



# Product Catalog

**Ethernet Switches**

**PoE Ethernet Switches**

**PoE Media Converters**

**PoE Copper Extenders**

**Network Interface Devices**

**Media Converters, Transponders, Switches and Chassis**

**CWDM and DWDM Multiplexers / Demultiplexers**

**Optical Transceivers**



# Company Overview

## About Omnitron Systems

Omnitron Systems designs and manufactures fiber media converters for Ethernet, Power-over-Ethernet (PoE), Single Pair Ethernet, Serial, and TDM protocols, as well as Ethernet and PoE switches, demarcation devices and WDM and TDM multiplexers that are deployed in thousands of networks worldwide.

Omnitron's network connectivity products can integrate various cabling types, extend network distances, inject PoE / PoE+ / PoE++ and expand fiber capacity.

## Market Segments

- Enterprise and SMB
- Federal, State and Municipal Government
- Education (K-12 and Higher Learning)
- Building and Factory Automation
- Transportation (Highway, Toll, Railway, Airports)
- Security surveillance and WiFi
- Data Center and Cloud
- Service Provider and Cable MSO
- Wireless, small cell and mobile backhaul
- Utility, Oil and Energy

All Omnitron products are manufactured in the United States, and are TAA, BAA and NDAA Compliant.

Omnitron has built a reputation of delivering reliable products for mission critical networks. Every employee at Omnitron is involved in delivering high-quality, user-oriented fiber access solutions. By building strong relationships with our end-users and understanding the challenges they face, Omnitron engineers design products and features that provide value to our customers.

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# Company Overview

## Made in the USA

All Omnitron products are manufactured in the US, and are Trade Agreements Act (TAA) compliant.



## Free Network Design and 24/7 Technical Support

Omnitron's highly-trained pre-sales support staff, account managers, and technical support staff have the experience to provide solutions that are effective, practical and economical.



## Quality Statement

Omnitron Systems is committed to providing quality products and services that continually meet and exceed customer expectations. Omnitron's products comply with rigorous quality standards, including NEBS Level 3, FCC and UL certifications. This quality is achieved and improved through quality control policies and procedures.

## Standards Compliance

Omnitron is dedicated to full and comprehensive compliance with ITU-T, IEEE, RFC and MEF network industry standards. Comprehensive standards compliance ensures full feature functionality and multi-vendor interoperability in complex network environments. Other compliances include TAA, BAA, NDAA and UKCA.



## Environmental Compliance

Omnitron products are RoHS, WEEE and REACH compliant and manufactured to address the use of chemical substances, and their potential impacts on both human health and the environment.

Omnitron's initiative to comply with environmental directives includes design for environment, reduction in the use of hazardous materials, recycling, and supplier responsibility.

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# Company Overview

## Product Lines

### Ethernet Switches, PoE Switches, Fiber Media Converters and Copper Extenders

Omnitron Systems offer a wide range of products Ethernet switches, media converters and PoE copper extenders. The switches are available with PoE or without, meeting the needs of Enterprise, Government and Telecom applications. The products are available in commercial (0 to 50°C ), wide (-40 to 60°C ) and extended (-40 to 75°C ) temperature ranges.

#### OmniConverter® Ethernet Switches

OmniConverter Compact Ethernet Switches enable distance extension over fiber optic cabling to multiple network edge devices, and feature IP-based management accessed with a Web, Telnet, SSH, SNMP or Serial Console interface.

OmniConverter Compact Ethernet Switches feature one or two fiber ports and up to eight 10/100/1000 RJ-45 ports, and are available as unmanaged or managed models.

OmniConverter multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 ports. The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. Managed and unmanaged models are available.



#### OmniConverter® PoE Switches

OmniConverter PoE PSE Switches enable network distance extension over fiber optic cabling and provide PoE (15.4W), PoE+ (30W) or IEEE 802.3bt (60W and 100W) power, and feature IP-based management accessed with a Web, Telnet, SSH, SNMP or Serial Console interface.

The OmniConverter PoE Ethernet switches that feature two 1/10G uplink ports and four 10/100/1000 RJ-45 copper Power Sourcing Power-over-Ethernet user ports. The 10GPoEBT/M is an IEEE 802.3bt switch featuring 60W and 100W per user port models.

The OmniConverter multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Power-over-Ethernet downlink/access ports. The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps.



#### OmniConverter Multi-Gigabit/Multi-Rate 10M, 100M, 1G, 2.5G, 5G, 10G Media Converter and PoE Media Converters

OmniConverter Multi-Gigabit/Multi-Rate unmanaged 10G Ethernet media converters feature one 1/10G SFP/SFP+ uplink port and one or two multi-gigabit/multi-rate RJ-45 user ports. The RJ-45 user ports support multi-rate speeds of 10Mbps, 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps.

Models are available supporting IEEE 802.3at (15 and 30W) and IEEE 802.3bt (60 and 100W) per user port.



# Company Overview

## OmniConverter® PoE Media Converters

OmniConverter PoE PSE Media Converters enable network distance extension over fiber optic cabling and provide PoE (15.4W), PoE+ (30W) or IEEE 802.3bt (60W and 100W) power. OmniConverter unmanaged PoE media converters are available with DC power or external AC power adapters, and are temperature hardened for outdoor deployments.



## OmniConverter® PoE Extenders

OmniConverter PoE Extenders are unmanaged 10/100/1000BASE-T PoE Extenders that enable the delivery of Ethernet data and Power over Ethernet (PoE) beyond the standard 100 meter limit of twisted pair copper cabling. OmniConverter PoE Extenders function as both Powered Devices (PD) and Power Sourcing Equipment (PSE), and require no external AC power. OmniConverter PoE Extenders can be daisy chained to extend distances to PoE devices up to 700 meters.



## OmniConverter Injectors

OmniConverter GPoE+/I is an ultra compact unmanaged gigabit Ethernet power injector that will extend the Ethernet link distance and adds power over the data lines.

The OmniConverter GPoE+/I features one RJ-45 uplink port and one RJ-45 downlink IEEE 802.3af/at PoE+ port. The uplink and downlink ports support 10/100/1000Mbps data rates and are capable of operating asymmetric rates.



## OmniConverter Single Pair Ethernet Converters

The OmniConverter Single Pair Ethernet converters are IEEE 802.3cg compliant products that convert 10BASE-T Ethernet to single-pair 10BASE-T1L Ethernet. They use single-pair Ethernet cabling (SPE) to extend the Ethernet link distance up to 1km.

The Single Pair Ethernet converters feature one IEEE 802.3cg compliant 10BASE-T1L terminal or IEC 63171 SPE port and one 10BASE-T RJ-45 port supporting 10Mbps full-duplex data rates.

The 10T/T1L is a 10BASE-T RJ-45 Ethernet to single-pair 10BASE-T1L Ethernet converter.

The 10TPS/T1L is an 10BASE-T IEEE 802.3at (PoE+) RJ-45 Ethernet to single-pair 10BASE-T1L Ethernet converter.



# Company Overview

## OmniConverter Single Pair Power over Ethernet Converters

The OmniConverter Single Pair Power over Ethernet converters are IEEE 802.3cg compliant products that function as PoE injectors and Powered Devices. They convert 10BASE-T Ethernet to single-pair 10BASE-T1L Ethernet. They use single-pair Ethernet cabling (SPE) to extend the Ethernet link distance up to 1km.

The Single Pair Power over Ethernet converters feature one IEEE 802.3cg compliant 10BASE-T1L terminal or IEC 63171-1 or IEC 63171-2 or IEC 63171-6 SPE port and one 10BASE-T RJ-45 port supporting 10Mbps full-duplex data rates.



## RuggedNet® Switches

RuggedNet Industrial Ethernet Switches enable fiber network connectivity and distance extension, and feature IP-based management with a Web, Telnet or Serial Console interface. RuggedNet Industrial Ethernet switches are ruggedized and temperature hardened for outdoor and industrial deployments.

RuggedNet Industrial Ethernet Switches feature one or two fiber ports and up to eight 10/100/1000 RJ-45 ports, and are available as unmanaged or managed models.

RuggedNet multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 ports. The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. Managed and unmanaged models are available.



## RuggedNet® PoE Ethernet Switches

RuggedNet Industrial PoE Switches enable fiber network connectivity and distance extension in manufacturing, transportation and IoT applications, and provide PoE (15.4W), PoE+ (30W) or IEEE 802.3bt (60W and 100W) power. RuggedNet Industrial PoE Switches are ruggedized and temperature hardened for outdoor and industrial deployments, and feature IP-based management with a Web, Telnet, SSH, SNMP or Serial Console interface.

The RuggedNet PoE Ethernet switches that feature two 1/10G uplink ports and four 10/100/1000 RJ-45 copper Power Sourcing Power-over-Ethernet user ports.

The RuggedNet multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Power-over-Ethernet ports. The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps.



## RuggedNet® PoE Copper Extender

RuggedNet Industrial PoE Extenders break through the 100 meter distance barrier of PoE copper cabling. Extend industrial copper network distances to PoE devices with plug-and-play extenders that require no external power.

RuggedNet Industrial GXPoE+/Si and GXHPoE/Si are unmanaged gigabit PoE Extenders that enable the delivery of Ethernet data and Power over Ethernet (PoE) beyond the standard 100 meter limit of twisted pair copper cabling.



## iConverter® Multi-Service Platform

The modular iConverter Multi-Service Platform of media converter, NID and multiplexer modules can be combined in a variety of chassis options to provide a managed, flexible and scalable architecture for today's evolving fiber networks. iConverter modules and chassis can be managed with NetOutlook® SNMP Management Software.

Network operators can leverage investments in existing infrastructure and deliver new services, protocols and data rates over fiber, and multiplex different services over a CWDM common fiber link.



## miConverter® Miniature Media Converters

miConverter miniature Ethernet media converters provide cost-effective integration of Ethernet copper network devices and fiber network cabling. These compact unmanaged converter modules can be powered by an external AC power supply or a USB port for fiber-to-the-desktop/laptop deployments. miConverter media converters are available as PoE powered devices, and support industrial temperature ranges.



## FlexSwitch Unmanaged 10G Ethernet Switch

The FlexSwitch 2X4GT is a six-port Ethernet switch with four 10/100/1000 RJ-45 ports, one 10G (10GBASE-R) SFP+ or XFP fiber port, and one RJ-45 port that auto-negotiates to Gigabit or 10G (1000BASE-T/10GBASE-T).



### FlexPoint® Unmanaged Media Converters

FlexPoint media converters provide unmanaged copper-to-fiber and fiber-to-fiber network connectivity with easy plug-and-play installation. The self-contained converter modules support Ethernet, serial, and T1/E1 protocols, and can be used as standalone units, rack-mounted or installed in a powered chassis.



### OmniLight® LGX DWDM Multiplexers

The OmniLight™ family of passive optical DWDM multiplexer modules provide a scalable, flexible and high-density solution for distributing wavelength services.

OmniLight modules can be installed in a 14-Module LGX Chassis that supports 14 full-size LGX modules or 28 half-size LGX modules, or a 3-Module Rack-Mount Shelf that supports 3 full-size LGX modules or 6 half-size LGX modules.



### SFP, SFP+ and XFP Pluggable Transceivers

Omnitron's SFP, SFP+ and XFP pluggable transceivers are interchangeable compact media connectors for standard, CWDM and DWDM wavelengths that enable a single network device to connect to a wide variety of fiber and copper cable types and distances.



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# OmniConverter® Ethernet Switch Overview

## OmniConverter® Ethernet Switch Overview

All Ethernet switches support the same feature set.

- Layer 2 Ethernet switch that forwards frames to any port based on their MAC address.
- Directed Switch mode, which directs multicast traffic (such as video) only to the appropriate uplink port, preventing the multicast video traffic from flooding other network ports.
- Models with two fiber or two copper uplink ports support redundant uplinks configurations
- Models with two fiber or two copper uplink ports also support Dual Device mode that enables the switches to operate as two independent and isolated Ethernet switches.
- The mode of operation can be configured using easily accessible DIP-switches.
- 1G models are available with fixed fiber ST, SC, LC and SFP connectors.
- Small Form Pluggable (SFP) transceiver receptacles models support multimode or single-mode and dual fiber or single-fiber transceiver in standard and CWDM/DWDM wavelengths.
- All models can be wall mounted, rack mounted or DIN-rail mounted.
- OmniConverter models support commercial (0° to 50°C), wide (-40° to 60°C) and extended (-40° to 75°C) operating temperature ranges and are available with an external 100 to 240VAC power adapter or with a DC terminal connector.
- PoE Models support:
  - Configurable PoE Power Reset

1G and 10G Managed Switches	10G Multi-Gigabit/Multi-Rate Managed Switches
Supports IPv4 and IPv6	Supports IPv4 and IPv6
Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces	Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
IP-based web management	IP-based web management
Password Strength Checking	Password Strength Checking
Email Notification with Simple Mail Transfer Protocol (SMTP)	Email Notification with Simple Mail Transfer Protocol (SMTP)
IEEE 802.1x, RADIUS, TACACS+ and ACL	IEEE 802.1x, RADIUS, TACACS+ and ACL
Rapid (RSTP) and Multiple (MSTP) Spanning Tree Protocols	
IEC 62439-2 Industrial Ring Media Redundancy Protocol	
IEEE 802.1ax LAG and LACP supporting Active/Active and Active/Standby	
IEEE 802.1Q VLAN tagging and IEEE 802.1ad Q-in-Q Provider Bridge VLAN stacking	IEEE 802.1Q VLAN tagging and IEEE 802.1ad Q-in-Q Provider Bridge VLAN stacking
IPv4 Internet Group Management (IGMP) and IPv6 Multicast Listener Discovery (MLD) snooping	IPv4 Internet Group Management (IGMP) and IPv6 Multicast Listener Discovery (MLD) snooping
IEEE 802.1ab Link Layer Discovery Protocol (LLDP)	IEEE 802.1ab Link Layer Discovery Protocol (LLDP)
Loop Prevention (CTP)	
SNTP / NTP and time of day	SNTP / NTP and time of day
Broadcast / Multicast / Unicast Storm Prevention	Broadcast / Multicast / Unicast Storm Prevention
Port Mirroring	
Rate Limiting, Queue prioritization and Class of Service	Rate Limiting, Queue prioritization and Class of Service
Static MAC configuration and blocking of unknown Unicast/Multicast addresses	Static MAC configuration and blocking of unknown Unicast/Multicast addresses
Port Access Control for enhanced security	Port Access Control for enhanced security
PoE Managed Models support	PoE Managed Models support
Heartbeat signal to verify connectivity to the PD	Heartbeat signal to verify connectivity to the PD
Individual remote PoE power reset	Individual remote PoE power reset
PoE power management with LLDP MED and MDI TLV	PoE power management with LLDP MED and MDI TLV
PoE Multi-Day Scheduling for power saving and security	PoE Multi-Day Scheduling for power saving and security

# OmniConverter® Ethernet Switch Overview

## Regulatory and Environmental Specifications

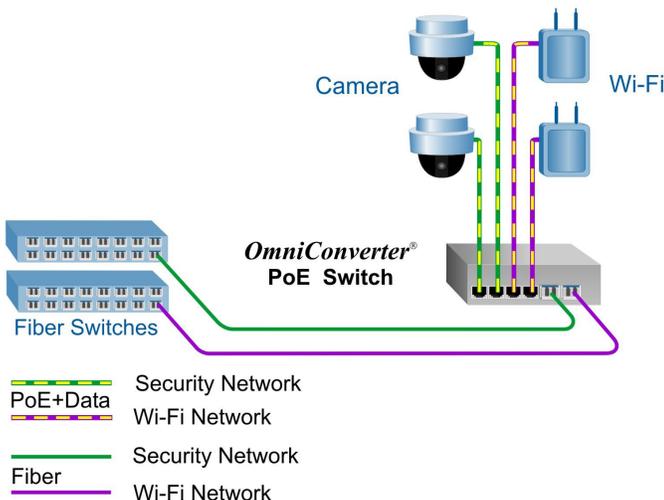
Refer to the product data sheets for individual differences in the regulatory compliances.

<p><b>Regulatory Compliances</b> (*Pending on 10G models)</p>	<p><b>Safety*:</b> UL 62368-1, UL 60950-1, IEC 62368-1, IEC 60950-1, EN 62368-1, EN 60950-1, CAN/CSA C22.2 No. 62368-1-14, CAN/CSA C22.2 No. 60950-1, CE Mark, UKCA</p> <p><b>EMC:</b> EN 55032/24 CE Emissions/Immunity, IEC 61000-6-4 Industrial Emissions, IEC 61000-6-2 Industrial Immunity</p> <p><b>EMI:</b> CISPR 32, FCC 47 Part 15 Subpart B Class A</p> <p><b>EMS:</b> IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV (DC models), IEC 61000-4-4 EFT: Power: 1 kV; Signal: 1 kV (AC models), IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV (DC models), IEC 61000-4-5 Surge: Power: 1 kV Line/Line; 2 kV Line/Gnd; Signal: 2 kV (AC models), IEC 61000-4-6 CS: Signal: 10 V, IEC 61000-4-8 (Magnetic Field) 30A/m, IEC 61000-4-11 (Voltage Dips, interrupts)</p> <p><b>IP Rating:</b> IP20 Protection <b>ACT:</b> TAA, BAA, NDAA</p>
<p><b>Environmental</b></p>	<p>REACH, RoHS and WEEE</p>

## Dual Device Mode Application

This Dual Device feature is extremely useful when two isolated networks domains share a single network distribution location.

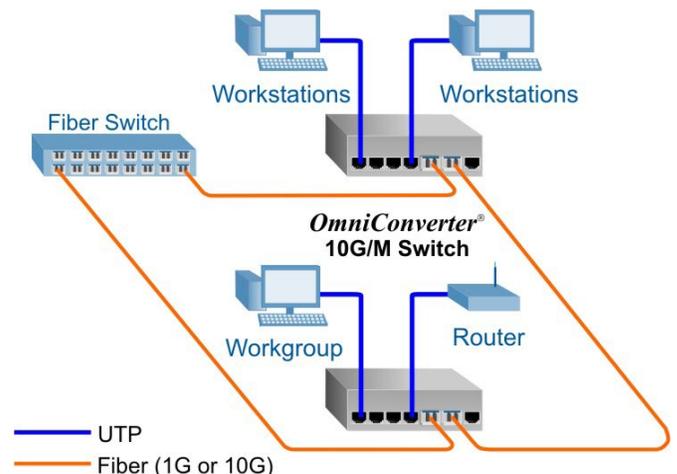
The example below depicts a scenario where a surveillance security (green) network and a Wi-Fi (purple) network are sharing a single hub distribution location. Using the two uplinks and the Dual Switch mode facilitates using a single PoE switch driving both the Cameras and the Wi-Fi Access Points while maintaining isolation between the networks.



## Daisy-Chain and Ring Topology Application

This example demonstrates the daisy chaining and ring capabilities of the OmniConverter. In this application each OmniConverter switch connects to its neighboring switches via its uplink ports eventually closing the ring.

Using this network architecture combined with ring protection protocols such as Media Redundancy Protocol (MRP) or Rapid Spanning Tree Protocol (RSTP) facilitates a highly resilient network required in mission critical applications.



# OmniConverter® Ethernet Switch Overview

OmniConverter® 1G and 10G Switches				
Product Family	1G Switches		10G Switches	
Product Line	G/Sx	G/M	10G/Sx	10G/M
Model # Range	2860 - 2879	2820 - 2839	2901	2900
Management				
Web, Telnet, SNMP, SSH, Serial		✓		✓
IPv4 and IPv6		✓		✓
Ports and Data Rates				
Number of Uplink Ports	1 or 2 fiber or 2 RJ-45	1 or 2 fiber or 2 RJ-45	2 SFP/SFP+	2 SFP/SFP+
Number of RJ-45 Ports	4 or 8	4 or 8	4 or 8	4 or 8
RJ-45 Data Rates	10/100/1000	10/100/1000	10/100/1000	10/100/1000
Uplink Data Rates	Fiber 100, 1000 Copper 10/100/1000	Fiber 100, 1000 Copper 10/100/1000	1G or 10G	1G or 10G
Features				
Frame size	10K	10K	10K	10K
Directed Switch Mode	✓	✓	✓	✓
Dual Device Mode	✓	✓	✓	✓
External Power Source				
DC Terminal	2-Pin	2-Pin	2-Pin	2-Pin
AC Connector includes power adapter	2.5 mm Barrel	2.5 mm Barrel	2.5 mm Barrel	2.5 mm Barrel
Operational Temperature Range				
Commercial 0 to 50°C	✓	✓	✓	✓
Wide -40 to 60°C	✓	✓	✓	✓
Extended -40 to 75°C	✓	✓	✓	✓
Catalog Reference				
Page Number	<a href="#">32</a>	<a href="#">23</a>	<a href="#">29</a>	<a href="#">20</a>

# OmniConverter® Ethernet Switch Overview

## OmniConverter® 1G and 10G PoE Switches

Product Family	1G PoE Switches				10G PoE Switches			
Product Line	GPoE+/Sx	GPoE+/M	GHPoEBT/Sx	GHPoEBT/M	10GPoE+/Sx	10GPoE+/M	10GPoEBT/Sx	10GPoEBT/M
Model # Range	9440 - 9459	9520 - 9539	3000B - 3019B 3040B - 3059B	3100B - 3119B 3140B - 3159B	9581	9580	3060B, 3062B	3160B, 3162B

### Management

Web, Telnet, SNMP, SSH, Serial		✓		✓		✓		✓
IPv4 and IPv6		✓		✓		✓		✓

### Ports and Data Rates

Number of Uplink Ports	1 or 2 fiber or 2 RJ-45	2 SFP/SFP+	2 SFP/SFP+	2 SFP/SFP+	2 SFP/SFP+			
Number of RJ-45 Ports	4 or 8	4 or 8	4	4	4 or 8	4 or 8	4	4
RJ-45 Data Rates	10/100/1000	10/100/1000	10/100/1000	10/100/1000	10/100/1000	10/100/1000	10/100/1000	10/100/1000
Uplink Data Rates	Fiber 100, 1000 Copper 10/100/1000	1G or 10G	1G or 10G	1G or 10G	1G or 10G			

### Features

Frame size	10K	10K	10K	10K	10K	10K	10K	10K
PoE Power Level	802.3af 802.3at	802.3af 802.3at	802.3af 802.3at 60W HPoE 802.3bt 60W or 100W	802.3af 802.3at 60W HPoE 802.3bt 60W or 100W	802.3af 802.3at	802.3af 802.3at	802.3af 802.3at 60W HPoE 802.3bt 60W or 100W	802.3af 802.3at 60W HPoE 802.3bt 60W or 100W
PoE Reset	✓	✓	✓	✓	✓	✓	✓	✓
Directed Switch Mode	✓	✓	✓	✓	✓	✓	✓	✓
Dual Device Mode	✓	✓	✓	✓	✓	✓	✓	✓
PoE Power Scheduler		✓		✓		✓		✓

### External Power Source

DC Terminal	2-Pin							
AC Connector includes power adapter	DIN-6							

### Operational Temperature Range

Commercial 0 to 50°C	✓	✓	✓	✓	✓	✓	✓	✓
Wide -40 to 60°C	✓	✓	✓	✓	✓	✓	✓	✓
Extended -40 to 75°C	✓	✓	✓	✓	✓	✓	✓	✓

### Catalog Reference

Page Number	<a href="#">34</a>	<a href="#">25</a>	<a href="#">33</a>	<a href="#">24</a>	<a href="#">31</a>	<a href="#">22</a>	<a href="#">30</a>	<a href="#">21</a>
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# OmniConverter® Ethernet Switch Overview

10G Multi-Gigabit/Multi-Rate Ethernet Switch Products						
Product Line	10GMG/Sx	10GMG/M	10GMGPoE+/Sx	10GMGPoE+/M	10GMGPoEBT/Sx	10GMGPoEBT/M
Model # Range	9650	9655	9651	9656	9652, 9653	9657, 9658
Management						
Web, Telnet, SNMP, SSH, Serial	-	✓	-	✓	-	✓
IPv4 and IPv6	-	✓	-	✓	-	✓
Ports and Data Rates						
Number of Uplink Ports	1	1	1	1	1	1
Number of RJ-45 Ports	4	4	4	4	4	4
RJ-45 Data Rates	10/100/1000 (x2) 100/1G/2.5G/5G/10G (x2)	10/100/1000 (x2) 100/1G/2.5G/5G/10G (x2)				
Uplink Data Rates	1G, 10G 10/100/1000, 1000, 2.5G, 5G 10G	1G, 10G 10/100/1000, 1000, 2.5G, 5G 10G				
Features						
Frame size	10K	10K	10K	10K	10K	10K
PoE Power Level	-	-	IEEE 802.3af IEEE 802.3at	IEEE 802.3af IEEE 802.3at	IEEE 802.3af IEEE 802.3at IEEE 802.3bt 60W or 100W	IEEE 802.3af IEEE 802.3at IEEE 802.3bt 60W or 100W
PoE Reset	-	-	✓	✓	✓	✓
Directed Switch Mode	✓	✓	✓	✓	✓	✓
PoE Power Scheduler	-	-	✓	✓	✓	✓
External Power Source						
DC Terminal	2-Pin	2-Pin	2-Pin	2-Pin	2-Pin	2-Pin
AC Connector includes power adapter	Barrel	Barrel	Barrel	Barrel	Barrel or DIN	Barrel or DIN
Operating Temperature						
Commercial 0 to 50°C	✓	✓	✓	✓	✓	✓
Wide -40 to 60°C	✓	✓	✓	✓	✓	✓
Industrial -40 to 75°C	✓	✓	✓	✓	✓	✓
Catalog Reference						
Page Number	<a href="#">26</a>	<a href="#">17</a>	<a href="#">28</a>	<a href="#">19</a>	<a href="#">27</a>	<a href="#">18</a>

# OmniConverter® 10G Managed Switch

## 10G Managed Switches

### OmniConverter® 10GMG/M Ethernet Switch

#### Managed Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Managed 10G multi-gigabit/multi-rate Ethernet Switch
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

#### Description

The OmniConverter 10GMG/M are managed multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 downlink/access ports.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches. These management interfaces provide access to filtering and security options, such as, broadcast storm prevention, IGMP, IEEE 802.1x, RADIUS, TACACS+ and Access Control Lists. Email and alarm reporting is provided.

#### Specifications

<b>Description</b>	Managed 10Gigabit Multi-Gigabit/Multi-Rate Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.25A max at 115VAC, 0.12A max at 230VAC
<b>DC Power Requirements</b>	+12 to +57VDC, 0.93A @ 12VDC, 0.23A @ 48VDC
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SNTP, RADIUS, TACACS+, IEEE 802.1x,
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.5 lbs. (720 grams); w/AC/DC Adapter 2.0 lbs. (913 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

#### Ordering

10GMG/M	Description
9655-0-14-pt	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 ports + 2 x 10/100/1000 RJ-45 ports
9655-1-14-pt	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 ports + 2 x 10/100/1000 RJ-45 ports
<b>Power Options (p):</b>	
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord	
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord	
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	
Z = Extended temperature (-40 to 75°C)	

# OmniConverter® 10G Managed Switch

## OmniConverter® 10GMGPoEBT/M Ethernet Switch

### Managed Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Managed 10G multi-gigabit/multi-rate PoE Ethernet Switch
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter 10GMGPoEBT/M are managed multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Power-over-Ethernet downlink/access ports. They support PoE, PoE+ and PoEBT up to 100 watts depending on the model.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. The 10GMGPoEBT/M supports IEEE 802.3bt (60 and 100W) per user port depending on the model.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches. These management interfaces provide access to filtering and security options, such as, broadcast storm prevention, IGMP, IEEE 802.1x, RADIUS, TACACS+ and Access Control Lists. Email and alarm reporting is provided.

### Specifications

Description	Managed IEEE 802.3bt 10G Multi-Gigabit/Multi-Rate Ethernet Switch
Frame Size	Up to 10,240 bytes
AC Power Requirements	100 - 240VAC/50 - 60Hz 3.5A max at 115VAC, 2.5A max at 230VAC Supplied adapter provides 250W
DC Power Requirements	+46 to +57VDC; 4.52A @ 56VDC - 60W +46 to +57VDC; 7.40A @ 56VDC - 100W
Environment	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
Standards	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SNTP, RADIUS, TACACS+, IEEE 802.1x, IEEE 802.3af (15.40 watts), IEEE 802.3at (30 watts), IEEE 802.3bt (up to 100 watts)
Management	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
Dimension (W x D x H)	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
Weight	1.6 lbs. (726 grams); w/AC/DC Adapter 3.7 lbs. (1.68 kg)
Warranty	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

10GMGPoEBT/M	Description
60W	9657-0-14-pt 1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 60W per ports + 2 x 10/100/1000 RJ-45 60W per ports
	9657-1-14-pt 1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 60W per ports + 2 x 10/100/1000 RJ-45 60W per ports
100W	9658-0-14-pt 1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 100W per ports + 2 x 10/100/1000 RJ-45 100W per ports
	9658-1-14-pt 1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 100W per ports + 2 x 10/100/1000 RJ-45 100W per ports
<b>Power Options (p):</b>	
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord	
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord	
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	
Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8	

# OmniConverter® 10G Managed Switch

## OmniConverter® 10GMGPoE+/M Ethernet Switch

### Managed Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Managed 10G multi-gigabit/multi-rate PoE Ethernet Switch
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter 10GMGPoE+/M are managed multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Power-over-Ethernet downlink/access ports.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. The 10GMGPoE+/M supports IEEE 802.3at (15 and 30W) per user port.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches. These management interfaces provide access to filtering and security options, such as, broadcast storm prevention, IGMP, IEEE 802.1x, RADIUS, TACACS+ and Access Control Lists. Email and alarm reporting is provided.

### Specifications

Description	Managed IEEE 802.3at 10G Multi-Gigabit/Multi-Rate Ethernet Switch
Frame Size	Up to 10,240 bytes
AC Power Requirements	100 - 240VAC/50 - 60Hz 3.5A max at 115VAC, 2.5A max at 230VAC Supplied adapter provides 250W
DC Power Requirements	+46 to +57VDC; 2.37A @ 56VDC
Environment	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
Standards	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SNTP, RADIUS, TACACS+, IEEE 802.1x, IEEE 802.3af (15.40 watts), IEEE 802.3at (30 watts),
Management	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
Dimension (W x D x H)	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
Weight	1.5 lbs. (680 grams); w/AC/DC Adapter 3.6 lbs. (1.63 kg)
Warranty	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

10GMGPoE+/M	Description
9656-0-14-pt	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 30W per port + 2 x 10/100/1000 RJ-45 30W per port
9656-1-14-pt	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 30W per port + 2 x 10/100/1000 RJ-45 30W per port
<b>Power Options (p):</b>	
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord 9 = Direct DC input, 2 pin terminal, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C) Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8	

# OmniConverter® 10G Managed Switch

## OmniConverter® 10G/M Ethernet Switch Managed 6 and 10 Port 10G Ethernet Switch

- Managed 1/10G Ethernet Switches
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+
- Four or eight 10/100/1000 copper user ports



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter 10G/M are managed compact Ethernet switches that feature two 1/10G uplink ports and four or eight 10/100/1000 RJ-45 copper user ports.

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches. These management interfaces provide access to filtering and security options, such as, broadcast storm prevention, IGMP, IEEE 802.1x, RADIUS, TACACS+ and Access Control Lists. Email and text event notification and alarm reporting is provided.

### Specifications

<b>Description</b>	Managed 6 and 10 Port 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.25A max at 115VAC, 0.12A max at 230VAC
<b>DC Power Requirements</b>	+12 to +57VDC, 0.86A @ 12VDC, 0.22A @ 48VDC – 4 Port models +12 to +57VDC, 0.94A @ 12VDC, 0.24A @ 48VDC – 8 Port models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNMP, RADIUS, TACACS+, IEEE 802.1x
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.5 lbs. (720 grams); w/AC/DC Adapter 2.0 lbs. (913 grams) - 4P 1.6 lbs. (735 grams); w/AC/DC Adapter 2.1 lbs. (941 grams) - 8P
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

10G/M 4 User Port	10G/M 8 User Port	Description
2900-0-24-pt	2900-0-28-pt	2x 1/10G SFP/SFP+ Uplinks
<b>Power Options (p):</b>		
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord		
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord		
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord		
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter		
<b>Operating Temperature Options (t):</b>		
<leave blank> = Commercial temperature (0 to 50°C)		
W = Wide temperature (-40 to 60°C)		
Z = Extended temperature (-40 to 75°C)		

# OmniConverter® 10G Managed Switch

## OmniConverter® 10GPoEBT/M PoE Ethernet Switch Managed 6 Port 60/100W IEEE 802.3bt 10G Ethernet Switch

- Managed 60W/100W IEEE 802.3bt PoE 1/10G Ethernet Switches
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+
- Four 10/100/1000 copper PoE user ports



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter 10GPoEBT/M are managed High-Power PoE Ethernet switches that feature two 1/10G uplink ports and four 10/100/1000 RJ-45 copper Power-over-Ethernet user ports. The 10GPoEBT/M supports PoE, PoE+, legacy 60W HPoE and IEEE 802.3bt (60 or 100W).

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

### Specifications

<b>Description</b>	Managed 6 Port IEEE 802.3bt PoE 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 3.5A max at 115VAC, 2.5A max at 230VAC
<b>DC Power Requirements</b>	+46 to +57VDC, 4.47A @ 56VDC – 60W models +46 to +57VDC, 7.33A @ 56VDC – 100W models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNTP, RADIUS, TACACS+, IEEE 802.1x IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max), 60W HPoE IEEE 802.3bt (60 and 100W)
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.6 lbs. (735 grams); w/AC/DC Adapter 3.7 lbs. (1703 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

10GPoEBT/M 60W	10GPoEBT/M 100W	Description
3160B-0-24-pt	3162B-0-24-pt	2x 1/10G SFP/SFP+ Uplinks and 4x 10/100/1000 Copper
<b>Power Options (p):</b>		
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord		
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord		
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord		
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter		
<b>Operating Temperature Options (t):</b>		
<leave blank> = Commercial temperature (0 to 50°C)		
W = Wide temperature (-40 to 60°C)		
Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8		

# OmniConverter® 10G Managed Switch

## OmniConverter® 10G PoE+/M PoE Ethernet Switch Managed 6 and 10 Port PoE/PoE+ 10G Ethernet Switch

- Managed PoE/PoE+ 1/10G Ethernet Switches
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+
- Four or eight 10/100/1000 copper PoE user ports



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter 10G PoE+/M are compact managed PoE and PoE+ Ethernet switches that feature two 1/10G uplink ports and four or eight 10/100/1000 RJ-45 copper Power Sourcing Power-over-Ethernet user ports.

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

### Specifications

<b>Description</b>	Managed 6 and 10 Port PoE/PoE+ 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 3.5A max at 115VAC, 2.5A max at 230VAC
<b>DC Power Requirements</b>	+46 to +57VDC, 2.33A @ 56VDC – 4 port models +46 to +57VDC, 4.49A @ 56VDC – 8 port models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNMP, RADIUS, TACACS+, IEEE 802.1x IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.5 lbs. (720 grams); w/AC/DC Adapter 3.6 lbs. (1645 grams) - 4P 1.7 lbs. (755 grams); w/AC/DC Adapter 3.8 lbs. (1723 grams) - 8P
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

10G PoE+/M 4 User Port	10G PoE+/M 8 User Port	Description
9580-0-24-pt	9580-0-28-pt	2x 1/10G SFP/SFP+ Uplinks
<b>Power Options (p):</b>		
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord		
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord		
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord		
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter		
<b>Operating Temperature Options (t):</b>		
<leave blank> = Commercial temperature (0 to 50°C)		
W = Wide temperature (-40 to 60°C)		
Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8		

# OmniConverter® 1G Managed Switch

## 1G Managed Switches

### OmniConverter® G/M Ethernet Switch

#### Managed 6 and 10 Port 1G Switch

- Managed 6 and 10 port Gigabit Ethernet switch
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Two 10/100/1000 copper or standard/CWDM fiber uplink ports
- Four or eight 10/100/1000 copper user ports
- ST, SC and LC fixed fiber ports or 100M/1G SFP transceivers



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

#### Description

The OmniConverter G/M are compact managed Ethernet switches that feature copper or fiber uplink ports and four or eight 10/100/1000 RJ-45 copper user ports.

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

#### Specifications

<b>Description</b>	Managed 6 and 10 Port Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.2A max at 115VAC; 0.1A max at 230VAC
<b>DC Power Requirements</b>	+12 to +57VDC, 0.68A @ 12VDC, 0.17A @ 48VDC – 4 port models +12 to +57VDC, 0.75A @ 12VDC, 0.19A @ 48VDC – 8 port models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNTP, RADIUS, TACACS+, IEEE 802.1x
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.5 lbs. (720 grams); w/AC/DC Adapter 2.0 lbs. (913 grams) - 4P 1.6 lbs. (735 grams); w/AC/DC Adapter 2.1 lbs. (941 grams) - 8P
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

#### Ordering

G/M 4 User Port	G/M 8 User Port	Description
2820-0-14-pt	2820-0-18-pt	ST 850nm MM 220/550m
2822-0-14-pt	2822-0-18-pt	SC 850nm MM 220/550m
2826-0-14-pt	2826-0-18-pt	LC 850nm MM 220/550m
2822-6-14-pt	2822-6-18-pt	SC 1310nm MM 2km
2821-1-14-pt	2821-1-18-pt	ST 1310nm SM 12km
2823-1-14-pt	2823-1-18-pt	SC 1310nm SM 12km
2827-1-14-pt	2827-1-18-pt	LC 1310nm SM 12km
2823-2-14-pt	2823-2-18-pt	SC 1310nm SM 34km
2823-3-14-pt	2823-3-18-pt	SC 1550nm SM 80km
2823-4-14-pt	2823-4-18-pt	SC 1550nm SM 110km
2823-5-14-pt	2823-5-18-pt	SC 1550nm SM 140km
2830-0-14-pt	2830-0-18-pt	SC 13/15 MM-SF 220/550m
2831-0-14-pt	2831-0-18-pt	SC 15/13 MM-SF 220/550m
2830-1-14-pt	2830-1-18-pt	SC 13/15 SM-SF 20km
2831-1-14-pt	2831-1-18-pt	SC 15/13 SM-SF 20km
2830-2-14-pt	2830-2-18-pt	SC 13/15 SM-SF 40km
2831-2-14-pt	2831-2-18-pt	SC 15/13 SM-SF 40km
2839-0-14-pt	2839-0-18-pt	1x 1000Mbps SFP Uplink
2839-0-24-pt	2839-0-28-pt	2x 1000Mbps SFP Uplinks
2839-1-24-pt	2839-1-28-pt	2x RJ-45 Uplinks

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord
- 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord
- 9 = Direct DC input, 2 pin terminal, no AC/DC power adapter

#### Operating Temperature Options (t):

- <leave blank> = Commercial temperature (0 to 50°C)
- W = Wide temperature (-40 to 60°C)
- Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8

See [1000M Fiber Specifications](#) for optical parameters.

# OmniConverter® 1G Managed Switch

## OmniConverter® GHPoEBT/M PoE Ethernet Switch Managed 6 Port 60/100W IEEE 802.3bt 1G Switch

- Managed High-Power 60W/100W PoE Gigabit Ethernet Switches
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Supports 60W Pre-BT HPoE and IEEE 802.3bt 60W or 100W
- Two 10/100/1000 copper or standard/CWDM fiber uplink ports
- Four 10/100/1000 copper PoE user ports
- ST, SC and LC fixed fiber ports or 100M/1G SFP transceivers



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter GHPoEBT/M are compact High-Power PoE Ethernet switches. The GHPoEBT/M supports PoE, PoE+, legacy 60W HPoE, PoE++ and IEEE 802.3bt (60 or 100W).

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

### Specifications

<b>Description</b>	Managed 6 Port High-Power PoE Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 3.5A max at 115VAC, 2.5A max at 230VAC
<b>DC Power Requirements</b>	+46 to +57VDC, 4.46A @ 56VDC – 60W models +46 to +57VDC, 7.31A @ 56VDC – 100W models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNTP, RADIUS, TACACS+, IEEE 802.1x IEEE 802.3af (15.40 watts max), IEEE 802.3at (30 watts max) HPoE 60W, IEEE 802.3bt (60 and 100W)
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.6 lbs. (735 grams); w/AC/DC Adapter 3.7 lbs. (1703 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

GHPoEBT/M 60W	GHPoEBT/M 100W	Description
3100B-0-14-pt	3140B-0-14-pt	ST 850nm MM 220/550m
3102B-0-14-pt	3142B-0-14-pt	SC 850nm MM 220/550m
3106B-0-14-pt	3146B-0-14-pt	LC 850nm MM 220/550m
3102B-6-14-pt	3142B-6-14-pt	SC 1310nm MM 2km
3101B-1-14-pt	3141B-1-14-pt	ST 1310nm SM 12km
3103B-1-14-pt	3143B-1-14-pt	SC 1310nm SM 12km
3107B-1-14-pt	3147B-1-14-pt	LC 1310nm SM 12km
3103B-2-14-pt	3143B-2-14-pt	SC 1310nm SM 34km
3103B-3-14-pt	3143B-3-14-pt	SC 1550nm SM 80km
3103B-4-14-pt	3143B-4-14-pt	SC 1550nm SM 110km
3103B-5-14-pt	3143B-5-14-pt	SC 1550nm SM 140km
3110B-0-14-pt	3150B-0-14-pt	SC 13/15 MM-SF 220/550m
3111B-0-14-pt	3151B-0-14-pt	SC 15/13 MM-SF 220/550m
3110B-1-14-pt	3150B-1-14-pt	SC 13/15 SM-SF 20km
3111B-1-14-pt	3151B-1-14-pt	SC 15/13 SM-SF 20km
3110B-2-14-pt	3150B-2-14-pt	SC 13/15 SM-SF 40km
3111B-2-14-pt	3151B-2-14-pt	SC 15/13 SM-SF 40km
3119B-0-14-pt	3159B-0-14-pt	1x 1000Mbps SFP Uplink
3119B-0-24-pt	3159B-0-24-pt	2x 1000Mbps SFP Uplinks
3119B-1-24-pt	3159B-1-24-pt	2x RJ-45 Uplinks

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord
- 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord
- 9 = Direct DC input, 2 pin terminal, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

W = Wide temperature (-40 to 60°C)

Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8

See [1000M Fiber Specifications](#) for optical parameters.

# OmniConverter® 1G Managed Switch

## OmniConverter® GPoE+/M PoE Ethernet Switch Managed 6 and 10 Port PoE/PoE+ 1G Switch

- Managed 6 and 10 port PoE/PoE+ Ethernet switch
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Two 10/100/1000 copper or standard/CWDM fiber uplink ports
- Four or eight 10/100/1000 copper PoE user ports
- ST, SC and LC fixed fiber ports or 100M/1G SFP transceivers



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter GPoE+/M are compact managed PoE and PoE+ Ethernet switches that feature copper or fiber uplink ports and four or eight 10/100/1000 RJ-45 copper Power Sourcing Power-over-Ethernet user ports.

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

### Specifications

<b>Description</b>	Managed 6 and 10 Port PoE/PoE+ Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 3.5A max at 115VAC, 2.5A max at 230VAC
<b>DC Power Requirements</b>	+46 to +57VDC, 2.31A @ 56VDC – 4 port models +46 to +57VDC, 4.47A @ 56VDC – 8 port models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNTP, RADIUS, TACACS+, IEEE 802.1x IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.6 lbs. (735 grams); w/AC/DC Adapter 3.7 lbs. (1703 grams) 1.7 lbs. (755 grams); w/AC/DC Adapter 3.8 lbs. (1723 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

GPoE+/M 4 User Port	GPoE+/M 8 User Port	Description
9520-0-14-pt	9520-0-18-pt	ST 850nm MM 220/550m
9522-0-14-pt	9522-0-18-pt	SC 850nm MM 220/550m
9526-0-14-pt	9526-0-18-pt	LC 850nm MM 220/550m
9522-6-14-pt	9522-6-18-pt	SC 1310nm MM 2km
9521-1-14-pt	9521-1-18-pt	ST 1310nm SM 12km
9523-1-14-pt	9523-1-18-pt	SC 1310nm SM 12km
9527-1-14-pt	9527-1-18-pt	LC 1310nm SM 12km
9523-2-14-pt	9523-2-18-pt	SC 1310nm SM 34km
9523-3-14-pt	9523-3-18-pt	SC 1550nm SM 80km
9523-4-14-pt	9523-4-18-pt	SC 1550nm SM 110km
9523-5-14-pt	9523-5-18-pt	SC 1550nm SM 140km
9530-0-14-pt	9530-0-18-pt	SC 13/15 MM-SF 220/550m
9531-0-14-pt	9531-0-18-pt	SC 15/13 MM-SF 220/550m
9530-1-14-pt	9530-1-18-pt	SC 13/15 SM-SF 20km
9531-1-14-pt	9531-1-18-pt	SC 15/13 SM-SF 20km
9530-2-14-pt	9530-2-18-pt	SC 13/15 SM-SF 40km
9531-2-14-pt	9531-2-18-pt	SC 15/13 SM-SF 40km
9539-0-14-pt	9539-0-18-pt	1x 1000Mbps SFP Uplink
9539-0-24-pt	9539-0-28-pt	2x 1000Mbps SFP Uplinks
9539-1-24-pt	9539-1-28-pt	2x RJ-45 Uplinks

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord
- 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord
- 9 = Direct DC input, 2 pin terminal, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

W = Wide temperature (-40 to 60°C)

Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8

See [1000M Fiber Specifications](#) for optical parameters.

# OmniConverter® 10G Unmanaged Switch

## 10G Unmanaged Switches

### OmniConverter® 10GMG/Sx Ethernet Switch

#### Unmanaged Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Unmanaged 10G multi-gigabit/multi-rate Ethernet Switch
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports
- Supports jumbo frames up to 10,240 bytes



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

#### Description

The OmniConverter 10GMG/Sx are unmanaged multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 downlink/access ports.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

#### Specifications Ordering

<b>Description</b>	Unmanaged 10Gigabit Multi-Gigabit/Multi-Rate Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 - 240VAC/50 - 60Hz 0.25A max at 115VAC, 0.12A max at 230VAC
<b>DC Power Requirements</b>	+12 to +57VDC; 0.82A @ 12VDC, 0.21A @ 48VDC
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.3bz,
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.5 lbs. (720 grams); w/AC/DC Adapter 2.0 lbs. (913 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

10GMG/Sx	Description
9650-0-14-pt	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 ports + 2 x 10/100/1000 RJ-45 ports
9650-1-14-pt	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 ports + 2 x 10/100/1000 RJ-45 ports
<b>Power Options (p):</b> 1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord 9 = Direct DC input, 2 pin terminal, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C) Z = Extended temperature (-40 to 75°C)	

# OmniConverter® 10G Unmanaged Switch

## OmniConverter® 10GMGPoEBT/Sx Ethernet Switch

### Unmanaged Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Unmanaged 10G multi-gigabit/multi-rate PoE Ethernet Switch
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports
- Supports jumbo frames up to 10,240 bytes



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter 10GMGPoEBT/Sx are unmanaged multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Power-over-Ethernet downlink/access ports. They support PoE, PoE+ and PoEBT up to 100 watts depending on the model.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. The 10GMGPoEBT/Sx supports IEEE 802.3bt (60 and 100W) per user port depending on the model.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

### Specifications

Description	Unmanaged IEEE 802.3bt 10G Multi-Gigabit/Multi-Rate Ethernet Switch
Frame Size	Up to 10,240 bytes
AC Power Requirements	100 - 240VAC/50 - 60Hz 3.5A max at 115VAC, 2.5A max at 230VAC Supplied adapter provides 250W
DC Power Requirements	+46 to +57VDC; 4.49A @ 56VDC - 60W +46 to +57VDC; 7.38A @ 56VDC - 100W
Environment	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
Standards	IEEE 802.3, 802.3bz, IEEE 802.3af (15.4 watts max), IEEE 802.3at (30 watts max) IEEE 802.3bt (60 watts or 100 watts max)
Dimension (W x D x H)	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
Weight	1.6 lbs. (726 grams); w/AC/DC Adapter 3.7 lbs. (1.68 kg)
Warranty	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

10GMGPoEBT/Sx		Description
60W	9652-0-14-pt	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 60W per ports + 2 x 10/100/1000 RJ-45 60W per ports
	9652-1-14-pt	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 60W per ports + 2 x 10/100/1000 RJ-45 60W per ports
100W	9653-0-14-pt	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 100W per ports + 2 x 10/100/1000 RJ-45 100W per ports
	9653-1-14-pt	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 100W per ports + 2 x 10/100/1000 RJ-45 100W per ports
<b>Power Options (p):</b>		
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord		
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord		
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord		
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter		
<b>Operating Temperature Options (t):</b>		
<leave blank> = Commercial temperature (0 to 50°C)		
W = Wide temperature (-40 to 60°C)		
Z = Extended temperature (-40 to 75°C) -not available with power option 1, 2 & 8		

# OmniConverter® 10G Unmanaged Switch

## OmniConverter® 10GMGPOE+/Sx Ethernet Switch

### Unmanaged Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Unmanaged 10G multi-gigabit/multi-rate PoE Ethernet Switch
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports
- Supports jumbo frames up to 10,240 bytes



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter 10GMGPOE+/Sx are unmanaged multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Power-over-Ethernet downlink/access ports.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. The 10GMGPOE+/Sx supports IEEE 802.3at (15 and 30W) per user port.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

### Specifications

<b>Description</b>	Unmanaged IEEE 802.3at 10G Multi-Gigabit/Multi-Rate Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 - 240VAC/50 - 60Hz 3.5A max at 115VAC, 2.5A max at 230VAC Supplied adapter provides 250W
<b>DC Power Requirements</b>	+46 to +57VDC; 2.34A @ 56VDC
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.3bz, IEEE 802.3af (15.4 watts max) IEEE 802.3at (30 watts max)
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.5 lbs. (680 grams); w/AC/DC Adapter 3.6 lbs. (1.63 kg)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

10GMGPOE+/Sx	Description
9651-0-14-pt	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 30W per port + 2 x 10/100/1000 RJ-45 30W per port
9651-1-14-pt	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 30W per port + 2 x 10/100/1000 RJ-45 30W per port
<b>Power Options (p):</b>	
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord	
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord	
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	
Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8	

# OmniConverter® 10G Unmanaged Switch

## OmniConverter® 10G/Sx Ethernet Switch Unmanaged 6 and 10 Port 10G Ethernet Switch

- Unmanaged 1/10G Ethernet Switches
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+
- Four or eight 10/100/1000 copper user ports
- Supports jumbo frames up to 10,240 bytes



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter 10G/Sx are unmanaged compact Ethernet switches that feature two 1/10G uplink ports and four or eight 10/100/1000 RJ-45 copper user ports.

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

### Specifications

<b>Description</b>	Unmanaged 6 and 10 Port 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.25A max at 115VAC, 0.12A max at 230VAC
<b>DC Power Requirements</b>	+12 to +57VDC, 0.86A @ 12VDC, 0.22A @ 48VDC – 4 Port models +12 to +57VDC, 0.94A @ 12VDC, 0.24A @ 48VDC – 8 Port models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.5 lbs. (720 grams); w/AC/DC Adapter 2.0 lbs. (913 grams) - 4P 1.6 lbs. (735 grams); w/AC/DC Adapter 2.1 lbs. (941 grams) - 8P
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

10G/Sx 4 User Port	10G/Sx 8 User Port	Description
2901-0-24-pt	2901-0-28-pt	2x 1/10G SFP/SFP+ Uplinks
<b>Power Options (p):</b>		
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord		
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord		
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord		
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter		
<b>Operating Temperature Options (t):</b>		
<leave blank> = Commercial temperature (0 to 50°C)		
W = Wide temperature (-40 to 60°C)		
Z = Extended temperature (-40 to 75°C)		

# OmniConverter® 10G Unmanaged Switch

## OmniConverter® 10GPoEBT/Sx PoE Ethernet Switch Unmanaged 6 Port 60/100W IEEE 802.3bt 10G Ethernet Switch

- Unmanaged 60W/100W IEEE 802.3bt PoE 1/10G Ethernet Switches
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+
- Four 10/100/1000 copper PoE user ports
- Supports jumbo frames up to 10,240 bytes



[See OmniConverter Ethernet Switch Overview for the complete list of features.](#)

### Description

The OmniConverter 10GPoEBT/Sx are unmanaged High-Power PoE Ethernet switches that feature two 1/10G uplink ports and four 10/100/1000 RJ-45 copper Power-over-Ethernet user ports. The 10GPoEBT/Sx supports PoE, PoE+, legacy 60W HPoE and IEEE 802.3bt (60 or 100W).

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

### Specifications

<b>Description</b>	Unmanaged 6 Port IEEE 802.3bt PoE 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 3.5A max at 115VAC, 2.5A max at 230VAC
<b>DC Power Requirements</b>	+46 to +57VDC, 4.47A @ 56VDC – 60W models +46 to +57VDC, 7.33A @ 56VDC – 100W models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max), 60W HPoE IEEE 802.3bt (60 and 100W)
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.6 lbs. (735 grams); w/AC/DC Adapter 3.7 lbs. (1703 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

10GPoEBT/Sx 60W	10GPoEBT/Sx 100W	Description
3060B-0-24-pt	3062B-0-24-pt	2x 1/10G SFP/SFP+ Uplinks and 4x 10/100/1000 Copper
<b>Power Options (p):</b>		
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord		
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord		
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord		
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter		
<b>Operating Temperature Options (t):</b>		
<leave blank> = Commercial temperature (0 to 50°C)		
W = Wide temperature (-40 to 60°C)		
Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8		

# OmniConverter® 10G Unmanaged Switch

## OmniConverter® 10GPoE+/Sx PoE Ethernet Switch Unmanaged 6 and 10 Port PoE/PoE+ 10G Ethernet Switch

- Unmanaged PoE/PoE+ 1/10G Ethernet Switches
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+
- Four or eight 10/100/1000 copper PoE user ports
- Supports jumbo frames up to 10,240 bytes



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter 10GPoE+/Sx are compact unmanaged PoE and PoE+ Ethernet switches that feature two 1/10G uplink ports and four or eight 10/100/1000 RJ-45 copper Power Sourcing Power-over-Ethernet user ports.

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

### Specifications

<b>Description</b>	Unmanaged 6 and 10 Port PoE/PoE+ 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 3.5A max at 115VAC, 2.5A max at 230VAC
<b>DC Power Requirements</b>	+46 to +57VDC, 2.33A @ 56VDC – 4 port models +46 to +57VDC, 4.49A @ 56VDC – 8 port models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.5 lbs. (720 grams); w/AC/DC Adapter 3.6 lbs. (1645 grams) - 4P 1.7 lbs. (755 grams); w/AC/DC Adapter 3.8 lbs. (1723 grams) - 8P
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

10GPoE+/Sx 4 User Port	10GPoE+/Sx 8 User Port	Description
9581-0-24-pt	9581-0-28-pt	2x 1/10G SFP/SFP+ Uplinks
<b>Power Options (p):</b>		
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord 9 = Direct DC input, 2 pin terminal, no AC/DC power adapter		
<b>Operating Temperature Options (t):</b>		
<leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C) Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8		

# OmniConverter® 1G Unmanaged Switch

## 1G Unmanaged Switches

### OmniConverter® G/Sx Ethernet Switch

#### Unmanaged 6 and 10 Port 1G Switch

- Unmanaged 6 and 10 port Gigabit Ethernet switch
- Two 10/100/1000 copper or standard/CWDM fiber uplink ports
- Four or eight 10/100/1000 copper user ports
- ST, SC and LC fixed fiber ports or 100M/1G SFP transceivers
- Supports jumbo frames up to 10,240 bytes



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

#### Description

The OmniConverter G/Sx are compact unmanaged Ethernet switches that feature copper or fiber uplink ports and four or eight 10/100/1000 RJ-45 copper user ports.

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches.

#### Specifications

<b>Description</b>	Unmanaged 6 and 10 Port Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.2A max at 115VAC; 0.1A max at 230VAC
<b>DC Power Requirements</b>	+12 to +57VDC, 0.68A @ 12VDC, 0.17A @ 48VDC – 4 port models +12 to +57VDC, 0.75A @ 12VDC, 0.19A @ 48VDC – 8 port models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.5 lbs. (720 grams); w/AC/DC Adapter 2.0 lbs. (913 grams) - 4P 1.6 lbs. (735 grams); w/AC/DC Adapter 2.1 lbs. (941 grams) - 8P
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

#### Ordering

G/Sx 4 User Port	G/Sx 8 User Port	Description
2860-0-14-pt 2862-0-14-pt 2866-0-14-pt 2862-6-14-pt	2860-0-18-pt 2862-0-18-pt 2866-0-18-pt 2862-6-18-pt	ST 850nm MM 220/550m SC 850nm MM 220/550m LC 850nm MM 220/550m SC 1310nm MM 2km
2861-1-14-pt 2863-1-14-pt 2867-1-14-pt	2861-1-18-pt 2863-1-18-pt 2867-1-18-pt	ST 1310nm SM 12km SC 1310nm SM 12km LC 1310nm SM 12km
2863-2-14-pt 2863-3-14-pt 2863-4-14-pt 2863-5-14-pt	2863-2-18-pt 2863-3-18-pt 2863-4-18-pt 2863-5-18-pt	SC 1310nm SM 34km SC 1550nm SM 80km SC 1550nm SM 110km SC 1550nm SM 140km
2870-0-14-pt 2871-0-14-pt	2870-0-18-pt 2871-0-18-pt	SC 13/15 MM-SF 220/550m SC 15/13 MM-SF 220/550m
2870-1-14-pt 2871-1-14-pt 2870-2-14-pt 2871-2-14-pt	2870-1-18-pt 2871-1-18-pt 2870-2-18-pt 2871-2-18-pt	SC 13/15 SM-SF 20km SC 15/13 SM-SF 20km SC 13/15 SM-SF 40km SC 15/13 SM-SF 40km
2879-0-14-pt 2879-0-24-pt 2879-1-24-pt	2879-0-18-pt 2879-0-28-pt 2879-1-28-pt	1x 1000Mbps SFP Uplink 2x 1000Mbps SFP Uplinks 2x RJ-45 Uplinks

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord
- 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord
- 9 = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

W = Wide temperature (-40 to 60°C)

Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8

See [1000M Fiber Specifications](#) for optical parameters.

# OmniConverter® 1G Unmanaged Switch

## OmniConverter® GHPoEBT/Sx PoE Ethernet Switch Unmanaged 6 Port 60/100W IEEE 802.3bt 1G Switch

- Unmanaged High-Power 60W/100W PoE Gigabit Ethernet Switches
- GHPoEBT/Sx supports 60W Pre-BT HPoE and IEEE 802.3bt 60W or 100W
- Two 10/100/1000 copper or standard/CWDM fiber uplink ports
- Four 10/100/1000 copper PoE user ports
- ST, SC and LC fixed fiber ports or 100M/1G SFP transceivers
- Supports jumbo frames up to 10,240 bytes



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter GHPoEBT/Sx are compact High-Power PoE Ethernet switches that feature copper or fiber uplink ports and four 10/100/1000 RJ-45 copper Power Sourcing Power-over-Ethernet user ports. The GHPoEBT/Sx supports PoE, PoE+, legacy 60W HPoE and IEEE 802.3bt (60 or 100W).

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

### Specifications

<b>Description</b>	Unmanaged 6 Port High-Power PoE Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 3.5A max at 115VAC, 2.5A max at 230VAC
<b>DC Power Requirements</b>	+46 to +57VDC, 4.46A @ 56VDC – 60W models +46 to +57VDC, 7.31A @ 56VDC – 100W models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max), IEEE 802.3bt (60 and 100W)
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.6 lbs. (735 grams); w/AC/DC Adapter 3.7 lbs. (1703 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

### Ordering

GHPoEBT/Sx 60W	GHPoEBT/Sx 100W	Description
3000B-0-14-pt	3040B-0-14-pt	ST 850nm MM 220/550m
3002B-0-14-pt	3042B-0-14-pt	SC 850nm MM 220/550m
3006B-0-14-pt	3046B-0-14-pt	LC 850nm MM 220/550m
3002B-6-14-pt	3042B-6-14-pt	SC 1310nm MM 2km
3001B-1-14-pt	3041B-1-14-pt	ST 1310nm SM 12km
3003B-1-14-pt	3043B-1-14-pt	SC 1310nm SM 12km
3007B-1-14-pt	3047B-1-14-pt	LC 1310nm SM 12km
3003B-2-14-pt	3043B-2-14-pt	SC 1310nm SM 34km
3003B-3-14-pt	3043B-3-14-pt	SC 1550nm SM 80km
3003B-4-14-pt	3043B-4-14-pt	SC 1550nm SM 110km
3003B-5-14-pt	3043B-5-14-pt	SC 1550nm SM 140km
3010B-0-14-pt	3050B-0-14-pt	SC 13/15 MM-SF 220/550m
3011B-0-14-pt	3051B-0-14-pt	SC 15/13 MM-SF 220/550m
3010B-1-14-pt	3050B-1-14-pt	SC 13/15 SM-SF 20km
3011B-1-14-pt	3051B-1-14-pt	SC 15/13 SM-SF 20km
3010B-2-14-pt	3050B-2-14-pt	SC 13/15 SM-SF 40km
3011B-2-14-pt	3051B-2-14-pt	SC 15/13 SM-SF 40km
3019B-0-14-pt	3059B-0-14-pt	1x 1000Mbps SFP Uplink
3019B-0-24-pt	3059B-0-24-pt	2x 1000Mbps SFP Uplinks
3019B-1-24-pt	3059B-1-24-pt	2x RJ-45 Uplinks

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord
- 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord
- 9 = Direct DC input, 2 pin terminal, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

W = Wide temperature (-40 to 60°C)

Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8

See [1000M Fiber Specifications](#) for optical parameters.

# OmniConverter® 1G Unmanaged Switch

## OmniConverter® GPoE+/Sx PoE Ethernet Switch Unmanaged 6 and 10 Port PoE/PoE+ 1G Switch

- Unmanaged 6 and 10 port PoE/PoE+ Ethernet switch
- Two 10/100/1000 copper or standard/CWDM fiber uplink ports
- Four or eight 10/100/1000 copper PoE user ports
- ST, SC and LC fixed fiber ports or 100M/1G SFP transceivers
- Supports jumbo frames up to 10,240 bytes



See [OmniConverter Ethernet Switch Overview](#) for the complete list of features.

### Description

The OmniConverter GPoE+/Sx are compact unmanaged PoE and PoE+ Ethernet switches that feature copper or fiber uplink ports and four or eight 10/100/1000 RJ-45 copper Power Sourcing Power-over-Ethernet user ports.

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

### Specifications

<b>Description</b>	Unmanaged 6 and 10 Port PoE/PoE+ Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 3.5A max at 115VAC, 2.5A max at 230VAC
<b>DC Power Requirements</b>	+46 to +57VDC, 2.31A @ 56VDC – 4 port models +46 to +57VDC, 4.47A @ 56VDC – 8 port models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Dimension (W x D x H)</b>	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)
<b>Weight</b>	1.5 lbs. (720 grams); w/AC/DC Adapter 3.7 lbs. (1703 grams) 1.7 lbs. (755 grams); w/AC/DC Adapter 3.8 lbs. (1723 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support 2 year AC power adapter warranty

See [1000M Fiber Specifications](#) for optical parameters.

### Ordering

GPoE+/Sx 4 User Port	GPoE+/Sx 8 User Port	Description
9440-0-14-pt	9440-0-18-pt	ST 850nm MM 220/550m
9442-0-14-pt	9442-0-18-pt	SC 850nm MM 220/550m
9446-0-14-pt	9446-0-18-pt	LC 850nm MM 220/550m
9442-6-14-pt	9442-6-18-pt	SC 1310nm MM 2km
9441-1-14-pt	9441-1-18-pt	ST 1310nm SM 12km
9443-1-14-pt	9443-1-18-pt	SC 1310nm SM 12km
9447-1-14-pt	9447-1-18-pt	LC 1310nm SM 12km
9443-2-14-pt	9443-2-18-pt	SC 1310nm SM 34km
9443-3-14-pt	9443-3-18-pt	SC 1550nm SM 80km
9443-4-14-pt	9443-4-18-pt	SC 1550nm SM 110km
9443-5-14-pt	9443-5-18-pt	SC 1550nm SM 140km
9450-0-14-pt	9450-0-18-pt	SC 13/15 MM-SF 220/550m
9451-0-14-pt	9451-0-18-pt	SC 15/13 MM-SF 220/550m
9450-1-14-pt	9450-1-18-pt	SC 13/15 SM-SF 20km
9451-1-14-pt	9451-1-18-pt	SC 15/13 SM-SF 20km
9450-2-14-pt	9450-2-18-pt	SC 13/15 SM-SF 40km
9451-2-14-pt	9451-2-18-pt	SC 15/13 SM-SF 40km
9459-0-14-pt	9459-0-18-pt	1x 1000Mbps SFP Uplink
9459-0-24-pt	9459-0-28-pt	2x 1000Mbps SFP Uplinks
9459-1-24-pt	9459-1-28-pt	2x RJ-45 Uplinks

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 1** = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord
- 2** = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 8** = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord
- 9** = Direct DC input, 2 pin terminal, no AC/DC power adapter

#### Operating Temperature Options (t):

- <leave blank>** = Commercial temperature (0 to 50°C)
- W** = Wide temperature (-40 to 60°C)
- Z** = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8

# OmniConverter® Media Converter Overview

## OmniConverter® Media Converter Overview

- Layer 2 Ethernet switch that forwards frames to any port based on their MAC address
- Models with two fiber uplink ports support redundant uplinks and daisy-chain configurations for high availability network applications.
- The mode of operation can be configured using easily accessible DIP-switches.
- 100M and 1G models are available with fixed fiber ST, SC, LC connectors or Small Form Pluggable (SFP) transceiver receptacles. The fiber ports support multimode or single-mode and dual fiber or single-fiber. SFPs support a variety of standard and CWDM/DWDM wavelengths.
- 10G models feature a Small Form Pluggable (SFP) transceiver receptacle port supporting 10/100/1000BASE-T, 1000BASE-T, 2.5BASE-T, 5GBASE-T and 10GBASE-T copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers. They also support standard or CWDM/DWDM wavelengths transceivers. The RJ-45 user ports support multi-gigabit/multi-rate speeds of 10Mbps, 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps.
- PoE models feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely to save time and expense by eliminating the need to dispatch manpower to remote network sites.
- Models can be wall mounted, rack mounted (8260-0) or DIN-rail mounted using an optional mounting bracket (8250-0) or DIN-rail mounting clip (8251-0). They are available with an external 100 to 240V AC/DC power adapter or with a DC terminal connector.
- Models support commercial (0° to 50°C), wide (-40° to 60°C) and extended (-40° to 75°C) operating temperature ranges

## Regulatory and Environmental Specifications

OmniConverter FPoE+/S, FPoE+/SE, GPoE+/S, GPoE+/SE, GPoEBT/S	
<b>Regulatory Compliances (Pending)</b>	Safety: UL 62368-1, UL 60950-1, IEC 62368-1, IEC 60950-1, CAN/CSA C22.2 No. 60950-1, EN 60950-1:2006, CE Mark, UKCA
	EMI: FCC 47CFR, Part 15 Class A, AS/NZS 3548, AS/NZS 4417.1, AS/NZS 4417.2, ICES-003 Issue 3, EN 55032/CISPR 22, EN55035, EN61000-3-2, VCCI V3/2001.04 (CISPR 22A:1997, Class A)
	EMS: IEC/EN61000-4-2 ; Contact discharge ±8kV (Level 4) Air Discharge ±15kV (Level 4), IEC/EN61000-4-3; 80mhz to 1Ghz ; 10v/m, 1.4GHz to 2.0ghz ; 5 v/m, 2.0GHz to 2.7GHz ; 5 v/m, IEC/EN61000-4-4; DC power line +/- 4 kV, Data Line +/- 4kV, IEC/EN61000-4-5; DC power line, Line/Line +/- 2kV, Line/Earth +/- 2kV (Level 3), Data Line /Earth +/- 4kV (Level 4), IEC/EN61000-4-6; 150kHz to 80 MHz; 10Vrms, IEC/EN61000-4-8; 30A/m (Magnetic Field) (Power Frequency Magnetic Field Immunity Test), IEC/EN61000-4-11; 70% dip, 40% variation, IEC/EN61000-4-12, IEC/EN 61000-6-2, IEC/EN61000-6-4, IEC 60068-2-27; Test Ga and guidance: Acceleration, steady state, IEC 60068-2-6; Test Fc: Vibration (sinusoidal)
	IP Rating: IP40 Protection
	ACT: TAA, BAA, NDAA
<b>Environmental</b>	REACH, RoHS and WEEE

# OmniConverter® Media Converter Overview

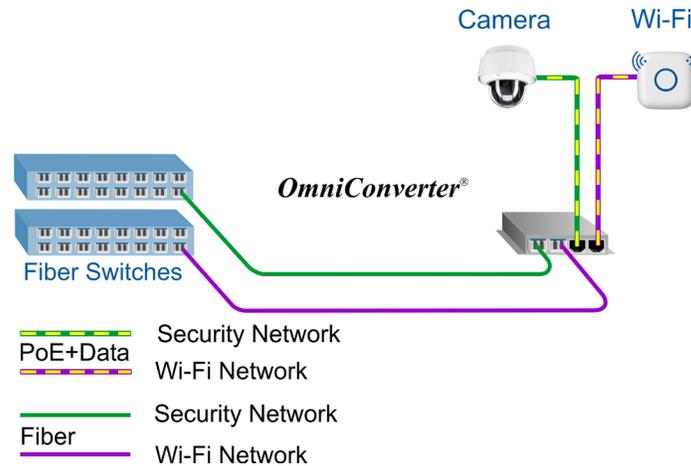
OmniConverter 10G/S, 10GPoE+/S and 10GPoEBT/S	
<b>Regulatory Compliances (*Pending)</b>	<p>Safety: UL 62368-1*, UL 60950-1*, IEC 62368-1*, IEC 60950-1*, EN 62368-1*, EN 60950-1*, CAN/CSA C22.2 No. 62368-1-14*, CAN/CSA C22.2 No. 60950-1*, CE Mark, UKCA</p> <p>EMC: EN 55032/24 CE Emissions/Immunity, UKCA</p> <p>EMI: CISPR 32, FCC 47 Part 15 Subpart B Class A</p> <p>EMS: IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV (DC models), IEC 61000-4-4 EFT: Power: 1 kV; Signal: 1 kV (AC models), IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV (DC models), IEC 61000-4-5 Surge: Power: 1 kV Line/Line; 2 kV Line/Gnd; Signal: 2 kV (AC models), IEC 61000-4-6 CS: Signal: 3 Vrms, IEC 61000-4-8 (Magnetic Field) 30 A/m, IEC 61000-4-11 (Voltage Dips, interrupts)</p> <p>IP Rating: IP20 Protection</p> <p>ACT: TAA, BAA, NDAA</p>
<b>Environmental</b>	RoHS, WEEE, REACH

# OmniConverter® Media Converter Overview

## Dual Device Mode Application

The Dual Device feature is available on models with two uplink ports and two RJ-45 user ports.

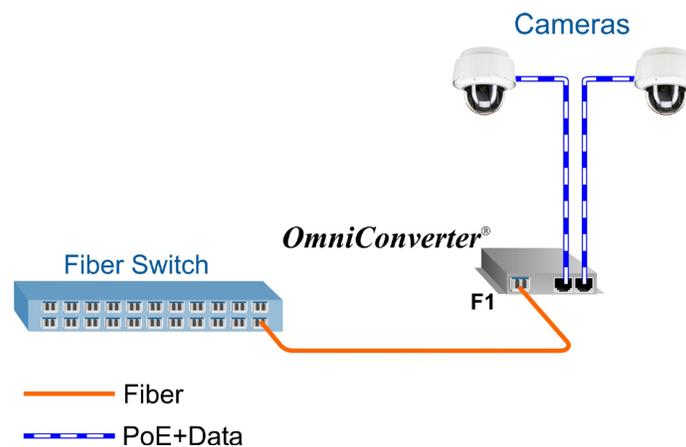
The example below depicts a scenario where a surveillance security (green) network and a Wi-Fi (purple) network are sharing a single hub distribution location. Using the two uplinks and the Dual Switch mode facilitates using a single PoE switch driving both the Cameras and the Wi-Fi Access Points while maintaining isolation between the networks.



## Directed Switch Mode

The Directed Switch feature is available on models with one or two uplink ports and two RJ-45 user ports.

When configured for Directed Switch Mode, traffic from all the RJ-45 user ports is only forwarded to the uplink port F1, preventing the broadcast traffic from flooding other network ports. The data traffic on the additional uplink port F2 (not shown) is also forwarded to port F1. Incoming traffic from F1 follows MAC address mapping.



# OmniConverter® Media Converter Overview

Media Converter Products						
Product Line	FPoE+/S	FPoE+/SE	GPoE+/S	GPoE+/SE	GPoEBT/S	GPoEBT/S
Model # Range	9320N - 9339N	9398N - 9399N	9420N - 9439N	9498N - 9499N	9500N - 9519N	9150N - 9169N

## Ports and Data Rates

Number of Uplink Ports	1 or 2	1	1 or 2	1	1 or 2	1 or 2
Number of RJ-45 Ports	1 or 2	1	1 or 2	1	1 or 2	1 or 2
RJ-45 Data Rates	10/100	10/100	10/100/1000	10/100/1000	10/100/1000	10/100/1000
Uplink Data Rates	Copper 10/100 Fiber 100 SFP 100 FF	Copper 10/100 Fiber 100 SFP	Copper 10/100/1000 Fiber 100/1000 SFP 1000 FF	Copper 10/100/1000 Fiber 1000 SFP	Copper 10/100/1000 Fiber 100/1000 SFP 1000 FF	Copper 10/100/1000 Fiber 100/1000 SFP 1000 FF

## Features

Frame size	10K	10K	10K	10K	10K	10K
PoE Power Level	IEEE 802.3af IEEE 802.3at	IEEE 802.3af IEEE 802.3at	IEEE 802.3af IEEE 802.3at	IEEE 802.3af IEEE 802.3at	IEEE 802.3af IEEE 802.3at 60W HPoE IEEE 802.3bt 60W	IEEE 802.3af IEEE 802.3at 60W HPoE IEEE 802.3bt 100W
PoE Reset	✓	-	✓	-	✓	✓
Direct Switch Mode	✓	-	✓	-	✓	✓
Dual Device Mode	✓	-	✓	-	✓	✓
Link Fault Modes	✓	-	✓	-	✓	✓

## External Power Source

DC Terminal	2-Pin	2-Pin	2-Pin	2-Pin	2-Pin	2-Pin
AC Connector	Barrel	Barrel	Barrel	Barrel	Barrel	Barrel or DIN

## Operating Temperature

Commercial 0 to 50°C	✓	✓	✓	✓	✓	✓
Wide -40 to 60°C	✓	✓	✓	✓	✓	✓
Industrial -40 to 75°C	✓	-	✓	-	✓	✓

## Catalog Reference

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# OmniConverter® Media Converter Overview

10Gigabit Ethernet Media Converter Products				
Product Line	10G/S	10GPoE+/S	10GPoEBT/S	10GPoEBT/S
Model # Range	9190	9191	9192	9194B

## Ports and Data Rates

Max Ports	3	3	3	3
Max Fiber Ports	1	1	1	1
Max RJ-45 User Ports	2	2	2	2
RJ-45 Data Rates	10/100/1000 2.5G, 5G, 10G	10/100/1000 2.5G, 5G, 10G	10/100/1000 2.5G, 5G, 10G	10/100/1000 2.5G, 5G, 10G
Fiber Data Rates	1G, 10G 10/100/1000, 1000, 2.5G, 5G 10G			

## Features

Frame size	10K	10K	10K	10K
PoE Power Level	-	IEEE 802.3af	IEEE 802.3af IEEE 802.3at IEEE 802.3bt 60W	IEEE 802.3af IEEE 802.3at IEEE 802.3bt 100W
PSE Mode	-	Alt A	Alt A	Alt A
Auto Polarity X-over	-	✓	✓	✓
PoE Reset	-	✓	✓	✓

## External Power Source

DC Terminal	2-Pin	2-Pin	2-Pin	2-Pin
AC Connector	Barrel	Barrel or DIN-6	Barrel or DIN-6	Barrel or DIN-6

## Operating Temperature

Commercial 0 to 50°C	✓	✓	✓	✓
Wide -40 to 60°C	✓	✓	✓	✓
Industrial -40 to 75°C	-	-	-	-

## Catalog Reference

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# OmniConverter® Media Converter Overview

## 10G Media Converters

### OmniConverter® 10G/S Media Converter

#### Multi-Gigabit/Multi-Rate 10M, 100M, 1G, 2.5G, 5G, 10G Media Converters

- Unmanaged 10G multi-gigabit/multi-rate media converters
- One 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink port
- Supports copper and fiber SFP/SFP+ transceivers
- RJ-45 user ports support 10M, 100M, 1G, 2.5G, 5G and 10G
- One or two copper user ports and one fiber port



See [OmniConverter Media Converter Overview](#) for the complete list of features.

#### Description

The OmniConverter 10G/S are unmanaged multi-gigabit/multi-rate media converters featuring one 1/10G SFP/SFP+ uplink port and one or two multi-gigabit/multi-rate RJ-45 user ports.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 10Mbps, 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps.

The SFP transceiver receptacle port supports a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10G copper transceivers and 1G and 10G fiber transceivers.

The OmniConverter 10G/S are standard Layer 2 Ethernet switches that forward frames to any port based on their MAC address. The 10G/S supports frame sizes up to 10,240 bytes.

#### Specifications

<b>Description</b>	Unmanaged Multi-gigabit/Multi-rate copper to 1/10G SFP Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.1A @ 120VAC; 1 RJ-45 100 to 240VAC 50/60Hz, 0.14A @ 120VAC; 2 RJ-45
<b>DC Power Requirements</b>	+12 to +57VDC; 0.19A @ 56VDC; 1 RJ-45 +12 to +57VDC; 0.25A @ 56VDC; 2 RJ-45
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Dimension (W x D x H)</b>	4.8" x 6.0" x 1.375" (121.92 mm x 152.4 mm x 34.93 mm)
<b>Weight</b>	1.1 lbs. (498.9 grams); w/ AC/DC Adapter: 1.6 lbs. (725.7 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

10G/S	Description
9190-0-1y-pt	1 x SFP/SFP+ Uplink
<b>Number of RJ-45 Ports (y):</b>	
1 = One RJ-45 Ports	
2 = Two RJ-45 Ports	
<b>Power Options (p):</b>	
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord	
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord	
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	

# OmniConverter® 10G Media Converter

## OmniConverter® 10GPoEBT/S Media Converter

### Multi-Gigabit/Multi-Rate 10M, 100M, 1G, 2.5G, 5G, 10G PoE Media Converters

- Unmanaged 10G multi-gigabit/multi-rate media converters
- One 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink port
- Supports copper and fiber SFP/SFP+ transceivers
- RJ-45 user ports support 10M, 100M, 1G, 2.5G, 5G and 10G
- One or two copper user ports and one fiber port
- Models support IEEE 802.3af, IEEE 802.3at and IEEE 802.3bt (60W and 100W)



See [OmniConverter Media Converter Overview](#) for the complete list of features.

### Description

The OmniConverter 10GPoEBT/S are unmanaged multi-gigabit/multi-rate PoE media converters featuring one 1/10G SFP/SFP+ uplink port and one or two multi-gigabit/multi-rate RJ-45 Power-over-Ethernet user ports. They support PoE, PoE+ and PoE++ up to 100 watts depending on the model.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 10Mbps, 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. The 10GPoEBT/S supports IEEE 802.3bt (60 and 100W) per user port depending on the model.

The SFP transceiver receptacle port supports a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10G copper transceivers and 1G and 10G fiber transceivers.

### Specifications

<b>Description</b>	Unmanaged Multi-gigabit/Multi-rate copper to 1/10G SFP IEEE 802.3bt /60/100W Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.69A @ 120VAC; 60W models; 1 RJ-45 100 to 240VAC 50/60Hz, 1.30A @ 120VAC; 60W models; 2 RJ-45 100 to 240VAC 50/60Hz, 1.08A @ 120VAC ; 100W models; 1 RJ-45 100 to 240VAC 50/60Hz, 2.08A @ 120VAC; 100W models; 2 RJ-45
<b>DC Power Requirements</b>	+46 to +57VDC; 1.28A @ 56VDC; 60W models; 1 RJ-45 +46 to +57VDC; 2.43A @ 56VDC; 60W models; 2 RJ-45 +46 to +57VDC; 2.00A @ 56VDC; 100W models; 1 RJ-45 +46 to +57VDC; 3.87A @ 56VDC; 100W models; 2 RJ-45
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.af, 802.3at, 802.3bt
<b>Dimension (W x D x H)</b>	4.8" x 6.0" x 1.375" (121.92 mm x 152.4 mm x 34.93 mm)
<b>Weight</b>	1.1 lbs. (498.9 grams); module only w/ AC/DC Adapter: 3.2 lbs. (1452 grams); 60W model w/ AC/DC Adapter: 3.7 lbs. (1678 grams); 100W model
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

10GPoEBT/S 60W	10GPoEBT/S 100W	Description
9192B-0-1y-pt	9194B-0-1y-pt	1 x SFP/SFP+ Uplink
<b>Number of RJ-45 802.3bt Ports (y):</b>		
1 = One RJ-45 Ports		
2 = Two RJ-45 Ports		
<b>Power Options (p):</b>		
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord		
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord		
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord		
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter		
<b>Operating Temperature Options (t):</b>		
<leave blank> = Commercial temperature (0 to 50°C)		
W = Wide temperature (-40 to 60°C)		

# OmniConverter® 10G PoE Media Converter

## OmniConverter® 10GPoE+/S Media Converter

### Multi-Gigabit/Multi-Rate 10M, 100M, 1G, 2.5G, 5G, 10G PoE Media Converters

- Unmanaged 10G multi-gigabit/multi-rate media converters
- One 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink port
- Supports copper and fiber SFP/SFP+ transceivers
- RJ-45 user ports support 10M, 100M, 1G, 2.5G, 5G and 10G
- One or two copper user ports and one fiber port
- Models support IEEE 802.3af and IEEE 802.3at



See [OmniConverter Media Converter Overview](#) for the complete list of features.

### Description

The OmniConverter 10GPoE+/S are unmanaged multi-gigabit/multi-rate PoE media converters featuring one 1/10G SFP/SFP+ uplink port and one or two multi-gigabit/multi-rate RJ-45 Power-over-Ethernet user ports. They support PoE, PoE+ and PoE++ up to 100 watts depending on the model.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 10Mbps, 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. The 10GPoE+/S supports IEEE 802.3at (15 and 30W).

The SFP transceiver receptacle port supports a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10G copper transceivers and 1G and 10G fiber transceivers.

### Specifications

<b>Description</b>	Unmanaged Multi-gigabit/Multi-rate copper to 1/10G SFP IEEE 802.3at 15/30W Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.40A @ 120VAC; 1 RJ-45 100 to 240VAC 50/60Hz, 0.72A @ 120VAC; 2 RJ-45
<b>DC Power Requirements</b>	+46 to +57VDC; 0.74A @ 56VDC 1 RJ-45 +46 to +57VDC; 1.34A @ 56VDC; 2 RJ-45
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.3af, 802.3at
<b>Dimension (W x D x H)</b>	4.8" x 6.0" x 1.375" (121.92 mm x 152.4 mm x 34.93 mm)
<b>Weight</b>	1.1 lbs. (499 grams); w/ AC/DC Adapter: 3.2 lbs. (1452 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

10GPoE+/S	Description
9191-0-1y-pt	1 x SFP/SFP+ Uplink
<b>Number of RJ-45 PoE/PoE+ Ports (y):</b>	
1 = One RJ-45 Ports	
2 = Two RJ-45 Ports	
<b>Power Options (p):</b>	
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord	
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord	
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	

# OmniConverter® 1G PoE Media Converter

## 1G PoE Media Converters

### OmniConverter® GPoEBT/S PoE Media Converter

#### Unmanaged 60/100W IEEE 802.3bt 1G Media Converter

- Unmanaged High-Power 60W/100W PoE Gigabit Ethernet Media Converters
- Supports IEEE 802.3bt 60W or 100W
- Supports 100BASE-X or 1000BASE-X Copper SFP transceivers
- One or two 10/100/1000 copper PoE user ports and one or two fiber ports
- ST, SC and LC fixed fiber ports



See [OmniConverter Media Converter Overview](#) for the complete list of features.

#### Description

The OmniConverter GPoEBT/S is a multi-port High-Power PoE Ethernet media converters that feature one or two uplink ports and one or two 10/100/1000 RJ-45 copper PoE ports. The uplink ports can be fiber or copper. The GPoEBT/S is an IEEE 802.3bt media converter featuring 60 and 100 watts per RJ-45 port and supports frame sizes up to 10,240 bytes.

The media converter support SFP transceiver receptacle ports supporting 10/100/1000 SGMII or 1Gbps SERDES copper transceivers and 100Mbps and 1000Mbps standard, CWDM and DWDM fiber transceivers in a variety of distances and fiber types.

The GPoEBT/S supports Directed Switch mode, which directs multicast traffic (such as video) only to the appropriate uplink port, preventing the multicast video traffic from flooding other network ports.

Models with two fiber port support redundant fiber uplinks and Dual Device mode that enables the GPoEBT/S to operate as two independent and isolated Ethernet media converters.

#### Specifications

<b>Description</b>	Unmanaged 10/100/1000 Copper to 100 or 1000 Fiber 60W and 100W Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.62A @ 120VAC – 60W models; 1 RJ-45 100 to 240VAC 50/60Hz, 1.19A @ 120VAC – 60W models; 2 RJ-45 100 to 240VAC 50/60Hz, 1.0A @ 120VAC – 100W models; 1 RJ-45 100 to 240VAC 50/60Hz, 1.95A @ 120VAC – 100W models; 2 RJ-45
<b>DC Power Requirements</b>	+46 to +57VDC, 1.16A @ 56VDC – 60W models; 1 RJ-45 +46 to +57VDC, 2.25A @ 56VDC – 60W models; 2 RJ-45 +46 to +57VDC, 1.88A @ 56VDC – 100W models; 1 RJ-45 +46 to +57VDC, 3.67A @ 56VDC – 100W models; 2 RJ-45
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max) IEEE 802.3bt (60 and 100W)
<b>Dimension (W x D x H)</b>	4.5" x 6.0" x 1.0" (114.3 mm x 152.4 mm x 25.4 mm)
<b>Weight</b>	1.1 lbs. (498.9 grams); w/ AC/DC Adapter: 2.8 lbs. (1256.4 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

GPoEBT/S 60W	GPoEBT/S 100W	Description
9500N-0-ypt	9150N-0-ypt	ST 850nm MM 220/550m
9502N-0-ypt	9152N-0-ypt	SC 850nm MM 220/550m
9506N-0-ypt	9156N-0-ypt	LC 850nm MM 220/550m
9501N-1-ypt	9151N-1-ypt	ST 1310nm SM 12km
9503N-1-ypt	9153N-1-ypt	SC 1310nm SM 12km
9507N-1-ypt	9157N-1-ypt	LC 1310nm SM 12km
9501N-2-ypt	9151N-2-ypt	ST 1310nm SM 34km
9503N-2-ypt	9153N-2-ypt	SC 1310nm SM 34km
9503N-3-ypt	9153N-3-ypt	SC 1550nm SM 80km
9503N-4-ypt	9153N-4-ypt	SC 1550nm SM 110km
9503N-5-ypt	9153N-5-ypt	SC 1550nm SM 140km
9510N-0-ypt	9160N-0-ypt	SC 13/15 MM-SF 220/550m
9511N-0-ypt	9161N-0-ypt	SC 15/13 MM-SF 220/550m
9510N-1-ypt	9160N-1-ypt	SC 13/15 SM-SF 20km
9511N-1-ypt	9161N-1-ypt	SC 15/13 SM-SF 20km
9510N-2-ypt	9160N-2-ypt	SC 13/15 SM-SF 40km
9511N-2-ypt	9161N-2-ypt	SC 15/13 SM-SF 40km
9519N-0-ypt	9169N-0-ypt	1x 100/1000Mbps SFP Uplink
9519N-1-ypt	9169N-1-ypt	2x 100/1000Mbps SFP Uplinks
9518N-0-ypt	9168N-0-ypt	1x 10/100/1000Mbps RJ-45 Uplink
9518N-1-ypt	9168N-1-ypt	2x 10/100/1000Mbps RJ-45 Uplink
MM = Multimode, SM = Single-mode, SF = Single-fiber		
<b>Number of RJ-45 PoE/PoE+ Ports (y):</b>		
1 = One RJ-45 Ports		
2 = Two RJ-45 Ports		
<b>Power Options (p):</b>		
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord		
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord		
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord		
9 = Direct DC input, 3 pin terminal, no AC/DC power adapter		
<b>Operating Temperature Options (t):</b>		
<leave blank> = Commercial temperature (0 to 50°C)		
W = Wide temperature (-40 to 60°C)		
Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8		

See [1000M Fiber Specifications](#) for optical parameters.

# OmniConverter® 1G PoE Media Converter

## OmniConverter® GPoE+/S PoE Media Converter Unmanaged PoE/PoE+ 1G Media Converter

- Unmanaged PoE/PoE+ Gigabit Ethernet Media Converters
- Supports IEEE 802.3af (15.4W) and 802.3at (30W)
- Two 10/100/1000 RJ-45 or two Gigabit fiber uplink ports
- Supports 100BASE-X or 1000BASE-X SFP transceivers
- One or two 10/100/1000 copper PoE user ports and one or two uplink ports
- ST and SC fixed fiber ports



See [OmniConverter Media Converter Overview](#) for the complete list of features.

### Description

The OmniConverter GPoE+/S are multi-port IEEE 802.3at PoE+ Ethernet media converters that feature one or two fiber uplink ports, one or two copper uplink ports and one or two 10/100 RJ-45 PoE+ ports. The GPoE+/S provides up to 30W PoE+ (IEEE 802.3at) per RJ-45 user port and supports frame sizes up to 10,240 bytes.

The media converter support SFP transceiver receptacle ports supporting 10/100/1000 SGMII or 1Gbps SERDES copper transceivers and 100Mbps and 1000Mbps standard, CWDM and DWDM fiber transceivers in a variety of distances and fiber types.

Configurable features include Directed Switch mode, Dual Device mode, Redundant uplinks, link modes and a PoE power reset function that enables a PD device to be re-initialized remotely.

### Specifications

<b>Description</b>	Unmanaged 10/100/1000 Copper to 100 or 1000 Fiber PoE/PoE+ Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.33A @ 120VAC – 1 PoE+ RJ-45 models 100 to 240VAC 50/60Hz, 0.62A @ 120VAC – 2 PoE+ RJ-45 models
<b>DC Power Requirements</b>	+46 to +57VDC, 0.62A @ 56VDC – 1 PoE+ RJ-45 models +46 to +57VDC, 1.16A @ 56VDC – 2 PoE+ RJ-45 models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Dimension (W x D x H)</b>	3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
<b>Weight</b>	1.0 lbs. (453.6 grams), w/ AC/DC Adapter: 1.9 lbs. (852.6 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

GPoE+/S	Description
9420N-0-ypt 9422N-0-ypt	ST 850nm MM 220/550m SC 850nm MM 220/550m
9421N-1-ypt 9423N-1-ypt	ST 1310nm SM 12km SC 1310nm SM 12km
9421N-2-ypt 9423N-2-ypt 9423N-3-ypt 9423N-4-ypt 9423N-5-ypt	ST 1310nm SM 34km SC 1310nm SM 34km SC 1550nm SM 80km SC 1550nm SM 110km SC 1550nm SM 140km
9430N-0-ypt 9431N-0-ypt	SC 13/15 MM-SF 220/550m SC 15/13 MM-SF 220/550m
9430N-1-ypt 9431N-1-ypt 9430N-2-ypt 9431N-2-ypt	SC 13/15 SM-SF 20km SC 15/13 SM-SF 20km SC 13/15 SM-SF 40km SC 15/13 SM-SF 40km
9439N-0-ypt 9439N-1-ypt	1x 100/1000Mbps SFP Uplink 2x 100/1000Mbps SFP Uplinks
9438N-0-ypt 9438N-1-ypt	1x 10/100/1000Mbps RJ-45 Uplink 2x 10/100/1000Mbps RJ-45 Uplink

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Number of RJ-45 PoE/PoE+ Ports (y):

- 1 = One RJ-45 Ports
- 2 = Two RJ-45 Ports

#### Power Options (p):

- 1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord
- 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord
- 9 = Direct DC input, 2 pin terminal, no AC/DC power adapter

#### Operating Temperature Options (t):

- <leave blank> = Commercial temperature (0 to 50°C)
- W = Wide temperature (-40 to 60°C)
- Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8

See [1000M Fiber Specifications](#) for optical parameters.

# OmniConverter® 1G PoE Media Converter

## OmniConverter® GPoE+/SE PoE Media Converter

### Unmanaged PoE/PoE+ 1G Media Converter

- Unmanaged PoE/PoE+ Gigabit Ethernet Media Converters
- Supports IEEE 802.3af (15.4W) and 802.3at (30W)
- Supports 1000BASE-X SFP transceivers
- One SFP transceiver or one RJ-45 uplink port and one RJ-45 PoE+ port
- Plug and Play operation



See [OmniConverter Media Converter Overview](#) for the complete list of features.

### Description

The OmniConverter GPoE+/SE are media converters that convert 10/100/1000BASE-T copper to 1000BASE-X fiber and support Power-over-Ethernet (PoE and PoE+). Classified as Power Sourcing Equipment (PSE), they can provide up to 30W PoE+ (IEEE 802.3at) on the RJ-45 port.

The GPoE+/SE is available with one SFP transceiver receptacle uplink port or one RJ-45 uplink port and one RJ-45 PoE+ port.

The media converters are plug-in-play requiring no set-up.

### Specifications

<b>Description</b>	Unmanaged 10/100/1000 Copper to 1000 Fiber PoE/PoE+ Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.31A @ 120VAC
<b>DC Power Requirements</b>	+46 to +57VDC, 0.59A @ 56VDC
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Dimension (W x D x H)</b>	3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
<b>Weight</b>	1.0 lbs.; 453.6 grams, w/ AC/DC Adapter: 1.8 lbs.; 816.4grams
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

GPoE+/SE	Description
9498N-0-1pt	1 x 10/100/1000 RJ-45 Uplink Port + 1 x 10/100/1000 RJ-45 30W Port
9499N-0-1pt	1 x SFP Uplink Port + 1 x 10/100/1000 RJ-45 30W Port
<b>Power Options (p):</b> <b>1</b> = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord <b>2</b> = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord <b>8</b> = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord <b>9</b> = Direct DC input, 2 pin terminal, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) <b>W</b> = Wide temperature (-40 to 60°C)	

See [1000M Fiber Specifications](#) for optical parameters.

# OmniConverter® 100M PoE Media Converter

## 100M PoE Media Converters

### OmniConverter® FPoE+/S PoE Media Converter

#### Unmanaged PoE/PoE+ Fast Ethernet Media Converter

- Unmanaged PoE/PoE+ Fast Ethernet Media Converters
- Supports IEEE 802.3af (15.4W) and 802.3at (30W)
- Two 100/1000 RJ-45 or two Gigabit fiber uplink ports
- Supports 100BASE-X SFP transceivers
- One or two 100/1000 copper PoE user ports and one or two uplink ports
- ST and SC fixed fiber ports



See [OmniConverter Media Converter Overview](#) for the complete list of features.

#### Description

The OmniConverter FPoE+/S are multi-port IEEE 802.3at PoE+ Ethernet media converters that feature one or two fiber uplink ports, one or two copper uplink ports and one or two 10/100 RJ-45 PoE+ ports. The OmniConverter FPoE+/S provides up to 30W PoE+ (IEEE 802.3at) per RJ-45 port and supports frame sizes up to 10,240 bytes.

Configurable features include Directed Switch mode, Dual Device mode, Redundant uplinks, link modes and a PoE power reset function that enables a PD device to be re-initialized remotely.

#### Specifications

<b>Description</b>	Unmanaged 10/100 Copper to 100 Fiber PoE/PoE+ Media Converter
<b>Frame Size</b>	Up to 10,240 bytes (FPoE/SL: up to 2,000 bytes)
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.33A @ 120VAC – 1 PoE+ RJ-45 models 100 to 240VAC 50/60Hz, 0.62A @ 120VAC – 2 PoE+ RJ-45 models
<b>DC Power Requirements</b>	+46 to +57VDC, 0.78A @ 56VDC – 1 PoE+ RJ-45 models +46 to +57VDC, 1.45A @ 56VDC – 2 PoE+ RJ-45 models
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Dimension (W x D x H)</b>	3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
<b>Weight</b>	1.0 lbs. (453.6 grams), w/ AC/DC Adapter: 1.9 lbs. (852.6 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

FPoE+/S	Description
9320N-0-ypt 9322N-0-ypt	ST 1310nm MM 5km SC 1310nm MM 5km
9321N-1-ypt 9323N-1-ypt	ST 1310nm SM 30km SC 1310nm SM 30km
9321N-2-ypt 9323N-2-ypt 9323N-3-ypt	ST 1310nm SM 60km SC 1310nm SM 60km SC 1550nm SM 120km
9330N-0-ypt 9331N-0-ypt	SC 13/15 MM-SF 5km SC 15/13 MM-SF 5km
9330N-1-ypt 9331N-1-ypt 9330N-2-ypt 9331N-2-ypt	SC 13/15 SM-SF 20km SC 15/13 SM-SF 20km SC 13/15 SM-SF 40km SC 15/13 SM-SF 40km
9339N-0-ypt 9339N-1-ypt	1x 100Mbps SFP Uplink 2x 100Mbps SFP Uplinks
9338N-0-ypt 9338N-1-ypt	1x 10/100Mbps RJ-45 Uplink 2x 10/100Mbps RJ-45 Uplinks

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Number of RJ-45 PoE/PoE+ Ports (y):

- 1 = One RJ-45 Ports
- 2 = Two RJ-45 Ports

#### Power Options (p):

- 1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord
- 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord
- 9 = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

- <leave blank> = Commercial temperature (0 to 50°C)
- W = Wide temperature (-40 to 60°C)
- Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8

See [100M Fiber Specification](#) for optical parameters.

# OmniConverter® 100M PoE Media Converter

## OmniConverter® FPoE+/SE PoE Media Converter Unmanaged PoE/PoE+ Fast Ethernet Media Converter

- Unmanaged PoE/PoE+ Fast Ethernet Media Converters
- Supports IEEE 802.3af (15.4W) and 802.3at (30W)
- Supports 100BASE-X SFP transceivers
- One SFP transceiver or one RJ-45 uplink port and one RJ-45 PoE+ port
- Plug and Play operation



See [OmniConverter Media Converter Overview](#) for the complete list of features.

### Description

The OmniConverter FPoE+/SE are media converters that convert 10/100BASE-T copper to 100BASE-X fiber and support Power-over-Ethernet (PoE and PoE+). Classified as Power Sourcing Equipment (PSE), they can provide up to 30W PoE+ (IEEE 802.3at) on the RJ-45 port. The OmniConverter FPoE+/SE support frame sizes up to 10,240 bytes.

The FPoE+/SE is available with one SFP transceiver receptacle uplink port or one RJ-45 uplink port and one RJ-45 PoE+ port.

The media converters are plug-in-play requiring no set-up.

### Specifications

<b>Description</b>	Unmanaged 10/100 Copper to 100 Fiber PoE/PoE+ Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.xx A @ 120VAC
<b>DC Power Requirements</b>	+46 to +57VDC, 0.xx A @ 56VDC
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Dimension (W x D x H)</b>	3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
<b>Weight</b>	1.0 lbs.; 453.6 grams, w/ AC/DC Adapter: 1.8 lbs.; 816.4grams
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

FPoE+/SE	Description
9398N-0-1pt	1 x 10/100 RJ-45 Uplink Port + 1 x 10/100 RJ-45 30W Port
9399N-0-1pt	1 x SFP Uplink Port + 1 x 10/100 RJ-45 30W Port
<b>Power Options (p):</b> 1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord 9 = Direct DC input, 2 pin terminal, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C)	

See [100M Fiber Specification](#) for optical parameters.

# OmniConverter® PoE Ethernet Extender Overview

## OmniConverter® PoE Ethernet Extender Overview

The OmniConverter PoE Extenders are unmanaged gigabit PoE Extenders that enable the delivery of Ethernet data and Power over Ethernet (PoE) beyond the standard 100 meter limit of twisted pair copper cabling. Distance and power extension up to 700 meters can be achieved by daisy-chaining multiple extenders.

Utilizing data regeneration and voltage level boosting capabilities, OmniConverter PoE Extenders can be daisy chained to break through the Ethernet copper distance barrier and deliver 10/100/1000 data and power to multiple PoE powered devices.

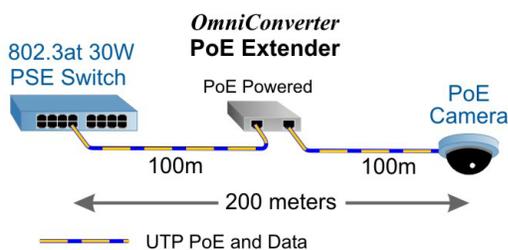
Due to cable resistance, voltage drop across the cabling could lower the voltage below the minimum standard requirement of the attached PD. OmniConverter PoE Extenders have smart voltage-boosting technology to maintain the required standard compliant PoE voltage levels between hops.

The PoE Extenders are plug-and-play devices that support auto-negotiation of data rates and duplex modes for simple in-line installation to instantly extend industrial network distances.

- Unmanaged 30W and 60W Gigabit PoE Extender
- Multiple port configurations:
  - 1 RJ-45 PoE/PD + 1 RJ-45 PoE/PSE
  - 1 RJ-45 PoE/PD + 2 RJ-45 PoE/PSE
- Can be Powered by IEEE 802.3at or High-Power PoE 60W Power Sourcing Equipment
- Can Power IEEE 802.3af PoE, IEEE 802.3at or High-Power PoE 60W Powered Devices
- Voltage-boosting technology to guarantee minimum voltage requirement to the Powered Device
- Plug-and-Play installation with auto-negotiation of data rates and duplex modes
- Wall, Rack and DIN-rail mountable
- The OmniConverter supports commercial (0 to +50°C) and wide (-40 to +60°C) operating temperature ranges

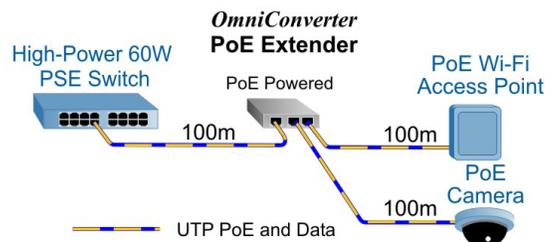
### Basic PoE Extender Application

This example shows an OmniConverter PoE Extender powering an 802.3at PoE camera, and achieving a distance of 200 meters (656 feet) between an 802.3at PoE PSE switch and the camera.



### PoE Extender with Two PDs Application

This example shows a OmniConverter PoE Extender with two PoE/PSE ports powering an 802.3af camera and an 802.3at Wi-Fi Access Point 200 meters from the High-Power PoE 60W PSE switch.



# OmniConverter® PoE Ethernet Extender Overview

OmniConverter 1G PoE Copper Extenders							
Models	Model #	Max PoE Power	Number of Uplink Ports	Number of Downlink Ports	RJ-45 Data Rates	Frame Size	Temp
GXPoE+/S	2000	IEEE 802.3at 30W	1	1 or 2	10/100/1000	10K	0 to 50°C -40 to 60°C
GXHPoE+/S	2001	HPoE 60W	1	1 or 2	10/100/1000	10K	0 to 50°C -40 to 60°C

## Regulatory and Environmental Specifications

Description	GXPoE+/S and GXHPoE+/S
<b>Compliances</b>	<p>Safety: UL 62368-1, UL 60950-1, IEC 62368-1, IEC 60950-1, EN 62368-1, EN 60950-1, CAN/CSA C22.2 No. 62368-1-14, CAN/CSA C22.2 No. 60950-1, CE Mark, UKCA</p> <p>EMC: EN 55032/24 CE Emissions/Immunity, IEC 61000-6-4 Industrial Emissions, IEC 61000-6-2 Industrial Immunity</p> <p>EMI: CISPR 32, FCC 47 Part 15 Subpart B Class A</p> <p>EMS: IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m, (passed at 10V/m), IEC 61000-4-4 EFT: Power: 1 kV, (passed at 2 kV), IEC 61000-4-4 EFT: Signal: 0.5 kV, (passed at 1 kV), IEC 61000-4-5 Surge: Power: 1 kV, (passed at 2 kV), IEC 61000-4-5 Surge: Signal: 1 kV, IEC 61000-4-6 CS: Signal: 3 Vrms, (passed at 10 Vrms)</p> <p>IP Rating: IP20 Protection</p> <p>ACT: TAA, BAA, NDAA</p>
<b>Environmental</b>	REACH, RoHS, WEEE

# OmniConverter® PoE Ethernet Extender

## OmniConverter® GXPoE+/S and GXHPoE/S

### Unmanaged 30W and 60W Gigabit PoE Extender with Booster Technology

- Unmanaged 30W and 60W Gigabit PoE Extender
- Can be Powered by IEEE 802.3at or High-Power PoE 60W Power Sourcing Equipment
- Can Power IEEE 802.3af PoE, IEEE 802.3at or High-Power PoE 60W Powered Devices
- Voltage-boosting technology to guarantee minimum voltage requirement to the Powered Device



See [OmniConverter PoE Extender Overview](#) for the complete list of features.

### Description

OmniConverter GXPoE+/S and GXHPoE/S are unmanaged gigabit PoE Extenders that enable the delivery of Ethernet data and Power over Ethernet (PoE) beyond the standard 100 meter limit of twisted pair copper cabling.

### Specifications

<b>Description</b>	10/100/1000 Copper Ethernet PoE/PD to PoE/PSE Extenders
<b>Frame Size</b>	Up to 10,240 bytes
<b>PoE/PD Input</b>	+/-42.5 to +/-57VDC
<b>PoE/PSE Output</b>	+/-50 to +/-57VDC
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max) HPoE 60W
<b>Dimension (W x D x H)</b>	3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	0.82 lbs. (372 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

GXPoE+/S 30W	GXHPoE/S 60W	Description
2000-11t	2001-11t	One RJ-45 PoE/PD and one RJ-45 PoE/PSE
2000-12t	2001-12t	One RJ-45 PoE/PD and two RJ-45 PoE/PSE
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) <b>W</b> = Wide temperature (-40 to 60°C)		

### Distances and Power

PSE Source Power	Number of Extenders	Distance Meters / Feet	Available Power for PD per Cable Type		
			Category 5	Category 5e	Category 6
802.3at 30W	1	200m / 656 ft.	17.6 watts	18.6 watts	19.9 watts
	2	300m / 984 ft.	11.3 watts	12.2 watts	13.5 watts
	3	400m / 1,312 ft.	6.0 watts	6.7 watts	7.9 watts
	4	500m / 1,640 ft.	1.2 watts	1.8 watts	2.9 watts
High-Power 60W	1	200m / 656 ft.	38.8 watts	40.8 watts	43.5 watts
	2	300m / 984 ft.	29.2 watts	31.1 watts	34.0 watts
	3	400m / 1,312 ft.	21.4 watts	23.2 watts	25.9 watts
	4	500m / 1,640 ft.	14.8 watts	16.6 watts	19.0 watts
	5	600m / 1,968 ft.	9.1 watts	10.7 watts	12.9 watts
	6	700m / 2,296 ft.	4.0 watts	5.4 watts	7.4 watts
	7	800m / 2,624 ft.	-	Data Only	2.4 watts

Distances are based on a daisy chain topology with no drop locations along chain. Distances also based on using certified Cat 5, Cat 5e or Cat 6 cabling with no patch cables or panels.

# OmniConverter® PoE Ethernet Injector Overview

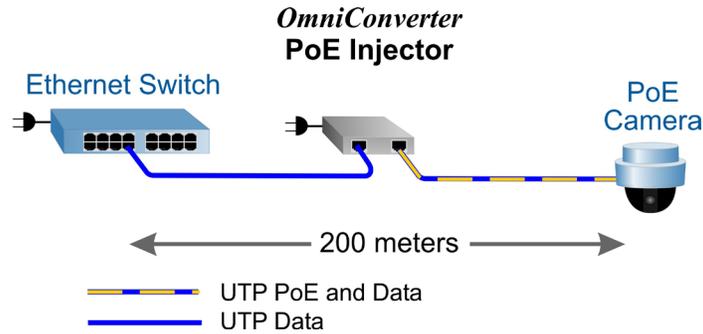
## OmniConverter® PoE Ethernet Injector Overview

OmniConverter GPoE+/I is an unmanaged gigabit Ethernet power injector that will extend the Ethernet link distance and adds power over the data lines.

The OmniConverter GPoE+/I features one RJ-45 uplink port and one RJ-45 downlink IEEE 802.3af/at PoE+ port. The uplink and downlink ports support 10/100/1000Mbps data rates and are capable of operating asymmetric rates.

### Basic PoE Injector Application

This example shows an OmniConverter PoE Injector powering an 802.3at PoE camera, and achieving a distance of 200 meters between an Ethernet switch and the camera.



### OmniConverter 1G PoE Copper Injector

Models	Model #	Max PoE Power	Number of Uplink Ports	Number of Downlink Ports	RJ-45 Data Rates	Frame Size	Temp
GPoE+/I	1700	IEEE 802.3at 30W	1	1	10/100/1000	9K	0 to 50°C -40 to 60°C -40 to 75°C

### Regulatory and Environmental Specifications

Description	GPoE+/I
<b>Compliances (Pending)</b>	Safety: UL 62368-1, UL 60950-1, IEC 62368-1, IEC 60950-1, CAN/CSA C22.2 No. 60950-1, EN 60950-1:2006, CE Mark, UKCA
	EMC: IEC/EN 61000-4-2, IEC/EN 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-5, IEC/EN 61000-4-6, IEC/EN 61000-4-8, IEC/EN 61000-4-11
	EMI: FCC 47CFR, Part 15 Class A, AS/NZS 3548, AS/NZS 4417.1, AS/NZS 4417.2, ICES-003 Issue 3, EN 55032/CISPR 22, EN 55035, EN 61000-3-2, VCCI V3/2001.04 (CISPR 22A:1997, Class A)
	ACT: TAA, BAA, NDAA
<b>Environmental</b>	REACH, RoHS, WEEE

# OmniConverter® PoE Ethernet Injector

## OmniConverter® GPoE+/I Unmanaged Gigabit PoE Injector

- Ultra Compact Unmanaged IEEE 802.3at 30W PoE+ Power Injector
- 10/100/1000 RJ-45 uplink port and 10/100/1000 RJ-45 PoE+ downlink port
- Support IEEE 802.3af/at on downlink port
- Auto-negotiate PoE power level requested by the attached PD
- Plug-and-Play installation with auto-negotiation of data rates and duplex modes



### Description

OmniConverter GPoE+/I is an ultra compact unmanaged gigabit Ethernet power injector that will extend the Ethernet link distance and adds power over the data lines.

The OmniConverter GPoE+/I features one RJ-45 uplink port and one RJ-45 downlink IEEE 802.3af/at PoE+ port. The uplink and downlink ports support 10/100/1000Mbps data rates and are capable of operating asymmetric rates.

### Specifications

<b>Description</b>	10/100/1000BASE-T RJ-45 to 10/100/1000BASE-T RJ-45 PoE+ Ethernet Injector
<b>Frame Size</b>	Up to 9K bytes
<b>AC Power Requirements</b>	100 - 120VAC/50 - 60Hz, 1.5A @ 120VAC (max)
<b>DC Power Requirements</b>	+44 to +57VDC; 0.57A @ 56VDC
<b>Environment</b>	Operating: 0 to 50° C , -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Dimension (W x D x H)</b>	1.75" x 2.50" x 0.84" (44.5 mm x 63.5 mm x 21.3 mm)
<b>Weight</b>	2.5 oz. (70.9 grams), w/ AC/DC Adapter 12 oz. (340.2 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

GPoE+/I	Description
1700-pt	1 x 10/100/1000 RJ-45 uplink port + 1 x 10/100/1000 RJ-45 30W PoE+ port
<b>Power Options (p):</b>	
Standalone models without integrated mounting brackets	
<b>A</b> = US AC/DC Adapter, 100 - 240 VAC included	
<b>B</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>C</b> = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>G</b> = No AC/DC Adapter provided	
<b>I</b> = External AC/DC Adapter, 100 - 240 VAC included, with Japanese Power Cord	
Standalone models with integrated mounting brackets	
<b>D</b> = US AC/DC Adapter, 100 - 240 VAC included	
<b>E</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>F</b> = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>H</b> = No AC/DC Adapter provided	
<b>J</b> = External AC/DC Adapter, 100 - 240 VAC included, with Japanese Power Cord	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
<b>W</b> = Wide temperature (-40 to 60°C)	
<b>Z</b> = Extended temperature (-40 to 75°C)	

# OmniConverter® Single Pair Ethernet Overview

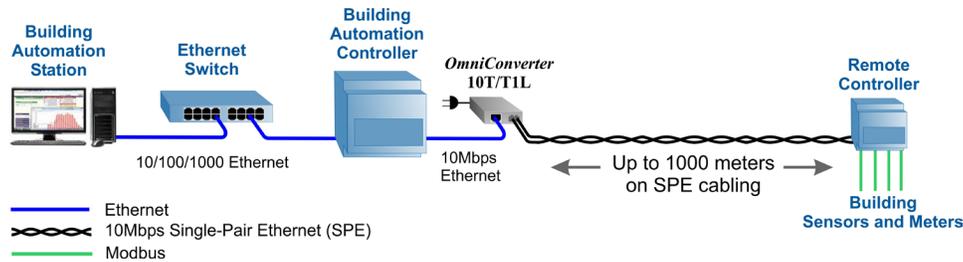
## OmniConverter® Single Pair Ethernet Overview

The OmniConverter Single Pair Ethernet converters are IEEE 802.3cg compliant products that convert 10BASE-T Ethernet to single-pair 10BASE-T1L Ethernet. They use single-pair Ethernet cabling (SPE) to extend the Ethernet link distance up to 1km.

The Single Pair Ethernet converters feature one 2-pin terminal block 10BASE-T1L IEEE 802.3cg compliant port and one 10BASE-T RJ-45 port supporting 10Mbps full-duplex data rates.

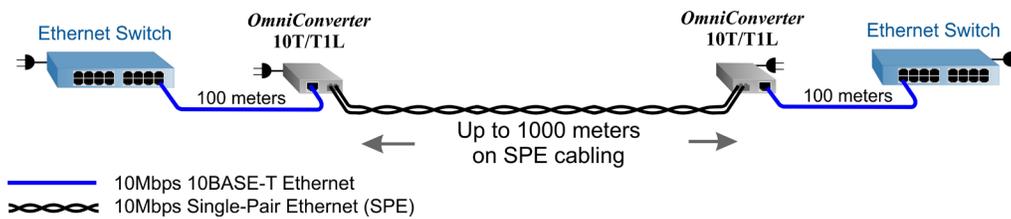
### Building Automation Application

This example shows an OmniConverter 10T/T1L extending a 10Mbps Ethernet data connection from a Building Automation Controller over a single-pair Ethernet cable to a Remote Controller. The Remote Controller is gathering data from building sensors and meters.



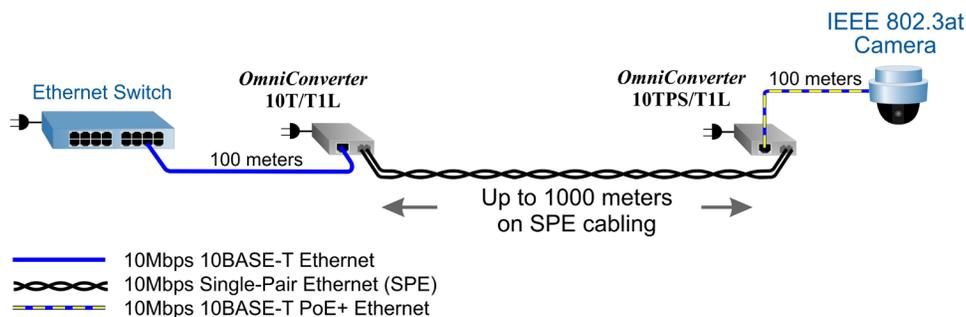
### Extend Ethernet up to 1000 meters

This example shows an OmniConverter 10T/T1L extending a 100 meter 10Mbps Ethernet data connection across a single-pair Ethernet cable to another OmniConverter 10T/T1L. The total distance extension is up to 1200 meters.



### Extend Ethernet up to 1000 meters and Inject up to 30W PoE+

This example shows an OmniConverter 10T/T1L extending a 10Mbps Ethernet data connection across a SPE cable to a 10T1PS/T1L powering an 802.3at PoE camera.



Models	Model #	Max PoE Power	Number of Uplink Ports	Number of Downlink Ports	RJ-45 Data Rates	Frame Size	Temp
10T/T1L	2010-000	-	1	1	10	1518	0 to 50°C -40 to 60°C -40 to 75°C
10T1PS/T1L	2010-010	IEEE 802.3at 30W	1	1	10	1518	0 to 50°C -40 to 60°C -40 to 75°C

# OmniConverter® Single Pair Ethernet Overview

## Regulatory and Environmental Specifications

<b>Compliances (Pending)</b>	Safety: UL 62368-1, UL 60950-1, IEC 62368-1, IEC 60950-1, CAN/CSA C22.2 No. 60950-1, EN 60950-1:2006 CE Mark, UKCA  EMC: IEC/EN 61000-4-2, IEC/EN 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-5, IEC/EN 61000-4-6, IEC/EN 61000-4-8, IEC/EN 61000-4-11  EMI: FCC 47CFR, Part 15 Class A, AS/NZS 3548, AS/NZS 4417.1, AS/NZS 4417.2, ICES-003 Issue 3 EN 55032/CISPR 22, EN 55035, EN 61000-3-2, VCCI V3/2001.04 (CISPR 22A:1997, Class A)  ACT: TAA, BAA, NDAA
<b>Environmental</b>	REACH, RoHS, WEEE

# OmniConverter® 10BASE-T1L Converter

## OmniConverter® 10T/T1L

### Unmanaged 10Mbps 10BASE-T to 10BASE-T1L Converter

- Ultra compact unmanaged 10BASE-T to 10BASE-T1L Ethernet media converter
- IEEE 802.3cg single pair Ethernet (SPE) on 2-Pin or IEC 63171-2 connector
- AC to DC Power Adapter or 2-Pin DC terminal
- Plug-and-Play installation



See [OmniConverter Single Pair Ethernet Overview](#) for the complete list of features

### Description

OmniConverter 10T/T1L is an ultra compact cost-effective unmanaged 10Mbps Ethernet media converter that converts 10BASE-T Ethernet to single-pair 10BASE-T1L Ethernet. The 10BASE-T1L uses single-pair Ethernet cabling (SPE) to extend the Ethernet link distance up to 1km.

The OmniConverter 10T/T1L features one 2-pin terminal block 10BASE-T1L IEEE 802.3cg compliant port and one 10BASE-T RJ-45 port supporting 10Mbps full-duplex data rates.

The 10T/T1L is available as a standalone unit with or without integrated mounting brackets. It can be DIN-rail mounted using the optional DIN-rail mounting clip kit (8252-0). They are available with an external 100 to 240VAC power adapter or with a 2-Pin DC terminal connector.

### Specifications

<b>Description</b>	10BASE-T RJ-45 to 10BASE-T1L 2-Pin Terminal
<b>Frame Size</b>	Up to 1518 bytes
<b>AC Power Requirements</b>	100 - 120VAC/50 - 60Hz, 0.6A @ 120VAC (max)
<b>DC Power Requirements</b>	+9 to +24VDC; 0.34A @ 12VDC
<b>Environment</b>	Operating: 0 to 50° C , -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3cg
<b>Dimension (W x D x H)</b>	w/o Bracket: 1.75" x 2.50" x 0.84" (44.5 mm x 63.5 mm x 21.3 mm) w/ Bracket: 2.10" x 2.50" x 0.84" (53.3 mm x 63.5 mm x 21.3 mm)
<b>Weight</b>	2.5 oz. (70.9 grams), w/ AC/DC Adapter 12 oz. (340.2 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

10T/T1L	Description
2010-c00-pt	1 x 10BASE-T RJ-45 port + 1 x 10BASE-T1L port
<b>SPE Connector Type Options (c):</b>	
0 = 2-pin Terminal 2 = IEC 63171-2 SPE jack	
<b>Power Options (p):</b>	
Standalone models without integrated mounting brackets	
A = US AC/DC Adapter, 100 - 240 VAC included	
B = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
C = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
G = No AC/DC Adapter provided	
I = External AC/DC Adapter, 100 - 240 VAC included, with Japanese Power Cord	
Standalone models with integrated mounting brackets	
D = US AC/DC Adapter, 100 - 240 VAC included	
E = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
F = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
H = No AC/DC Adapter provided	
J = External AC/DC Adapter, 100 - 240 VAC included, with Japanese Power Cord	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	
Z = Extended temperature (-40 to 75°C)	

Single-Pair Ethernet (SPE) cable: IEC 61156-13 (fixed) or IEC 61156-14 (flexible) 18AWG cable or better

# OmniConverter® 10BASE-T1L Converter

## OmniConverter® 10TPS/T1L

### Unmanaged 10Mbps 10BASE-T to 10BASE-T1L PoE+ Converter

- Ultra compact unmanaged 10BASE-T to 10BASE-T1L Ethernet media converter
- IEEE 802.3cg single pair Ethernet (SPE) on 2-Pin or IEC 63171-2 connector
- Support IEEE 802.3at (PoE+) on RJ-45 port
- AC to DC Power Adapter or 2-Pin DC terminal
- Plug-and-Play installation



[See OmniConverter Single Pair Ethernet Overview for the complete list of features](#)

### Description

OmniConverter 10TPS/T1L is an ultra compact unmanaged 10Mbps Ethernet media converter that converts 10BASE-T PoE+ Ethernet to single-pair 10BASE-T1L Ethernet. The 10BASE-T1L uses single-pair Ethernet cabling (SPE) to extend the Ethernet link distance up to 1km. The 10TPS/T1L supports IEEE 802.3at (up to 30 watts) on the 10BASE-T RJ-45 port.

The OmniConverter 10TPS/T1L features one IEEE 802.3cg compliant 10BASE-T1L terminal or IEC 63171 SPE port and one 10BASE-T RJ-45 port supporting 10Mbps full-duplex data rates.

The 10TPS/T1L is available as a standalone unit with or without integrated mounting brackets. It can be DIN-rail mounted using the optional DIN-rail mounting clip kit (8252-0). They are available with an external 100 to 240VAC power adapter or with a 2-Pin DC terminal connector.

### Specifications

<b>Description</b>	10BASE-T PoE+ RJ-45 to 10BASE-T1L 2-Pin Terminal
<b>Frame Size</b>	Up to 1518 bytes
<b>AC Power Requirements</b>	100 - 120VAC/50 - 60Hz, 1.5A @ 120VAC (max)
<b>DC Power Requirements</b>	+44 to +57VDC; 0.56A @ 56VDC
<b>Environment</b>	Operating: 0 to 50° C , -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3cg IEEE 802.3af IEEE 802.3at
<b>Dimension (W x D x H)</b>	w/o Bracket: 1.75" x 2.50" x 0.84" (44.5 mm x 63.5 mm x 21.3 mm) w/ Bracket: 2.10" x 2.50" x 0.84" (53.3 mm x 63.5 mm x 21.3 mm)
<b>Weight</b>	2.5 oz. (70.9 grams), w/ AC/DC Adapter 12 oz. (340.2 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

10TPS/T1L	Description
2010-c10-pt	1 x 10BASE-T PoE+ RJ-45 port + 1 x 10BASE-T1L port
<b>SPE Connector Type Options (c):</b> 0 = 2-pin Terminal 2 = IEC 63171-2 SPE jack	
<b>Power Options (p):</b> Standalone models without integrated mounting brackets A = US AC/DC Adapter, 100 - 240 VAC included B = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord C = Direct DC input, 2 pin terminal connector, no AC/DC power adapter G = No AC/DC Adapter provided I = External AC/DC Adapter, 100 - 240 VAC included, with Japanese Power Cord Standalone models with integrated mounting brackets D = US AC/DC Adapter, 100 - 240 VAC included E = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord F = Direct DC input, 2 pin terminal connector, no AC/DC power adapter H = No AC/DC Adapter provided J = External AC/DC Adapter, 100 - 240 VAC included, with Japanese Power Cord	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C) Z = Extended temperature (-40 to 75°C)	

Single-Pair Ethernet (SPE) cable: IEC 61156-13 (fixed) or IEC 61156-14 (flexible) 18AWG cable or better

# OmniConverter® Single Pair PoE Overview

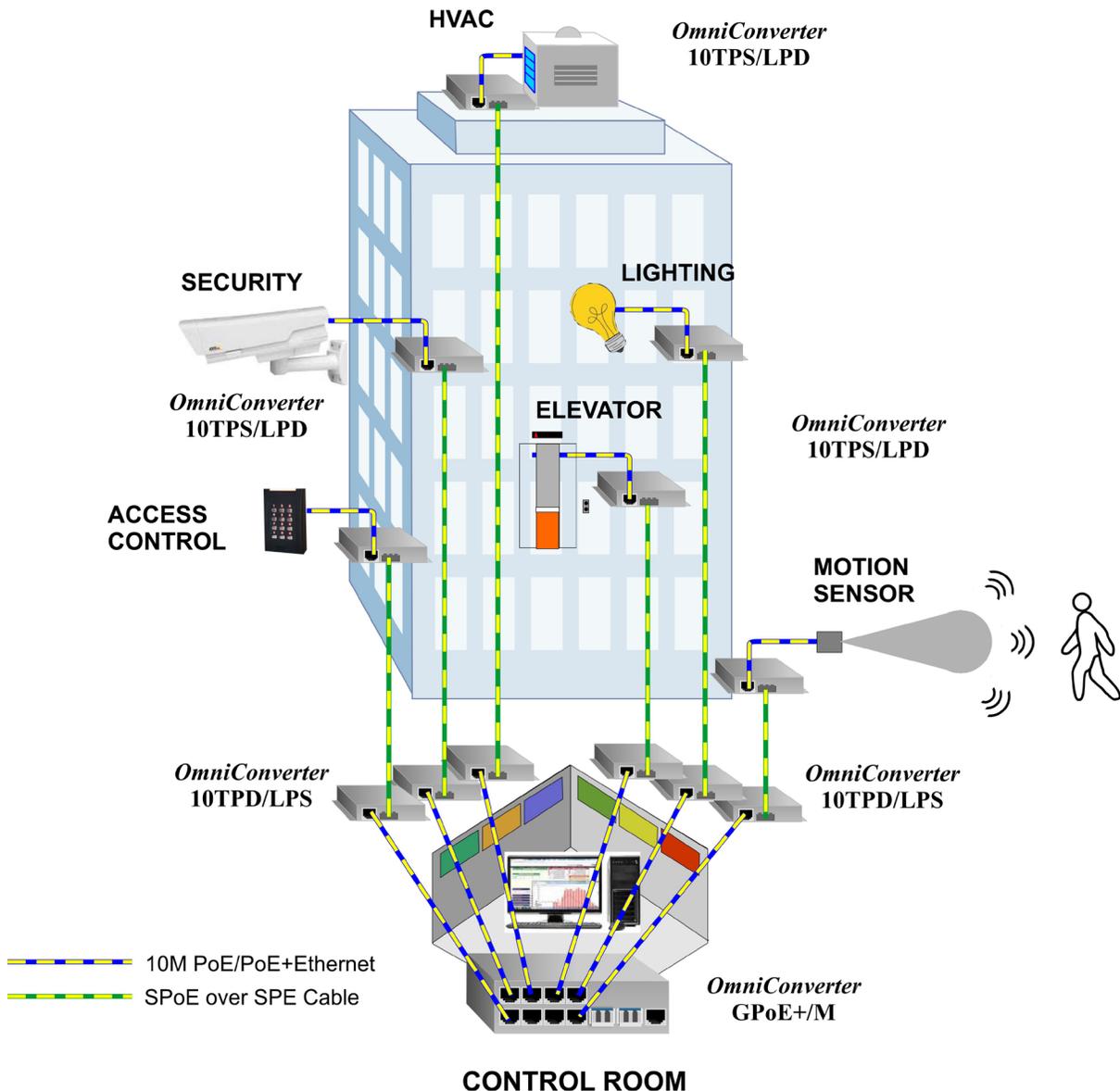
## OmniConverter® Single Pair Power over Ethernet Overview

The OmniConverter Single Pair Power over Ethernet converters are IEEE 802.3cg compliant products that function as PoE injectors and Powered Devices. They convert 10BASE-T Ethernet to single-pair 10BASE-T1L Ethernet. They use single-pair Ethernet cabling (SPE) to extend the Ethernet link distance up to 1km.

The Single Pair Power over Ethernet converters feature one IEEE 802.3cg compliant 10BASE-T1L terminal or IEC 63171-2 SPE port and one 10BASE-T RJ-45 port supporting 10Mbps full-duplex data rates.

### Building Automation Application

This example shows a Building Automation application using a combination of OmniConverter 10TPD/LPS and 10TPS/LPD to connect building systems back to a centralized control room. No external AC power is required for the modules since the 10TPD/LPS modules are powered by the GPoE+/M PoE+ switch and the 10TPS/LPD modules are powered over the SPE cable. Each building system is powered by PoE/PoE+ from the OmniConverter 10TPS/LPD modules. Systems controlled by the OmniConverter modules include Motion Detection, Lighting, Elevator Control, Access Control to Floors, Security Surveillance and HVAC.



# OmniConverter® Single Pair PoE Overview

10BASE-T to 10BASE-T1L Power over Ethernet Converters									
Models	Base Model #	10BASE-T Port (RJ-45)	Number of Uplink Ports	10BASE-T1L Port (3 Pin or IEC)		Number of Downlink Ports	Data Rate	Frame Size	Temp
10T/LPS	2020	-	1	SPoE PSE	Auto Detects Classes 10 - 15 30/58VDC PD	1	10Mbps	1518	0 to 50°C -40 to 60°C -40 to 75°C
10TPD/LPS	2030	PoE+ PD	1	SPoE PSE	Auto Detects Classes 10 - 15 30/58VDC PD	1	10Mbps	1518	0 to 50°C -40 to 60°C -40 to 75°C
10TPS/LPD58	2045	PoE+ PSE	1	SPoE PD	Class 15 58 VDC PD models	1	10Mbps	1518	0 to 50°C -40 to 60°C -40 to 75°C
10T/LPDS30	2050	-	1	SPoE PD	Class 12 30 VDC PD models with Splitter	1	10Mbps	1518	0 to 50°C -40 to 60°C -40 to 75°C
10T/LPDS58	2055	-	1	SPoE PD	Class 15 58 VDC PD models with Splitter	1	10Mbps	1518	0 to 50°C -40 to 60°C -40 to 75°C

## Regulatory and Environmental Specifications

<b>Compliances (Pending)</b>	Safety:	UL 62368-1, UL 60950-1, IEC 62368-1, IEC 60950-1, CAN/CSA C22.2 No. 60950-1, EN 60950-1:2006 CE Mark, UKCA
	EMC:	IEC/EN 61000-4-2, IEC/EN 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-5, IEC/EN 61000-4-6, IEC/EN 61000-4-8, IEC/EN 61000-4-11
	EMI:	FCC 47CFR, Part 15 Class A, AS/NZS 3548, AS/NZS 4417.1, AS/NZS 4417.2, ICES-003 Issue 3 EN 55032/CISPR 22, EN 55035, EN 61000-3-2, VCCI V3/2001.04 (CISPR 22A:1997, Class A)
	ACT:	TAA, BAA, NDAA
<b>Environmental</b>	REACH, RoHS, WEEE	

# OmniConverter® Single Pair PoE Converters

## OmniConverter® Single Pair Power over Ethernet

### Unmanaged 10Mbps 10BASE-T to 10BASE-T1L Converter

- Unmanaged 10BASE-T to 10BASE-T1L Power over Ethernet media converter
- IEEE 802.3cg single pair Ethernet (SPE) on 3-Pin or IEC 63171 connector
- Power over Ethernet
  - 10BASE-T – PoE+/PSE or PoE+/PD
  - 10BASE-T1L – SPoE/PSE or SPoE/PD
- Automatic detection of Class 10 through Class 15 PD devices
- 12VDC or 24VDC Power Splitter output



See [OmniConverter Single Pair Power over Ethernet Overview](#) for the complete list of features

### Description

The OmniConverter Single Pair Power over Ethernet converters are IEEE 802.3cg compliant products that function as PoE injectors and Powered Devices. They convert 10BASE-T Ethernet to single-pair 10BASE-T1L Ethernet. They use single-pair Ethernet cabling (SPE) to extend the Ethernet link distance up to 1km.

The Single Pair Power over Ethernet converters feature one IEEE 802.3cg compliant 10BASE-T1L terminal or IEC 63171-1 or IEC 63171-2 or IEC 63171-6 SPE port and one 10BASE-T RJ-45 port supporting 10Mbps full-duplex data rates.

They are available as a standalone unit with or without integrated mounting brackets. They can be DIN-rail mounted using the optional DIN-rail mounting clip kit (8252-0). Models are available with an external 100 to 240VAC power adapter or with a 2-Pin DC terminal connector.

## OmniConverter 10T/LPS

### Unmanaged 10BASE-T to 10BASE-T1L SPoE

#### Specifications

<b>Description</b>	10BASE-T to 10BASE-T1L SPoE
<b>Frame Size</b>	Up to 1518 bytes
<b>AC Power Requirements</b>	100 - 240VAC, 50-60Hz, 0.91A @ 120VAC
<b>DC Power Requirements</b>	+50 to +58VDC; 1.69A @ 56VDC
<b>Environment</b>	Operating: 0 to 50° C , -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3cg
<b>Dimension (W x D x H)</b>	w/o Bracket: 3.1" x 4.8" x 1.0" (78.7 mm x 121.9 mm x 25.4 mm) w/ Bracket: 3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
<b>Weight</b>	1.0 lbs. (453.6 grams), w/ AC/DC Adapter 1.9 lbs. (852.6 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

10T/LPS	Description
2020-c0-mpt	1 x 10BASE-T RJ-45 port + 1 x 10BASE-T1L SPoE port (Auto Detects Classes 10 - 15 30/58VDC PD)
<b>SPE Connector Type Options (c):</b>	
0 = 3-pin Terminal 1 = IEC 63171-1 SPE jack 2 = IEC 63171-2 SPE jack 6 = IEC 63171-6 SPE jack	
<b>Mounting Options (m):</b>	
0 = Without integrated mounting brackets 1 = With integrated mounting brackets	
<b>Power Options (p):</b>	
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord 9 = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C) Z = Extended temperature (-40 to 75°C)	

Single-Pair Ethernet (SPE) cable: IEC 61156-13 (fixed) or IEC 61156-14 (flexible) 18AWG cable or better

# OmniConverter® Single Pair PoE Converters

## OmniConverter 10TPD/LPS

### Unmanaged 10BASE-T PD to 10BASE-T1L SPoE

#### Specifications

<b>Description</b>	10BASE-T PD to 10BASE-T1L SPoE
<b>Frame Size</b>	Up to 1518 bytes
<b>AC Power Requirements</b>	N/A
<b>DC Power Requirements</b>	N/A
<b>Environment</b>	Operating: 0 to 50° C , -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.3cg, IEEE 802.3af, IEEE 802.3at
<b>Dimension (W x D x H)</b>	w/o Bracket: 3.1" x 4.8" x 1.0" (78.7 mm x 121.9 mm x 25.4 mm) w/ Bracket: 3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
<b>Weight</b>	1.0 lbs. (453.6 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

10TPD/LPS	Description
2030-c0-m0t	1 x 10BASE-T PD RJ-45 port + 1 x 10BASE-T1L SPoE port (Auto Detects Classes 10 - 15 30/58VDC PD)
<b>SPE Connector Type Options (c):</b> 0 = 3-pin Terminal 1 = IEC 63171-1 SPE jack 2 = IEC 63171-2 SPE jack 6 = IEC 63171-6 SPE jack	
<b>Mounting Options (m):</b> 0 = Without integrated mounting brackets 1 = With integrated mounting brackets	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C) Z = Extended temperature (-40 to 75°C)	

Single-Pair Ethernet (SPE) cable: IEC 61156-13 (fixed) or IEC 61156-14 (flexible) 18AWG cable or better

## OmniConverter 10TPS/LPD

### Unmanaged 10BASE-T PoE+ to 10BASE-T1L PD

#### Specifications

<b>Description</b>	10BASE-T PoE+ to 10BASE-T1L PD
<b>Frame Size</b>	Up to 1518 bytes
<b>AC Power Requirements</b>	N/A
<b>DC Power Requirements</b>	N/A
<b>Environment</b>	Operating: 0 to 50° C , -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.3cg, IEEE 802.3af, IEEE 802.3at
<b>Dimension (W x D x H)</b>	w/o Bracket: 3.1" x 4.8" x 1.0" (78.7 mm x 121.9 mm x 25.4 mm) w/ Bracket: 3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
<b>Weight</b>	1.0 lbs. (453.6 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

10TPS/LPD	Description
2045-c0-m0t	1 x 10BASE-T PoE+ RJ-45 1 x 10BASE-T1L PD (Class 15, 58VDC PD model))
<b>SPE Connector Type Options (c):</b> 0 = 3-pin Terminal 1 = IEC 63171-1 SPE jack 2 = IEC 63171-2 SPE jack 6 = IEC 63171-6 SPE jack	
<b>Mounting Options (m):</b> 0 = Without integrated mounting brackets 1 = With integrated mounting brackets	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C) Z = Extended temperature (-40 to 75°C)	

Single-Pair Ethernet (SPE) cable: IEC 61156-13 (fixed) or IEC 61156-14 (flexible) 18AWG cable or better

# OmniConverter® Single Pair PoE Converters

## OmniConverter 10T/LPDS

### Unmanaged 10BASE-T to 10BASE-T1L PD with Splitter

#### Specifications

<b>Description</b>	10BASE-T to 10BASE-T1L PD with Splitter
<b>Frame Size</b>	Up to 1518 bytes
<b>AC Power Requirements</b>	N/A
<b>DC Power Requirements</b>	N/A
<b>Environment</b>	Operating: 0 to 50° C , -40 to 60° C and -40 to 75°C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.3cg
<b>Dimension (W x D x H)</b>	w/o Bracket: 3.1" x 4.8" x 1.0" (78.7 mm x 121.9 mm x 25.4 mm) w/ Bracket: 3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
<b>Weight</b>	1.0 lbs. (453.6 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

10T/LPDS	Description
2050-cy-m0t	1 x 10BASE-T RJ-45 1 x 10BASE-T1L 30 VDC (Class 12) PD with Splitter
2055-cy-m0t	1 x 10BASE-T RJ-45 1 x 10BASE-T1L 58 VDC (Class 15) PD with Splitter
<b>SPE Connector Type Options (c):</b> <b>0</b> = 3-pin Terminal <b>1</b> = IEC 63171-1 SPE jack <b>2</b> = IEC 63171-2 SPE jack <b>6</b> = IEC 63171-6 SPE jack	
<b>Splitter Output Voltage Options (y):</b> <b>1</b> = 12VDC Terminal Connector <b>2</b> = 24VDC Terminal Connector	
<b>Mounting Options (m):</b> <b>0</b> = Without integrated mounting brackets <b>1</b> = With integrated mounting brackets	
<b>Operating Temperature Options (t):</b> <b>&lt;leave blank&gt;</b> = Commercial temperature (0 to 50°C) <b>W</b> = Wide temperature (-40 to 60°C) <b>Z</b> = Extended temperature (-40 to 75°C)	

Single-Pair Ethernet (SPE) cable: IEC 61156-13 (fixed) or IEC 61156-14 (flexible) 18AWG cable or better

# OmniConverter® Accessories

## OmniConverter® Mounting Options and Accessories

### Wall Mount

#### Description

The OmniConverter can be wall mounted using the mounting holes on the integrated mounting brackets.



#### Description

The Wall Mounting Bracket (1691-0) is installed on the top of the OmniConverter GPoE+/I modules and allows the module to be attached to a wall, backboard or other flat surface.

### Rack Mount Shelf



#### Description

The 1U 19" rack mount shelf accommodates OmniConverter switches, OmniConverter media converters and copper extenders.

Accommodates up to 4 OmniConverter /S and /SE Converters or PoE Extender  
Accommodates up to 3 OmniConverter GHPoEBT/S Converters  
Accommodates up to 2 OmniConverter Switches

### Specifications

Description	Rack Mount Shelf
Dimension (W x D x H)	19.0" x 7.09" x 1.72" (482.6 mm x 180.1 mm x 43.7 mm)
Warranty	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

Rack Mount Shelf	Description
8260-0	Rack-Mount Shelf

### DIN-Rail Mounting Clip



#### Description

The DIN-Rail mounting clips (8251-0) accommodate any Omnitron product with wall mount brackets. The DIN Rail mounting clip attaches to the wall mount brackets on the module, allowing any wall mount module to be DIN Rail mounted.



#### Description

The DIN Rail mounting clips (8252-0) provides DIN Rail capabilities for OmniConverter GPoE+/I modules. The DIN Rail mounting clip attaches to the side of the module.

### DIN-Rail Mounting Bracket



#### Description

The DIN-Rail mounting bracket (8250-0) provides DIN Rail capabilities for OmniConverter media converters with a height dimension of 1 inch. This kit contains all the necessary components to provide DIN Rail mounting for several different mounting orientations.

# RuggedNet® Industrial Ethernet Switch Overview

## RuggedNet® Industrial Ethernet Switch Overview

All Industrial Ethernet switches support the same feature set.

- Layer 2 Ethernet switch that forwards frames to any port based on their MAC address.
- Directed Switch mode, which directs multicast traffic (such as video) only to the appropriate uplink port, preventing the multicast video traffic from flooding other network ports.
- Models with two fiber or two copper uplink ports support redundant uplinks and daisy-chain configurations for high availability industrial network applications.
- Models with two fiber or two copper uplink ports also support Dual Device mode that enables the switches to operate as two independent and isolated Ethernet switches.
- The mode of operation can be configured using easily accessible DIP-switches.
- The 1G models are available with fixed fiber ST, SC, LC connectors. All models are available with Small Form Pluggable (SFP) transceiver receptacles. The fiber ports support multimode or single-mode and dual fiber or single-fiber. SFPs support a variety of distances in standard and CWDM/DWDM wavelengths.
- All models can be wall mounted, rack mounted or DIN-rail mounted.
- RuggedNet models support extended (-40° to 75°C) operating temperature ranges and are available with single or dual DC terminal connectors.
- PoE Models support:
  - Configurable PoE Power Reset

1G and 10G Managed Switches	10G Multi-Gigabit/Multi-Rate Managed Switches
Supports IPv4 and IPv6	Supports IPv4 and IPv6
Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces	Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
IP-based web management	IP-based web management
Password Strength Checking	Password Strength Checking
Email Notification with Simple Mail Transfer Protocol (SMTP)	Email Notification with Simple Mail Transfer Protocol (SMTP)
IEEE 802.1x, RADIUS, TACACS+ and ACL	IEEE 802.1x, RADIUS, TACACS+ and ACL
Rapid (RSTP) and Multiple (MSTP) Spanning Tree Protocols	
IEC 62439-2 Industrial Ring Media Redundancy Protocol	
IEEE 802.1ax LAG and LACP supporting Active/Active and Active/Standby	
IEEE 802.1Q VLAN tagging and IEEE 802.1ad Q-in-Q Provider Bridge VLAN stacking	IEEE 802.1Q VLAN tagging and IEEE 802.1ad Q-in-Q Provider Bridge VLAN stacking
IPv4 Internet Group Management (IGMP) and IPv6 Multicast Listener Discovery (MLD) snooping	IPv4 Internet Group Management (IGMP) and IPv6 Multicast Listener Discovery (MLD) snooping
IEEE 802.1ab Link Layer Discovery Protocol (LLDP)	IEEE 802.1ab Link Layer Discovery Protocol (LLDP)
Loop Prevention (CTP)	
SNTP / NTP and time of day	SNTP / NTP and time of day
Broadcast / Multicast / Unicast Storm Prevention	Broadcast / Multicast / Unicast Storm Prevention
Port Mirroring	
Rate Limiting, Queue prioritization and Class of Service	Rate Limiting, Queue prioritization and Class of Service
Static MAC configuration and blocking of unknown Unicast/Multicast addresses	Static MAC configuration and blocking of unknown Unicast/Multicast addresses
Port Access Control for enhanced security	Port Access Control for enhanced security
PoE Managed Models support	PoE Managed Models support
Heartbeat signal to verify connectivity to the PD	Heartbeat signal to verify connectivity to the PD
Individual remote PoE power reset	Individual remote PoE power reset
PoE power management with LLDP MED and MDI TLV	PoE power management with LLDP MED and MDI TLV
PoE Multi-Day Scheduling for power saving and security	PoE Multi-Day Scheduling for power saving and security

# RuggedNet® Industrial Ethernet Switch Overview

## Regulatory and Environmental Specifications

Refer to the product data sheets for individual differences in the regulatory compliances.

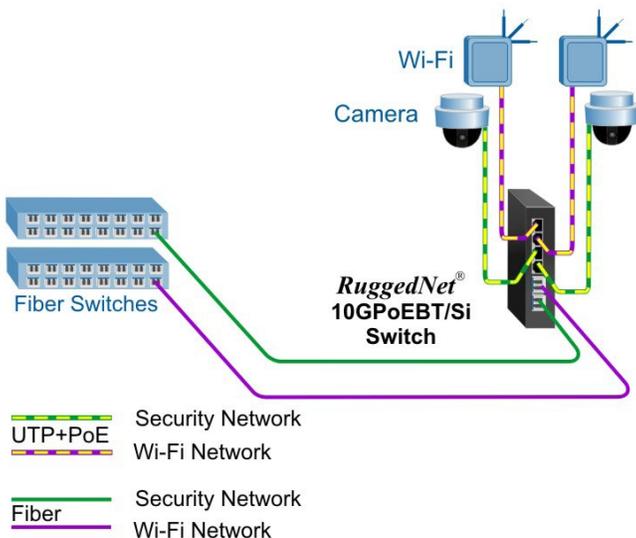
<p><b>Regulatory Compliances</b> (*Pending on 10G models)</p>	<p>Safety*: UL 62368-1, UL 60950-1, IEC 62368-1, IEC 60950-1, EN 62368-1, EN 60950-1, CAN/CSA C22.2 No. 62368-1-14, CAN/CSA C22.2 No. 60950-1, CE Mark, UKCA</p> <p>EMC: EN 55032/24 CE Emissions/Immunity, IEC 61000-6-4 Industrial Emissions, IEC 61000-6-2 Industrial Immunity, UKCA</p> <p>EMI: CISPR 32, FCC 47 Part 15 Subpart B Class A</p> <p>EMS: IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m (on UTP cabling) and 20 V/m (on STP cabling) IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: Signal: 10 V, IEC 61000-4-8 ( Magnetic Field), 30A/m, IEC 61000-4-11 (General Immunity in Industrial Environments)</p> <p>IP Rating: IP40 Protection ACT: TAA, BAA, NDAA</p>
<p><b>Environmental</b></p>	<p>REACH, RoHS and WEEE</p>

# RuggedNet® Industrial Ethernet Switch Overview

## Dual Device Mode Application

This Dual Device feature is extremely useful when two isolated networks domains share a single network distribution location.

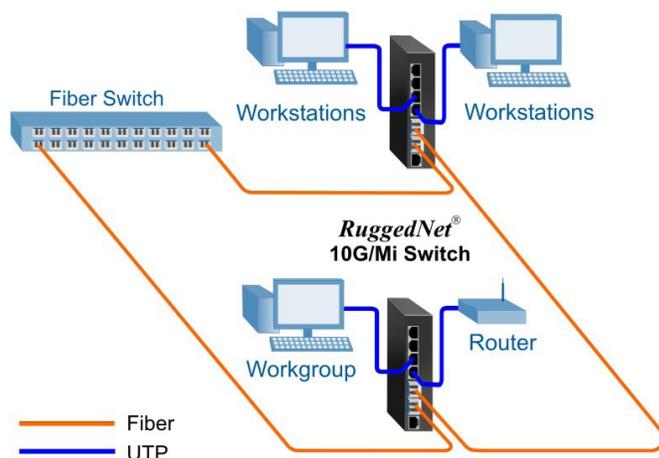
The example below depicts a scenario where a surveillance security (green) network and a Wi-Fi (purple) network are sharing a single hub distribution location. Using the two uplinks and the Dual Switch mode facilitates using a single PoE switch driving both the Cameras and the Wi-Fi Access Points while maintaining isolation between the networks.



## Daisy-Chain and Ring Topology Application

This example demonstrates the daisy chaining and ring capabilities of the RuggedNet. In this application each RuggedNet switch connects to its neighboring switches via its uplink ports eventually closing the ring.

Using this network architecture combined with ring protection protocols such as Media Redundancy Protocol (MRP) or Rapid Spanning Tree Protocol (RSTP) facilitates a highly resilient network required in mission critical applications.



# RuggedNet® Industrial Ethernet Switch Overview

RuggedNet® 1G and 10G Switches				
Product Family	1G Switches		10G Switches	
Product Line	G/Si	G/Mi	10G/Si	10G/Mi
Model # Range	2880 - 2899	2840 - 2859	2903	2902
<b>Management</b>				
Web, Telnet, SNMP, SSH, Serial		✓		✓
IPv4 and IPv6		✓		✓
<b>Ports and Data Rates</b>				
Number of Uplink Ports	1 or 2 fiber or 2 RJ-45	1 or 2 fiber or 2 RJ-45	2 SFP/SFP+	2 SFP/SFP+
Number of RJ-45 Ports	4 or 8	4 or 8	4 or 8	4 or 8
RJ-45 Data Rates	10/100/1000			
Uplink Data Rates	Fiber 100 or 1000 Copper 10/100/1000	Fiber 100 or 1000 Copper 10/100/1000	1G or 10G	1G or 10G
<b>Features</b>				
Frame size	10K	10K	10K	10K
Directed Switch Mode	✓	✓	✓	✓
Dual Device Mode	✓	✓	✓	✓
Alarm Contact Closures		✓		✓
<b>External Power Source</b>				
DC Terminal	2-Pin single or dual	2-Pin single or dual	2-Pin dual	2-Pin dual
<b>Operational Temperature Range</b>				
Extended -40 to 75°C	✓	✓	✓	✓
<b>Catalog Reference</b>				
Page Number	78	69	75	66

# RuggedNet® Industrial Ethernet Switch Overview

RuggedNet® 1G and 10G PoE Switches								
Product Family	1G PoE Switches				10G PoE Switches			
Product Line	GPoE+/Si	GPoE+/Mi	GHPoEBT/Si	GHPoEBT/Mi	10GPoE+/Si	10GPoE+/Mi	10GPoEBT/Si	10GPoEBT/Mi
Model # Range	9560 - 9579	9540 - 9559	3200B - 3219B 3240B - 3259B	3300B - 3319B 3340B - 3359B	9583	9582	3260B, 3262B	3360B, 3362B

## Management

Web, Telnet, SNMP, SSH, Serial		✓		✓		✓		✓
IPv4 and IPv6		✓		✓		✓		✓

## Ports and Data Rates

Number of Uplink Ports	1 or 2 fiber or 2 RJ-45	2 SFP/SFP+	2 SFP/SFP+	2 SFP/SFP+	2 SFP/SFP+			
Number of RJ-45 Ports	4 or 8	4 or 8	4	4	4 or 8	4 or 8	4	4
RJ-45 Data Rates	10/100/1000	10/100/1000	10/100/1000	10/100/1000	10/100/1000	10/100/1000	10/100/1000	10/100/1000
Uplink Data Rates	Fiber 100 / 1000 Copper 10/100/1000	1G or 10G	1G or 10G	1G or 10G	1G or 10G			

## Features

Frame size	10K	10K	10K	10K	10K	10K	10K	10K
PoE Power Level	802.3af 802.3at	802.3af 802.3at	802.3af 802.3at 802.3bt 60W or 100W	802.3af 802.3at 802.3bt 60W or 100W	802.3af 802.3at	802.3af 802.3at	802.3af 802.3at 802.3bt 60W or 100W	802.3af 802.3at 802.3bt 60W or 100W
PoE Reset	✓	✓	✓	✓	✓	✓	✓	✓
Directed Switch Mode	✓	✓	✓	✓	✓	✓	✓	✓
Dual Device Mode	✓	✓	✓	✓	✓	✓	✓	✓
PoE Power Scheduler		✓		✓		✓		✓
Alarm Contact Closures		✓		✓		✓		✓

## External Power Source

DC Terminal	2-Pin single or dual	2-Pin dual	2-Pin dual	2-Pin dual	2-Pin dual			
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## Operational Temperature Range

Extended -40 to 75°C	✓	✓	✓	✓	✓	✓	✓	✓
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## Catalog Reference

Page Number	<a href="#">80</a>	<a href="#">71</a>	<a href="#">79</a>	<a href="#">70</a>	<a href="#">77</a>	<a href="#">68</a>	<a href="#">76</a>	<a href="#">67</a>
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# RuggedNet® Industrial Ethernet Switch Overview

## 10G Multi-Gigabit/Multi-Rate Ethernet Switch Products

Product Line	10GMG/Si	10GMG/Mi	10GMGPOE+/Si	10GMGPOE+/Mi	10GMGPOEBT/Si	10GMGPOEBT/Mi
Model # Range	9660	9665	9661	9666	9662, 9663	9667, 9668
<b>Management</b>						
Web, Telnet, SNMP, SSH, Serial	-	✓	-	✓	-	✓
IPv4 and IPv6	-	✓	-	✓	-	✓

## Ports and Data Rates

Number of Uplink Ports	1	1	1	1	1	1
Number of RJ-45 Ports	4	4	4	4	4	4
RJ-45 Data Rates	10/100/1000 (x2) 100/1G/2.5G/5G/10G (x2)					
Uplink Data Rates	1G, 10G 10/100/1000, 1000, 2.5G, 5G 10G					

## Features

Frame size	10K	10K	10K	10K	10K	10K
PoE Power Level	-	-	IEEE 802.3af IEEE 802.3at	IEEE 802.3af IEEE 802.3at	IEEE 802.3af IEEE 802.3at IEEE 802.3bt 60W or 100W	IEEE 802.3af IEEE 802.3at IEEE 802.3bt 60W or 100W
PoE Reset	✓	✓-	✓	✓	✓	✓
Directed Switch Mode	✓	✓	✓	✓	✓	✓
PoE Power Scheduler	-	✓	-	✓	-	✓
Alarm Contact Closures	-	✓	-	✓	-	✓

## External Power Source

DC Terminal	2-Pin	2-Pin	2-Pin		2-Pin	
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## Operating Temperature

Commercial 0 to 50°C	✓	✓	✓	✓	✓	✓
Wide -40 to 60°C	✓	✓	✓	✓	✓	✓
Industrial -40 to 75°C	✓	✓	✓	✓	✓	✓

## Catalog Reference

Page Number	<a href="#">72</a>	<a href="#">63</a>	<a href="#">74</a>	<a href="#">65</a>	<a href="#">73</a>	<a href="#">65</a>
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# RuggedNet® 10G Managed Ethernet Switch

## 10G Managed Switches

### RuggedNet® 10GMG/Mi Ethernet Switch

#### Managed Industrial Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Managed Industrial 10G multi-gigabit/multi-rate Ethernet Switch
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports



See [RuggedNet Industrial Ethernet Switch Overview](#) for the complete list of features.

#### Description

The RuggedNet 10GMG/Mi are managed industrial multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 downlink/access ports.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

An alarm relay is available to detect user configured events. The relay contact can be configured for normally open or normally closed operation. One alarm input is available for detecting external events such as door open or closed.

#### Specifications

<b>Description</b>	Managed Industrial 10Gigabit Multi-Gigabit/Multi-Rate Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+12 to +57VDC; 0.93A @ 12VDC, 0.23A @ 48VDC
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SNMP, RADIUS, TACACS+, IEEE 802.1x
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Alarm Contact (Output)</b>	2 form C Relay for Normally Open and Normally Closed Operation 110VDC/125VAC Maximum Voltage 2A Maximum Current
<b>Alarm Sensor (Input)</b>	2.0ma @ 3.3VDC Closure Detection
<b>Dimension (W x D x H)</b>	1.5" x 5.2" x 5.5" (38.1 mm x 132.1 mm x 139.7 mm)
<b>Weight</b>	1.5 lbs. (680 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

#### Ordering

10GMG/Mi	Description
9665-0-14-2Z	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 ports + 2 x 10/100/1000 RJ-45 ports, dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
9665-1-14-2Z	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 ports + 2 x 10/100/1000 RJ-45 ports, dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C

#### Power Options:

**2** = Dual DC 2-Pin terminal connector

#### Operating Temperature:

**Z** = Extended temperature (-40 to 75°C)

# RuggedNet® 10G Managed Ethernet Switch

## RuggedNet® 10GMGPOEBT/Mi Ethernet Switch

### Managed Industrial Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Managed Industrial 10G multi-gigabit/multi-rate PoE Ethernet Switch
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports



See [RuggedNet Industrial Ethernet Switch Overview](#) for the complete list of features.

#### Description

The RuggedNet 10GMGPOEBT/Mi are managed industrial multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Power-over-Ethernet downlink/access ports. They support PoE, PoE+ and PoEBT up to 100 watts depending on the model.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. The 10GMGPOEBT/Mi supports IEEE 802.3bt (60 and 100W) per user port depending on the model.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

An alarm relay is available to detect user configured events. The relay contact can be configured for normally open or normally closed operation. One alarm input is available for detecting external events such as door open or closed.

#### Specifications

Description	Managed IEEE 802.3bt 10G Multi-Gigabit/Multi-Rate Ethernet Switch
Frame Size	Up to 10,240 bytes
DC Power Requirements	+46 to +57VDC; 4.52A @ 56VDC - 60W +46 to +57VDC; 7.40A @ 56VDC - 100W
Environment	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
Standards	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, RFC 5424, RFC 4541, RFC 2710, IEC 62433-2, SMTP, SNTP, RADIUS, TACACS+, IEEE 802.1x, IEEE 802.3af (15.40 watts), IEEE 802.3at (30 watts), IEEE 802.3bt (up to 100 watts)
Management	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
Alarm Contact (Output)	2 form C Relay for Normally Open and Normally Closed Operation 110VDC/125VAC Maximum Voltage 2A Maximum Current
Alarm Sensor (Input)	2.0ma @ 3.3VDC Closure Detection
Dimension (W x D x H)	1.5" x 5.2" x 5.5" (38.1 mm x 132.1 mm x 139.7 mm)
Weight	1.5 lbs. (680 grams)
Warranty	5 year product warranty with 24/7/365 free Technical Support

#### Ordering

10GMGPOEBT/Mi	Description
60W	9667-0-14-ZZ 1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 60W per port + 2 x 10/100/1000 RJ-45 60W per port, dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
	9667-1-14-ZZ 1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 60W per port + 2 x 10/100/1000 RJ-45 60W per port, dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
100W	9668-0-14-ZZ 1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 100W per port + 2 x 10/100/1000 RJ-45 100W per port, dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
	9668-1-14-ZZ 1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 100W per port + 2 x 10/100/1000 RJ-45 100W per port, dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C

#### Power Options (p):

- 1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord
- 2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord
- 9 = Direct DC input, 2 pin terminal, no AC/DC power adapter

#### Operating Temperature Options (t):

- <leave blank> = Commercial temperature (0 to 50°C)
- W = Wide temperature (-40 to 60°C)
- Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8

# RuggedNet® 10G Managed Ethernet Switch

## RuggedNet® 10GMGPOE+/Mi Ethernet Switch

### Managed Industrial Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Managed Industrial 10G multi-gigabit/multi-rate PoE Ethernet Switch
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports



See [RuggedNet Industrial Ethernet Switch Overview](#) for the complete list of features.

#### Description

The RuggedNet 10GMGPOE+/Mi are managed industrial multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Power-over-Ethernet downlink/access ports.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. The 10GMGPOE+/Mi supports IEEE 802.3at (15 and 30W) per user port.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

An alarm relay is available to detect user configured events. The relay contact can be configured for normally open or normally closed operation. One alarm input is available for detecting external events such as door open or closed.

#### Specifications

<b>Description</b>	Managed IEEE 802.3at 10G Multi-Gigabit/Multi-Rate Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+46 to +57VDC; 2.37A @ 56VDC
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SNTP, RADIUS, TACACS+, IEEE 802.1x, IEEE 802.3af (15.40 watts), IEEE 802.3at (30 watts),
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Alarm Contact (Output)</b>	2 form C Relay for Normally Open and Normally Closed Operation 110VDC/125VAC Maximum Voltage 2A Maximum Current
<b>Alarm Sensor (Input)</b>	2.0ma @ 3.3VDC Closure Detection
<b>Dimension (W x D x H)</b>	1.5" x 5.2" x 5.5" (38.1 mm x 132.1 mm x 139.7 mm)
<b>Weight</b>	1.5 lbs. (680 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

#### Ordering

10GMGPOE+/Mi	Description
9666-0-14-2Z	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 30W per port + 2 x 10/100/1000 RJ-45 30W per port
9666-1-14-2Z	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 30W per port + 2 x 10/100/1000 RJ-45 30W per port
<b>Power Options (p):</b>	
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord	
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord	
9 = Direct DC input, 2 pin terminal, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	
Z = Extended temperature (-40 to 75°C) -not available with power option 1,2 & 8	

# RuggedNet® 10G Managed Ethernet Switch

## RuggedNet® 10G/Mi Ethernet Switch Managed Industrial 6 and 10 Port 10G Ethernet Switch

- Managed Industrial 1/10G Ethernet Switches
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+
- Four or eight 10/100/1000 copper user ports



[See RuggedNet Industrial Ethernet Switch Overview for the complete list of features.](#)

### Description

The RuggedNet 10G/Mi are ruggedized managed industrial Ethernet switches that feature two 1/10G uplink ports and four or eight 10/100/1000 RJ-45 copper user ports.

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches. These management interfaces provide access to filtering and security options, such as, broadcast storm prevention, IGMP, IEEE 802.1x, RADIUS, TACACS+ and Access Control Lists. Email and text event notification and alarm reporting is provided.

### Specifications

<b>Description</b>	Managed 6 and 10 Port 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+12 to +57VDC, 0.86A @ 12VDC, 0.22A @ 48VDC – 4 port models +12 to +57VDC, 0.94A @ 12VDC, 0.24A @ 48VDC – 8 port models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNTP, RADIUS, TACACS+, IEEE 802.1x
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams) - 4 Port models 1.77 lb. (803 grams) - 8 Port models
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

### Ordering

10G/Mi 4 User Port	10G/Mi 8 User Port	Description
2902-0-24-ZZ	2902-0-28-ZZ	2x 1/10G SFP Uplinks
<b>Power Options:</b> Z = Dual DC 2-Pin terminal connector		
<b>Operating Temperature:</b> Z = Extended temperature (-40 to 75°C)		

# RuggedNet® 10G Managed Ethernet Switch

## RuggedNet® 10GPoEBT/Mi PoE Ethernet Switch

### Managed Industrial 6 Port 60/100W IEEE 802.3bt 10G Ethernet Switch

- Managed Industrial 60W/100W IEEE 802.3bt PoE 1/10G Ethernet Switches
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+
- Four 10/100/1000 copper PoE user ports



[See RuggedNet Industrial Ethernet Switch Overview for the complete list of features.](#)

### Description

The RuggedNet 10GPoEBT/Mi are managed Industrial High-Power PoE Ethernet switches that feature two 1/10G uplink ports and four 10/100/1000 RJ-45 copper Power-over-Ethernet user ports. The 10GPoEBT/Mi supports PoE, PoE+, legacy 60W HPoE and IEEE 802.3bt (60 or 100W).

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

### Specifications

<b>Description</b>	Managed 6 Port IEEE 803.3bt PoE 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+46 to +57VDC, 4.47A @ 56VDC – 60W models +46 to +57VDC, 7.33A @ 56VDC – 100W models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNTP, RADIUS, TACACS+, IEEE 802.1x IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max), 60W HPoE IEEE 802.3bt (60 and 100W)
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

### Ordering

10GPoEBT/Mi 60W	10GPoEBT/Mi 100W	Description
3360B-0-24-2Z	3362B-0-24-2Z	2x 1G/10 SFP/SFP+ Uplinks and 4x 10/100/1000 Copper
<b>Power Options:</b> 2 = Dual DC 2-Pin terminal connector		
<b>Operating Temperature:</b> Z = Extended temperature (-40 to 75°C)		

# RuggedNet® 10G Managed Ethernet Switch

## RuggedNet® 10GPoE+/Mi PoE Ethernet Switch

### Managed Industrial 6 and 10 Port PoE/PoE+ 10G Ethernet Switch

- Managed Industrial PoE/PoE+ 1/10G Ethernet Switches
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Support speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+ transceivers
- Four or eight 10/100/1000 copper PoE user ports



[See RuggedNet Industrial Ethernet Switch Overview for the complete list of features.](#)

### Description

The RuggedNet 10GPoE+/Mi are ruggedized managed PoE and PoE+ Industrial Ethernet switches that feature two 1/10G uplink ports and four 10/100/1000 RJ-45 copper Power-over-Ethernet user ports.

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

### Specifications

<b>Description</b>	Managed 6 and 10 Port PoE/PoE+ 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+46 to +57VDC, 2.33A @ 56VDC – 4 Port models +46 to +57VDC, 4.49A @ 56VDC – 8 Port models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNTP, RADIUS, TACACS+, IEEE 802.1x IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max) IEEE 802.3bt (60 and 100W)
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams) - 4 Port models 1.77 lb. (803 grams) - 8 Port models
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

### Ordering

10GPoE+/Mi 4 User Port	10GPoE+/Mi 8 User Port	Description
9582-0-24-ZZ	9582-0-28-ZZ	2x 1G/10 SFP/SFP+ Uplinks
<b>Power Options:</b> 2 = Dual DC 2-Pin terminal connector		
<b>Operating Temperature:</b> Z = Extended temperature (-40 to 75°C)		

# RuggedNet® 1G Managed Ethernet Switch

## 1G Managed Switches

### RuggedNet® G/Mi Ethernet Switch

#### Managed Industrial 6 and 10 Port 1G Switch

- Managed Industrial 6 and 10 port Ethernet switch
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Two 10/100/1000 copper or standard/CWDM Gigabit fiber uplink ports
- Four or eight 10/100/1000 copper PoE user ports
- ST, SC and LC fixed fiber ports or Gigabit SFP transceivers



See [RuggedNet Industrial Ethernet Switch Overview](#) for the complete list of features.

#### Description

The RuggedNet G/Mi are ruggedized managed industrial Ethernet switches that feature fiber or copper uplink ports and four or eight 10/100/1000 RJ-45 copper ports.

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches. These management interfaces provide access to filtering and security options, such as, broadcast storm prevention, IGMP, IEEE 802.1x, RADIUS, TACACS+ and Access Control Lists. Email and text event notification and alarm reporting is provided.

#### Specifications

<b>Description</b>	Managed 6 and 10 Port Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+12 to +57VDC, 0.68A @ 12VDC, 0.17A @ 48VDC – 4 port models +12 to +57VDC, 0.75A @ 12VDC, 0.19A @ 48VDC – 8 port models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNTP, RADIUS, TACACS+, IEEE 802.1x
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams) - 4 Port models 1.77 lb. (803 grams) - 8 Port models
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

#### Ordering

G/Mi 4 User Port	G/Mi 8 User Port	Description
2840-0-14-pZ	2840-0-18-pZ	ST 850nm MM 220/550m
2842-0-14-pZ	2842-0-18-pZ	SC 850nm MM 220/550m
2846-0-14-pZ	2846-0-18-pZ	LC 850nm MM 220/550m
2842-6-14-pZ	2842-6-18-pZ	SC 1310nm MM 2km
2841-1-14-pZ	2841-1-18-pZ	ST 1310nm SM 12km
2843-1-14-pZ	2843-1-18-pZ	SC 1310nm SM 12km
2847-1-14-pZ	2847-1-18-pZ	LC 1310nm SM 12km
2843-2-14-pZ	2843-2-18-pZ	SC 1310nm SM 34km
2843-3-14-pZ	2843-3-18-pZ	SC 1550nm SM 80km
2843-4-14-pZ	2843-4-18-pZ	SC 1550nm SM 110km
2843-5-14-pZ	2843-5-18-pZ	SC 1550nm SM 140km
2850-0-14-pZ	2850-0-18-pZ	SC 13/15 MM-SF 220/550m
2851-0-14-pZ	2851-0-18-pZ	SC 15/13 MM-SF 220/550m
2850-1-14-pZ	2850-1-18-pZ	SC 13/15 SM-SF 20km
2851-1-14-pZ	2851-1-18-pZ	SC 15/13 SM-SF 20km
2850-2-14-pZ	2850-2-18-pZ	SC 13/15 SM-SF 40km
2851-2-14-pZ	2851-2-18-pZ	SC 15/13 SM-SF 40km
2859-0-14-pZ	2859-0-18-pZ	1x 1000Mbps SFP Uplink
2859-0-24-pZ	2859-0-28-pZ	2x 1000Mbps SFP Uplinks
2859-1-24-pZ	2859-1-28-pZ	2x RJ-45 Uplinks

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 1 = Single DC 2-Pin terminal connector
- 2 = Dual DC 2-Pin terminal connector

#### Operating Temperature:

- Z = Extended temperature (-40 to 75°C)

See [1000M Fiber Specifications](#) for optical parameters.

# RuggedNet® 1G Managed Ethernet Switch

## RuggedNet® GHPoEBT/Mi PoE Ethernet Switch Managed Industrial 6 Port 60/100W IEEE 802.3bt 1G Switch

- Managed Industrial High-Power 60W/100W PoE Gigabit Ethernet Switches
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- GHPoEBT/Mi supports 60W Pre-BT HPoE and IEEE 802.3bt 60W or 100W
- Two 10/100/1000 copper or standard/CWDM Gigabit fiber uplink ports
- Four 10/100/1000 copper PoE user ports
- ST, SC and LC fixed fiber ports or Gigabit SFP transceivers



[See RuggedNet Industrial Ethernet Switch Overview for the complete list of features.](#)

### Description

The RuggedNet GHPoE/Mi and GHPoEBT/Mi are industrial ruggedized and temperature-hardened managed Ethernet switches that feature fiber or copper uplink ports and four 10/100/1000 RJ-45 copper PoE user ports. The GHPoEBT/Mi supports PoE, PoE+, legacy 60W HPoE and IEEE 802.3bt (60 or 100W). The GHPoE/Mi supports PoE, PoE+ and legacy 60W HPoE.

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

### Specifications

<b>Description</b>	Managed 6 Port High-Power PoE Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+46 to +57VDC, 4.46A @ 56VDC – 60W models +46 to +57VDC, 7.31A @ 56VDC – 100W models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNTP, RADIUS, TACACS+, IEEE 802.1x IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max), HPoE 60W IEEE 802.3bt (60 and 100W) – BT models only
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

### Ordering

GHPoEBT/Mi 60W	GHPoEBT/Mi 100W	Description
3300B-0-14 pZ	3340B-0-14 pZ	ST 850nm MM 220/550m
3302B-0-14 pZ	3342B-0-14 pZ	SC 850nm MM 220/550m
3306B-0-14 pZ	3346B-0-14 pZ	LC 850nm MM 220/550m
3302B-6-14 pZ	3342B-6-14 pZ	SC 1310nm MM 2km
3301B-1-14 pZ	3341B-1-14 pZ	ST 1310nm SM 12km
3303B-1-14 pZ	3343B-1-14 pZ	SC 1310nm SM 12km
3307B-1-14 pZ	3347B-1-14 pZ	LC 1310nm SM 12km
3303B-2-14 pZ	3343B-2-14 pZ	SC 1310nm SM 34km
3303B-3-14 pZ	3343B-3-14 pZ	SC 1550nm SM 80km
3303B-4-14 pZ	3343B-4-14 pZ	SC 1550nm SM 110km
3303B-5-14 pZ	3343B-5-14 pZ	SC 1550nm SM 140km
3310B-0-14 pZ	3350B-0-14 pZ	SC 13/15 MM-SF 220/550m
3311B-0-14 pZ	3351B-0-14 pZ	SC 15/13 MM-SF 220/550m
3310B-1-14 pZ	3350B-1-14 pZ	SC 13/15 SM-SF 20km
3311B-1-14 pZ	3351B-1-14 pZ	SC 15/13 SM-SF 20km
3310B-2-14 pZ	3350B-2-14 pZ	SC 13/15 SM-SF 40km
3311B-2-14 pZ	3351B-2-14 pZ	SC 15/13 SM-SF 40km
3319B-0-14 pZ	3359B-0-14 pZ	1x 1000Mbps SFP Uplink
3319B-0-24 pZ	3359B-0-24 pZ	2x 1000Mbps SFP Uplinks
3319B-1-24 pZ	3359B-1-24 pZ	2x RJ-45 Uplinks

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 1 = Single DC 2-Pin terminal connector
- 2 = Dual DC 2-Pin terminal connector

#### Operating Temperature:

- Z = Extended temperature (-40 to 75°C)

[See 1000M Fiber Specifications for optical parameters.](#)

# RuggedNet® 1G Managed Ethernet Switch

## RuggedNet® GPoE+/Mi PoE Ethernet Switch Managed Industrial 6 and 10 Port PoE/PoE+ 1G Switch

- Managed Industrial 6 and 10 port PoE/PoE+ Ethernet switch
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Two 10/100/1000 copper or standard/CWDM Gigabit fiber uplink ports
- Four or eight 10/100/1000 copper PoE user ports
- ST, SC and LC fixed fiber ports or Gigabit SFP transceivers



See [RuggedNet Industrial Ethernet Switch Overview](#) for the complete list of features.

### Description

The RuggedNet GPoE+/Mi are ruggedized managed PoE and PoE+ industrial Ethernet switches that feature fiber or copper uplink ports and four or eight 10/100/1000 RJ-45 copper Power Sourcing Power-over-Ethernet user ports.

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches.

### Specifications

<b>Description</b>	Managed 6 and 10 Port PoE/PoE+ Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+46 to +57VDC, 2.31A @ 56VDC – 4 port models +46 to +57VDC, 4.47A @ 56VDC – 8 port models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1ab, IEEE 802.1ax, IEEE 802.1w RSTP/MSTP RFC 5424, RFC 4541, RFC 2710, IEC 624339-2, SMTP, SMS, SNTP, RADIUS, TACACS+, IEEE 802.1x IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Management</b>	IPv4 and IPv6 address, Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams) - 4 Port models 1.77 lb. (803 grams) - 8 Port models
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

### Ordering

GPoE+/Mi 4 User Port	GPoE+/Mi 8 User Port	Description
9540-0-14-pZ	9540-0-18-pZ	ST 850nm MM 220/550m
9542-0-14-pZ	9542-0-18-pZ	SC 850nm MM 220/550m
9546-0-14-pZ	9546-0-18-pZ	LC 850nm MM 220/550m
9542-6-14-pZ	9542-6-18-pZ	SC 1310nm MM 2km
9541-1-14-pZ	9541-1-18-pZ	ST 1310nm SM 12km
9543-1-14-pZ	9543-1-18-pZ	SC 1310nm SM 12km
9547-1-14-pZ	9547-1-18-pZ	LC 1310nm SM 12km
9543-2-14-pZ	9543-2-18-pZ	SC 1310nm SM 34km
9543-3-14-pZ	9543-3-18-pZ	SC 1550nm SM 80km
9543-4-14-pZ	9543-4-18-pZ	SC 1550nm SM 110km
9543-5-14-pZ	9543-5-18-pZ	SC 1550nm SM 140km
9550-0-14-pZ	9550-0-18-pZ	SC 13/15 MM-SF 220/550m
9551-0-14-pZ	9551-0-18-pZ	SC 15/13 MM-SF 220/550m
9550-1-14-pZ	9550-1-18-pZ	SC 13/15 SM-SF 20km
9551-1-14-pZ	9551-1-18-pZ	SC 15/13 SM-SF 20km
9550-2-14-pZ	9550-2-18-pZ	SC 13/15 SM-SF 40km
9551-2-14-pZ	9551-2-18-pZ	SC 15/13 SM-SF 40km
9559-0-14-pZ	9559-0-18-pZ	1x 1000Mbps SFP Uplink
9559-0-24-pZ	9559-0-28-pZ	2x 1000Mbps SFP Uplinks
9559-1-24-pZ	9559-1-28-pZ	2x RJ-45 Uplinks

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 1 = Single DC 2-Pin terminal connector
- 2 = Dual DC 2-Pin terminal connector

#### Operating Temperature:

- Z = Extended temperature (-40 to 75°C)

See [1000M Fiber Specifications](#) for optical parameters.

# RuggedNet® 10G Unmanaged Ethernet Switch

## 10G Unmanaged Switches

### RuggedNet® 10GMG/Si Ethernet Switch

#### Unmanaged Industrial Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Unmanaged Industrial 10G multi-gigabit/multi-rate Ethernet Switch
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports
- Supports jumbo frames up to 10,240 bytes



[See RuggedNet Industrial Ethernet Switch Overview for the complete list of features.](#)

#### Description

The RuggedNet 10GMG/Si are unmanaged industrial multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 downlink/access ports.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

#### Specifications

<b>Description</b>	Unmanaged 10Gigabit Multi-Gigabit/Multi-Rate Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+12 to +57VDC; 0.82A @ 12VDC, 0.21A @ 48VDC
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.3bz,
<b>Dimension (W x D x H)</b>	1.5" x 5.2" x 5.5" (38.1 mm x 132.1 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

#### Ordering

10GMG/Si	Description
9660-0-14-2Z	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 ports + 2 x 10/100/1000 RJ-45 ports dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
9660-1-14-2Z	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 ports + 2 x 10/100/1000 RJ-45 ports dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
<b>Power:</b> 2 = Dual DC 2-Pin terminal connector	
<b>Operating Temperature:</b> Z = Extended temperature (-40 to 75°C)	

# RuggedNet® 10G Unmanaged Ethernet Switch

## RuggedNet® 10GMGPoEBT/Si Ethernet Switch

### Unmanaged Industrial Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Unmanaged Industrial 10G multi-gigabit/multi-rate PoE Ethernet Switch
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports
- Supports jumbo frames up to 10,240 bytes



See [RuggedNet Industrial Ethernet Switch Overview](#) for the complete list of features.

#### Description

The RuggedNet 10GMGPoEBT/S1 are unmanaged multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Power-over-Ethernet downlink/access ports. They support PoE, PoE+ and PoEBT up to 100 watts depending on the model.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. The 10GMGPoEBT/Si supports IEEE 802.3bt (60 and 100W) per user port depending on the model.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

#### Specifications

<b>Description</b>	Unmanaged IEEE 802.3bt 10G Multi-Gigabit/Multi-Rate Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+46 to +57VDC; 4.49A @ 56VDC - 60W +46 to +57VDC; 7.38A @ 56VDC - 100W
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.3bz, IEEE 802.3af (15.4 watts max), IEEE 802.3at (30 watts max) IEEE 802.3bt (60 watts or 100 watts max)
<b>Dimension (W x D x H)</b>	1.5" x 5.2" x 5.5" (38.1 mm x 132.1 mm x 139.7 mm)
<b>Weight</b>	1.5 lbs. (680 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

#### Ordering

10GMGPoEBT/Si		Description
60W	9662-0-14-ZZ	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 60W per ports + 2 x 10/100/1000 RJ-45 60W per ports dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
	9662-1-14-ZZ	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 60W per ports + 2 x 10/100/1000 RJ-45 60W per ports dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
100W	9663-0-14-ZZ	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 100W per ports + 2 x 10/100/1000 RJ-45 100W per ports dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
	9663-1-14-ZZ	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 100W per ports + 2 x 10/100/1000 RJ-45 100W per ports dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
<b>Power:</b> 2 = Dual DC 2-Pin terminal connector		
<b>Operating Temperature:</b> Z = Extended temperature (-40 to 75°C)		

# RuggedNet® 10G Unmanaged Ethernet Switch

## RuggedNet® 10GMGPoE+/Si Ethernet Switch

### Unmanaged Industrial Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G Ethernet Switch

- Unmanaged Industrial 10G multi-gigabit/multi-rate PoE Ethernet Switch
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 and two 10/100/1G RJ-45 ports
- Supports jumbo frames up to 10,240 bytes



[See RuggedNet Industrial Ethernet Switch Overview for the complete list of features.](#)

### Description

The RuggedNet 10GMGPoE+/Si are unmanaged multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Power-over-Ethernet downlink/access ports.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. The 10GMGPoE+/Si supports IEEE 802.3at (15 and 30W) per user port.

The switches feature a SFP transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 100M/1G/2.5G/5G/10GBASE-T multi-gigabit copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

### Specifications

<b>Description</b>	Unmanaged 10G Multi-Gigabit/Multi-Rate PoE Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+46 to +57VDC; 2.34A @ 56VDC
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.3bz, IEEE 802.3af (15.4 watts max) IEEE 802.3at (30 watts max)
<b>Dimension (W x D x H)</b>	1.5" x 5.2" x 5.5" (38.1 mm x 132.1 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

### Ordering

10GMGPoE+/Si	Description
9661-0-14-2Z	1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 30W per port + 2 x 10/100/1000 RJ-45 30W per port, dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
9661-1-14-2Z	1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 30W per port + 2 x 10/100/1000 RJ-45 30W per port, dual power inputs (2-pin terminal block), industrial temperature range -40 to 75°C
<b>Power:</b> 2 = Dual DC 2-Pin terminal connector	
<b>Operating Temperature:</b> Z = Extended temperature (-40 to 75°C)	

# RuggedNet® 10G Unmanaged Ethernet Switch

## RuggedNet® 10G/Si Ethernet Switch

### Unmanaged Industrial 6 and 10 Port 10G Ethernet Switch

- Unmanaged Industrial 1/10G Ethernet Switches
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+
- Four or eight 10/100/1000 copper user ports
- Supports jumbo frames up to 10,240 bytes



See [RuggedNet Industrial Ethernet Switch Overview](#) for the complete list of features.

### Description

The RuggedNet 10G/Si are ruggedized unmanaged industrial Ethernet switches that feature two 1/10G uplink ports and four or eight 10/100/1000 RJ-45 copper user ports.

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

### Specifications

<b>Description</b>	Unmanaged 6 and 10 Port 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+12 to +57VDC, 0.86A @ 12VDC, 0.22A @ 48VDC – 4 port models +12 to +57VDC, 0.94A @ 12VDC, 0.24A @ 48VDC – 8 port models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams) - 4 Port models 1.77 lb. (803 grams) - 8 Port models
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

### Ordering

10G/Si 4 User Port	10G/Si 8 User Port	Description
2903-0-24-ZZ	2903-0-28-ZZ	2x 1/10G SFP Uplinks
<b>Power:</b> 2 = Dual DC 2-Pin terminal connector		
<b>Operating Temperature:</b> Z = Extended temperature (-40 to 75°C)		

# RuggedNet® 10G Unmanaged Ethernet Switch

## RuggedNet® 10GPoEBT/Si PoE Ethernet Switch

### Unmanaged Industrial 6 Port 60/100W IEEE 802.3bt 10G Ethernet Switch

- Unmanaged Industrial 60W/100W IEEE 802.3bt PoE 1/10G Ethernet Switches
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+
- Four 10/100/1000 copper PoE user ports
- Supports jumbo frames up to 10,240 bytes



[See RuggedNet Industrial Ethernet Switch Overview for the complete list of features.](#)

#### Description

The RuggedNet 10GPoEBT/Si are unmanaged Industrial High-Power PoE Ethernet switches that feature two 1/10G uplink ports and four 10/100/1000 RJ-45 copper Power-over-Ethernet user ports. The 10GPoEBT/Si supports PoE, PoE+, legacy 60W HPoE and IEEE 802.3bt (60 or 100W).

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

#### Specifications

<b>Description</b>	Unmanaged 6-Port IEEE 802.3bt PoE 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+46 to +57VDC, 4.47A @ 56VDC – 60W models +46 to +57VDC, 7.33A @ 56VDC – 100W models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max), 60W HPoE IEEE 802.3bt (60 and 100W)
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

#### Ordering

10GPoEBT/Si 60W	10GPoEBT/Si 100W	Description
3260B-0-24-2Z	3262B-0-24-2Z	2x 1G/10 SFP/SFP+ Uplinks and 4x 10/100/1000 Copper
<b>Power:</b> 2 = Dual DC 2-Pin terminal connector		
<b>Operating Temperature:</b> Z = Extended temperature (-40 to 75°C)		

# RuggedNet® 10G Unmanaged Ethernet Switch

## RuggedNet® 10GPoE+/Si PoE Ethernet Switch

### Unmanaged Industrial 6 and 10 Port PoE/PoE+ 10G Ethernet Switch

- Unmanaged Industrial PoE/PoE+ 1/10G Ethernet Switches
- Two 1/10G SFP/SFP+ standard/CWDM/DWDM transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps using copper SFP/SFP+ transceiver
- Four or eight 10/100/1000 copper PoE user ports
- Supports jumbo frames up to 10,240 bytes



[See RuggedNet Industrial Ethernet Switch Overview for the complete list of features.](#)

### Description

The RuggedNet 10GPoE+/Si are ruggedized unmanaged PoE and PoE+ industrial Ethernet switches that feature two 1/10G uplink ports and four or eight 10/100/1000 RJ-45 copper Power Sourcing Power-over-Ethernet user ports.

The switches feature two Small Form Pluggable (SFP) transceiver receptacle ports supporting 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

### Specifications

<b>Description</b>	Unmanaged 6 and 10 Port PoE/PoE+ 10Gigabit Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+46 to +57VDC, 2.33A @ 56VDC – 4 Port models +46 to +57VDC, 4.49A @ 56VDC – 8 Port models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams) - 4 Port models 1.77 lb. (803 grams) - 8 Port models
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

### Ordering

10GPoE+/Sx 4 User Port	10GPoE+/Sx 8 User Port	Description
9583-0-24-ZZ	9583-0-28-ZZ	2x 1/10G SFP Uplinks
<b>Power:</b> 2 = Dual DC 2-Pin terminal connector		
<b>Operating Temperature:</b> Z = Extended temperature (-40 to 75°C)		

# RuggedNet® 1G Unmanaged Ethernet Switch

## 1G Unmanaged Switches

### RuggedNet® G/Si Ethernet Switch

#### Unmanaged Industrial 6 and 10 Port 1G Switch

- Unmanaged Industrial 6 and 10 port Ethernet switch
- Two 10/100/1000 copper or standard/CWDM Gigabit fiber uplink ports
- Four or eight 10/100/1000 copper user ports
- ST, SC and LC fixed fiber ports or Gigabit SFP transceivers
- Supports jumbo frames up to 10,240 bytes



See [RuggedNet Industrial Ethernet Switch Overview](#) for the complete list of features.

#### Description

The RuggedNet G/Si are ruggedized unmanaged industrial Ethernet switches that feature fiber or copper uplink ports and four or eight 10/100/1000 RJ-45 copper user ports.

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

#### Specifications

<b>Description</b>	Unmanaged 6 and 10 Port Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+12 to +57VDC, 0.68A @ 12VDC, 0.17A @ 48VDC – 4 port models +12 to +57VDC, 0.75A @ 12VDC, 0.19A @ 48VDC – 8 port models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams) - 4 Port models 1.77 lb. (803 grams) - 8 Port models
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

#### Ordering

G/Si 4 User Port	G/Si 8 User Port	Description
2880-0-14-pZ	2880-0-18-pZ	ST 850nm MM 220/550m
2882-0-14-pZ	2882-0-18-pZ	SC 850nm MM 220/550m
2886-0-14-pZ	2886-0-18-pZ	LC 850nm MM 220/550m
2882-6-14-pZ	2882-6-18-pZ	SC 1310nm MM 2km
2881-1-14-pZ	2881-1-18-pZ	ST 1310nm SM 12km
2883-1-14-pZ	2883-1-18-pZ	SC 1310nm SM 12km
2887-1-14-pZ	2887-1-18-pZ	LC 1310nm SM 12km
2883-2-14-pZ	2883-2-18-pZ	SC 1310nm SM 34km
2883-3-14-pZ	2883-3-18-pZ	SC 1550nm SM 80km
2883-4-14-pZ	2883-4-18-pZ	SC 1550nm SM 110km
2883-5-14-pZ	2883-5-18-pZ	SC 1550nm SM 140km
2890-0-14-pZ	2890-0-18-pZ	SC 13/15 MM-SF 220/550m
2891-0-14-pZ	2891-0-18-pZ	SC 15/13 MM-SF 220/550m
2890-1-14-pZ	2890-1-18-pZ	SC 13/15 SM-SF 20km
2891-1-14-pZ	2891-1-18-pZ	SC 15/13 SM-SF 20km
2890-2-14-pZ	2890-2-18-pZ	SC 13/15 SM-SF 40km
2891-2-14-pZ	2891-2-18-pZ	SC 15/13 SM-SF 40km
2899-0-14-pZ	2899-0-18-pZ	1x 1000Mbps SFP Uplink
2899-0-24-pZ	2899-0-28-pZ	2x 1000Mbps SFP Uplinks
2899-1-24-pZ	2899-1-28-pZ	2x RJ-45 Uplinks
MM = Multimode, SM = Single-mode, SF = Single-fiber		
<b>Power Options (p):</b>		
1 = Single DC 2-Pin terminal connector		
2 = Dual DC 2-Pin terminal connector		
<b>Operating Temperature:</b>		
Z = Extended temperature (-40 to 75°C)		

See [1000M Fiber Specifications](#) for optical parameters.

# RuggedNet® 1G Unmanaged Ethernet Switch

## RuggedNet® GHPoEBT/Si PoE Ethernet Switch

### Unmanaged Industrial 6 Port 60/100W IEEE 802.3bt 1G Switch

- Unmanaged Industrial High-Power 60W/100W PoE Gigabit Ethernet Switches
- GHPoEBT/Si supports 60W Pre-BT HPOE and IEEE 802.3bt 60W or 100W
- Two 10/100/1000 copper or standard/CWDM Gigabit fiber uplink ports
- Four 10/100/1000 copper PoE user ports
- ST, SC and LC fixed fiber ports or Gigabit SFP transceivers
- Supports jumbo frames up to 10,240 bytes



[See RuggedNet Industrial Ethernet Switch Overview for the complete list of features.](#)

### Description

The RuggedNet GHPoEBT/Si are industrial ruggedized unmanaged Ethernet switches that feature fiber or copper uplink ports and four 10/100/1000 RJ-45 copper Power-over-Ethernet user ports. The GHPoEBT/Si supports PoE, PoE+, legacy 60W HPOE and IEEE 802.3bt (60 or 100W).

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

### Specifications

<b>Description</b>	Unmanaged 6-Port High-Power PoE Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+46 to +57VDC, 4.46A @ 56VDC – 60W models +46 to +57VDC, 7.31A @ 56VDC – 100W models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max), IEEE 802.3bt (60 and 100W)
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams)
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

### Ordering

GHPoEBT/Si 60W	GHPoEBT/Si 100W	Description
3200B-0-14-pZ 3202B-0-14-pZ 3206B-0-14-pZ 3202B-6-14-pZ	3240B-0-14-pZ 3242B-0-14-pZ 3246B-0-14-pZ 3242B-6-14-pZ	ST 850nm MM 220/550m SC 850nm MM 220/550m LC 850nm MM 220/550m SC 1310nm MM 2km
3201B-1-14-pZ 3203B-1-14-pZ 3207B-1-14-pZ	3241B-1-14-pZ 3243B-1-14-pZ 3247B-1-14-pZ	ST 1310nm SM 12km SC 1310nm SM 12km LC 1310nm SM 12km
3203B-2-14-pZ 3203B-3-14-pZ 3203B-4-14-pZ 3203B-5-14-pZ	3243B-2-14-pZ 3243B-3-14-pZ 3243B-4-14-pZ 3243B-5-14-pZ	SC 1310nm SM 34km SC 1550nm SM 80km SC 1550nm SM 110km SC 1550nm SM 140km
3210B-0-14-pZ 3211B-0-14-pZ	3250B-0-14-pZ 3251B-0-14-pZ	SC 13/15 MM-SF 220/550m SC 15/13 MM-SF 220/550m
3210B-1-14-pZ 3211B-1-14-pZ 3210B-2-14-pZ 3211B-2-14-pZ	3250B-1-14-pZ 3251B-1-14-pZ 3250B-2-14-pZ 3251B-2-14-pZ	SC 13/15 SM-SF 20km SC 15/13 SM-SF 20km SC 13/15 SM-SF 40km SC 15/13 SM-SF 40km
3219B-0-14-pZ 3219B-0-24-pZ 3219B-1-24-pZ	3259B-0-14-pZ 3259B-0-24-pZ 3259B-1-24-pZ	1x 1000Mbps SFP Uplink 2x 1000Mbps SFP Uplinks 2x RJ-45 Uplinks
MM = Multimode, SM = Single-mode, SF = Single-fiber		
<b>Power Options (p):</b> 1 = Single DC 2-Pin terminal connector 2 = Dual DC 2-Pin terminal connector		
<b>Operating Temperature:</b> Z = Extended temperature (-40 to 75°C)		

[See 1000M Fiber Specifications for optical parameters.](#)

# RuggedNet® 1G Unmanaged Ethernet Switch

## RuggedNet® GPoE+/Si PoE Ethernet Switch Unmanaged Industrial 6 and 10 Port PoE/PoE+ 1G Switch

- Unmanaged Industrial 6 and 10 port PoE/PoE+ Ethernet switch
- Two 10/100/1000 copper or standard/CWDM Gigabit fiber uplink ports
- Four or eight 10/100/1000 copper PoE user ports
- ST, SC and LC fixed fiber ports or Gigabit SFP transceivers
- Supports jumbo frames up to 10,240 bytes



See [RuggedNet Industrial Ethernet Switch Overview](#) for the complete list of features.

### Description

The RuggedNet GPoE+/Si are ruggedized unmanaged PoE and PoE+ industrial Ethernet switches that feature fiber or copper uplink ports and four or eight 10/100/1000 RJ-45 copper Power Sourcing Power-over-Ethernet user ports.

The switches feature two SFP transceiver receptacle ports supporting 10/100/1000BASE-T SGMII copper transceivers or 100BASE-X SGMII fiber transceiver or 1000BASE-X SERDES fiber transceivers.

The mode of operation can be configured using easily accessible DIP-switches.

The switches feature a remote PoE power reset function that can be configured with a DIP-switch. The PoE power reset feature allows all PDs to be power-cycled and reset remotely.

### Specifications

<b>Description</b>	Unmanaged 6 and 10 Port PoE/PoE+ Ethernet Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>DC Power Requirements</b>	+46 to +57VDC, 2.31A @ 56VDC – 4 port models +46 to +57VDC, 4.47A @ 56VDC – 8 port models
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max)
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.70 lb. (772 grams) - 4 Port models 1.77 lb. (803 grams) - 8 Port models
<b>Warranty</b>	5 year product warranty with 24/7/365 free Technical Support

### Ordering

GPoE+/Si 4 User Port	GPoE+/Si 8 User Port	Description
9560-0-14-pZ	9560-0-18-pZ	ST 850nm MM 220/550m
9562-0-14-pZ	9562-0-18-pZ	SC 850nm MM 220/550m
9566-0-14-pZ	9566-0-18-pZ	LC 850nm MM 220/550m
9562-6-14-pZ	9562-6-18-pZ	SC 1310nm MM 2km
9561-1-14-pZ	9561-1-18-pZ	ST 1310nm SM 12km
9563-1-14-pZ	9563-1-18-pZ	SC 1310nm SM 12km
9567-1-14-pZ	9567-1-18-pZ	LC 1310nm SM 12km
9563-2-14-pZ	9563-2-18-pZ	SC 1310nm SM 34km
9563-3-14-pZ	9563-3-18-pZ	SC 1550nm SM 80km
9563-4-14-pZ	9563-4-18-pZ	SC 1550nm SM 110km
9563-5-14-pZ	9563-5-18-pZ	SC 1550nm SM 140km
9570-0-14-pZ	9570-0-18-pZ	SC 13/15 MM-SF 220/550m
9571-0-14-pZ	9571-0-18-pZ	SC 15/13 MM-SF 220/550m
9570-1-14-pZ	9570-1-18-pZ	SC 13/15 SM-SF 20km
9571-1-14-pZ	9571-1-18-pZ	SC 15/13 SM-SF 20km
9570-2-14-pZ	9570-2-18-pZ	SC 13/15 SM-SF 40km
9571-2-14-pZ	9571-2-18-pZ	SC 15/13 SM-SF 40km
9579-0-14-pZ	9579-0-18-pZ	1x 1000Mbps SFP Uplink
9579-0-24-pZ	9579-0-28-pZ	2x 1000Mbps SFP Uplinks
9579-1-24-pZ	9579-1-28-pZ	2x RJ-45 Uplinks

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**  
**1** = Single DC 2-Pin terminal connector  
**2** = Dual DC 2-Pin terminal connector

**Operating Temperature:**  
**Z** = Extended temperature (-40 to 75°C)

See [1000M Fiber Specifications](#) for optical parameters.

# RuggedNet® PoE Ethernet Extender Overview

## RuggedNet® PoE Ethernet Extender Overview

The RuggedNet® PoE Extenders are unmanaged gigabit PoE Extenders that enable the delivery of Ethernet data and Power over Ethernet (PoE) beyond the standard 100 meter limit of twisted pair copper cabling.

PoE Extenders are cost-effective unmanaged gigabit Ethernet extenders capable of extending the link distance between the Power Source Equipment and Powered Devices. Distance and power extension up to 700 meters can be achieved by daisy-chaining multiple extenders.

Utilizing data regeneration and voltage level boosting capabilities, RuggedNet PoE Extenders can be daisy chained to break through the Ethernet copper distance barrier and deliver 10/100/1000 data and power to multiple PoE powered devices.

Due to cable resistance, voltage drop across the cabling could lower the voltage below the minimum standard requirement of the attached PD. RuggedNet PoE Extenders have smart voltage-boosting technology to maintain the required standard compliant PoE voltage levels between hops.

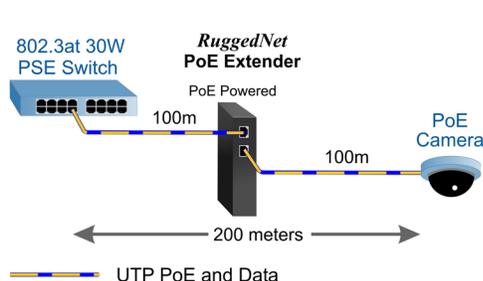
The PoE Extenders automatically negotiate and deliver the power level required by a Powered Device (PD) partner. When a non-PoE device, such as a laptop, is connected to the PoE Extenders for data only applications, no power is applied.

The PoE Extenders are plug-and-play devices that support auto-negotiation of data rates and duplex modes for simple in-line installation to instantly extend industrial network distances. The PoE Extenders are fully operational once a PSE is connected to the PoE/PD port, displaying power and operational status without a PD attached. This facilitates the installation and troubleshooting by ensuring each link is operational.

- Unmanaged 30W and 60W Gigabit PoE Extender
- Multiple port configurations:
  - 1 RJ-45 PoE/PD + 1 RJ-45 PoE/PSE
  - 1 RJ-45 PoE/PD + 2 RJ-45 PoE/PSE
- Can be Powered by IEEE 802.3at or High-Power PoE 60W Power Sourcing Equipment
- Can Power IEEE 802.3af PoE, IEEE 802.3at or High-Power PoE 60W Powered Devices
- Voltage-boosting technology to guarantee minimum voltage requirement to the Powered Device
- Plug-and-Play installation with auto-negotiation of data rates and duplex modes
- Supports jumbo frames up to 10,240 bytes
- Wall, Rack and DIN-rail mountable
- The RuggedNet supports an industrial (-40 to +75°C) operating temperature range

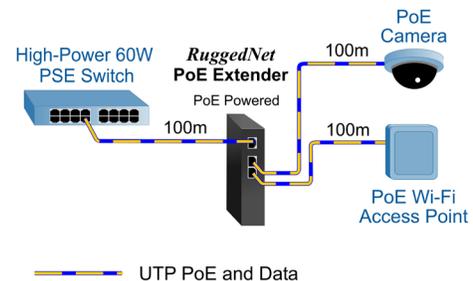
## Basic PoE Extender Application

This example shows an RuggedNet PoE Extender powering an 802.3at PoE camera, and achieving a distance of 200 meters (656 feet) between an 802.3at PoE PSE switch and the camera.



## PoE Extender with Two PDs Application

This example shows a RuggedNet PoE Extender with two PoE/PSE ports powering an 802.3af camera and an 802.3at Wi-Fi Access Point 200 meters from the High-Power PoE 60W PSE switch.



# RuggedNet® PoE Ethernet Extender Overview

RuggedNet Unmanaged PoE Gigabit Extenders		
Product Line	GXPoE+/Si	GXHPoE/Si
	30 Watt Model	60 Watt Model
Model # Range	2200	2201
Ports and Data Rates		
Maximum PD Ports	1	1
Maximum PoE Ports	1 or 2	1 or 2
PD/PoE Port Data Rates	10/100/1000	10/100/1000
Features		
Frame size	10K	10K
PoE Power Level	IEEE 802.3af IEEE 802.3at	IEEE 802.3af IEEE 802.3at HPoE
Temperature Hardened		
Industrial -40 to 75°C	✓	✓

## Regulatory and Environmental Specifications

<b>Regulatory Compliances</b>	<p>Safety: UL 62368-1, UL 60950-1, IEC 62368-1, IEC 60950-1, EN 62368-1, EN 60950-1, CAN/CSA C22.2 No. 62368-1-14, CAN/CSA C22.2 No. 60950-1, CE Mark, UKCA</p> <p>EMC: EN 55032/24 CE Emissions/Immunity, IEC 61000-6-4 Industrial Emissions, IEC 61000-6-2 Industrial Immunity</p> <p>EMI: CISPR 32, FCC 47 Part 15 Subpart B Class A</p> <p>EMS: IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m, (passed industrial rating of 10V/m), IEC 61000-4-4 EFT: Power: 1 kV, (passed industrial rating of 2 kV), IEC 61000-4-4 EFT: Signal: 0.5 kV, (passed industrial rating of 1 kV), IEC 61000-4-5 Surge: Power: 1 kV, (passed industrial rating of 2 kV), IEC 61000-4-5 Surge: Signal: 1 kV, IEC 61000-4-6 CS: Signal: 3 Vrms, (passed industrial rating of 10 Vrms)</p> <p>IP Rating: IP40 Protection ACT: TAA, BAA, NDAA</p>
<b>Environmental</b>	REACH, RoHS, WEEE

# RuggedNet® PoE Ethernet Extender

## RuggedNet® GXPoE+/Si and GXHPoE/Si

### Unmanaged Industrial 30W and 60W Gigabit PoE Extender with Booster Technology

- Unmanaged Industrial 30W and 60W Gigabit PoE Extender
- Can be Powered by IEEE 802.3at or High-Power PoE 60W Power Sourcing Equipment
- Can Power IEEE 802.3af PoE, IEEE 802.3at or High-Power PoE 60W Powered Devices
- Voltage-boosting technology to guarantee minimum voltage requirement to the Powered Device
- Industrial -40 to 75°C temperature range



See [RuggedNet PoE Ethernet Extender Overview](#) for a complete list of features.

#### Description

RuggedNet Industrial GXPoE+/Si and GXHPoE/Si are unmanaged gigabit PoE Extenders that enable the delivery of Ethernet data and Power over Ethernet (PoE) beyond the standard 100 meter limit of twisted pair copper cabling.

#### Specifications

<b>Description</b>	10/100/1000BASE-T Ethernet PoE/PD to PoE/PSE Extenders
<b>Frame Size</b>	Up to 10,240 bytes
<b>PoE/PD Input</b>	+/-42.5 to +/-57VDC
<b>PoE/PSE Output</b>	+/-50 to +/-57VDC
<b>Environment</b>	Operating: -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max) IEEE 802.3at (30 watts max) HPoE 60W
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.56 lb. (708 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

GXPoE+/S 30W	GXHPoE/S 60W	Description
2200-11Z	2201-11Z	One RJ-45 PoE/PD and one RJ-45 PoE/PSE
2200-12Z	2201-12Z	One RJ-45 PoE/PD and two RJ-45 PoE/PSE
<b>Operating Temperature:</b> Z = Extended temperature (-40 to 75°C)		

#### Distances and Power

PSE Source Power	Number of Extenders	Distance Meters / Feet	Available Power for PD per Cable Type		
			Category 5	Category 5e	Category 6
802.3at 30W	1	200m / 656 ft.	17.6 watts	18.6 watts	19.9 watts
	2	300m / 984 ft.	11.3 watts	12.2 watts	13.5 watts
	3	400m / 1,312 ft.	6.0 watts	6.7 watts	7.9 watts
	4	500m / 1,640 ft.	1.2 watts	1.8 watts	2.9 watts
High-Power 60W	1	200m / 656 ft.	38.8 watts	40.8 watts	43.5 watts
	2	300m / 984 ft.	29.2 watts	31.1 watts	34.0 watts
	3	400m / 1,312 ft.	21.4 watts	23.2 watts	25.9 watts
	4	500m / 1,640 ft.	14.8 watts	16.6 watts	19.0 watts
	5	600m / 1,968 ft.	9.1 watts	10.7 watts	12.9 watts
	6	700m / 2,296 ft.	4.0 watts	5.4 watts	7.4 watts
	7	800m / 2,624 ft.	-	Data Only	2.4 watts

Distances are based on a daisy chain topology with no drop locations along chain. Distances also based on using certified Cat5, Cat5e or Cat6 cabling with no patch cables or panels.

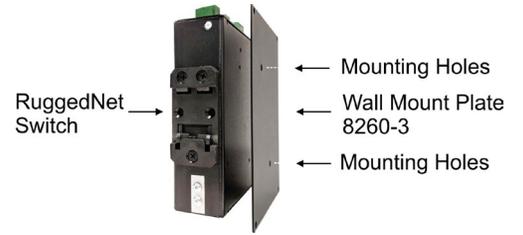
# RuggedNet® Accessories

## RuggedNet® Mounting Options and Accessories

### Wall/Rack Mount Plate

#### Description

The wall mount plate is used to wall or rack mount any RuggedNet switches and extenders. One wall mount plate is required per module.



#### Ordering

Wall Mount Plate	Description
8260-3	Wall Mounting Plate (one per module is required)

### Rack Mount Shelf

#### Description

The 1U 19" rack mount shelf accommodates RuggedNet switches and extenders when installed with the optional Wall Mount Plate (8260-3).

Accommodates up to 2 RuggedNet Switches or Extenders



#### Specifications

Description	Rack Mount Shelf
Dimension (W x D x H)	19.0" x 7.09" x 1.72" (482.6 mm x 180.1 mm x 43.7 mm)
Warranty	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

Rack Mount Shelf	Description
8260-0	Rack-Mount Shelf

### DIN-Rail Mounting

#### Description

The RuggedNet switches and extenders can be DIN-rail mounted using the included DIN-rail mount bracket.



# iConverter® Multi-Service Platform Overview

## iConverter® Multi-Service Platform Overview



The iConverter Multi-Service Platform consists of managed media converters, Network Interface Devices (NIDs), CWDM Multiplexers and T1/E1 Multiplexers. This modular system provides fiber connectivity in Service Provider, Enterprise and Government networks.

iConverter modules and chassis create a true multi-service platform that transports a variety of network protocols over fiber infrastructure and equipment. Flexible and easily scalable, iConverter modules are hot-swappable and can be mounted in a 19-Module, 5-Module, 2-Module or 1-Module powered chassis. Multi-module chassis feature redundant and hot-swappable power supplies.

The iConverter Multi-Service Platform can be managed with NetOutlook® SNMP Management Software.

iConverter equipment is NEBS Level 3, UL, cUL, CE and UKCA compliant. Modules and chassis support a standard commercial temperature range of 0 to 50°C. Models are also available supporting a wide temperature range (-40 to 60°C) or an industrial temperature range (-40 to 75°C).

Visit [www.omnitrion-systems.com](http://www.omnitrion-systems.com) for detailed specifications, application examples, white papers and the latest information on new products.

### Technologies Supported:

10M, 100M, Gigabit and 10 Gigabit Ethernet  
T1(DS1)/E1, T3(DS3)/E3  
OC-3, OC-12, OC-48, OC-192  
STM-1, STM-4, STM-16, STM-64  
1/2/4/8/10 Fibre Channel  
CPRI up to 6.144 Gbps  
Serial RS-232/422/485 and X21  
Standard and D/CWDM SFP/SFP+/XFPs  
Power over Ethernet

### Module Types:

Copper RJ-45 to Fiber  
Fiber to Fiber  
Coax to Fiber  
4-Port Copper Switch  
T1/E1 Multiplexer  
CWDM Multiplexer  
CWDM Transponder

### Next-Generation Enterprise Networks

iConverter media converters and multiplexers provide advanced fiber connectivity for Enterprise LAN and WAN networks. iConverter media converters support managed copper to fiber, multimode fiber to single-mode fiber, or dual fiber to single-fiber conversion applications.

iConverter modules and chassis are used for point-to-point fiber connectivity, or to distribute high-density fiber links from the Network Core to standalone or compact, multi-module configurations at the Network Edge. To support Next-Generation networks, iConverter media converters feature:

Pluggable transceivers for standard and CWDM wavelengths  
Quality of Service (QoS) Prioritization  
VLAN Mapping  
Port VLAN and Port Access Controls

Auto Negotiation  
Bandwidth Control  
Jumbo Frames up to 10,240 bytes

# iConverter® Multi-Service Platform Overview

## Media Converters and Transponders

iConverter Managed Media Converters provide seamless integration of copper and fiber, and different fiber types. iConverter media converter modules support a wide variety of protocols and data rates to create a reliable and cost-effective network. iConverter media converters support pluggable transceivers for flexible connectivity solutions for standard, CWDM and DWDM wavelengths.



## T1/E1 Multiplexers

iConverter T1/E1 Multiplexers transport up to sixteen independent T1/E1 circuits and 10/100/100 Ethernet from copper links onto a fiber link, CWDM wavelength or Ethernet Virtual Connection (EVC). Designed for mobile backhaul, building-to-building PBX connectivity, and demarcation extension, iConverter T1/E1 multiplexers are available in modular or fixed chassis configurations with redundant power supplies.



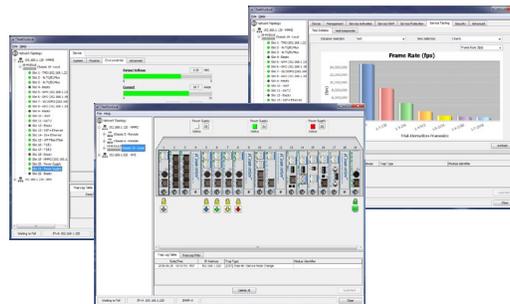
## Ethernet Switch Modules

iConverter 10/100 and 10/100/1000 switch modules are managed four-port Ethernet switches that can be installed in a variety of chassis configurations with backplane connectivity to other iConverter modules.

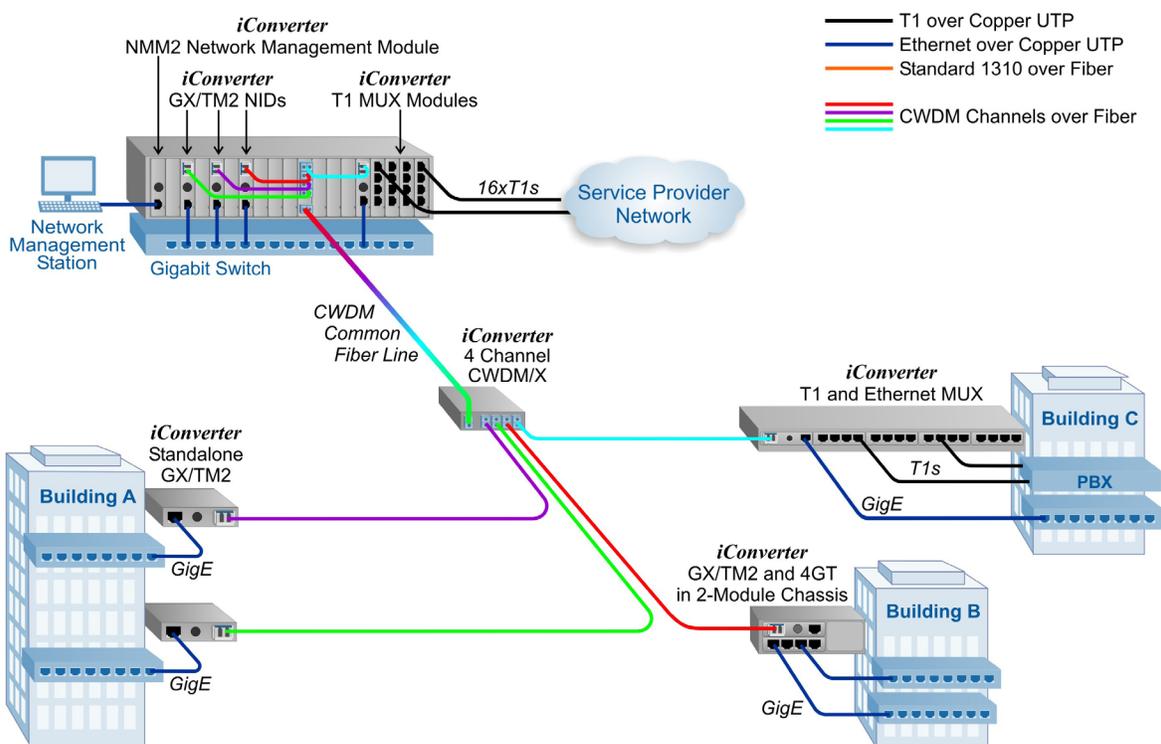


## Management Systems

The iConverter management system provides the ability to remotely monitor network performance, configure hardware parameters and perform fault detection. The iConverter Multi-Service Platform can be managed with NetOutlook SNMP Network Management Software.



# iConverter® Multi-Service Platform Overview



In this campus network application diagram, the iConverter Multi-Service Platform enables multiple services to be transported over CWDM with connectivity to copper equipment in different buildings.

At the network core location in the top left of the diagram, an iConverter 19-Module Chassis is deployed with GX/TM2 NID plug-in modules, and a Modular T1 and Ethernet Multiplexer. An iConverter NMM2 Network Management Module installed with the GX/TM2 NIDs enables remote configuration, end-to-end network performance monitoring and fault detection.

The GX/TM2 NID plug-in modules with CWDM SFP transceivers convert copper UTP links from a core switch to CWDM fiber patch cables that connect to a 4-Channel CWDM/X Multiplexer module. The GX/TM2 modules provide copper-to-fiber media conversion with integrated management, and support the IEEE 802.3ah Ethernet in the First Mile standard to provide carrier-grade link fault management and monitoring. The GX/TM2 also supports VLAN stacking and Quality of Service for voice, video and data over Ethernet.

A Service Provider has handed off sixteen T1 circuits via UTP cabling at the demarcation point at the network core that are extended to a PBX in another building. A Modular T1 and Ethernet Multiplexer in the 19-Module Chassis transports the T1s and Gigabit Ethernet over fiber, and provides wavelength connectivity to the 4-Channel CWDM/X MUX using a CWDM SFP transceiver.

The 4-Channel CWDM/X MUX transports all four wavelengths (channels) over a Common Fiber Line. Three wavelengths transport Gigabit Ethernet, and the fourth transports Gigabit Ethernet and sixteen T1 circuits. iConverter CWDM Multiplexers can transport up to 16 CWDM wavelengths, with up to 10G per wavelength.

At the opposite end of the CWDM Common Fiber Line, a 4-Channel CWDM/X MUX module installed in a Passive 1-Module Chassis de-multiplexes the four wavelengths, and CWDM fiber access links connect to equipment at different buildings in the campus network. The equipment at each building has a CWDM SFP that matches the wavelength coming from the CWDM/X MUX.

At Building A, two fiber links are connected to standalone GX/TM2 NIDs that provide media conversion, and managed connectivity to Ethernet switches on different floors in the building.

At Building B, a fiber link connects to a GX/TM2 installed in an 2-Module Chassis with a 4GT 4-port switch module. This compact chassis configuration functions as a managed switch with a fiber uplink and five managed 10/100/1000 UTP ports that connect via copper to department switches.

At Building C, a fiber link connects to a fixed configuration T1 and Ethernet MUX that provides connectivity for sixteen copper T1s to a PBX, and copper Gigabit Ethernet connectivity to an Ethernet Switch.

# iConverter® Chassis

## iConverter® Chassis Options

### iConverter® 19-Module Chassis

#### Managed Redundant Power Chassis

- The high-density iConverter 19-Module Chassis is 2U high
- Up to three hot-swappable AC, 24VDC and 48VDC power supplies
- Ethernet Backplane allows modules to share data to support a wide variety of network applications
- Up to 19 iConverter chassis can be linked and managed using a single IP address



#### Description

The iConverter 19-Module Chassis is designed for applications where fault tolerance and a high-density rack footprint are essential. The 2U (3.5 inch) high iConverter 19-Module Chassis supports up to three power supplies for redundancy, and can be mounted in a 19-inch or 23-inch rack.

The 19-Module Chassis features up to three hot-swappable, redundant power supplies. The power supplies operate in load-sharing mode to reduce the burden on each power supply to extend the lifetime and fault tolerance.

Power is provided to the nineteen iConverter modules installed in the chassis via the chassis backplane. When used with an iConverter management module, the management capabilities include the ability to monitor the voltage, current and temperature of each power supply. Any out-of-range violation can trigger an SNMP trap to allow quick corrective maintenance.

In addition to handling the power and management data for each iConverter module, the 19-Module Chassis backplane allows sharing of Ethernet data between the individual modules. iConverter modules that are installed in adjacent slots and equipped with Ethernet backplane ports have the ability to connect to each other via the chassis' Ethernet backplane and facilitate a variety of flexible management options including unmanaged, out-of-band managed, in-band managed and multi-port configurations.

#### Specifications

Description	19-Module Chassis for iConverter media converters and NIDs
<b>AC Power Chassis Input Requirements</b>	100 to 240VAC, 50/60Hz, 2.0A @ 120VAC - 60W models 2.5A @ 120VAC - 120W models IEC 320 C14
<b>AC Power Chassis Output Requirements</b>	18.0A @ 3.3VDC - 60W models 36.0A @ 3.3VDC - 120W models
<b>DC Power Chassis Input Requirements</b>	+/- 18 to +/- 36VDC, 6.0A @ 24VDC - 66W 24VDC models +/- 36 to +/- 60VDC, 3.0A @ 48VDC - 66W 48VDC models 5.0A @ 48VDC - 120W models 3-Pin Terminal (isolated)
<b>DC Power Chassis Output Requirements</b>	20.0A @ 3.3VDC - all 66W models 36.0A @ 3.3VDC - 120W models
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	17.15" x 14.0" x 3.5" (435.61 mm x 355.6 mm x 88.9 mm)
<b>Weight</b>	One Power Supply: 16.0 lbs (7.26 kg) Two Power Supplies: 18.5 lbs (8.39 kg) Three Power Supplies: 21.0 lbs (9.53 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

19-Module Chassis	Description
8200-pt	19-Module Chassis AC 60W
8201-pt	19-Module Chassis AC 120W High-Flow
8206-pt	19-Module Chassis 24VDC 66W
8205-pt	19-Module Chassis 48VDC 66W
8207-pt	19-Module Chassis 48VDC 120W High-Flow
<b>Power Options (p):</b>	
1 = One Power Supply with US power cord	
2 = Two Power Supplies with US power cord	
3 = Three Power Supplies with US power cord	
9 = Spare Power Supply with US power cord	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	

# iConverter<sup>®</sup> Chassis

## iConverter<sup>®</sup> 5-Module Chassis Managed Redundant Power Chassis

- The iConverter 5-Module Chassis is 1U (1.75 inch) high and supports 19-inch or 23-inch rack mounts
- Redundant, hot-swappable AC, 24VDC and 48VDC power supplies for mission critical networks
- Ethernet Backplane allows modules to share data to support a wide variety of network applications
- All iConverter modules are hot-swappable when used with the 5-Module Chassis



### Description

The iConverter 5-Module Chassis is designed for applications where fault tolerance and reliability are essential. The 1U (1.75 inch) high iConverter 5-Module Chassis has redundant power supplies and can be mounted in a 19-inch or 23-inch rack.

The 5-Module Chassis features two hot-swappable redundant power supplies. The redundant power supplies operate in load-sharing mode to reduce the burden on each power supply to extend the lifetime and fault tolerance.

Power is provided to up to five iConverter modules via the chassis backplane. When used with an iConverter management module, the management capabilities include the ability to monitor the voltage, current and temperature of each power supply. Any out of range violation can trigger an SNMP trap to allow quick corrective maintenance.

In addition to handling the power and management data for each iConverter module, the 5-Module Chassis backplane allows sharing of Ethernet data between the individual modules. iConverter modules that are installed in adjacent slots and equipped with Ethernet backplane ports have the ability to connect to each other via the chassis' Ethernet backplane and facilitate a variety of flexible management options including unmanaged, out-of-band managed, in-band managed and multi-port configurations.

### Specifications

Description	5-Module Chassis for iConverter media converters and NIDs
<b>AC Power Chassis Input Requirements</b>	100 to 240VAC, 50/60Hz, 0.5A @ 120VAC - 33W models 1.5A @ 120VAC - 66W models IEC 320 C14
<b>AC Power Chassis Output Requirements</b>	10.0A @ 3.3VDC - 33W models 20.0A @ 3.3VDC - 66W models
<b>DC Power Chassis Input Requirements</b>	+/- 18 to +/- 36VDC, 1.4A @ 24VDC - 33W 24VDC models +/- 36 to +/- 60VDC, 0.7A @ 48VDC - 33W 48VDC models 2.0A @ 48VDC - 66W models 3-Pin Terminal (isolated)
<b>DC Power Chassis Output Requirements</b>	10.0A @ 3.3VDC - all 33W models 20.0A @ 3.3VDC - 66W models
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	17.5" x 9.0" x 1.75" (444.5 mm x 228.6 mm x 44.5 mm)
<b>Weight</b>	One Power Supply: 7.5 lbs (3.40 kg) Two Power Supplies: 9.0 lbs (4.08 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

5-Module Chassis	Description
8220-pt	5-Module Chassis AC 33W
8221-pt	5-Module Chassis AC 66W High-Flow
8226-pt	5-Module Chassis 24VDC 33W
8225-pt	5-Module Chassis 48VDC 33W
8227-pt	5-Module Chassis 48VDC 66W High-Flow
<b>Power Options (p):</b>	
1 = One Power Supply with US power cord	
2 = Two Power Supplies with US power cord	
9 = Spare Power Supply with US power cord	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	

## iConverter<sup>®</sup> 2-Module Chassis

### Managed Power Chassis

- 2-Module chassis feature an internal AC or DC power supply
- Houses all models of hot-swappable iConverter media converter and switch modules
- Ethernet Backplane allows modules to share data to support a wide variety of network applications



### Description

The iConverter 2-Module Power Chassis is a compact, versatile chassis featuring a single internal universal AC or 18-60VDC power supply. The chassis provides housing for all iConverter multi-service platform modules.

The 2-Module Chassis features a backplane that enables sharing of Ethernet data between two installed iConverter modules that are equipped with Ethernet backplane ports. This enables the chassis to support a variety of networking configurations. Installing an iConverter copper-to-fiber module and a four-port switch module provides a fiber uplink and five 10/100 or 10/100/1000 user ports.

Equipped with an iConverter management module or Network Interface Device (NID), the 2-Module Chassis provides a secure, local or remote managed solution capable of supporting advanced Ethernet services for Enterprise and Service Provider networks. It can be remotely managed via IP-based SNMP or Telnet.

### Specifications

<b>Description</b>	2-Module Chassis for iConverter media converters and NIDs
<b>AC Power Chassis Input Requirements</b>	100 to 240VAC, 50/60Hz, 0.5A @ 120VAC - 8.5W models 0.5A @ 120VAC - 16.5W models IEC 320 C14
<b>AC Power Chassis Output Requirements</b>	2.6A @ 3.3VDC - 8.5W models 5.0A @ 3.3VDC - 16.5W models
<b>DC Power Chassis Input Requirements</b>	+/- 18 to +/- 60VDC, 1.0A @ 48VDC - 6.6W models 2.0A @ 48VDC - 16.5W models 3-Pin Terminal (isolated)
<b>DC Power Chassis Output Requirements</b>	2.0A @ 3.3VDC - 6.6W models 5.0A @ 3.3VDC - 16.5W models
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	6.7" x 5.51" x 1.87" (170.18 mm x 139.95 mm x 47.5 mm)
<b>Weight</b>	2.5 lbs (1.14 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

2-Module Chassis	Description
8230-pt	2-Module Chassis AC 8.5W, No fan
8231-pt	2-Module Chassis AC 16.5W, Temperature controlled fan
8232-1t	2-Module Chassis AC 16.5W, High-Flow fan
8235-pt	2-Module Chassis 48VDC 8.5W, No fan
8236-pt	2-Module Chassis 48VDC 16.5W, Temperature controlled fan
8238-1t	2-Module Chassis 48VDC 16.5W, High-Flow fan
<b>Power Options (p):</b>	
0 = Standard model - not available with High-Flow models 1 = Dying Gasp model	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C)	

## iConverter® 1-Module Chassis

### Managed Power Chassis

- 1-Module Power Chassis with external AC adapter power supply or direct DC power
- DC input supports 20 to 60VDC via three pin terminal connector with isolated ground
- Houses all single-slot models of hot-swappable iConverter media converter and switch modules
- All iConverter modules are hot-swappable



### Description

The 1-Module Power Chassis is designed for network edge or Customer Premises deployments where low-profile, low cost and flexible upgrades are important. The compact 1-Module iConverter Power Chassis supports a single iConverter module and is powered by an external AC power adapter or external DC power source (20 to 60VDC).

The chassis supports managed edge demarcation applications when an iConverter Network Interface Device (NID) plug-in module with integrated management (such as the 10/100M2 shown in the photos above) is installed in the chassis. Models with “Dying Gasp” support allow NIDs to send a power failure alarm in the event of power loss.

### Specifications

Description	1-Module Chassis for iConverter media converters and NIDs
<b>AC Power Chassis Input Requirements</b>	100 to 240VAC, 50/60Hz, 0.13A @ 120VAC - 3.3W and 5.0W US models 0.19A @ 120VAC - 3.3W and 5.0W Universal models 2.5mm Barrel Connector 100 to 240VAC, 50/60Hz, 1.0A @ 120VAC - 8.3W models 2.1mm Barrel Connector
<b>AC Power Chassis Output Requirements</b>	1.0A @ 3.3VDC - 3.3W models 1.5A @ 3.3VDC - 5W models 2.5A @ 3.3VDC - 8.3W models
<b>DC Power Chassis Input Requirements</b>	+/- 20 to +/- 60VDC, 0.6A @ 48VDC - 8.3W models 3-Pin Terminal (isolated)
<b>DC Power Chassis Output Requirements</b>	2.5A @ 3.3VDC - 8.3W models
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.3W / 5.0W 3.8" x 5.5" x 1.0" (96.52 mm x 139.7 mm x 25.4 mm) 8.3W 3.8" x 6.0" x 1.0" (96.52 mm x 152.4 mm x 25.4 mm)
<b>Weight</b>	1.5 lbs. (0.68 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

1-Module Chassis	Description
8240-1t	1-Module Chassis AC 3.3W US AC/DC Adapter, 100 - 240 VAC included
8241-1t	1-Module Chassis AC 5.0W, dying gasp US AC/DC Adapter, 100 - 240 VAC included
8240-2t	1-Module Chassis AC 3.3W Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord
8241-2t	1-Module Chassis AC 5.0W, dying gasp Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord
8242-1t	1-Module Chassis AC 8.3W US AC/DC Adapter, 100 - 240 VAC included
8243-1t	1-Module Chassis AC 8.3W, dying gasp US AC/DC Adapter, 100 - 240 VAC included
8242-2t	1-Module Chassis AC 8.3W Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord
8243-2t	1-Module Chassis AC 8.3W, dying gasp Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord
8242-9t	1-Module Chassis 48VDC, 8.3W 3 pin terminal connector, no AC/DC power adapter
8243-9t	1-Module Chassis 48VDC, 8.3W, dying gasp 3 pin terminal connector, no AC/DC power adapter
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) <b>W</b> = Wide temperature (-40 to 60°C)	

## iConverter® 1-Module Industrial Power Chassis

### Managed Redundant Power Chassis

- 1-Module Industrial Power Chassis
- Single or dual DC power for redundancy
- DC input supports 12 to 36VDC or 20 to 60VDC
- LED indicators for each power source
- Wall, Rack or DIN-rail mountable
- Industrial -40 to 75°C temperature range



### Description

The iConverter 1-Module Industrial Power Chassis is a compact, versatile chassis featuring a single or dual DC terminal power connection supporting 12 to 36VDC or 20 to 60VDC providing flexible installation options.

Utilizing the combination of iConverter modules and 1-Module Industrial chassis enables a full range of industrial network applications, such as access control, data acquisition and Industrial Internet of Things (IIoT) to be supported. This includes a wide range of copper and fiber industrial applications by utilizing selected iConverter module.

### Specifications

<b>Description</b>	1-Module Industrial Power Chassis
<b>DC Power Chassis Input Requirements</b>	+/-12 to +/- 36 VDC - 8270-1 models 1.5A Max @ 12VDC 2-Pin Terminal +/-20 to +/- 60 VDC - 8270-2 models 0.8A Max @ 20VDC 2-Pin Terminal
<b>DC Power Chassis Output Requirements</b>	3.0A @ 3.3VDC; 10.0 watts
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m Compliance: REACH, RoHS, WEEE
<b>Compliances*</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
<b>Weight</b>	1.5 lbs. (0.68 kg)
<b>Warranty</b>	5 year warranty with 24/7/365 free Technical Support
* Pending	

### Ordering

1-Module Chassis	Description
8270-1-1t	1-Module Chassis +/-12 to +/- 36 VDC, Single Power Input
8270-1-2t	1-Module Chassis +/-12 to +/- 36 VDC, Dual Power Input
8270-2-1t	1-Module Chassis +/-20 to +/- 60 VDC, Single Power Input
8270-2-2t	1-Module Chassis +/-20 to +/- 60 VDC, Dual Power Input
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) <b>W</b> = Wide temperature (-40 to 60°C) <b>Z</b> = Extended temperature (-40 to 75°C)	

## iConverter<sup>®</sup> 1-Module Redundant Power Chassis with PoE Managed Redundant Power Chassis

- 1-Module Redundant Power Chassis with dual redundant powering options
- Support the following power options
  - Power-over-Ethernet (IEEE 802.3af) or
  - DC Power 9-24VDC (2-Pin Terminal or AC/DC adapter) or
  - DC Power 24-60VDC
- Two optional 10/100 Ethernet ports
- Four optional contact closure alarm sensors



### Description

The iConverter 1-Module Redundant Power Chassis supports multiple power sources, configurable 10/100 Ethernet ports and a wide variety of alarm options. Power source options feature load-sharing combinations of Power-over-Ethernet (PoE), 9-24VDC and 24-60VDC. The PoE option is designed for applications where the converter chassis must be physically located where power is unavailable or is costly to install. Power is provided to one of the chassis' optional 10/100 network ports from a Power Source Equipment (PoE/PSE) such as a switch or a Mid-Span power injecting device.

The two optional 10/100 RJ-45 network ports are available with or without PoE option on one of the ports. Auto-negotiation, 10/100 and Half/Full-Duplex modes can be configured for each port.

Four optional contact-closure alarm sensors are available for monitoring external events. These sensors can be used to monitor a backup battery, the state of an enclosure's door or other environmental device states. An SNMP trap can be selectively generated upon the occurrence of any of these monitored events.

The chassis can be remotely managed when an iConverter module with integrated management (such as the 10/100M2) is installed in the chassis. The management module provides monitoring, remote configuration and trap notification.

### Specifications

<b>Description</b>	1-Module Redundant Power Chassis
<b>Frame Size</b>	Up to 1,536 (on models with optional Ethernet ports)
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.2A @ 120VAC
<b>DC Power Requirements</b>	+9.0 to +24.0VDC, 1.5A @ 9VDC 2 Pin Terminal (non-isolated) or barrel connector +/- 24.0 to +/- 60.0VDC, 0.3A @ 48VDC 3 Pin Terminal (isolated) 44 - 57VDC, 0.27A @ 48VDC RJ-45 (Alt A & B)
<b>DC Output Power</b>	3.3VDC, 3.0A @ 3.3VDC (per power input)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 IEEE 802.3af (15.40 watts max)
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A, AS/NZS 3548, VCC1 Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	5.4" x 6.8" x 1.0" (137.16 mm x 172.72 mm x 25.4 mm)
<b>Weight</b>	1.5 lbs. (0.68 kg) w/ AC/DC Adapter: 2.0 lbs. (0.91 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

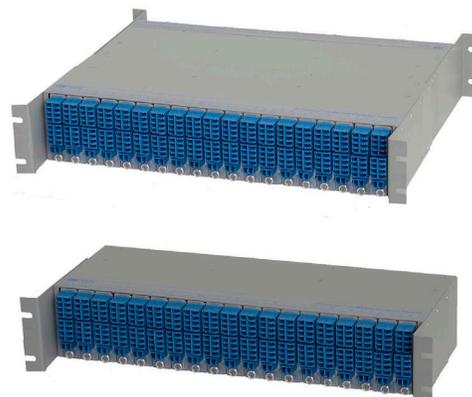
1-Module Redundant Chassis	Description
8245-11p-t	Two 9-24VDC Barrel Connector
8247-11p-t	Two 9-24VDC Barrel, Alarm Contacts
8248-11p-t	Two 9-24VDC Barrel, Alarm Contacts, RJ-45
8247-220-t	Two 9-24VDC Terminal, Alarm Contacts
8248-220-t	Two 9-24VDC Terminal, Alarm Contacts, RJ-45
8247-31p-t	9-24VDC Barrel, 24-60VDC Terminal, Alarm Contact
8248-31p-t	9-24VDC Barrel, 24-60VDC Terminal, Alarm Contact, RJ-45
8247-320-t	9-24VDC Terminal, 24-60VDC Terminal, Alarm Contact
8248-320-t	9-24VDC Terminal, 24-60VDC Terminal, Alarm Contact, RJ-45
8246-51p-t	PoE Power, 9-24VDC Barrel
8248-51p-t	PoE Power, 9-24VDC Barrel, Alarm Contact
8249-520-t	PoE Power, 9-24VDC Terminal, Alarm Contact
<b>Power Options (p):</b>	
1 = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord	
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
8 = External AC/DC Adapter, 100 - 240 VAC included, Japanese Power Cord	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	
See data sheet for the complete list of chassis options available.	

# iConverter<sup>®</sup> Chassis

## iConverter<sup>®</sup> 19-Module Compact Chassis

### 19 and 38 Module Passive Chassis

- The iConverter Compact Chassis provides high-density, CWDM/DWDM fiber distribution
- Available as a single, front-loading chassis or as a dual front and rear loading chassis
- Can be installed in 19" and 23" racks



### Description

The iConverter 19-Module Compact Chassis provides an innovative approach to increase the number of CWDM or DWDM connections in a 2U (3.5 inch) high rack space. The short chassis design allows two chassis to be connected back-to-back supporting up to 38 CWDM or DWDM modules. This configuration provides up to 684 connectors or up to 608 simplex channels or 304 duplex channels.

The 19-Module Compact Chassis is designed for passive iConverter CWDM/DWDM modules that do not require power. The Chassis can be ordered as a single, front-loading chassis or as a dual front and rear loading chassis kit.

### Specifications

Description	19-Module Compact Chassis for iConverter CWDM modules
Environment	Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
Dimension (W x D x H)	17.15" x 6.0" x 3.5" (435.6 mm x 152.4 mm x 88.9 mm) - 8210-1 17.15" x 12.0" x 3.5" (435.6 mm x 304.8 mm x 88.9 mm) - 8210-2
Weight	7.1 lbs. (3.22kg) 14.5 lbs. (6.58kg)
Warranty	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

Compact Chassis	Description
8210-1	Single Front-Loading 19-Module Compact Chassis with two 19" Rack Mount Brackets
8210-2	Dual Front and Rear Loading 19-Module Compact Chassis Kit with four 19" Rack Mount Brackets and two Coupling Brackets
8097-2	Coupling Brackets (set of 2)
8091-2	23" Rack Mount Brackets (set of 2)
8096-1	19" Rack Mount Cable Management Kit
8096-2	23" Rack Mount Cable Management Kit

# iConverter<sup>®</sup> Chassis

## iConverter<sup>®</sup> 1-Module Passive Chassis

### Passive Chassis

- Compact 1-Module Passive Chassis without power
- Supports single slot passive iConverter CWDM/DWDM Multiplexers and OADMs
- Wall-mount or tabletop options for flexible installations



### Description

The iConverter 1-Module Passive Chassis is a one-slot, standalone chassis without power, that can house all passive iConverter single slot modules. It is designed for network edge or Customer Premises deployments where no powered, low-profile, low cost and flexible upgrades are important, making it an ideal solution for Enterprise, datacenter and metro access interconnectivity.

### Specifications

<b>Description</b>	1-Module Passive Chassis for iConverter CWDM modules
<b>Environment</b>	Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Dimension (W x D x H)</b>	3.8" x 5.5" x 1.0" (96.52 mm x 139.7 mm x 25.4 mm)
<b>Weight</b>	0.8 lbs. (361g)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

<b>Passive Chassis</b>	<b>Description</b>
8244-0	1-Module Passive Chassis

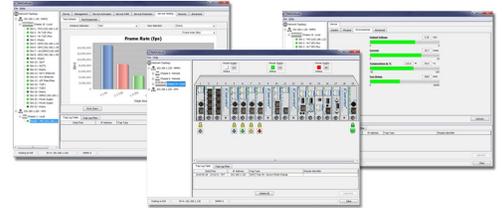
# iConverter<sup>®</sup> Network Management Software

## Management and Management Software

### NetOutlook<sup>®</sup> Network Management Software

#### SNMP Network Management Software for Omnitron Products

- Intuitive Graphical User Interface (GUI) provides configuration, monitoring and reporting of Omnitron modules and chassis
- Real-time trap notification
- Supports SNMPv1, SNMPv2c and SNMPv3
- Optical performance statistics for SFP transceivers equipped on modules
- SNMP Device Discovery utility that automatically detects Omnitron chassis and modules on the network



#### Description

NetOutlook Network Management Software is a robust and secure network management application for Omnitron products. NetOutlook provides remote management of the iConverter<sup>®</sup> Multi-Service Platform, OmniConverter<sup>®</sup> and RuggedNet<sup>®</sup> Ethernet Switches.

NetOutlook has an intuitive Graphical User Interface (GUI) that provides the ability to remotely monitor network performance, configure hardware parameters, provision services, generate performance reports and perform advanced fault detection.

NetOutlook graphical tree structure provides visibility of all discovered network addresses. This simplifies the management of large networks, and provides instance access and notification of network problems.

#### Specifications

Description	Network Management System for Omnitron Products
System Requirements	Microsoft compatible PC with Microsoft Windows 2000/2003/XP/Windows7/8/10 and an Ethernet Network Interface Card

#### Ordering

NetOutlook	Description
8100-0	NetOutlook Management Software (Single User License)

# iConverter<sup>®</sup> Network Management Module

## iConverter<sup>®</sup> NMM2 Network Management Module

- Provides real-time management, trap notification and remote configuration
- Supports SNMPv1, SNMPv2c, SNMPv3 and Telnet protocols
- SNMP management via Omnitron's NetOutlook<sup>®</sup> management software, or third-party SNMP management software
- Password protected to prevent unauthorized access
- 10/100Mbps RJ-45 port supports auto or manual negotiation and auto-crossover



### Description

The iConverter NMM2 provides comprehensive remote monitoring, configuration and alarm notification functions for all iConverter managed media converters and Network Interface Devices (NIDs). Installed in any slot of an iConverter chassis, the NMM2 manages all other modules and power supplies installed in the chassis through a high-speed management backplane.

Through the 10/100 RJ-45 Ethernet port, the NMM2 can be remotely accessed by IP-based management protocols, including SNMPv1/2c/3, Telnet and FTP. The serial console port provides local access and initial configuration from an RS-232 terminal. Management is accessed either via NetOutlook<sup>®</sup>, Omnitron's SNMP Management Software, or by any third party SNMP management software. An intuitive Command Line Interface (CLI) can be accessed either via the serial port or Telnet.

### Specifications

<b>Description</b>	Network Management Module
<b>Frame Size</b>	Up to 2,048 bytes
<b>DC Power Requirements</b>	0.9A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3 RFC1155, RFC1156, RFC1157, RFC1212, RFC1213, OST MIB MEF 9, 14, 21
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, Serial Console
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

<b>NMM2</b>	<b>Description</b>
8000N-0t	Management module
8081-3	NMM2 Serial Cable (DB-9 Male to Female - 3ft.)
8082-0	NMM2 DIN-6 to DB-9 Female Adapter Cable

**Operating Temperature Options (t):**  
<leave blank> = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)  
**Z** = Extended temperature (-40 to 75°C)

# iConverter<sup>®</sup> Network Interface Device Overview

## iConverter<sup>®</sup> Network Interface Device Overview

iConverter Network Interface Devices (NIDs) provide Carrier Ethernet demarcation for wholesale and retail Ethernet business services, 4G/LTE mobile backhaul, small cells, carrier Wi-Fi, and cloud services.

iConverter NIDs are compact demarcation devices that support advanced Performance Monitoring, Service Activation Testing, Fault Management, timing and synchronization, and protection.

**SDN+NFV Ready Demarcation** – iConverter NIDs are integrated into service orchestration platforms with SDN+NFV ecosystem partners.

**Automated Service Creation** – Zero-Touch Provisioning and Service Activation Testing enable rapid service turn-up.

**Guaranteed Performance and Uptime** – iConverter NIDs support performance monitoring across Layer 2, 3 and 4 networks with advanced fault management and service protection.

**Simplify Inventory** – Deploy the same iConverter GM4 or XM5 NID in a variety of access networks (active or passive) and for different service types to simplify equipment inventory.

**Tiered NIDs Match Cost to Revenue** – Omnitron provides a tiered product offering to align features and costs with the different types of Ethernet services.

- **Carrier Ethernet 2.0 NIDs** provide advanced demarcation for wholesale and retail services with comprehensive service assurance
- **Service OAM NIDs** provide demarcation for Carrier Ethernet services with Operations Administration and Maintenance (OAM) for performance SLAs
- **Link OAM NIDs** provide cost-effective demarcation for internet access and best effort Ethernet and internet access services

### Carrier Ethernet 2.0 NIDs

iConverter MEF CE 2.0 Certified NIDs provide demarcation with Multiple Classes of Service (Multi-CoS), Manageability and Interconnect. These services reflect major new capabilities of E-Line, E-LAN, E-Tree and E-Access services. These state-of-the-art NIDs enable new services and reduce operating costs with automated service provisioning and testing.

iConverter GM4 and XM5 CE 2.0 NIDs support the latest Service OAM standards for performance monitoring and fault management, and provide protection switching for service assurance.

### iConverter GM4 NIDs

iConverter GM4 NIDs deliver advanced Carrier Ethernet 2.0 services, and are the most compact NIDs available with the lowest power consumption. They are available in 2 and 3 port standalone units and chassis plug-in modules, and 5-port standalone models with a variety of port configurations.



### iConverter GM4 PoE NIDs

iConverter GM4 PoE NIDs deliver advanced Carrier Ethernet 2.0 services and provide integrated Power over Ethernet (PoE) at the demarcation. GM4 PoE NIDs support all the functions of the GM4 NIDs, and add 802.3af PoE (15.4W), 802.3at PoE+ (30W), and up to 60W on each RJ-45 port for small cell and Wi-Fi applications.



# iConverter<sup>®</sup> Network Interface Device Overview

## iConverter XM5 and XM5 Aggregation NIDs

iConverter XM5 NIDs provide advanced 10G demarcation and aggregation for Carrier Ethernet 2.0 services. The XM5 NIDs feature three 10G SFP+ or XFP ports and up to four Gigabit/100Mbps SFP or RJ-45 10/100/1000 ports.

The iConverter XM5-1G is a multi-port Gigabit NID that features a combination of Gigabit SFP ports and 10/100/1000 RJ-45 ports for UNI or NNI deployments (not shown).



The XM5 Aggregation and Demarcation Devices feature two 10G SFP+ or XFP ports, twelve Gigabit/100Mbps SFP ports, and two 10/100/1000 RJ-45 ports.



## Service OAM NIDs

### iConverter GM3 NIDs

iConverter GM3 NIDs provide MEF 9, 14 and 21 certified demarcation for Ethernet services delivered across one or more operator networks. IEEE 802.1ag and ITU-T Y.1731 Service OAM provides the fault detection and performance monitoring necessary to ensure proper enforcement and compliance to SLAs. The GM3 NIDs support Zero-Touch Provisioning (ZTP), color-aware rate limiting and Class of Service differentiation and prioritization.



### iConverter microNID™

The iConverter microNID is a low-latency, compact and cost-effective NID that provides service activation testing, fault and performance monitoring. The two-port microNID enables Service Providers to deliver premium services with Service Level Agreements where cost, space and power consumption are constraints. Cable MSOs can deliver value-added commercial Ethernet services and wireless backhaul over their existing DOCSIS networks with guaranteed Quality of Service.



# iConverter<sup>®</sup> Network Interface Device Overview

## Link OAM NIDs

### iConverter M2 NIDs

The iConverter M2 Class NIDs provide Ethernet E-Line service demarcation for services that do not require SLA performance assurance. These cost-effective NIDs support 802.3ah Link OAM with fault detection for Ethernet in the First Mile (EFM) access links. The M2 NIDs provide MEF 9, 14 and 21 certified Ethernet service demarcation in telecom networks, and mission-critical managed fiber links in enterprise, government and utility networks.

M2 Class NIDs are available in 2-Port standalone units and chassis plug-in modules that support copper-to-fiber and fiber-to-fiber demarcation for 10/100 and 10/100/1000 services.



## Port Interfaces

Feature	M2 Class	GM3	microNID	GM4	GM4 5-Port	GM4 PoE	XM5-1G	XM5	XM5 Aggr.
Number of ports	2	2 or 3	2	2 or 3	5	Up to 5	8	7	16
10/100/1000BASE-T Copper	✓	✓	100/1000	✓	Up to 4		Up to 8	Up to 4	2
10/100/1000BASE-T Copper PoE/PoE+/60W						Up to 4			
1000BASE-X Fixed Fiber	✓	✓		✓					
Fiber SFP (100Mbps or 1000Mbps)	✓	✓	✓	✓	Up to 5	Up to 2	Up to 8	Up to 4	12
Copper SFP (10/100/1000Mbps)	✓	✓		✓	Up to 5	Up to 2	Up to 8	Up to 4	Up to 12
Fiber XFP or SFP+ (10G or 1000Mbps)								3**	2*
Chassis Plug-In Modules	✓	✓		✓					
Page Number	<a href="#">112</a>	<a href="#">109</a>	<a href="#">110</a>	<a href="#">108</a>	<a href="#">107</a>	<a href="#">106</a>	<a href="#">105</a>	<a href="#">104</a>	<a href="#">103</a>

# iConverter® Network Interface Device Overview

## NID Features Comparison Chart

Feature		M2 Class	GM3	microNID	GM4	GM4 5-Port	GM4 PoE	XM5	XM5 Aggr.
<b>MEF Compliance</b>	Carrier Ethernet 2.0 Certified				✓	✓	✓	✓	✓
	MEF 9, 14 and 21	✓	✓		✓	✓	✓	✓	✓
<b>Traffic Management</b>	IEEE 802.1Q VLAN Tagging	✓	✓		✓	✓	✓	✓	✓
	IEEE 802.1ad Q-in-Q VLAN Tagging	✓	✓		✓	✓	✓	✓	✓
	64k Granular Rate Limiting	✓	✓		✓	✓	✓	✓	✓
	Hierarchical rate limiting with two-level policing		✓		✓	✓	✓	✓	✓
	CIR/EIR and CBS/EBS Policing and Shaping		✓		✓	✓	✓	✓	✓
	per Port		✓		✓	✓	✓	✓	✓
	per EVC		✓		✓	✓	✓	✓	✓
	per Class of Service		✓		✓	✓	✓	✓	✓
	per MAC Addr, IP Addr, ToS, DiffServe		✓		✓	✓	✓	✓	✓
	Port Mirroring		✓		✓	✓	✓	✓	✓
	IEEE 802.1p CoS Priority		✓		✓	✓	✓	✓	✓
	L2CP Policy Management		✓	✓	✓	✓	✓	✓	✓
RFC 4541 IGMP Snooping					✓	✓	✓	✓	✓
<b>Timing and Synchronization</b>	IEEE 1588v2 Transparent Clock				✓	✓	✓	✓	✓
	IEEE 1588v2 Slave Clock							✓	✓
	IEEE 1588v2 Boundary Clock							✓	✓
	Synchronous Ethernet				✓	✓	✓	✓	✓
<b>Service OAM</b>	IEEE 802.3ah Link OAM	✓	✓	✓	✓	✓	✓	✓	✓
	IEEE 802.1ag Service OAM		✓	✓	✓	✓	✓	✓	✓
	ITU-T Y.1731 Performance Monitoring		✓	✓	✓	✓	✓	✓	✓
	RFC 5357 TWAMP/TWAMP Lite			✓	✓	✓	✓	✓	✓
	Syslog				✓	✓	✓	✓	✓
	Trap Hosts; up to 8	✓	✓	✓	✓	✓	✓	✓	✓
	MIB Statistics (RMON)	✓	✓	✓	✓	✓	✓	✓	✓
<b>Service Activation Testing</b>	IETF RFC 2544 with built-in Test-head			✓	✓	✓	✓	✓	✓
	Third-party in-band loopback support			✓	✓	✓	✓	✓	✓
	ITU-T Y.1564 Service Testing (built-in Test-head)			✓	✓	✓	✓	✓	✓
	Per port and per flow loopback			✓	✓	✓	✓	✓	✓
	with MAC (Layer 2) swap			✓	✓	✓	✓	✓	✓
	with IP (Layer 3) swap			✓	✓	✓	✓	✓	✓
<b>Protection and Redundancy</b>	Port Redundancy (Primary and Backup Link)		✓		✓	✓	✓	✓	✓
	LAG with LACP (1:1 and 1+1)				✓	✓	✓	✓	✓
	ITU-T-G.8031 Ethernet Linear Protection (ELPS)				✓	✓	✓	✓	✓
	ITU-T-G.8032 Ethernet Ring Protection (ERPS)				✓	✓	✓	✓	✓
	IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)		✓		✓	✓	✓	✓	✓
<b>Automatic Provisioning</b>	Zero-Touch Provisioning (DHCP/TFTP)		✓		✓	✓	✓	✓	✓
	DPoE DEMARC Auto Configuration algorithm				✓	✓	✓		
<b>Security and Authentication</b>	TACACS+				✓	✓	✓	✓	✓
	RADIUS				✓	✓	✓	✓	✓
	802.1x				✓	✓	✓	✓	✓
	Access Control Lists				✓	✓	✓	✓	✓
<b>Power</b>	Redundant AC/DC Power Inputs					✓		✓	✓

# iConverter® Network Interface Device Overview

## Management

Feature		M2 Class	GM3	microNID	GM4	GM4 5-Port	GM4 PoE	XM5 and XM5-1G	XM5 Aggr.
Management Interfaces and Protocols	Serial Console Interface	✓	✓	✓	✓	✓	✓	✓	✓
	Dedicated Ethernet Mgt. Interface							✓	✓
	Telnet	✓	✓	✓	✓	✓	✓	✓	✓
	SSH				✓	✓	✓	✓	✓
	SNMP v1/v2c/v3	✓	✓	✓	✓	✓	✓	✓	✓
	IPv6				✓	✓	✓	✓	✓
Management	NetOutlook Management Software	✓	✓	✓	✓	✓	✓	✓	✓
SDN+NFV	Ciena Blue Planet Integration		✓		✓	✓	✓		
Monitoring Portals and Software	OcularIP Portal Integration		✓		✓	✓	✓		
	SolarWinds Integration	✓	✓		✓	✓	✓		

## Service Types

### Bronze - Best Effort Ethernet Services

Internet Access and Small Business  
Basic Management and Fault Detection

### Silver - SLA Assured Services

Carrier Ethernet Business Services and Mobile Backhaul  
Fault Management and Performance Monitoring

### Gold - Carrier Ethernet 2.0 Services

Advanced SLA assured services per Class of Service  
Rapid service turn up and testing

### Platinum - Protected Carrier Ethernet 2.0 Services

Advanced CE 2.0 Services  
Service protection with guaranteed uptime

Feature		M2 Class	GM3	microNID	GM4	GM4 5-Port	GM4 PoE	XM5 and XM5-1G	XM5 Aggr.
		Bronze	Silver		Gold and Platinum				
MEF Defined Services	E-Line	✓	✓	✓	✓	✓	✓	✓	✓
	E-LAN		✓	✓	✓	✓	✓	✓	✓
	E-Tree and E-Access		✓		✓	✓	✓	✓	✓
	Carrier Ethernet 2.0 (all 8 Service Types <sup>1</sup> )				✓	✓	✓	✓	✓
Flow Types	EVC	✓	✓	✓	✓	✓	✓	✓	✓
	Multiplexed EVC		✓	✓	✓	✓	✓	✓	✓
	CE 2.0 Class of Service				✓	✓	✓	✓	✓
Types of Services	Business Services	✓	✓	✓	✓	✓	✓	✓	✓
	Cloud (Data Center) Services		✓	✓	✓	✓	✓	✓	✓
	Low-Latency Financial Services			✓	✓	✓	✓	✓	✓
	4G/LTE Mobile Backhaul		✓	✓	✓	✓	✓	✓	✓
	Small Cell			✓	✓	✓	✓	✓	✓
	Wholesale Ethernet		✓	✓	✓	✓	✓	✓	✓
	Direct Internet Access	✓							
Service Assurance	Best Effort Services (No SLA)	✓							
	SLA Assured Services		✓	✓	✓	✓	✓	✓	✓
	Port Failover Protection		✓		✓	✓	✓	✓	✓
	EVC Protection Switching				✓	✓	✓	✓	✓

# iConverter® 10G Network Interface Device

## 10G Ethernet Network Aggregation and Demarcation Switches

### iConverter® XM5 Aggregation Demarcation Device

#### Carrier Ethernet 2.0 Certified 10 Gigabit Aggregation NID

- MEF Carrier Ethernet 2.0 Certified 10 Gigabit Carrier Ethernet Aggregation NID
- Management via Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Comprehensive Performance Monitoring and Connectivity Fault Management
- Standards compliance for interoperability t
- Zero-Touch Provisioning and Ethernet Service Activation Testing
- Ethernet Protection Switching with sub-50ms failover



See [iConverter® Network Interface Device Overview](#) for the complete list of features.

#### Description

The XM5 Aggregation Demarcation Device features two 10G SFP+ or XFP ports, twelve Gigabit SFP ports, and two 10/100/1000 RJ-45 ports for aggregation of wholesale Ethernet, 4G/LTE mobile backhaul, business and cloud services. The XM5 can be deployed as a node on a 10G ring with Gigabit aggregation ports, or as a demarcation NID on a 10G access link with aggregation UNI ports for multiple tenants or cell towers. Gigabit SFPs can be installed in the 10G ports, and 100Mbps SFPs can be installed in the Gigabit SFP aggregation ports to provide a seamless upgrade path to future high-speed services.

#### Specifications

<b>Description</b>	Managed 10G Aggregation Demarcation Device
<b>Frame Size</b>	Up to 10,056 bytes
<b>AC Power Requirements</b>	80 to 264VAC, 50/60Hz, 0.8A @ 110VAC IEC 320 C14
<b>DC Power Requirements</b>	+/- 20 to +/- 60VDC, 1.2A @ 48VDC (56W Max) 3-Pin Terminal (isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.1Q, 802.1ad, 802.1AX, 802.1p, 802.3ah, 802.1ag, 1588v2 RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP), 2544 ITU-T G.8031, G.8032, G.8262, Y.1731, Y.1564 MEF Carrier Ethernet 2.0 Certified MEF 6.2, 9, 10.2, 14, 21, 26.1, 30, 31, 33
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, SSH, Serial Console
<b>Dimension (W x D x H)</b>	17.15" x 9.0" x 1.70" (435.6 mm x 228.6 mm x 43.2 mm)
<b>Weight</b>	1 Power Supply: 7.5 lbs (3.41 kg) 2 Power Supplies: 9.0 lbs (4.1 kg)
<b>Warranty</b>	3 Year warranty with 24/7/365 free Technical Support

#### Ordering

Two 10GBASE-R Ports, Twelve 100/1000BASE-X SFP Ports and Two RJ-45 10/100/1000BASE-T Ports	
XM5 Aggregation	Description
9620-C2-B-pt	SFP+ ports, AC Power
9620-C2-C-pt	SFP+ ports, DC Power
9626-C2-B-pt	SFP+ ports, AC Power with 1588, Alarm Contact option
9626-C2-C-pt	SFP+ ports, DC Power with 1588, Alarm Contact option
9634-C2-B-pt	SFP+ ports, AC Power with 1588, SyncE, Alarm Contact option
9634-C2-C-pt	SFP+ ports, DC Power with 1588, SyncE, Alarm Contact option
9621-C2-B-pt	XFP ports, AC Power
9621-C2-C-pt	XFP ports, DC Power
9627-C2-B-pt	XFP ports, AC Power with 1588, Alarm Contact option
9627-C2-C-pt	XFP ports, DC Power with 1588, Alarm Contact option
9635-C2-B-pt	XFP ports, AC Power with 1588, SyncE, Alarm Contact option
9635-C2-C-pt	XFP ports, DC Power with 1588, SyncE, Alarm Contact option
<b>Power Options (p):</b>	
1 = Single Power Supply	
2 = Dual Power Supplies	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	
Z = Extended Temperature (-40 to 75°C)	
See Data Sheet for additional models	



# iConverter® 10G Network Interface Device

## iConverter® XM5 Network Interface Device

### Carrier Ethernet 2.0 Certified 10 Gigabit NID

- MEF Carrier Ethernet 2.0 Certified 10 Gigabit Carrier Ethernet NID
- Management via Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Smallest full-function 10G NIDs available with the lowest power consumption
- Comprehensive Performance Monitoring and Connectivity Fault Management
- Zero-Touch Provisioning and Ethernet Service Activation Testing
- Ethernet Protection Switching with sub-50ms failover



See [iConverter® Network Interface Device Overview](#) for the complete list of features.

### Description

The XM5 features three 10G SFP+ or XFP ports and four SFP or RJ-45 gigabit ports for UNI or NNI deployments to deliver wholesale Ethernet, 4G/LTE mobile backhaul, business and cloud services. The XM5 can be deployed as a node on a 10G ring with ports for Gigabit and 10G spoke links, or as a demarcation NID on a 10G access link.

### Specifications

<b>Description</b>	Managed 10G Network Interface Device
<b>Frame Size</b>	Up to 10,056 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.6A @ 110VAC 2.5mm Barrel Connector
<b>DC Power Requirements</b>	+/-20 to +/-60VDC, Maximum power consumption 48W 3-Pin Terminal (isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.1Q, 802.1ad, 802.1AX, 802.1p, 802.3ah, 802.1ag, 1588v2 RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP), 2544 ITU-T G.8031, G.8032, G.8262, Y.1731, Y.1564 MEF Carrier Ethernet 2.0 Certified MEF 6.2, 9, 10.2, 14, 21, 26.1, 30, 31, 33
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, SSH, Serial Console
<b>Dimension (W x D x H)</b>	7.29" x 9.15" x 1.63" (185.2 mm x 232.4 mm x 41.4 mm)
<b>Weight</b>	3.24 lbs (1.47 kg)
<b>Warranty</b>	3 Year warranty with 24/7/365 free Technical Support

### Ordering

XM5 NID	Description
9600-yy-B-pt 9600-yy-C-pt	SFP+ ports, AC Power SFP+ ports, DC Power
9606-yy-B-pt 9606-yy-C-pt	SFP+ ports, AC Power with 1588, Alarm Contact option SFP+ ports, DC Power with 1588, Alarm Contact option
9614-yy-B-pt 9614-yy-C-pt	SFP+ ports, AC Power with 1588, SyncE, Alarm Contact option SFP+ ports, DC Power with 1588, SyncE, Alarm Contact option
9601-yy-B-pt 9601-yy-C-pt	XFP ports, AC Power XFP ports, DC Power
9607-yy-B-pt 9607-yy-C-pt	XFP ports, AC Power with 1588, Alarm Contact option XFP ports, DC Power with 1588, Alarm Contact option
9615-yy-B-pt 9615-yy-C-pt	XFP ports, AC Power with 1588, SyncE, Alarm Contact option XFP ports, DC Power with 1588, SyncE, Alarm Contact option
<b>Four Port Options (yy):</b> <b>04</b> = Four 10/100/1000BASE-T RJ-45 Ports <b>40</b> = Four 100/1000BASE-X SFP Ports	
<b>Power Options (p):</b> <b>1</b> = Single Power Supply <b>2</b> = Dual Power Supplies	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) <b>W</b> = Wide temperature (-40 to 60°C) <b>Z</b> = Extended Temperature (-40 to 75°C)	
See Data Sheet for additional models	



# iConverter<sup>®</sup> 1G Network Interface Device

## iConverter<sup>®</sup> XM5-1G Network Interface Device Carrier Ethernet 2.0 Certified 8 Port Gigabit NID

- MEF Carrier Ethernet 2.0 Certified 8 Port Gigabit NID
- Management via Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Supports combination of SFP transceivers and 10/100/1000 RJ-45 ports
- Comprehensive Performance Monitoring and Connectivity Fault Management
- Zero-Touch Provisioning and Ethernet Service Activation Testing
- Ethernet Protection Switching with sub-50ms failover



See [iConverter<sup>®</sup> Network Interface Device Overview](#) for the complete list of features.

### Description

The XM5-1G features a combination of Gigabit SFP ports and 10/100/1000 RJ-45 ports for UNI or NNI deployments to deliver wholesale Ethernet, 4G/LTE mobile backhaul, business and cloud services.

### Specifications

<b>Description</b>	Managed 1G Network Interface Device
<b>Frame Size</b>	Up to 10,056 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.3A @ 110VAC 2.5mm Barrel Connector
<b>DC Power Requirements</b>	+/- 20 to +/- 60VDC, Maximum power consumption 30W 3-Pin Terminal (isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.1Q, 802.1ad, 802.1AX, 802.1p, 802.3ah, 802.1ag, 1588v2 RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP), 2544 ITU-T G.8031, G.8032, G.8262, Y.1731, Y.1564 MEF Carrier Ethernet 2.0 Certified MEF 6.2, 9, 10.2, 14, 21, 26.1, 30, 31, 33
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, SSH, Serial Console
<b>Dimension (W x D x H)</b>	7.29" x 9.15" x 1.63" (185.8 mm x 232.4 mm x 41.4 mm)
<b>Weight</b>	3.24 lbs (1.47 kg)
<b>Warranty</b>	3 Year warranty with 24/7/365 free Technical Support

### Ordering

XM5-1G NID	Description
964y-00-B-pt 964y-00-C-pt	AC Power DC Power
964y-12-B-pt 964y-12-C-pt	AC Power with 1588, Alarm Contact option DC Power with 1588, Alarm Contact option
964y-16-B-pt 964y-16-C-pt	AC Power with 1588, SyncE, Alarm Contact option DC Power with 1588, SyncE, Alarm Contact option
<b>Four Port Options (y):</b>	
0 = Eight 100/1000BASE-X SFP Ports	
1 = Four 100/1000BASE-X SFP and Four 10/100/1000BASE-T RJ-45 Ports	
2 = Two 100/1000BASE-X SFP and Six 100/1000BASE-X SFP	
3 = Eight 10/100/1000BASE-T RJ-45 Ports	
<b>Power Options (p):</b>	
1 = Single Power Supply	
2 = Dual Power Supplies	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	
Z = Extended Temperature (-40 to 75°C)	
See Data Sheet for additional models	



# iConverter® 1G Network Interface Device

## 1G Managed Ethernet Demarcation Converters

### iConverter® GM4-PoE+ and GM4-HPoE Network Interface Devices

#### Carrier Ethernet 2.0 Certified NID with Power over Ethernet

- 1000Mbps and 100Mbps Carrier Ethernet Fiber Access
- Management via Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Supports 100BASE-X and 1000BASE-X SFP transceivers
- Provides 802.3af (15W), 802.3at (30W) and High-Power PoE (60W)
- Comprehensive Performance Monitoring and Connectivity Fault Management
- Zero-Touch Provisioning and Ethernet Service Activation Testing



[See iConverter® Network Interface Device Overview for the complete list of features.](#)

#### Description

The iConverter GM4 PoE Network Interface Devices (NID) deliver advanced Carrier Ethernet 2.0 services and provide integrated Power over Ethernet (PoE) at the demarcation. GM4 PoE NIDs function as PoE Power Sourcing Equipment in small cell (metro cell) and Wi-Fi applications, where the radio equipment can be powered through the Ethernet UTP cables.

#### Specifications

<b>Description</b>	Managed 1G Network Interface Device Network with PoE
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 2.8A @ 120VAC 2.1mm Barrel Connector or DIN-6 Connector
<b>DC Power Requirements</b>	+48 to +57VDC, 0.83A @ 48VDC – PoE+ models; 1 RJ-45 +48 to +57VDC, 1.50A @ 48VDC – PoE+ models; 2 RJ-45 +48 to +57VDC, 2.13A @ 48VDC – PoE+ models; 3 RJ-45 +48 to +57VDC, 2.74A @ 48VDC – PoE+ models; 4 RJ-45  +48 to +57VDC, 1.45A @ 48VDC – HPoE models; 1 RJ-45 +48 to +57VDC, 2.75A @ 48VDC – HPoE models; 2 RJ-45 +48 to +57VDC, 4.01A @ 48VDC – HPoE models; 1 RJ-45 +48 to +57VDC, 5.24A @ 48VDC – HPoE models; 2 RJ-45  3-Pin Terminal (isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.1Q, 802.1ad, 802.1p, 802.3, 802.3ah, 802.1ag, 1588v2 RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP), 2544 ITU-T G.8031, G.8032, G.8262, Y.1731, Y.1564 MEF Carrier Ethernet 2.0 Certified MEF 6.2, 9, 10.2, 14, 21, 26.1, 30, 31, 33
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, SSH, Serial Console
<b>Dimension (W x D x H)</b>	5" x 7.5" x 1.375" (127 mm x B: 190.5 mm x H: 34.9 mm)
<b>Weight</b>	1.38 lbs. (0.626 kg) w/ Power Adapter: 2.50 lbs. (1.13 kg)
<b>Warranty</b>	3 Year warranty with 24/7/365 free Technical Support

#### Ordering

GM4-PoE+	GM4-HPoE	Description
8991S-11-pt	8991T-11-pt	One SFP and one RJ-45 PoE Port
8991S-14-pt	8991T-14-pt*	One SFP and four RJ-45 PoE Ports
8991S-22-pt	8991T-22-pt	Two SFP and two RJ-45 PoE Ports
8991S-23-pt	8991T-23-pt*	Two SFP and three RJ-45 PoE Ports
<b>Power Options (p):</b>		
D = External AC/DC Adapter, 100 - 240 VAC included, US Power Cord		
E = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord		
F = Direct DC input, 3 pin terminal connector, no AC/DC power adapter		
<b>Operating Temperature Options (t):</b>		
<leave blank> = Commercial temperature (0 to 50°C)		
W = Wide temperature (-40 to 60°C)		
Z = Extended temperature (-40 to 75°C) -not available with power option D & E		
* AC models are only available in commercial and wide temperature.		



# iConverter® 1G Network Interface Device

## iConverter® GM4 5 Port Network Interface Device

### Carrier Ethernet 2.0 Certified 5 Port Gigabit NID

- 1000Mbps and 100Mbps Carrier Ethernet Fiber Access NID
- MEF Carrier Ethernet 2.0 Certified
- Management via Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Supports 100BASE-X and 1000BASE-X SFP transceivers
- Comprehensive Performance Monitoring and Connectivity Fault Management
- Zero-Touch Provisioning and Ethernet Service Activation Testing
- Ethernet Protection Switching with sub-50ms failover



See [iConverter® Network Interface Device Overview](#) for the complete list of features.

### Description

The iConverter GM4 provides comprehensive support of the latest carrier-class Ethernet Service OAM standards, enabling service assurance and reducing operational costs. IEEE 802.1ag Connectivity Fault Management (CFM) pro-actively monitors service availability and provides tools for rapid fault isolation. ITU-T Y.1731 Performance Monitoring provides the ability to monitor SLA parameters including frame delay, frame delay variation and frame loss.

### Specifications

<b>Description</b>	Managed 1G 5 Port Network Interface Device
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.2A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements</b>	+/- 11 to +/- 60VDC, 1.5A @ 12VDC, 0.4A @ 48VDC 3-Pin Terminal (isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.1Q, 802.1ad, 802.1p, 802.3, 802.3ah, 802.1ag, 1588v2 RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP), 2544 ITU-T G.8031, G.8032, G.8262, Y.1731, Y.1564 MEF Carrier Ethernet 2.0 Certified MEF 6.2, 9, 10.2, 14, 21, 26.1, 30, 31, 33
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, SSH, Serial Console
<b>Dimension (W x D x H)</b>	4.8" x 6.0" x 1.375" (121.9 mm x 152.4 mm x 34.9 mm)
<b>Weight</b>	1.5 lbs. (0.680 kg) w/ AC adapter: 2.0 lbs. (0.907 kg)
<b>Warranty</b>	3 Year warranty with 24/7/365 free Technical Support

### Ordering

GM4 5-Port NID	Description
8991R-14-pt	One SFP and four 10/100/1000BASE-T copper ports with a single power input
8991R-23-pt	Two SFP and three 10/100/1000BASE-T copper ports with a single power input
8991R-41-pt	Four SFP and one 10/100/1000BASE-T copper ports with a single power input
8991R-50-pt	Five SFP port with a single power input
8992R-14-pt	One SFP and four 10/100/1000BASE-T copper ports with dual power input
8992R-23-pt	Two SFP and three 10/100/1000BASE-T copper ports with dual power input
8992R-41-pt	Four SFP and one 10/100/1000BASE-T copper ports with dual power input
8992R-50-pt	Five SFP port with dual power input
<b>Power Options (p):</b>	
<b>D</b> = US AC/DC Adapter, 100 - 240 VAC included	
<b>E</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>F</b> = Direct DC input, 3 pin terminal connector, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
<b>W</b> = Wide temperature (-40 to 60°C)	
<b>Z</b> = Extended Temperature (-40 to 75°C)	



# iConverter<sup>®</sup> 1G Network Interface Device

## iConverter<sup>®</sup> GM4 Network Interface Device

### Carrier Ethernet 2.0 Certified 2 and 3 Port Gigabit NID

- 1000Mbps and 100Mbps Carrier Ethernet Fiber Access NID
- MEF Carrier Ethernet 2.0 Certified
- Management via Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Supports 100BASE-X and 1000BASE-X SFP transceivers
- Comprehensive Performance Monitoring and Connectivity Fault Management
- Zero-Touch Provisioning and Ethernet Service Activation Testing
- Ethernet Protection Switching with sub-50ms failover



See [iConverter<sup>®</sup> Network Interface Device Overview](#) for the complete list of features.

### Description

The iConverter GM4 provides comprehensive support of the latest carrier-class Ethernet Service OAM standards, enabling service assurance and reducing operational costs. IEEE 802.1ag Connectivity Fault Management (CFM) pro-actively monitors service availability and provides tools for rapid fault isolation. ITU-T Y.1731 Performance Monitoring provides the ability to monitor SLA parameters including frame delay, frame delay variation and frame loss.

### Specifications

<b>Description</b>	Managed 1G 2 and 3-Port Network Interface Device
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.1A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	2-Port: 2.56A @ 3.3VDC 3-Port: 2.85A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (standalone)</b>	+8 to +60VDC, 1.2A @ 9VDC (typical), 1.0A @ 12VDC (typical) 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.1Q, 802.1ad, 802.1p, 802.3, 802.3ah, 802.1ag, 1588v2 RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP), 2544 ITU-T G.8031, G.8032, G.8262, Y.1731, Y.1564 MEF Carrier Ethernet 2.0 Certified MEF 6.2, 9, 10.2, 14, 21, 26.1, 30, 31, 33
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, SSH, Serial Console
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.1" x 4.8" x 1.0" (78.74 mm x 121.92 mm x 25.4 mm) Standalone w/ integrated mounting brackets: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Integrated mounting brackets w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	3 Year warranty with 24/7/365 free Technical Support

### Ordering

GM4	Description
8920R-0-pt 8922R-0-pt	One ST 850nm MM 220/550m and one 10/100/1000 port One SC 850nm MM 220/550m and one 10/100/1000 port
8921R-1-pt 8923R-1-pt	One ST 1310nm SM 12km and one 10/100/1000 port One SC 1310nm SM 12km and one 10/100/1000 port
8923R-2-pt 8923R-3-pt 8923R-4-pt 8923R-5-pt	One SC 1310nm SM 34km and one 10/100/1000 port One SC 1310nm SM 80km and one 10/100/1000 port One SC 1550nm SM 110km and one 10/100/1000 port One SC 1550nm SM 140km and one 10/100/1000 port
8930R-1-pt 8931R-1-pt 8930R-2-pt 8931R-2-pt	One SC 13/15 SM-SF 20km and one 10/100/1000 port One SC 15/13 SM-SF 20km and one 10/100/1000 port One SC 13/15 SM-SF 40km and one 10/100/1000 port One SC 15/13 SM-SF 40km and one 10/100/1000 port
8939R-0-pt 8970R-0-pt 8974R-0-pt 8975R-0-pt 8989R-0-pt 8999R-0-pt	One 100/1000Mbps SFP and one 10/100/1000 port One 100/1000Mbps SFP and two 10/100/1000 ports Three 10/100/1000 ports Two 100/1000Mbps SFP and one 10/100/1000 ports Two 10/100/1000 ports Two 100/1000Mbps SFP ports

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

<left blank> = Plug-in model

Standalone models

**A** = US AC/DC Adapter, 100 - 240 VAC included

**B** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**C** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

Standalone models with integrated mounting brackets

**D** = US AC/DC Adapter, 100 - 240 VAC included

**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

**W** = Wide temperature (-40 to 60°C)

**Z** = Extended temperature (-40 to 75°C)



# iConverter<sup>®</sup> 1G Network Interface Device

## iConverter<sup>®</sup> GM3 Network Interface Device 2 and 3 Port Gigabit NID for Ethernet Fiber Access

- 1000Mbps and 100Mbps Carrier Ethernet Fiber Access
- Management via Telnet, SNMPv1/v2c/v3 and serial interfaces
- Supports 100BASE-X and 1000BASE-X SFP transceivers
- Comprehensive Performance Monitoring and Connectivity Fault Management
- Zero-Touch Provisioning
- Supports frame sizes up to 10,240 bytes



See [iConverter<sup>®</sup> Network Interface Device Overview](#) for the complete list of features.

### Description

The iConverter GM3 supports carrier-class Ethernet Service OAM standards. IEEE 802.1ag Connectivity Fault Management (CFM) proactively monitors service availability and provides tools for rapid fault isolation. ITU-T Y.1731 Performance Monitoring provides the ability to monitor key SLA parameters including frame delay, frame delay variation and frame loss. These OAM features provide proactive fault detection and rapid isolation of potential service problems, enabling SLA assurance while reducing Operational costs (OPEX).

### Specifications

<b>Description</b>	Managed 1G 2 and 3-Port Network Interface Device
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.1A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	1.6A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (standalone)</b>	+8 to +32VDC, 0.6A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.1Q, 802.1p, 802.3, 802.3ah, 802.1ad, 802.1ag, Y.1731 RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP) Carrier Ethernet 2.0 Compliant, MEF 9, 14, 21, 30, 31
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, Serial Console
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.1" x 4.8" x 1.0" (78.74 mm x 121.92 mm x 25.4 mm) Standalone w/ integrated mounting brackets: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Integrated mounting brackets w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	3 Year warranty with 24/7/365 free Technical Support

### Ordering

GM3 NID	Description
8920P-0-pt 8922P-0-pt	One ST 850nm MM 220/550m and one 10/100/1000 port One SC 850nm MM 220/550m and one 10/100/1000 port
8921P-1-pt 8923P-1-pt	One ST 1310nm SM 12km and one 10/100/1000 port One SC 1310nm SM 12km and one 10/100/1000 port
8923P-2-pt 8923P-3-pt 8923P-4-pt 8923P-5-pt	One SC 1310nm SM 34km and one 10/100/1000 port One SC 1310nm SM 80km and one 10/100/1000 port One SC 1550nm SM 110km and one 10/100/1000 port One SC 1550nm SM 140km and one 10/100/1000 port
8930P-1-pt 8931P-1-pt 8930P-2-pt 8931P-2-pt	One SC 13/15 SM-SF 20km and one 10/100/1000 port One SC 15/13 SM-SF 20km and one 10/100/1000 port One SC 13/15 SM-SF 40km and one 10/100/1000 port One SC 15/13 SM-SF 40km and one 10/100/1000 port
8939P-0-pt 8970P-0-pt 8974P-0-pt 8975P-0-pt 8989P-0-pt 8999P-0-pt	One 100/1000Mbps SFP and one 10/100/1000 port One 100/1000Mbps SFP and two 10/100/1000 ports Three 10/100/1000 ports Two 100/1000Mbps SFP and one 10/100/1000 ports Two 10/100/1000 ports Two 100/1000Mbps SFP ports

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

<left blank> = Plug-in model

Standalone models

**A** = US AC/DC Adapter, 100 - 240 VAC included

**B** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**C** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

Standalone models with integrated mounting brackets

**D** = US AC/DC Adapter, 100 - 240 VAC included

**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

**W** = Wide temperature (-40 to 60°C)

**Z** = Extended temperature (-40 to 75°C)



# iConverter<sup>®</sup> 1G Network Interface Device

## iConverter<sup>®</sup> microNID<sup>™</sup> Network Interface Device

### 2 Port Gigabit NID

- 100/1000BASE-T Copper and 100/1000BASE-X SFP Network Interface Device
- Management via Telnet and SNMPv1/v2c/v3
- Supports 100BASE-X and 1000BASE-X SFP transceivers
- Comprehensive Performance Monitoring and Connectivity Fault Management
- Ethernet Service Activation Testing
- Supports frame sizes up to 10,240 bytes



See [iConverter<sup>®</sup> Network Interface Device Overview](#) for the complete list of features.

### Description

The iConverter microNID is a low-latency, compact and cost-effective Network Interface Device (NID) that provides service activation testing, fault and performance monitoring. The two-port microNID enables the delivery of service-assured Business Ethernet, 4G/LTE macro cell and metro/small cell backhaul services.

### Specifications

<b>Description</b>	Managed 1G 100/1000BASE-X Network Interface Device
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.1A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements</b>	+/-11 to +/-60VDC, 0.60A @ 12VDC, 0.16A @ 48VDC 3-Pin Terminal (isolated) +/-44 to +/-57VDC, 0.16A @ 48VDC PoE RJ-45 (Alternative A & B)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.1Q, 802.1ad, 802.1ax, 802.1p, 802.1ag, 802.3, 802.3ad, 802.3ah, 802.3af, 802.3at, 1588v2 RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP), 2544 ITU-T G.8262, Y.1731, Y.1564 MEF 30, 31
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3,
<b>Dimension (W x D x H)</b>	3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
<b>Weight</b>	1.0 lb. (453.6 grams) w/ Power Adapter: 1.5 lbs. (680.4 grams)
<b>Warranty</b>	3 Year warranty with 24/7/365 free Technical Support

### Ordering

microNID	Description
5000-02-pt	Two 10/100/1000 copper ports
5000-11-pt	One 100/1000Mbps SFP and one 10/100/1000 copper port
5000-20-pt	Two 100/1000Mbps SFP ports
<b>Power Options (p):</b>	
D = US AC/DC Adapter, 100 - 240 VAC included	
E = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
F = Direct DC input, 3 pin terminal connector, no AC/DC power adapter	
N = PD and US AC/DC Adapter, 100 - 240 VAC included	
P = PD and Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
R = PD and Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	
Z = Extended temperature (-40 to 75°C)	



# iConverter<sup>®</sup> 1G Network Interface Device

## iConverter<sup>®</sup> GX/TM2 Network Interface Device 10/100/1000 Copper to 1000 Fiber NID

- Carrier-Grade optical Ethernet Network Interface Device
- Management via Telnet, SNMPv1/v2c/v3 and serial interfaces
- Supports 1000BASE-X SFP transceivers
- 802.3ah Link OAM for early fault detection and performance monitoring
- Configurable Link Fault Propagation modes
- 10,240 byte Jumbo frames
- ST, SC and LC fixed fiber ports



See [iConverter<sup>®</sup> Network Interface Device Overview](#) for the complete list of features.

### Description

The iConverter GX/TM2 is a carrier-grade Network Interface Device (NID) that provides 10/100/1000 copper to Gigabit Ethernet fiber media conversion with integrated management. The GX/TM2 supports the IEEE 802.3ah Link OAM standard with Fault Detection, Performance Monitoring and Remote Loopback for Ethernet in the First Mile (EFM) access links.

### Specifications

<b>Description</b>	Managed 10/100/1000 copper to 1000 Fiber NID
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.08A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	1.1A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (standalone)</b>	+8 to +15VDC, 0.6A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.1Q, 802.1p, 802.3, 802.3ah, 802.1ad RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP) MEF 9, 14, 21
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, Serial Console
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.1" x 4.8" x 1.0" (78.74 mm x 121.92 mm x 25.4 mm) Standalone w/ integrated mounting brackets: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Integrated mounting brackets w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

GX/TM2	Description
8920N-0-pt	ST 850nm MM 220/550m
8922N-0-pt	SC 850nm MM 220/550m
8926N-0-pt	LC 850nm MM 220/550m
8922N-6-pt	SC 1310nm MM 2km
8921N-1-pt	ST 1310nm SM 12km
8923N-1-pt	SC 1310nm SM 12km
8927N-1-pt	LC 1310nm SM 12km
8923N-2-pt	SC 1310nm SM 34km
8927N-2-pt	LC 1310nm SM 34km
8923N-3-pt	SC 1550nm SM 80km
8927N-3-pt	LC 1550nm SM 80km
8923N-4-pt	SC 1550nm SM 110km
8927N-4-pt	LC 1550nm SM 110km
8923N-5-pt	SC 1550nm SM 140km
8927N-5-pt	LC 1550nm SM 140km
8930N-1-pt	SC 13/15 SM-SF 20km
8931N-1-pt	SC 15/13 SM-SF 20km
8930N-2-pt	SC 13/15 SM-SF 40km
8931N-2-pt	SC 15/13 SM-SF 40km
8939N-0-pt	1000Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

<left blank> = Plug-in model

Standalone models

**A** = US AC/DC Adapter, 100 - 240 VAC included

**B** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**C** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

Standalone models with integrated mounting brackets

**D** = US AC/DC Adapter, 100 - 240 VAC included

**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

**W** = Wide temperature (-40 to 60°C)

**Z** = Extended temperature (-40 to 75°C)



See [1000M Fiber Specifications](#) for optical parameters.

# iConverter® 1G Network Interface Device

## iConverter® 2GXM2 Network Interface Device

### 1000 Fiber to 1000 Fiber NID

- Carrier-Grade optical Ethernet Network Interface Device
- Management via Telnet, SNMPv1/v2c/v3 and serial interfaces
- Supports 1000BASE-X SFP transceivers
- 802.3ah Link OAM for early fault detection and performance monitoring
- Configurable Link Fault Propagation modes
- 10,240 byte Jumbo frames



See [iConverter® Network Interface Device Overview](#) for the complete list of features.

### Description

The iConverter 2GXM2 is a carrier-grade Network Interface Device (NID) that provides 10/100 copper to Fast Ethernet fiber media conversion with integrated management. The 2GXM2 supports the IEEE 802.3ah Link OAM standard with Fault Detection, Performance Monitoring and Remote Loopback for Ethernet in the First Mile (EFM) access links.

### Specifications

<b>Description</b>	Managed 1000 to 1000 Fiber NID
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.05A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	1.1A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (standalone)</b>	+8 to +15VDC, 0.5A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.1Q, 802.1p, 802.3, 802.3ah, 802.1ad RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP) MEF 9, 14, 21
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, Serial Console
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.1" x 4.8" x 1.0" (78.74 mm x 121.92 mm x 25.4 mm) Standalone w/ integrated mounting brackets: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Integrated mounting brackets w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

2GXM2	Description
8999N-0-pt	Two 1000Mbps SFP ports
<b>Power Options (p):</b>	
<left blank> = Plug-in model	
Standalone models	
<b>A</b> = US AC/DC Adapter, 100 - 240 VAC included	
<b>B</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>C</b> = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
Standalone models with integrated mounting brackets	
<b>D</b> = US AC/DC Adapter, 100 - 240 VAC included	
<b>E</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>F</b> = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
<b>W</b> = Wide temperature (-40 to 60°C)	
<b>Z</b> = Extended temperature (-40 to 75°C)	



# iConverter® 100M Network Interface Device

## 100M Managed Ethernet Demarcation Converters

### iConverter® 10/100M2 Network Interface Devices

#### 10/100 Copper to 100 Fiber NID

- Carrier-Grade optical Ethernet Network Interface Device
- Management via Telnet, SNMPv1/v2c/v3 and serial interfaces
- Supports 100BASE-X SFP transceivers
- Configurable Link Fault Propagation modes
- 2,048 byte Jumbo frames
- ST, SC and LC fixed fiber ports



See [iConverter® Network Interface Device Overview](#) for the complete list of features.

#### Description

The iConverter 10/100M2 is a carrier-grade Network Interface Device (NID) that provides 10/100 copper to Fast Ethernet fiber media conversion with integrated management. The 10/100M2 supports the IEEE 802.3ah Link OAM standard with Fault Detection, Performance Monitoring and Remote Loopback for Ethernet in the First Mile (EFM) access links.

#### Specifications

<b>Description</b>	Managed 10/100 Copper to 100 Fiber NID
<b>Frame Size</b>	Up to 2,048 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.06A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	0.9A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (standalone)</b>	+8 to +15VDC, 0.5A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.1Q, 802.1p, 802.3, 802.3ah, 802.1ad RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP) MEF 9, 14, 21
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, Serial Console
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.1" x 4.8" x 1.0" (78.74 mm x 121.92 mm x 25.4 mm) Standalone w/ integrated mounting brackets: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Integrated mounting brackets w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

10/100M2	Description
8900N-0-pt 8902N-0-pt	ST 1310nm MM 5km SC 1310nm MM 5km
8901N-1-pt 8903N-1-pt 8907N-1-pt	ST 1310nm SM 30km SC 1310nm SM 30km LC 1310nm SM 30km
8901N-2-pt 8903N-2-pt 8907N-2-pt	ST 1310nm SM 60km SC 1310nm SM 60km LC 1310nm SM 60km
8903N-3-pt 8907N-3-pt	SC 1550nm SM 120km LC 1550nm SM 120km
8910N-1-pt 8911N-1-pt 8910N-2-pt 8911N-2-pt	SC 13/15 SM-SF 20km SC 15/13 SM-SF 20km SC 13/15 SM-SF 40km SC 15/13 SM-SF 40km
8919N-0-pt	100Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

<left blank> = Plug-in model

Standalone models

**A** = US AC/DC Adapter, 100 - 240 VAC included

**B** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**C** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

Standalone models with integrated mounting brackets

**D** = US AC/DC Adapter, 100 - 240 VAC included

**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

**W** = Wide temperature (-40 to 60°C)

**Z** = Extended temperature (-40 to 75°C)

See [100M Fiber Specifications](#) for optical parameters.



# iConverter® 100M Network Interface Device

## iConverter® 2FXM2 Network Interface Device

### 100 Fiber to 100 Fiber NID

- Carrier-Grade optical Ethernet Network Interface Device
- Management via Telnet, SNMPv1/v2c/v3 and serial interfaces
- Supports 100BASE-X SFP transceivers
- 802.3ah Link OAM for early fault detection and performance monitoring
- Configurable Link Fault Propagation modes
- 2,048 byte Jumbo frames



See [iConverter® Network Interface Device Overview](#) for the complete list of features.

### Description

The iConverter 2FXM2 is a carrier-grade Network Interface Device (NID) that provides 10/100 copper to Fast Ethernet fiber media conversion with integrated management. The 2FXM2 supports the IEEE 802.3ah Link OAM standard with Fault Detection, Performance Monitoring and Remote Loopback for Ethernet in the First Mile (EFM) access links.

### Specifications

<b>Description</b>	Managed 100 to 100 Fiber NID
<b>Frame Size</b>	Up to 2,048 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.08A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	1.2A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (standalone)</b>	+8 to +15VDC, 0.6A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.1Q, 802.1p, 802.3, 802.3ah, 802.1ad RFC 2819 (RMON), 2863 (IF-MIB), 2131 (DHCP) MEF 9, 14, 21
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, Serial Console
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.1" x 4.8" x 1.0" (78.74 mm x 121.92 mm x 25.4 mm) Standalone w/ integrated mounting brackets: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Integrated mounting brackets w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

2FXM2	Description
8959N-0-pt	Two 100Mbps SFP ports
<b>Power Options (p):</b> <left blank> = Plug-in model Standalone models A = US AC/DC Adapter, 100 - 240 VAC included B = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord C = Direct DC input, 2 pin terminal connector, no AC/DC power adapter Standalone models with integrated mounting brackets D = US AC/DC Adapter, 100 - 240 VAC included E = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord F = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C) Z = Extended temperature (-40 to 75°C)	



# iConverter® Media Converters Overview

## iConverter® Media Converter Features Overview

Module Name	Model Number	Data Rates				Ports			Form Factor		Port Features							Link Modes (Fault Propagation)			Page Number		
		10 Mbps	100 Mbps	1000 Mbps	10 Gbps	# Fiber	SFP/SFP+/XFP	# Copper	Backplane (Mbps)	Standalone Unit	Chassis Plug-In Module	Port Access Control	Port VLAN	Tag VLAN	Provider VLAN (Q-in-Q)	QoS/Prioritization	Maximum Packet Size	Rate Limiting	MIB Statistics	LP & RFD		SFD	ASY
10GXT	8580	✓	✓	✓	✓	1	✓	1		✓						10,056							<a href="#">116</a>
XGT+	8589N				✓	1	✓***	1		✓	✓					UNL							<a href="#">117</a>
XG	8599P				✓	2	✓**			✓	✓					UNL			✓	✓	✓	<a href="#">118</a>	
XG+	8599R				✓	2	✓***			✓	✓					UNL			✓	✓	✓	<a href="#">118</a>	
GX/T2	8520N	✓	✓	✓		1	✓	1	1000	✓	✓	✓	✓	✓	✓	10,240	✓*	✓	✓	✓		<a href="#">119</a>	
Gx AN	8500N			✓		1	✓	1		✓	✓					UNL			✓	✓		<a href="#">120</a>	
2GXT	8484	✓	✓	✓		2	✓	2	1000	✓	✓	✓	✓	✓	✓	10,240	✓*	✓	✓		✓	<a href="#">121</a>	
GX/X	8542			✓		2			10/100		✓	✓	✓	✓	✓	1,536		✓	✓	✓		<a href="#">122</a>	
GX/F	8562		✓	✓		2			10/100		✓	✓	✓	✓	✓	1,536		✓	✓	✓		<a href="#">123</a>	
4GT	8482	✓	✓	✓				4	10/100/1000	✓	✓	✓	✓	✓	✓	10,240	✓*	✓				<a href="#">124</a>	
1000FF	8642			✓		2				✓	✓					UNL						<a href="#">125</a>	
100Fx/Tx	8360		✓			1		1			✓					UNL			✓			<a href="#">126</a>	
10/100	8380	✓	✓			1		1	10/100		✓					1,536			✓			<a href="#">127</a>	
2Fx	8440		✓			2			10/100		✓	✓	✓	✓	✓	1,536	✓	✓	✓	✓		<a href="#">128</a>	
100FF	8620	✓	✓			2				✓	✓					UNL						<a href="#">129</a>	
4Tx	8480	✓	✓					4	10/100		✓	✓	✓			1,536		✓				<a href="#">130</a>	
4TxVT	8481	✓	✓					4	10/100		✓	✓	✓	✓	✓	1,536	✓	✓				<a href="#">131</a>	
10FL/T	8300	✓				1		1			✓					UNL			✓			<a href="#">132</a>	
10T/2	8340	✓						2	10		✓											<a href="#">133</a>	
xFF	8699	Up to 8.5 Gbps				2	✓				✓	✓					UNL		✓				<a href="#">134</a>
OC12FF	8680	622Mbps				2					✓	✓					UNL						<a href="#">135</a>
Tx/2Fx	8420		✓			2		1			✓					UNL			✓	✓		<a href="#">136</a>	
Tx/2Tx	8400		✓					3			✓					UNL			✓	✓		<a href="#">136</a>	
OC3FF	8660	155Mbps				2					✓	✓					UNL						<a href="#">137</a>

The media converters listed in this table can be managed by installing an iConverter NMM2 Network Management Module or M2 Network Interface Device (NID) in the same chassis with the media converter modules.

# iConverter® 10G Media Converters

## 10G Media Converters

### iConverter® 10GXT

#### 10/100/1000 Copper to 1000/10G Fiber Ethernet Media Converter

- Multi-rate 10/100/1000 copper to 1/10G Ethernet Media Converter
- Supports 1000BASE-X or 10GBASE-R SFP/SFP+ transceivers or 10GBASE-R XFP transceivers
- 10/100/1000 with Half/Full-Duplex auto-negotiation and auto-crossover
- Supports user selectable link detection modes
- Supports 10,056 byte jumbo frames



#### Description

The iConverter 10GXT is a 10/100/1000BASE-T copper to 1000BASE-X or 10GBASE-R fiber media converter, and is available as a compact, unmanaged standalone unit. The iConverter 10GXT supports jumbo frames up to 10,056 bytes.

The 10GXT is used to convert 10/100/1000 copper to Gigabit Ethernet fiber or 10 Gigabit Ethernet fiber. The 10GXT supports 1000BASE-X or 10GBASE-R Small Form Pluggable (SFP/SFP+) transceivers or 10GBASE-X XFP transceivers.

#### Specifications

<b>Description</b>	Unmanaged 10/100/1000 Copper to 1/10G Fiber Media Converter
<b>Frame Size</b>	Up to 10,056 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.19A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements</b>	+9 to +16VDC, 2.5A max 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.3an, 802.3az
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA< NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.06" x 4.8" x 1.3" (77.7 mm x 121.9 mm x 33.0 mm)
<b>Weight</b>	0.79 lb. (358 grams) w/ Power Adapter: 1.21 lbs. (549 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

10GXT	Description
8580-0-pt	10/100/1000 Copper to SFP/SFP+ Receptacle
8580-1-pt	10/100/1000 Copper to XFP Receptacle
<b>Power Options (p):</b>	
Standalone models without integrated mounting brackets	
<b>A</b> = US AC/DC Adapter, 100 - 240 VAC included	
<b>B</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>C</b> = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>G</b> = No AC/DC Adapter provided	
<b>I</b> = External AC/DC Adapter, 100 - 240 VAC included, with Japanese Power Cord	
Standalone models with integrated mounting brackets	
<b>D</b> = US AC/DC Adapter, 100 - 240 VAC included	
<b>E</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>F</b> = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>H</b> = No AC/DC Adapter provided	
<b>J</b> = External AC/DC Adapter, 100 - 240 VAC included, with Japanese Power Cord	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
<b>W</b> = Wide temperature (-40 to 60°C)	
<b>Z</b> = Extended temperature (-40 to 75°C)	

# iConverter® 10G Media Converters

## iConverter® XGT+

### 10G Copper to 10G Fiber Ethernet Managed Media Converter

- 10GBASE-T Ethernet Media Converter
- Copper to SFP+ or XFP Fiber interfaces
- Supports MSA power level 4 XFP transceivers
- Supports up to 100m over CAT-6A and CAT-7
- Built-in loopback for installation verification and troubleshooting
- Supports user selectable link detection modes



### Description

The iConverter XGT+ is a 10 Gigabit Ethernet media converter with one 10GBASE-T RJ-45 port and one XFP or SFP+ pluggable transceiver port that provides copper-to-fiber media conversion. The XGT+ converts short-reach cabling to multimode fiber, single-mode fiber or CAT-6A cabling (up to 100 meters) to extend distances to servers, switches and patch panels. For CAT-6A cabling links less than 30 meters, the XGT+ supports 10GBASE-T Short Reach mode. In this mode, the device conserves energy by reducing power and cooling requirements.

The iConverter XGT+ chassis plug-in module can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the plug-in module is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and via a serial port. The XGT+ can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

### Specifications

<b>Description</b>	Managed 10G Copper to 10G Fiber Media Converter
<b>Frame Size</b>	Unlimited
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.2A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	2.8A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+10 to +60VDC, 1.3A @ 12VDC max 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60°C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.3an, 802.3az, SFF-8077, SFF-8477
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 Compliant <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

XGT+	Description
8589N-0-p	10G Copper to SFP+ Receptacle
8589N-1-p	10G Copper to XFP Receptacle
<b>Power Options (p):</b>	
<left blank> = Plug-in model	
Standalone models with integrated mounting brackets	
<b>D</b> = US AC/DC Adapter, 100 - 240 VAC included	
<b>E</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>F</b> = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>Operating Temperature:</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
<b>W</b> = Wide temperature (-40 to 60°C) - XG+ only	

# iConverter® 10G Media Converters

## iConverter® XG and XG+

### 10G Fiber to 10G Fiber Protocol-Transparent Managed Media Converter

- Protocol-transparent 9.8Gbps to 11.32Gbps fiber converter and transponder
- Compatible with 10G Ethernet, 10G SONET/SDH, 10G Fibre Channel, 10G OTN (G.709) and 9.8G CPRI
- Functions as a fiber repeater supporting the three Rs
- Built-in loopback for installation verification and troubleshooting
- Supports user selectable link detection modes
- XG+ supports MSA power level 3 and 4 XFP transceivers



### Description

The iConverter XG and XG+ are protocol-transparent fiber media converters with automatic speed selection of data rates from 6Gbps to 11.32Gbps. The XG and XG+ feature pluggable transceiver ports, and can be used as fiber mode converters, CWDM or DWDM transponders, or fiber repeaters supporting the three Rs (regeneration, retiming and reshaping).

The iConverter XG and XG+ support 100% traffic throughput and have no packet size restrictions. Ultra-low packet latency (< 50nsec) enables high-performance connectivity for data centers and financial networks.

### Specifications

<b>Description</b>	Managed 10G Protocol-Transparent Media Converter/Transponder
<b>Frame Size</b>	Unlimited
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.2A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	1.5A @ 3.3VDC (XG SFP+/SFP+ model) 2.1A @ 3.3VDC (XG SFP+/XFP model) 2.5A @ 3.3VDC (XG XFP/XFP model) 3.75A @ 3.3VDC (XG+ models) Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+7 to +60VDC, 1.2A @ 9VDC, 0.9A @ 12VDC (XG models) 1.5A @ 9VDC, 1.1A @ 12VDC (XG+ models) 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C (XG) Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C (XG+) Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3ae (10G Ethernet), SONET OC-192, SDH STM-64, INCITS T11.2 (10G Fibre Channel), ITU-T G.709 OTN, 9.8G CPRI SFF-8077, SFF-8477
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 Compliant <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.1" x 4.8" x 1.0" (78.74 mm x 121.92 mm x 25.4 mm) Standalone w/ integrated mounting brackets: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

XG	XG+	Description
8599P-00-pt	8599R-00-pt	SFP+ to SFP+ model
8599P-01-pt	8599R-01-pt	SFP+ to XFP model
8599P-11-pt	8599R-11-pt	XFP to XFP model

**Power Options (p):**  
**<left blank>** = Plug-in model  
 Standalone models  
**A** = US AC/DC Adapter, 100 - 240 VAC included  
**B** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord  
**C** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter  
 Standalone models with integrated mounting brackets  
**D** = US AC/DC Adapter, 100 - 240 VAC included  
**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord  
**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

**Operating Temperature Options (t):**  
**<leave blank>** = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C) - XG+ only  
**Z** = Extended temperature (-40 to 75°C) - XG+ only

SFP+ Models and Associated Applications	
9.8304 Gbps	Common Public Radio Interface (CPRI)
9.95 Gbps	SONET OC-192, SDH STM-64, 10 Gbps Ethernet WAN PHY
10.31 Gbps	10 Gbps Ethernet LAN PHY
10.52 Gbps	10 Gbps Fibre Channel (10 GFC)
10.70 Gbps	OTN OTU-2 (G.709)
11.09 Gbps	10 Gbps Ethernet LAN PHY with 255/237 FEC coding
11.32 Gbps	10 Gbps Fibre Channel with 255/237 FEC coding
XFP Models and Associated Applications	
Data rates depend on the type and make of the XFP transceivers	

# iConverter® 1G Media Converters

## 1G Media Converters

### iConverter® GX/T2

#### 10/100/1000 Copper to 100/1000 Fiber Ethernet Managed Media Converter

- Multi-rate 10/100/1000 copper to 100/1000X Ethernet Media Converter
- Supports 100BASE-X and 1000BASE-X SFP transceivers
- Supports user selectable link detection modes
- Plug-in module supports IEEE 802.1Q Tag VLAN, Q-in-Q Multi-tagging and IEEE 802.1p Prioritization QoS
- ST and SC fixed fiber ports



#### Description

The iConverter GX/T2 is a 10/100/1000BASE-T copper to 100BASE-X or 1000BASE-X fiber media converter, and is available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter GX/T2 supports jumbo frames up to 10,240 bytes.

The iConverter GX/T2 chassis plug-in module can be used in managed applications. Management provides remote configuration, monitoring and trap notification. Management of the plug-in module is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and via a serial port. The GX/T2 can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

#### Specifications

<b>Description</b>	Managed 10/100/1000 Copper to 100/1000 Fiber Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.06A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	1.4A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+7 to +60VDC, 0.7A max 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.1Q, 802.1p, 802.1ad, 802.3, RFC 2819 (RMON)
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

GX/T2	Description
8520N-0-pt 8522N-0-pt	ST 850nm MM 220/550m SC 850nm MM 220/550m
8522N-6-pt	SC 1310nm MM 2km
8521N-1-pt 8523N-1-pt	ST 1310nm SM 12km SC 1310nm SM 12km
8523N-2-pt 8523N-3-pt 8523N-4-pt 8523N-5-pt	SC 1310nm SM 34km SC 1550nm SM 80km SC 1550nm SM 110km SC 1550nm SM 140km
8530N-0-pt 8531N-0-pt	SC 13/15 MM-SF 20km SC 15/13 MM-SF 20km
8530N-1-pt 8531N-1-pt	SC 13/15 SM-SF 20km SC 15/13 SM-SF 20km
8530N-2-pt 8531N-2-pt	SC 13/15 SM-SF 40km SC 15/13 SM-SF 40km
8539N-0-pt	100/1000Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

<left blank> = Plug-in model  
Standalone models  
**A** = US AC/DC Adapter, 100 - 240 VAC included  
**B** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord  
**C** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter  
Standalone models with integrated mounting brackets  
**D** = US AC/DC Adapter, 100 - 240 VAC included  
**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord  
**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See 1000M Fiber Specifications for optical parameters.

# iConverter® 1G Media Converters

## iConverter® GxAN

### 1000 Copper to 1000 Fiber Ethernet Managed Media Converter

- IEEE 802.3ab compatible 1000BASE-T copper to 1000BASE-X fiber converter
- RJ-45 auto or forced negotiation of duplex modes and pause capabilities
- RJ-45 supports MDI/MDIX auto-crossover
- Supports 1000BASE-X SFP transceivers
- Supports user selectable link detection modes
- ST, SC and LC fixed fiber ports



### Description

The iConverter Gx AN is a 1000BASE-T copper to 1000BASE-X fiber media converter, and is available as a compact unmanaged standalone unit or a managed chassis plug-in module. The RJ-45 port supports auto-negotiation or forced negotiation of duplex modes and pause capability. The fiber port supports both manual or auto-negotiation.

The iConverter GxAN chassis plug-in module can be used in managed applications. Management provides remote configuration, monitoring and trap notification. Management of the plug-in module is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

### Specifications

<b>Description</b>	Managed 1000 Copper to 1000 Fiber Media Converter
<b>Frame Size</b>	Up to 10,000 bytes
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.04A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	0.7A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+8 to +15VDC, 0.3A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<p><b>Safety:</b> UL, cUL, CE Mark, UKCA</p> <p><b>EMI:</b> FCC Class A</p> <p><b>ACT:</b> TAA, BAA, NDAA</p> <p><b>Environmental:</b> REACH, RoHS, WEEE</p>
<b>Dimension (W x D x H)</b>	<p>Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)</p> <p>Standalone: 3.1" x 4.8" x 1.0" (78.74 mm x 121.92 mm x 25.4 mm)</p> <p>Standalone w/ integrated mounting brackets: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)</p>
<b>Weight</b>	<p>Plug-in: 8 oz. (226.79 grams)</p> <p>Standalone w/o AC adapter: 1.0 lbs. (0.454 kg)</p> <p>Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)</p>
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

GxAN	Description
8500N-0-pt	ST 850nm MM 220/550m
8502N-0-pt	SC 850nm MM 220/550m
8506N-0-pt	LC 850nm MM 220/550m
8502N-6-pt	SC 1310nm MM 2km
8501N-1-pt	ST 1310nm SM 12km
8503N-1-pt	SC 1310nm SM 12km
8507N-1-pt	LC 1310nm SM 12km
8503N-2-pt	SC 1310nm SM 34km
8507N-2-pt	LC 1310nm SM 34km
8503N-3-pt	SC 1550nm SM 80km
8507N-3-pt	LC 1550nm SM 80km
8503N-4-pt	SC 1550nm SM 110km
8503N-5-pt	SC 1550nm SM 140km
8510N-0-pt	SC 13/15 MM-SF 20km
8511N-0-pt	SC 15/13 MM-SF 20km
8510N-1-pt	SC 13/15 SM-SF 20km
8511N-1-pt	SC 15/13 SM-SF 20km
8510N-2-pt	SC 13/15 SM-SF 40km
8511N-2-pt	SC 15/13 SM-SF 40km
8519N-0-pt	1000Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**  
**<left blank>** = Plug-in model  
 Standalone models  
**A** = US AC/DC Adapter, 100 - 240 VAC included  
**B** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord  
**C** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter  
 Standalone models with integrated mounting brackets  
**D** = US AC/DC Adapter, 100 - 240 VAC included  
**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord  
**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

**Operating Temperature Options (t):**  
**<left blank>** = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See 1000M Fiber Specifications for optical parameters.

# iConverter® 1G Media Converters

## iConverter® 2GXT

### 10/100/1000 Copper to 100/1000 Fiber Dual Ethernet Managed Media Converter

- 2-channel media converter and 4-port switch with two 10/100/1000BASE-T RJ-45 ports and two 100/1000BASE-X SFP ports
- Automatic data rate detection of installed SFP transceivers
- Fiber redundancy with less than 50ms switching
- Plug-in module supports IEEE 802.1Q Tag VLAN, Q-in-Q Multi-tagging and IEEE 802.1p Prioritization QoS
- Plug-in module features 100/1000Mbps Ethernet backplane ports for connectivity to adjacent modules



### Description

iConverter 2GXT Ethernet fiber media converters are members of the modular iConverter Multi-Service Platform. The 2GXT is a dual-channel media converter and four-port switch with two 10/100/1000BASE-T RJ-45 ports and two Small Form Pluggable (SFP) ports. The dual SFP fiber ports can be configured to provide 1:1 uplink protection with less than 50ms switchover when the 2GXT is deployed as a four-port switch.

The iConverter 2GXT chassis plug-in module can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the plug-in module is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and via a serial port. The 2GXT can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

### Specifications

<b>Description</b>	Managed 10/100/1000 Copper to 100/1000 Fiber Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.06A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	2.4A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+7 to +60VDC, 0.4A @ 12VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.1Q, 802.1p, 802.1ad, RFC 2819 (RMON)
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

2GXT	Description
8484-4-pt	Dual 10/100/1000 Copper to 100/1000Mbps SFP
<b>Power Options (p):</b> <left blank> = Plug-in model Standalone models with integrated mounting brackets <b>D</b> = US AC/DC Adapter, 100 - 240 VAC included <b>E</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord <b>F</b> = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b> <left blank> = Commercial temperature (0 to 50°C) <b>W</b> = Wide temperature (-40 to 60°C) <b>Z</b> = Extended temperature (-40 to 75°C)	

# iConverter® 1G Media Converters

## iConverter® GX/X

### 1000 Fiber to 1000 Fiber Ethernet Managed Media Converter

- Two-port 1000BASE-X fiber switch and fiber converter
- Features 100Mbps Ethernet backplane ports for connectivity to adjacent modules
- Supports IEEE 802.1Q Tag VLAN, Q-in-Q Multi-tagging and IEEE 802.1p Prioritization QoS
- Supports user selectable link detection modes
- SC and LC fixed fiber ports



### Description

The iConverter GX/X managed two-port Gigabit Ethernet switch and fiber converter is a member of the modular iConverter product family. The GX/X provides single-mode to multimode fiber conversion for extending network distances up to 12km by connecting multimode fiber network devices over single-mode fiber cabling. The GX/X also functions as a repeater, regenerate and re-time the fiber optic signal. Multiple GX/X modules can be cascaded to extend total network distances.

The iConverter GX/X module can be used in managed applications. Management provides remote configuration, monitoring and trap notification. Management of the module is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and via a serial port. The GX/X can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

### Specifications

<b>Description</b>	Managed 1000 Fiber to 1000 Fiber Media Converter
<b>Frame Size</b>	Up to 1,536 bytes
<b>DC Power Requirements</b>	2.2A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.1Q, 802.1p, 802.1ad, RFC 2819 (RMON)
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

<b>GX/X</b>	<b>Description</b>
8542-00t	Port 1: SC 850nm MM 220/550m Port 2: SC 850nm MM 220/550m
8543-10t	Port 1: SC 1310nm SM 12km Port 2: SC 850nm MM 220/550m
8543-11t	Port 1: SC 1310nm SM 12km Port 2: SC 1310nm SM 12km
8547-11t	Port 1: LC 1310nm SM 12km Port 2: LC 1310nm SM 12km
8543-22t	Port 1: SC 1310nm SM 34km Port 2: SC 1310nm SM 34km
8547-22t	Port 1: LC 1310nm SM 34km Port 2: LC 1310nm SM 34km
8543-33t	Port 1: SC 1550nm SM 80km Port 2: SC 1550nm SM 80km
8547-33t	Port 1: LC 1550nm SM 80km Port 2: LC 1550nm SM 80km
8554-11t	Port 1: SC 13/15 SF-SM 20km Port 2: SC 13/15 SF-SM 20km
8557-11t	Port 1: SC 15/13 SF-SM 20km Port 2: SC 15/13 SF-SM 20km

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Operating Temperature Options (t):**  
 <leave blank> = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

[See 1000M Fiber Specifications for optical parameters.](#)

# iConverter® 1G Media Converters

## iConverter® GX/F

### 1000 Fiber to 100 Fiber Ethernet Managed Media Converter

- 1000BASE-SX multimode or 1000BASE-LX single-mode to 100BASE-X single-mode or multimode
- Features 100Mbps Ethernet backplane ports for connectivity to adjacent modules
- Supports IEEE 802.1Q Tag VLAN, Q-in-Q Multi-tagging and IEEE 802.1p Prioritization QoS
- Supports user selectable link detection modes
- SC and LC fixed fiber ports



### Description

The iConverter GX/F managed media converter is a member of the modular iConverter product family. The GX/F provides single-mode to multimode fiber conversion and rate conversion between 1000BASE-X and 100BASE-X. It regenerates and retimes the fiber optic signal, and multiple GX/F repeaters can be cascaded to extend total network distances.

### Specifications

<b>Description</b>	Managed 1000 Fiber to 100 Fiber Media Converter and Repeater
<b>Frame Size</b>	Up to 1,536 bytes
<b>DC Power Requirements</b>	1.5A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.1Q, 802.1p, 802.1ad, RFC 2819 (RMON)
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

[See 1000M Fiber Specifications for optical parameters.](#)

[See 100M Fiber Specifications for optical parameters.](#)

### Ordering

<b>GX/F</b>	<b>Description</b>
8562-00t	Port 1: SC 850nm MM 220/550m (1000Mbps) Port 2: SC 1310nm MM 5km (100Mbps)
8562-01t	Port 1: SC 850nm MM 220/550m (1000Mbps) Port 2: SC 1310nm SM 30km (100Mbps)
8562-02t	Port 1: SC 850nm MM 220/550m (1000Mbps) Port 2: SC 1310nm SM 60km (100Mbps)
8563-10t	Port 1: SC 1310nm SM 12km (1000Mbps) Port 2: SC 1310nm MM 5km (100Mbps)
8563-11t	Port 1: SC 1310nm SM 12km (1000Mbps) Port 2: SC 1310nm SM 30km (100Mbps)
8567-11t	Port 1: LC 1310nm SM 12km (1000Mbps) Port 2: LC 1310nm SM 30km (100Mbps)
8563-12t	Port 1: SC 1310nm SM 12km (1000Mbps) Port 2: SC 1310nm SM 60km (100Mbps)
8567-12t	Port 1: LC 1310nm SM 12km (1000Mbps) Port 2: LC 1310nm SM 60km (100Mbps)
8562-05t	Port 1: SC 850nm MM 220/550m (1000Mbps) Port 2: SC 13/15 SF-SM 20km (100Mbps)
8562-07t	Port 1: SC 850nm MM 220/550m (1000Mbps) Port 2: SC 15/13 SF-SM 20km (100Mbps)
8562-06t	Port 1: SC 850nm MM 220/550m (1000Mbps) Port 2: SC 13/15 SF-SM 40km (100Mbps)
8562-08t	Port 1: SC 850nm MM 220/550m (1000Mbps) Port 2: SC 15/13 SF-SM 40km (100Mbps)
8563-15t	Port 1: SC 1310nm SM 12km (1000Mbps) Port 2: SC 13/15 SF-SM 20km (100Mbps)
8563-17t	Port 1: SC 1310nm SM 12km (1000Mbps) Port 2: SC 15/13 SF-SM 20km (100Mbps)
8563-16t	Port 1: SC 1310nm SM 12km (1000Mbps) Port 2: SC 13/15 SF-SM 40km (100Mbps)
8563-18t	Port 1: SC 1310nm SM 12km (1000Mbps) Port 2: SC 15/13 SF-SM 40km (100Mbps)

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

W = Wide temperature (-40 to 60°C)

See data sheet for additional models.

# iConverter® 1G Media Converters

## iConverter® 4GT

### 4 Port 10/100/1000 Copper Ethernet Managed Switch

- 4-Port 10/100/1000BASE-T standalone or plug-in Ethernet switch module
- Port supports auto-crossover, with 10/100/1000 Half or Full-Duplex auto-negotiation or forced setting
- Quality of Service and traffic prioritization supported via CoS P-bit value
- Plug-in module supports IEEE 802.1Q Tag VLAN, Q-in-Q Multi-tagging and IEEE 802.1p Prioritization QoS
- Plug-in module features 100/1000Mbps Ethernet backplane ports for connectivity to adjacent modules



### Description

The iConverter 4GT is a four-port 10/100/1000 Ethernet switch, available as a compact unmanaged standalone unit or a managed chassis plug-in module. The plug-in modules offers networking features including rate-limiting, traffic classification and prioritization, and VLAN capability.

The four RJ-45 ports support 10/100/1000Mbps bridging, Half/Full-Duplex and auto-negotiation. These features are configurable using DIP-switches or through software management. The 4GT supports RJ-45 auto-crossover (MDI/MDI-X) on all four ports.

The iConverter 4GT can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the 4GT is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and serial port. The 4GT can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

### Specifications

<b>Description</b>	Managed 4 Port 10/100/1000 Copper Switch
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.1A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	1.1A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+7 to +60VDC, 0.3A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.1Q, 802.1p, RFC 2819 (RMON)
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

4GT	Description
8482-4-pt	4 Port 10/100/1000 Copper
<b>Power Options (p):</b>	
<left blank> = Plug-in model	
Standalone models with integrated mounting brackets	
<b>D</b> = US AC/DC Adapter, 100 - 240 VAC included	
<b>E</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>F</b> = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<left blank> = Commercial temperature (0 to 50°C)	
<b>W</b> = Wide temperature (-40 to 60°C)	

# iConverter® 1G Media Converters

## iConverter® 1000FF

### 1000 Fiber to 1000 Fiber Managed Converter

- 1000BASE-X single-mode to 1000BASE-X multimode fiber converter
- Operates with a constant rate signal from 500Mbps to 1250Mbps
- Supports auto-negotiation of duplex mode
- Supports user selectable link detection modes
- SC fixed fiber ports



### Description

The iConverter 1000FF is a Gigabit Ethernet fiber-to-fiber media converter available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter 1000FF provides a cost-effective solution to extend fiber network distances with multimode to single-mode, dual fiber to single-fiber, and wavelength (850/1310, 850/1550 and 1310/1550) conversion.

### Specifications

<b>Description</b>	Managed 1000 to 1000 Fiber Media Converter
<b>Frame Size</b>	Unlimited
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.05A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	0.5A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+5 to +32VDC, 0.3A @ 9VDC max 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

1000FF	Description
8642-1-pt	Port 1: SC 850nm MM 220/550m Port 2: SC 1310nm SM 12km
8642-2-pt	Port 1: SC 850nm MM 220/550m Port 2: SC 1310nm SM 34km
8642-3-pt	Port 1: SC 850nm MM 220/550m Port 2: SC 1550nm SM 80km
8643-2-pt	Port 1: SC 1310nm SM 12km Port 2: SC 1310nm SM 34km
8643-3-pt	Port 1: SC 1310nm SM 12km Port 2: SC 1550nm SM 80km
8650-1-pt	Port 1: SC 850nm MM 220/550m Port 2: SC 13/15 SF-SM 20km
8651-1-pt	Port 1: SC 850nm MM 220/550m Port 2: SC 15/13 SF-SM 20km
8652-1-pt	Port 1: SC 1310nm SM 12km Port 2: SC 13/15 SF-SM 20km
8653-1-pt	Port 1: SC 1310nm SM 12km Port 2: SC 15/13 SF-SM 20km
8652-2-pt	Port 1: SC 1310nm SM 12km Port 2: SC 13/15 SF-SM 40km
8653-2-pt	Port 1: SC 1310nm SM 12km Port 2: SC 15/13 SF-SM 40km
MM = Multimode, SM = Single-mode, SF = Single-fiber	
<b>Power Options (p):</b>	
<left blank> = Plug-in model	
Standalone models with integrated mounting brackets	
<b>D</b> = US AC/DC Adapter, 100 - 240 VAC included	
<b>E</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>F</b> = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
<b>W</b> = Wide temperature (-40 to 60°C)	

See 1000M Fiber Specifications for optical parameters.

# iConverter® 100M Media Converters

## 10M and 100M Media Converters

### iConverter® 100Fx/Tx

#### 100 Copper to 100 Fiber Ethernet Managed Media Converter

- IEEE 802.3 compatible 100BASE-TX copper to 100BASE-X fiber converter
- RJ-45 port supports Half or Full-Duplex 100Mbps Ethernet
- UTP crossover switch eliminates the need for a crossover cable
- Supports user selectable link detection modes
- ST, SC and LC fixed fiber ports



#### Description

The iConverter 100Fx/Tx managed media converters are members of the modular iConverter product family, and provide 100BASE-TX copper to 100BASE-X fiber conversion.

The iConverter 100Fx/Tx can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the 100Fx/Tx is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and serial port. The 100Fx/Tx can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

#### Specifications

<b>Description</b>	Managed 100 Copper to 100 Fiber Media Converter
<b>Frame Size</b>	Unlimited
<b>DC Power Requirements</b>	0.7A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

100Fx/Tx	Description
8360-0t	ST 1310nm MM 5km
8362-0t	SC 1310nm MM 5km
8366-0t	LC 1310nm MM 5km
8361-1t	ST 1310nm SM 30km
8363-1t	SC 1310nm SM 30km
8367-1t	LC 1310nm SM 30km
8361-2t	ST 1310nm SM 60km
8363-2t	SC 1310nm SM 60km
8367-2t	LC 1310nm SM 60km
8363-3t	SC 1550nm SM 120km
8367-3t	LC 1550nm SM 120km
8370-0t	SC 13/15 MM-SF 5km
8371-0t	SC 15/13 MM-SF 5km
8370-1t	SC 13/15 SM-SF 20km
8371-1t	SC 15/13 SM-SF 20km
8370-2t	SC 13/15 SM-SF 40km
8371-2t	SC 15/13 SM-SF 40km
8370-3t	SC 13/15 SM-SF 60km
8371-3t	SC 15/13 SM-SF 60km

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

**W** = Wide temperature (-40 to 60°C)

**Z** = Extended temperature (-40 to 75°C)

See 100M Fiber Specifications for optical parameters.

# iConverter<sup>®</sup> 100M Media Converters

## iConverter<sup>®</sup> 10/100

### 10/100 Copper to 100 Fiber Ethernet Managed Media Converter

- IEEE 802.3 compatible 10/100 copper to 100 fiber converter
- Supports Half or Full-Duplex auto-negotiation with a manual crossover switch
- Supports user selectable link detection modes
- ST, SC and LC fixed fiber ports



### Description

The iConverter 10/100 managed media converters are members of the modular iConverter product family, and provide 10/100 copper to 100 fiber conversion.

The iConverter 10/100 can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the 10/100 is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and serial port. The 10/100 can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

### Specifications

<b>Description</b>	Managed 10/100 Copper to 100 Fiber Media Converter
<b>Frame Size</b>	Up to 1,536 bytes
<b>DC Power Requirements</b>	0.95A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

10/100	Description
8380-0t	ST 1310nm MM 5km
8382-0t	SC 1310nm MM 5km
8386-0t	LC 1310nm MM 5km
8381-1t	ST 1310nm SM 30km
8383-1t	SC 1310nm SM 30km
8387-1t	LC 1310nm SM 30km
8381-2t	ST 1310nm SM 60km
8383-2t	SC 1310nm SM 60km
8387-2t	LC 1310nm SM 60km
8383-3t	SC 1550nm SM 120km
8387-3t	LC 1550nm SM 120km
8390-0t	SC 13/15 MM-SF 5km
8391-0t	SC 15/13 MM-SF 5km
8390-1t	SC 13/15 SM-SF 20km
8391-1t	SC 15/13 SM-SF 20km
8390-2t	SC 13/15 SM-SF 40km
8391-2t	SC 15/13 SM-SF 40km
8390-3t	SC 13/15 SM-SF 60km
8391-3t	SC 15/13 SM-SF 60km

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Operating Temperature Options (t):**  
 <leave blank> = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See 100M Fiber Specifications for optical parameters.

# iConverter® 100M Media Converters

## iConverter® 2Fx

### 100 Fiber to 100 Fiber Ethernet Managed Media Converter

- Fast Ethernet fiber media converter and switch
- 100Mbps Ethernet backplane ports for connectivity to adjacent modules
- Supports user selectable link detection modes
- Supports IEEE 802.1Q Tag VLAN, Q in Q, IEEE 802.1p Prioritization QoS and Port VLAN
- ST, SC and LC fixed fiber ports



### Description

The iConverter 2Fx is a Fast Ethernet fiber-to-fiber media converter that provides multimode to single-mode and dual fiber to single fiber conversion with advanced switching features. The 2Fx is a member of the modular iConverter product family, and is a cost-effective solution to extend fiber network distances over single-mode fiber cabling. The iConverter 2Fx regenerates and re-times the fiber optic signal, and multiple 2Fxs can be used to extend total network distances.

The iConverter 2Fx can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the 2Fx is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and serial port. The 2Fx can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

### Specifications

<b>Description</b>	Managed 100 Fiber to 100 Fiber Media Converter
<b>Frame Size</b>	Up to 1,536 bytes
<b>DC Power Requirements</b>	0.9A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.1Q, 802.1p, RFC 2819 (RMON)
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

<b>2Fx</b>	<b>Description</b>
8440-0t	ST 1310nm MM 5km
8442-0t	SC 1310nm MM 5km
8446-0t	LC 1310nm MM 5km
8441-1t	ST 1310nm SM 30km
8443-1t	SC 1310nm SM 30km
8447-1t	LC 1310nm SM 30km
8441-2t	ST 1310nm SM 60km
8443-2t	SC 1310nm SM 60km
8447-2t	LC 1310nm SM 60km
8443-3t	SC 1550nm SM 120km
8447-3t	LC 1550nm SM 120km
8450-1t	SC 13/15 SM-SF 20km
8451-1t	SC 15/13 SM-SF 20km
8450-2t	SC 13/15 SM-SF 40km
8451-2t	SC 15/13 SM-SF 40km

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

W = Wide temperature (-40 to 60°C)

[See 100M Fiber Specifications for optical parameters.](#)

# iConverter<sup>®</sup> 100M Media Converters

## iConverter<sup>®</sup> 100FF

### 100 Fiber to 100 Fiber Managed Converter

- 100BASE-X single-mode to 100BASE-X multimode fiber converter
- Operates with a constant rate signal from 1Mbps to 100Mbps
- Supports auto-negotiation of duplex mode
- Supports user selectable link detection modes
- ST and SC fixed fiber ports



### Description

The iConverter 100FF is a Fast Ethernet fiber-to-fiber media converter available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter 100FF provides a cost-effective solution to extend fiber network distances with multimode to single-mode, dual fiber to single-fiber, and wavelength (850/1310 and 1310/1550) conversion.

### Specifications

<b>Description</b>	Managed 100 to 100 Fiber Media Converter
<b>Frame Size</b>	Unlimited
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.05A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	0.5A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+5 to +32VDC, 0.3A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

100FF	Description
8622-61-pt	Port 1: SC 850nm MM 2km Port 2: SC 1310nm SM 30km
8620-1-pt	Port 1: ST 1310nm MM 5km Port 2: ST 1310nm SM 30km
8622-1-pt	Port 1: SC 1310nm MM 5km Port 2: SC 1310nm SM 30km
8620-2-pt	Port 1: ST 1310nm MM 5km Port 2: ST 1310nm SM 60km
8622-2-pt	Port 1: SC 1310nm MM 5km Port 2: SC 1310nm SM 60km
8630-1-pt	Port 1: ST 1310nm MM 5km Port 2: SC 13/15 SF-SM 20km
8634-1-pt	Port 1: SC 1310nm MM 5km Port 2: SC 13/15 SF-SM 20km
8631-1-pt	Port 1: ST 1310nm MM 5km Port 2: SC 15/13 SF-SM 20km
8635-1-pt	Port 1: SC 1310nm MM 5km Port 2: SC 15/13 SF-SM 20km
8630-2-pt	Port 1: ST 1310nm MM 5km Port 2: SC 13/15 SF-SM 40km
8634-2-pt	Port 1: SC 1310nm MM 5km Port 2: SC 13/15 SF-SM 40km
8631-2-pt	Port 1: ST 1310nm MM 5km Port 2: SC 15/13 SF-SM 40km
8635-2-pt	Port 1: SC 1310nm MM 5km Port 2: SC 15/13 SF-SM 40km

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

<left blank> = Plug-in model

Standalone models with integrated mounting brackets

**D** = US AC/DC Adapter, 100 - 240 VAC included

**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

**W** = Wide temperature (-40 to 60°C)

See data sheet for additional models.

See 100M Fiber Specifications for optical parameters.

# iConverter<sup>®</sup> 100M Media Converters

## iConverter<sup>®</sup> 4Tx

### 4 Port 10/100 Copper Ethernet Managed Switch

- 4-Port 10/100BASE-T Ethernet switch module
- Conforms to IEEE 802.3, 10BASE-T and 100BASE-TX specifications
- Supports Half or Full-Duplex and auto-negotiation
- RJ-45 crossover support eliminates need for different cables in connecting to various devices
- 100Mbps Ethernet backplane ports for connectivity to adjacent modules



### Description

The iConverter 4Tx is a compact 4-Port Ethernet switch module and is a member of the managed iConverter product family. The 4Tx is a versatile plug-in switch module that can be deployed in a 19-Module, 5-Module, 2-Module and in a 1-Module Chassis.

The iConverter 4Tx can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the 4Tx is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and serial port. The 4Tx can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

### Specifications

<b>Description</b>	Managed 4 Port 10/100 Copper Switch
<b>Frame Size</b>	Up to 1,536 bytes
<b>DC Power Requirements</b>	0.9A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

<b>4Tx</b>	<b>Description</b>
8480-4t	4 Port 10/100 Copper
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) <b>W</b> = Wide temperature (-40 to 60°C) <b>Z</b> = Extended temperature (-40 to 75°C)	

# iConverter® 100M Media Converters

## iConverter® 4Tx VT

### 4 Port 10/100 Copper Ethernet Managed Switch

- 4-Port 10/100BASE-T Ethernet switch module
- Supports Half or Full-Duplex and auto-negotiation
- RJ-45 crossover support eliminates need for different cables in connecting to various devices
- Supports IEEE 802.1Q Tag VLAN, Q-in-Q Multi-tagging and IEEE 802.1p Prioritization QoS
- 100Mbps Ethernet backplane ports for connectivity to adjacent modules



### Description

The iConverter 4Tx VT is a compact 4-Port Ethernet switch module and is a member of the managed iConverter product family. The 4Tx VT is a versatile plug-in switch module that can be deployed in a 19-Module, 5-Module, 2-Module and in a 1-Module Chassis.

The iConverter 4Tx VT complies to IEEE 802.1Q and 802.1p standards. It supports the 802.1Q VLAN packet tagging and untagging for segregating data in Enterprise networks, and enabling secure separation of Service Provider network management and customer data to improve security and intrusion protection.

The iConverter 4TxVT can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the 4TxVT is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and serial port. The 4TxVT can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

### Specifications

<b>Description</b>	Managed 4 Port 10/100 Copper Switch with VLAN
<b>Frame Size</b>	Up to 1,536 bytes
<b>DC Power Requirements</b>	0.95A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.1Q, 802.1p, RFC 2819 (RMON)
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

4Tx VT	Description
8481-4t	4 Port 10/100 Copper
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) <b>W</b> = Wide temperature (-40 to 60°C) <b>Z</b> = Extended temperature (-40 to 75°C)	

# iConverter® 10M Media Converters

## iConverter® 10FL/T

### 10 Copper to 10 Fiber Ethernet Managed Media Converter

- IEEE 802.3 compatible 10BASE-T copper to 10BASE-FL fiber converter
- RJ-45 port automatically supports Half or Full-Duplex 10Mbps Ethernet
- UTP crossover switch eliminates the need for a crossover cable
- Supports user selectable link detection modes
- ST, SC and LC fixed fiber ports



### Description

The iConverter 10FL/T managed media converters are members of the modular iConverter product family, and provide 10BASE-T copper to 10BASE-FL fiber conversion.

The iConverter 10FL/T can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the 10FL/T is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and serial port. The 10FL/T can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

The management software can override the physical DIP-switch settings such as Link Propagate or Remote Fault Detection. Other parameters include module type and model, hardware and software revisions, serial numbers and a user-defined identifier.

### Specifications

<b>Description</b>	Managed 10 Copper to 10 Fiber Media Converter
<b>Frame Size</b>	Unlimited
<b>DC Power Requirements</b>	1.0A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

10FL/T	Description
8300-0t	ST 850nm MM 2km
8302-0t	SC 850nm MM 2km
8300-1t	ST 1310nm MM 5km
8301-1t	ST 1310nm SM 30km
8303-1t	SC 1310nm SM 30km
8307-1t	LC 1310nm SM 30km
8301-2t	ST 1310nm SM 60km
8303-2t	SC 1310nm SM 60km
8307-2t	LC 1310nm SM 60km
8303-3t	SC 1550nm SM 120km
8307-3t	LC 1550nm SM 120km
8310-1t	SC 13/15 SM-SF 20km
8311-1t	SC 15/13 SM-SF 20km
8310-2t	SC 13/15 SM-SF 40km
8311-2t	SC 15/13 SM-SF 40km

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Operating Temperature Options (t):**  
 <leave blank> = Commercial temperature (0 to 50°C)  
 W = Wide temperature (-40 to 60°C)

[See 10M Fiber Specifications for optical parameters.](#)

# iConverter® 10M Media Converters

## iConverter® 10T/2

### 10 Copper to 10 Coax Ethernet Managed Media Converter

- IEEE 802.3 compatible 10BASE-T copper to 10BASE-2 coax converter
- Seamlessly connects coax network segments to 10BASE-T hubs
- Supports 50 ohm coax to a maximum distance of 185m and 30 stations
- Features a UTP crossover switch and automatic polarity detection and correction
- Features switch-selectable coax line termination



### Description

The iConverter 10T/2 is a 10BASE-T to 10BASE-2 media converter that converts between twisted pair (copper) and coax LANs and joins their collision domains. The iConverter 10T/2 facilitates the connection of a coax segment to a 10BASE-T hub. When using a pair of iConverter 10T/2 converters back to back, they can connect between two 10BASE-T hubs via coax.

The iConverter 10T/2 can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the 10T/2 is accomplished by installing an iConverter Management

Module (NMM2) or Network Interface Device (NID) in the same chassis. The Management Module can be accessed via SNMP, Telnet, and serial port. The 10T/2 can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

### Specifications

<b>Description</b>	Managed 10 Copper to 10 Coax Media Converter
<b>Frame Size</b>	Unlimited
<b>DC Power Requirements</b>	1.0A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA, NEBS Level 3 <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

10T/2	Description
8340-0t	100 meters (copper) and 185 meters (Coax)
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) <b>W</b> = Wide temperature (-40 to 60°C)	

# iConverter<sup>®</sup> Specialty Media Converters

## Specialty Media Converters

### iConverter<sup>®</sup> xFF

#### SFP to SFP Protocol-Transparent Fiber Managed Converter

- SFP to SFP protocol-transparent fiber converter
- Supports 10M, 100M 1000M, SONET (OC-3/12/48), SDH (STM-1/4/16), 1x/2x/4x/8x Fibre Channel and Common Public Radio Interface (CPRI)
- Compatible with Omnitron T1/E1, DS3/T3/E3, serial media converters
- Converts single-mode fiber to multimode fiber
- Converts standard wavelengths to CWDM wavelengths
- Both SFP transceivers must be the same speed



#### Description

The iConverter xFF is a protocol-transparent media converter, and is available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter xFF is a Optical-Electrical-Optical (OEO) device, and provides reliable and cost-effective conversion between different wavelengths, multimode and single-mode, and dual and single-fiber.

The iConverter xFF operates as a protocol and rate-transparent device, supporting Small Form Pluggable (SFP) transceivers with constant data rates from 1Mbps to 8.50Gbps.

#### Specifications

<b>Description</b>	Managed SFP to SFP Protocol-Transparent Fiber Converter
<b>Frame Size</b>	Unlimited
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.05A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	0.5A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+5 to +32VDC, 0.3A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	Protocol Transparent up to 8.50Gbps: Ethernet (10BASE-X, 100BASE-X, 1000BASE-X) SONET (OC-3, OC-12, OC-48), SDH (STM-1, STM-4, STM-16) Fibre Channel (1x, 2x, 4x, 8x), CPRI line rates (up to 6.144Gbps) Single-mode to multimode Wavelength conversion (standard to CWDM)
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

xFF	Description
8699-0-pt	SFP to SFP model
<b>Power Options (p):</b>	
<left blank> = Plug-in model	
Standalone models with integrated mounting brackets	
<b>D</b> = US AC/DC Adapter, 100 - 240 VAC included	
<b>E</b> = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>F</b> = Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>J</b> = External JPN PSE AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
<b>W</b> = Wide temperature (-40 to 60°C)	

# iConverter® Specialty Media Converters

## iConverter® OC12FF

### OC-12 Fiber to OC-12 Fiber Managed Converter

- OC-12 multimode to single-mode fiber converter
- Supports auto-negotiation of duplex mode
- Supports user selectable link detection modes
- SC fixed fiber ports



### Description

The iConverter OC12FF is a OC-12/STM-4 fiber-to-fiber media converter available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter OC12FF provides a cost-effective solution to extend fiber network distances with multimode to single-mode, dual fiber to single-fiber, and wavelength (850/1310 and 850/1550) conversion.

### Specifications

<b>Description</b>	Managed OC-12 Fiber to Fiber Converter
<b>Frame Size</b>	Unlimited
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.05A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	0.5A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+5 to +32VDC, 0.3A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	SONET OC-12, SDH STM-4
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

OC12FF	Description
8681-1-pt	Port 1: SC 1310nm MM 220/550m Port 2: SC 1310nm SM 12km
8681-2-pt	Port 1: SC 1310nm MM 220/550m Port 2: SC 1310nm SM 34km
8681-3-pt	Port 1: SC 1310nm MM 220/550m Port 2: SC 1550nm SM 80km
8690-1-pt	Port 1: SC 1310nm MM 220/550m Port 2: SC 13/15 SF-SM 20km
8691-1-pt	Port 1: SC 1310nm MM 220/550m Port 2: SC 15/13 SF-SM 20km
8692-1-pt	Port 1: SC 1310nm SM 12km Port 2: SC 13/15 SF-SM 20km
8693-1-pt	Port 1: SC 1310nm SM 12km Port 2: SC 15/13 SF-SM 20km

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**  
 <left blank> = Plug-in model  
 Standalone models with integrated mounting brackets  
**D** = US AC/DC Adapter, 100 - 240 VAC included  
**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord  
**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

**Operating Temperature Options (t):**  
 <leave blank> = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See OC-12 Fiber Specifications for optical parameters.

# iConverter® Specialty Media Converters

## iConverter® Tx/2Fx and Tx/2Tx

### Redundant 100 Copper or 100 Fiber Managed Media Converter

- Redundant Fast Ethernet modules provide 100 microseconds link recovery
- Tx/2Fx model provides 100BASE-TX copper to two 100BASE-X fiber links
- Tx/2Tx models provide 100BASE-TX copper to two 100BASE-TX copper links
- RJ-45 ports support auto-negotiation and forced Half/Full-Duplex and manual crossover switch
- Supports user selectable link detection modes
- ST, SC and LC fixed fiber ports



### Description

The iConverter Redundant Fast Ethernet managed media converters are members of the modular iConverter product family. The iConverter Redundant Fast Ethernet modules are designed for use in networks that require fiber or copper link redundancy. With a link fault detection time of 100 microseconds, the Redundant iConverter modules provide the rapid response time required for mission-critical applications.

The iConverter Tx/2Fx and Tx/2Tx can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and serial port. They can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

### Specifications

<b>Description</b>	Managed Redundant Fast Ethernet Media Converters
<b>Frame Size</b>	Up to 1,536 bytes
<b>DC Power Requirements</b>	1.1A @ 3.3VDC (Tx/2Fx models) 0.7A @ 3.3VDC (Tx/2Tx models) Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

<b>Tx/2Tx</b>	<b>Description</b>
8400-0t	Copper to redundant copper (100 meters)
<b>Tx/2Fx</b>	<b>Description</b>
8420-0t	ST 1310nm MM 5km
8422-0t	SC 1310nm MM 5km
8426-0t	LC 1310nm MM 5km
8421-1t	ST 1310nm SM 30km
8423-1t	SC 1310nm SM 30km
8427-1t	LC 1310nm SM 30km
8421-2t	ST 1310nm SM 60km
8423-2t	SC 1310nm SM 60km
8427-2t	LC 1310nm SM 60km
8423-3t	SC 1550nm SM 120km
8427-3t	LC 1550nm SM 120km
8430-1t	SC 13/15 SM-SF 20km
8431-1t	SC 15/13 SM-SF 20km
8430-2t	SC 13/15 SM-SF 40km
8431-2t	SC 15/13 SM-SF 40km
8430-3t	SC 13/15 SM-SF 60km
8431-3t	SC 15/13 SM-SF 60km
MM = Multimode, SM = Single-mode, SF = Single-fiber	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	

See 100M Fiber Specifications for optical parameters.

# iConverter® Specialty Media Converters

## iConverter® OC3FF

### OC-3 Fiber to OC-3 Fiber Managed Converter

- OC-3 multimode to single-mode fiber converter
- Operates with a constant rate signal from 1Mbps to 155Mbps
- Support for OC3 over ATM or SONET
- Supports user selectable link detection modes
- ST and SC fixed fiber ports



### Description

The iConverter OC3FF is an OC-3/STM-1 fiber-to-fiber media converter available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter OC3FF provides a cost-effective solution to extend fiber network distances with multimode to single-mode, dual fiber to single-fiber, and wavelength (1310/1550) conversion.

### Specifications

<b>Description</b>	Managed OC-3 Fiber to Fiber Converter
<b>Frame Size</b>	Unlimited
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.05A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements (Plug-in)</b>	0.5A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+5 to +32VDC, 0.3A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	SONET OC-3, SDH STM-1
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

OC3FF	Description
8660-1-pt	Port 1: ST 1310nm MM 5km Port 2: ST 1310nm SM 30km
8661-1-pt	Port 1: SC 1310nm MM 5km Port 2: SC 1310nm SM 30km
8660-2-pt	Port 1: ST 1310nm MM 5km Port 2: ST 1310nm SM 60km
8661-2-pt	Port 1: SC 1310nm MM 5km Port 2: SC 1310nm SM 60km
8670-1-pt	Port 1: ST 1310nm MM 5km Port 2: SC 13/15 SF-SM 20km
8674-1-pt	Port 1: SC 1310nm MM 5km Port 2: SC 13/15 SF-SM 20km
8671-1-pt	Port 1: ST 1310nm MM 5km Port 2: SC 15/13 SF-SM 20km
8675-1-pt	Port 1: SC 1310nm MM 5km Port 2: SC 15/13 SF-SM 20km
8670-2-pt	Port 1: ST 1310nm MM 5km Port 2: SC 13/15 SF-SM 40km
8674-2-pt	Port 1: SC 1310nm MM 5km Port 2: SC 13/15 SF-SM 40km
8671-2-pt	Port 1: ST 1310nm MM 5km Port 2: SC 15/13 SF-SM 40km
8675-2-pt	Port 1: SC 1310nm MM 5km Port 2: SC 15/13 SF-SM 40km

MM = Multimode, SM = Single-mode, DF = Dual Fiber, SF = Single-fiber

#### Power Options (p):

<left blank> = Plug-in model  
Standalone models with integrated mounting brackets  
**D** = US AC/DC Adapter, 100 - 240 VAC included  
**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord  
**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See data sheet for additional models.

See OC-3 Fiber Specifications for optical parameters.

# iConverter® Communication Media Converters

## Communication Media Converters

### iConverter® T1/E1

#### T1/E1 Copper to Fiber Managed Media Converter

- Supports ANSI, AT&T, ITU and ETSI standards
- Supports T1, E1 and Primary Rate Interface voice or data
- Supports AMI, B8ZS and HDB3 line codes
- Features a crossover switch for easy connections to PBXs or CSUs
- Supports 100BASE-X SFP transceivers
- ST, SC and LC fixed fiber ports



#### Description

The iConverter T1/E1 is a T1 (1.544Mbps) or E1 (2.048Mbps) copper to fiber media converter, and is available as a compact unmanaged standalone unit or a managed chassis plug-in module. The iConverter T1/E1 media converters are designed to operate in pairs.

The module supports standard T1, E1 and Primary Rate Interface (PRI), voice or data. The module also supports AMI, B8ZS and HDB3 line codes. DIP-switches provide easy configuration of T1/E1 line codes and line build-out. A crossover switch makes it simple to connect the T1/E1 converter to PBXs or CSUs and eliminates the need for a crossover cable.

Diagnostic features include local loopback, remote loopback and all 1's insertion (AIS) modes for the copper or fiber segments. Local loopback validates connectivity to local T1/E1 lines, while remote loopback validates the entire fiber segment from one unit without having to make adjustments on both ends. Dry contact relay option allows a separate T1/E1 alarm circuit to be notified when a loss of power is detected.

#### Specifications

<b>Description</b>	Managed T1/E1 Copper to Fiber Media Converter
<b>Date Rate</b>	1.544Mbps (T1 and ISDN PRI) 2.048Mbps (E1)
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.05A @ 120VAC 2.5mm barrel connector
<b>DC Power Requirements (Plug-in)</b>	0.7A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+5 to +32VDC, 0.3A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	ANSI: T1.403, T1.102, AT&T: T62411, ITU: G.703, G.704, G.706, G.736, G.755, G.823, ETSI: ETS 300 166
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

T1/E1	Description
8700-0-pt	ST 1310nm MM 5km
8702-0-pt	SC 1310nm MM 5km
8706-0-pt	LC 1310nm MM 5km
8701-1-pt	ST 1310nm SM 30km
8703-1-pt	SC 1310nm SM 30km
8707-1-pt	LC 1310nm SM 30km
8701-2-pt	ST 1310nm SM 60km
8703-2-pt	SC 1310nm SM 60km
8707-2-pt	LC 1310nm SM 60km
8703-3-pt	SC 1310nm SM 120km
8707-3-pt	LC 1310nm SM 120km
8710-1-pt	SC 13/15 SF-SM 20km
8711-1-pt	SC 15/13 SF-SM 20km
8710-2-pt	SC 13/15 SF-SM 40km
8711-2-pt	SC 15/13 SF-SM 40km
8719-0-pt	100Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**  
**<left blank>** = Plug-in model  
 Standalone models with integrated mounting brackets  
**D** = US AC/DC Adapter, 100 - 240 VAC included  
**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord  
**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

**Operating Temperature Options (t):**  
**<left blank>** = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See 100M Fiber Specification for optical parameters.

# iConverter® Communication Media Converters

## iConverter® 4xT1/E1 MUX

### Unmanaged 4 Port T1/E1 Copper to Fiber Multiplexer

- Multiplexes four independent T1 or E1 channels to a single fiber link
- Optional 10/100 copper Ethernet service multiplexed with T1/E1 circuits
- Supports AMI, B8ZS and HDB3 line codes
- Easy configuration of T1/E1 line codes and line build-out
- Supports 100BASE-X SFP transceivers
- ST, SC and LC fixed fiber ports



### Description

The iConverter 4xT1/E1 MUX multiplexes up to four T1/E1s and an optional 10/100 Ethernet onto a fiber optic transport link. The unmanaged T1/E1 Multiplexer provides an easy-to-use and cost-effective multi-service solution for providing TDM and Ethernet connectivity.

The iConverter 4xT1/E1 MUX operates in a back-to-back configuration, with one multiplexer at each end of the fiber link.

### Specifications

<b>Description</b>	Unmanaged 4 Port T1/E1 MUX
<b>Date Rate</b>	1.544Mbps (T1 and ISDN PRI) 2.048Mbps (E1) 10/100Mbps (Ethernet Port)
<b>Frame Size</b>	Up to 2,044 bytes (Ethernet Port)
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.5A @ 120VAC IEC 320 Socket
<b>DC Power Requirements</b>	+/- 18 to +/- 60VDC; 2.0A @ 48VDC 3-Pin Terminal (isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	ANSI: T1.403, T1.102 AT&T: T62411 ITU: G.703, G.704, G.706, G.736, G.755, G.823, G.824, G.8261 ETSI: ETS 300 166 IEEE: 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	6.7" x 5.51" x 1.87" (170.18 mm x 139.95 mm x 47.5 mm)
<b>Weight</b>	2.5 lb (1.14 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

4xT1/E1 MUX	Description
8820e-0-pt	ST 1310nm MM 5km
8822e-0-pt	SC 1310nm MM 5km
8826e-0-pt	LC 1310nm MM 5km
8821e-1-pt	ST 1310nm SM 30km
8823e-1-pt	SC 1310nm SM 30km
8827e-1-pt	LC 1310nm SM 30km
8823e-2-pt	SC 1310nm SM 60km
8827e-2-pt	LC 1310nm SM 60km
8823e-3-pt	SC 1310nm SM 120km
8827e-3-pt	LC 1310nm SM 120km
8830e-1-pt	SC 13/15 SF-SM 20km
8831e-1-pt	SC 15/13 SF-SM 20km
8830e-2-pt	SC 13/15 SF-SM 40km
8831e-2-pt	SC 15/13 SF-SM 40km
8839e-0-pt	100Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Ethernet Options (e):**  
**<leave blank>** = No Ethernet port  
**U** = Ethernet port

**Power Options (p):**  
**B** = 100 - 240 VAC, IEC 320 socket, power cord included  
**C** = Direct DC input, 3 pin terminal connector, no AC/DC power adapter

**Operating Temperature Options (t):**  
**<leave blank>** = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See 100M Fiber Specifications for optical parameters.

# iConverter® Communication Media Converters

## iConverter® 4xT1/E1 MUX/M

### Managed 4 Port T1/E1 Copper to Fiber Multiplexer

- Multiplexes four independent T1 or E1 channels to a single fiber link
- 10/100/1000 copper Ethernet multiplexed with T1/E1 circuits
- Supports AMI, B8ZS and HDB3 line codes
- Supports 1000BASE-X SFP transceivers
- ST and SC fixed fiber ports



### Description

The iConverter 4xT1/E1 MUX/M multiplexes up to four T1/E1s and Ethernet onto a fiber optic transport link, and features remote management testing and configuration capabilities.

The iConverter 4xT1/E1 MUX/M operates in a back-to-back configuration, with one multiplexer at each end of the fiber transport link.

### Specifications

<b>Description</b>	Managed 4 Port T1/E1 MUX with Ethernet
<b>Date Rate</b>	1.544Mbps (T1 and ISDN PRI) 2.048Mbps (E1) 10/100/1000Mbps (Ethernet Port)
<b>Frame Size</b>	Up to 10,236 bytes (Ethernet Port)
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.5A @ 120VAC IEC 320 Socket
<b>DC Power Requirements</b>	+/- 18 to +/- 60VDC; 2.0A @ 48VDC 3-Pin Terminal (isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	ANSI: T1.403, T1.102 AT&T: T62411 ITU: G.703, G.704, G.706, G.736, G.755, G.823, G.824, G.8261 ETSI: ETS 300 166 IEEE: 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, Serial Console
<b>Dimension (W x D x H)</b>	6.7" x 5.51" x 1.87" (170.18 mm x 139.95 mm x 47.5 mm)
<b>Weight</b>	2.5 lb (1.14 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

4xT1/E1 MUX/M	Description
8820N-0-pt	ST 850nm MM 220/550m
8822N-0-pt	SC 850nm MM 220/550m
8821N-1-pt	ST 1310nm SM 12km
8823N-1-pt	SC 1310nm SM 12km
8823N-2-pt	SC 1310nm SM 34km
8823N-3-pt	SC 1550nm SM 80km
8823N-4-pt	SC 1550nm SM 110km
8823N-5-pt	SC 1550nm SM 140km
8830N-1-pt	SC 13/15 SF-SM 20km
8831N-1-pt	SC 15/13 SF-SM 20km
8830N-2-pt	SC 13/15 SF-SM 40km
8831N-2-pt	SC 15/13 SF-SM 40km
8839N-0-pt	1000Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**  
**B** = 100 - 240 VAC, IEC 320 socket, power cord included  
**C** = Direct DC input, 3 pin terminal connector, no AC/DC power adapter

**Operating Temperature Options (t):**  
**<leave blank>** = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

[See 1000M Fiber Specifications for optical parameters.](#)

# iConverter<sup>®</sup> Communication Media Converters

## iConverter<sup>®</sup> T1/E1 MUX/M

### Managed 16 Port T1/E1 Copper to Fiber Multiplexer

- Multiplexes up to sixteen independent T1 or E1 channels to a single fiber link
- 10/100/1000 copper Ethernet multiplexed with T1/E1 circuits
- Supports AMI, B8ZS and HDB3 line codes
- Easy configuration of T1/E1 line codes and line build-out
- Supports 1000BASE-X SFP transceivers
- ST and SC fixed fiber ports



### Description

The iConverter T1/E1 MUX/M multiplexes up to sixteen T1 or E1 circuits and one 10/100/1000 Ethernet service onto a fiber optic transport link, and features remote management testing and configuration capabilities.

The iConverter T1/E1 MUX/M operates in a back-to-back configuration. The T1/E1 copper interfaces are available in 4, 8, 12 or 16 RJ-48 port configurations for balanced T1/E1 applications.

### Specifications

<b>Description</b>	Managed T1/E1 MUX
<b>Date Rate</b>	1.544Mbps (T1 and ISDN PRI) 2.048Mbps (E1) 10/100/1000Mbps (Ethernet Port)
<b>Frame Size</b>	Up to 10,236 bytes (Ethernet Port)
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.5A @ 120VAC IEC 320 Socket
<b>DC Power Requirements</b>	+/- 18 to +/- 36VDC; 1.4A @ 24VDC (24VDC models) 3-Pin Terminal (isolated) +/- 36 to +/- 60VDC; 0.7A @ 48VDC (48VDC models) 3-Pin Terminal (isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	ANSI: T1.403, T1.102 AT&T: T62411 ITU: G.703, G.704, G.706, G.736, G.755, G.823, G.824, G.8261 ETSI: ETS 300 166 IEEE: 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, Serial Console
<b>Dimension (W x D x H)</b>	17.5" x 9.0" x 1.75" (444.5 mm x 228.6 mm x 44.5 mm)
<b>Weight</b>	One Power Supply: 7.5 lbs (3.40 kg) Two Power Supplies: 9.0 lbs (4.08 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

T1/E1 MUX/M	Description
2420-0-ypt 2422-0-ypt	ST 850nm MM 220/550m SC 850nm MM 220/550m
2421-1-ypt 2423-1-ypt	ST 1310nm SM 12km SC 1310nm SM 12km
2423-2-ypt 2423-3-ypt 2423-4-ypt 2423-5-ypt	SC 1310nm SM 34km SC 1550nm SM 80km SC 1550nm SM 110km SC 1550nm SM 140km
2430-1-ypt 2431-1-ypt	SC 13/15 SF-SM 20km SC 15/13 SF-SM 20km
2430-2-ypt 2431-2-ypt	SC 13/15 SF-SM 40km SC 15/13 SF-SM 40km
2439-0-ypt	1000Mbps SFP model

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Number of T1 Ports (y):**  
**1** = One 4-Port MUX Module (4 ports total)  
**2** = Two 4-Port MUX Module (8 ports total)  
**3** = Three 4-Port MUX Module (12 ports total)  
**4** = Four 4-Port MUX Module (14 ports total)

**Power Options (p):**  
**1** = One 100 - 240 VAC, IEC 320 socket, power cord included  
**2** = Two 100 - 240 VAC, IEC 320 socket, power cord included  
**3** = One Direct DC input, 3 pin terminal connector, 36 to 60VDC input  
**4** = Two Direct DC input, 3 pin terminal connector, 36 to 60VDC input  
**5** = One Direct DC input, 3 pin terminal connector, 18 to 36VDC input  
**6** = Two Direct DC input, 3 pin terminal connector, 18 to 36VDC input

**Operating Temperature Options (t):**  
**<leave blank>** = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See 1000M Fiber Specifications for optical parameters.

# iConverter® Communication Media Converters

## iConverter® Modular T1/E1 Multiplexer T1/E1 and Ethernet Managed Multiplexer

- Modular system multiplexes up to sixteen independent T1/E1 channels and 10/100/1000 Ethernet over fiber
- Multiple groups of mux modules can be installed in the same chassis
- Supports AMI, B8ZS and HDB3 line codes
- Easy configuration of T1/E1 line codes and line build-out
- Supports 1000BASE-X SFP transceivers
- ST and SC fixed fiber ports



### Description

The iConverter Modular T1/E1 Multiplexer transports up to sixteen T1/E1 circuits and 10/100/1000 Ethernet over point-to-point fiber, CWDM channel or Ethernet Virtual Connection (EVC). This flexible and scalable system is comprised of an iConverter Fiber Transport module (TM3), and one or more iConverter 4xT1/E1 MUX modules installed in a 2, 5 or 19-module chassis.

Each iConverter Fiber Transport module (TM3) and up to four contiguous iConverter 4xT1/E1 MUX modules combine to form a MUX group. A MUX group can connect with another MUX group at the opposite end of a dedicated fiber link or EVC. A MUX group can also interoperate with a Managed iConverter fixed-configuration T1/E1 Multiplexer.

### Specifications

<b>Description</b>	TM3 Transport Fiber Module and 4xT1/E1 MUX Module
<b>Date Rate</b>	1.544Mbps (T1 and ISDN PRI) 2.048Mbps (E1) 10/100/1000Mbps (Ethernet Port)
<b>Frame Size</b>	Up to 10,236 bytes (Ethernet Port)
<b>DC Power Requirements</b>	1.6A @ 3.3VDC - TM3 module 1.6A @ 3.3VDC - T1 MUX module Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	ANSI: T1.403, T1.102 AT&T: T62411 ITU: G.703, G.704, G.706, G.736, G.755, G.823, G.824, G.8261 ETSI: ETS 300 166 IEEE: 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Management</b>	Telnet, SNMPv1, SNMPv2c, SNMPv3, Serial Console (TM3 module)
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

TM3	Description
2420-0-Tt	ST 850nm MM 220/550m
2422-0-Tt	SC 850nm MM 220/550m
2421-1-Tt	ST 1310nm SM 12km
2423-1-Tt	SC 1310nm SM 12km
2423-2-Tt	SC 1310nm SM 34km
2423-3-Tt	SC 1550nm SM 80km
2423-4-Tt	SC 1550nm SM 110km
2423-5-Tt	SC 1550nm SM 140km
2430-1-Tt	SC 13/15 SF-SM 20km
2431-1-Tt	SC 15/13 SF-SM 20km
2430-2-Tt	SC 13/15 SF-SM 40km
2431-2-Tt	SC 15/13 SF-SM 40km
2439-0-Tt	1000Mbps SFP
2499-0-Tt	Two 1000Mbps SFP
MM = Multimode, SM = Single-mode, SF = Single-fiber	
4xT1/E1	Description
8485-4t	4 Port T1/E1 MUX module
8486-4t	4 Port T1/E1 MUX module with Clock I/O connector
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	

See 1000M Fiber Specifications for optical parameters.

# iConverter® Communication Media Converters

## iConverter® T3/E3

### T3/E3 Coax to Fiber Managed Media Converter

- T3 (DS3) or E3 Coax to fiber media converter
- Supports B3ZS and HDB3 line codes
- Supports framed or unframed and channelized or unchannelized data
- Supports RG-59 75 ohms coax interface with short-haul and long-haul build-out options
- Supports 100BASE-X SFP transceivers
- ST, SC and LC fiber ports



### Description

The iConverter T3/E3 is a T3 (44.736Mbps) or E3 (34.368Mbps) coax to fiber converter, and is available as a compact unmanaged standalone unit or a managed chassis plug-in module. The iConverter T3/E3 can be used to connect to devices such as PBXs, multiplexers, routers and video servers via fiber.

The iConverter T3/E3 media converters operate in pairs.

### Specifications

<b>Description</b>	Managed T3/E3 Coax to Fiber Media Converter
<b>Date Rate</b>	44.736Mbps (T3) 34.368Mbps (E3)
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.05A @ 120VAC 2.5mm barrel connector
<b>DC Power Requirements (Plug-in)</b>	0.7A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+5 to +32VDC, 0.3A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	ANSI: T1.102, T1.107, T1.404, T1-404a (T3) ITU: G.703, (E3), G.751, O.151 ETSI: EN 300 689, 300 686, 300 687
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

T3/E3	Description
8740-0-pt	ST 1310nm MM 5km
8742-0-pt	SC 1310nm MM 5km
8746-0-pt	LC 1310nm MM 5km
8741-1-pt	ST 1310nm SM 30km
8743-1-pt	SC 1310nm SM 30km
8747-1-pt	LC 1310nm SM 30km
8741-2-pt	ST 1310nm SM 60km
8743-2-pt	SC 1310nm SM 60km
8747-2-pt	LC 1310nm SM 60km
8743-3-pt	SC 1310nm SM 120km
8747-3-pt	LC 1310nm SM 120km
8750-1-pt	SC 13/15 SF-SM 20km
8751-1-pt	SC 15/13 SF-SM 20km
8750-2-pt	SC 13/15 SF-SM 40km
8751-2-pt	SC 15/13 SF-SM 40km
8759-0-pt	100Mbps SFP model

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**  
 <left blank> = Plug-in model  
 Standalone models with integrated mounting brackets  
**D** = US AC/DC Adapter, 100 - 240 VAC included  
**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord  
**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

**Operating Temperature Options (t):**  
 <leave blank> = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See 100M Fiber Specification for optical parameters.

# iConverter<sup>®</sup> Communication Media Converters

## iConverter<sup>®</sup> RS232

### Serial RS-232 to Fiber Managed Media Converter

- Serial RS-232 to fiber media converter with automatic data rate detection
- Supports bit rates ranging from 110 bps to 921,600 bps
- DB-9 and Terminal Block connector options for serial RS-232 interface
- DIP-switch configuration of DTE or DCE device
- Supports RTS, CTS, DCD, DTR and DSR controls
- ST, SC and LC fixed fiber ports



### Description

The iConverter RS232 is a managed serial RS-232 to fiber converter that transmits serial protocol over fiber media. The serial port interface is available with either a DB-9 female connector or terminal block connector for field wiring. The module automatically detects the signal data rate of the connected serial device, ranging from 110 bps to 921,600 bps. It also automatically adjusts to changes in the connected device's data rate during operation without reconfiguration or interruption of service.

The RS232 media converters operate in pairs.

### Specifications

<b>Description</b>	Managed Serial RS-232 to Fiber Media Converter
<b>Date Rate</b>	110 bps to 921,600 bps (Asynchronous)
<b>DC Power Requirements</b>	0.5A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	EIA-232
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

RS232	Description
8760-0t	ST 1310nm MM 5km (50 ft copper distance)
8762-0t	SC 1310nm MM 5km (50 ft copper distance)
8766-0t	LC 1310nm MM 5km (50 ft copper distance)
8761-1t	ST 1310nm SM 30km (50 ft copper distance)
8763-1t	SC 1310nm SM 30km (50 ft copper distance)
8767-1t	LC 1310nm SM 30km (50 ft copper distance)
8761-2t	ST 1310nm SM 60km (50 ft copper distance)
8763-2t	SC 1310nm SM 60km (50 ft copper distance)
8767-2t	LC 1310nm SM 60km (50 ft copper distance)
8763-3t	SC 1310nm SM 120km (50 ft copper distance)
8767-3t	LC 1310nm SM 120km (50 ft copper distance)
8770-1t	SC 13/15 SF-SM 20km (50 ft copper distance)
8771-1t	SC 15/13 SF-SM 20km (50 ft copper distance)
8770-2t	SC 13/15 SF-SM 40km (50 ft copper distance)
8771-2t	SC 15/13 SF-SM 40km (50 ft copper distance)

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Operating Temperature Options (t):**  
 <leave blank> = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See 100M Fiber Specifications for optical parameters.

# iConverter® Communication Media Converters

## iConverter® RS422/485

### Serial RS-422/RS-485 to Fiber Managed Media Converter

- Serial RS-422 and RS-485 to fiber media converter with automatic Full-Duplex data rate detection
- Supports bit rates ranging from 110 bps to 921,600 bps
- Built-in configurable terminators
- Configurable bit rate for Half-Duplex RS-485 and Full-Duplex RS-485 operation
- Supports Point-to-Point Half and Full-Duplex, MultiPoint Full-Duplex
- ST, SC and LC fixed fiber ports



### Description

The iConverter RS422/485 is a managed serial RS-422 and RS-485 to fiber converter that transmits serial protocol over fiber media. The serial port interface is available with either a DB-9 female connector or terminal block connector for field wiring. The module automatically detects the signal data rate of the connected serial device, ranging from 110 bps to 921,600 bps. It also automatically adjusts to changes in the connected device's data rate during operation without reconfiguration or interruption of service.

The RS422/485 media converters operate in pairs.

### Specifications

<b>Description</b>	Managed Serial RS-422 /RS-485 to Fiber Media Converter
<b>Date Rate</b>	110 bps to 921,600 bps (Asynchronous)
<b>DC Power Requirements</b>	0.5A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	EIA-422/485
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	8 oz. (226.79 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

RS422/485	Description
8780-0t	ST 1310nm MM 5km
8782-0t	SC 1310nm MM 5km
8786-0t	LC 1310nm MM 5km
8781-1t	ST 1310nm SM 30km
8783-1t	SC 1310nm SM 30km
8787-1t	LC 1310nm SM 30km
8781-2t	ST 1310nm SM 60km
8783-2t	SC 1310nm SM 60km
8787-2t	LC 1310nm SM 60km
8783-3t	SC 1310nm SM 120km
8787-3t	LC 1310nm SM 120km
8790-1t	SC 13/15 SF-SM 20km
8791-1t	SC 15/13 SF-SM 20km
8790-2t	SC 13/15 SF-SM 40km
8791-2t	SC 15/13 SF-SM 40km

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Operating Temperature Options (t):**  
 <leave blank> = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

[See 100M Fiber Specifications for optical parameters.](#)

# iConverter<sup>®</sup> Communication Media Converters

## iConverter<sup>®</sup> X21

### Serial X.21 to Fiber Managed Media Converter

- X.21 and RS-530 Serial to Fiber media converter
- Auto-configuration of baud rates
- DCE-sourced or terminal clock modes
- Supports serial data rates up to 8.192Mbps
- Included adapter cable used to provide desired serial interface gender
- Supports 100BASE-X SFP transceivers
- ST, SC and LC fixed fiber ports



### Description

The iConverter X21 is a X.21 or RS-530 serial-to-fiber media converter, and is available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter X21 supports several configuration modes to enable connections with a wide variety of X.21 and RS-530 devices.

The X21 can auto-detect and configure itself to match the baud rate of the connected device up to 8.192Mbps. The X21 supports standard DCE-sourced timing and terminal timing. The X21 also supports RS-530 DCE and DTE co-directional timing, Tx and Rx data, and two control lines. An adapter cable is included to accommodate different gender connectors.

The X21 media converters operate in pairs.

### Specifications

<b>Description</b>	Managed Serial X.21 to Fiber Media Converter
<b>Date Rate</b>	Up to 8.192Mbps
<b>AC Power Requirements (Standalone)</b>	100 to 240VAC, 50/60Hz, 0.05A @ 120VAC 2.5mm barrel connector
<b>DC Power Requirements (Plug-in)</b>	0.5A @ 3.3VDC Via Chassis Backplane
<b>DC Power Requirements (Standalone)</b>	+5 to +32VDC, 0.3A @ 9VDC 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	ITU-T X.21
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	Plug-in: 0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm) Standalone: 3.1" x 4.8" x 1.0" (78.74 mm x 121.92 mm x 25.4 mm) Standalone w/ integrated mounting brackets: 3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
<b>Weight</b>	Plug-in: 8 oz. (226.79 grams) Standalone w/o AC adapter: 1.0 lbs. (0.454 kg) Standalone w/ AC adapter: 1.5 lbs. (0.680 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

X21	Description
8840-0-pt	ST 1310nm MM 5km
8842-0-pt	SC 1310nm MM 5km
8846-0-pt	LC 1310nm MM 5km
8841-1-pt	ST 1310nm SM 30km
8843-1-pt	SC 1310nm SM 30km
8847-1-pt	LC 1310nm SM 30km
8841-2-pt	ST 1310nm SM 60km
8843-2-pt	SC 1310nm SM 60km
8847-2-pt	LC 1310nm SM 60km
8843-3-pt	SC 1310nm SM 120km
8847-3-pt	LC 1310nm SM 120km
8850-1-pt	SC 13/15 SF-SM 20km
8851-1-pt	SC 15/13 SF-SM 20km
8850-2-pt	SC 13/15 SF-SM 40km
8851-2-pt	SC 15/13 SF-SM 40km
8859-0-pt	100Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

<left blank> = Plug-in model

Standalone models

**A** = US AC/DC Adapter, 100 - 240 VAC included

**B** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**C** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

Standalone models with integrated mounting brackets

**D** = US AC/DC Adapter, 100 - 240 VAC included

**E** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**F** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

**W** = Wide temperature (-40 to 60°C)

See 100M Fiber Specifications for optical parameters.

## iConverter® Passive Optical Overview

### iConverter® CWDM Product Family

iConverter Coarse Wave Division Multiplexing (CWDM) Multiplexer/Demultiplexer modules support ITU-T G694.2 wavelengths between 1270nm to 1610nm in 20nm increments.

iConverter CWDM modules are protocol and rate transparent allowing different services up to 10Gbps each to be transported across the same fiber link. They provide a reliable and cost-effective solution for increasing bandwidth capacity over existing fiber infrastructure in Service Provider, Municipal, Utility and Enterprise networks.

The passive iConverter CWDM modules utilize a small and scalable plug-in form factor, and can be installed in any iConverter chassis achieving some of the highest port densities in the industry. They can be installed in a 1-Module Passive Chassis for unmanaged applications, or in multi-module chassis with a management module. The modules are designed to be integrated with other iConverter media converters and transponders to provide a true Multi-Service Platform capable of delivering 10, 100, Gigabit and 10 Gigabit Ethernet, Serial, TDM, SONET and other services across a CWDM common link. They are passive devices that can be installed in a powered chassis for managed applications.

- Protocol and rate transparent for applications up to 10Gbps
- Highly compact form factor
- Seamless integration with other iConverter SFP media converters and chassis for Multi-Service Platforms
- Minimal and uniform optical loss for easy network planning
- Industry standard LC connectors
- One (1) Year Warranty and Free 24/7 Technical Support
- Supports wide temperature range (-40 to 60°C)

# iConverter® CWDM Multiplexers

## iConverter® CWDM/X

### 4 and 8 Channel CWDM Multiplexer/Demultiplexer

- 4 and 8 channels (wavelengths) multiplexer/demultiplexer modules
- Scalable to 8 or 16 channels using an Expansion Port or Band Splitter
- Enables existing 1310nm networks to carry up to an additional 8 channels with optional 1310nm Pass Band Port
- Enables existing 1550nm networks to carry up to an additional 4 channels with optional 1550 Pass Band/ Expansion Port
- Protocol and rate transparent for applications up to 10Gbps
- UPC/LC and APC/LC ports



### Description

The iConverter CWDM/X Coarse Wave Division Multiplexing (CWDM) Multiplexer/Demultiplexer (MUX/DEMUX) modules support ITU-T G.694.2 wavelengths between 1270nm to 1610nm in 20nm increments. CWDM/X modules are protocol and rate transparent allowing different services up to 10Gbps to be transported across the same fiber link.

### Specifications

<b>Description</b>	4 and 8 Channel Multiplexer/Demultiplexer
<b>Date Rate</b>	Up to 10Gbps
<b>DC Power Requirements</b>	0.025A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	12 oz. (340.2 grams)
<b>Warranty</b>	One (1) year warranty with 24/7/365 free Technical Support

### Ordering

CWDM/X	Description
8860-0t	4-Channel CWDM Mux, UPC/LC, <1.9dB Insertion Loss 1471, 1491, 1591, 1611
8860-1t	4-Channel CWDM Mux, UPC/LC, <2.0dB Insertion Loss 1471, 1491, 1591, 1611, w/ 1310nm Pass Band
8860-2t	4-Channel CWDM Mux, UPC/LC, <2.0dB Insertion Loss 1471, 1491, 1591, 1611, w/ 1310nm Pass Band and 1550nm Expansion
8860-3t	4-Channel CWDM Mux, UPC/LC, <2.0dB Insertion Loss 1471, 1491, 1591, 1611, w/ 1550nm Expansion
8861-0t	4-Channel CWDM Mux, UPC/LC, <1.9dB Insertion Loss 1511, 1531, 1551, 1571
8861-1t	4-Channel CWDM Mux, UPC/LC, <2.0dB Insertion Loss 1511, 1531, 1551, 1571 w/ 1310nm Pass Band
8862-0t	8-Channel CWDM Mux, UPC/LC, <2.7dB Insertion Loss 1271, 1291, 1311, 1331, 1351, 1371, 1431, 1451
8863-0t	8-Channel CWDM Mux, UPC/LC, <2.7dB Insertion Loss 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611
8863-5t	8-Channel CWDM Mux, APC/LC, <2.7dB Insertion Loss 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611
8863-1t	8-Channel CWDM Mux, UPC/LC, <2.7dB Insertion Loss 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611, w/ 1310nm Pass Band
8863-6t	8-Channel CWDM Mux, APC/LC, <2.7dB Insertion Loss 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611 w/ 1310nm Pass Band
8865-0t	Single Band Splitter, UPC/LC, <0.8dB Insertion Loss
8865-2t	Dual Band Splitter, UPC/LC, <0.8dB Insertion Loss

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

**W** = Wide temperature (-40 to 60°C)

1310 Pass Band port supports 1260nm to 1460nm (Rev 2.0 or later).

1550 Pass Band / Expansion port supports 15110nm to 1570nm. The port can be used to cascade the two 4-Channel MUX or pass any legacy 1550 devices.

# iConverter® CWDM Single-Fiber

## iConverter® Single Fiber CWDM/X and CWDM/AD Single Fiber Multiplexers and Add/Drop Modules

- 2 and 4 Channel Single-fiber MUX/DEMUX modules
- 2 and 4 Channel modules are scalable to 4 or 8 Channels using a Band Splitter module
- 1 Channel Single-fiber Optical Add and Drop Multiplexers modules
- Add and Drop functions in both directions
- UPC/LC ports



### Description

iConverter Single-Fiber Course Wave Division Multiplexing (CWDM) modules provide a flexible and cost-effective solution for increasing the fiber capacity of single fiber networks. Up to eight separate data channels can be transported on a single-fiber link with iConverter Single-Fiber CWDM modules.

Single-Fiber iConverter CWDM/X modules are available in 2 and 4-Channel models, supporting a variety of wavelength combinations and port configurations. iConverter 1-Channel Single-Fiber CWDM/AD modules are CWDM Optical Add and Drop Multiplexers (OADM).

### Specifications

<b>Description</b>	Single-fiber MUX and Add/Drop Multiplexers
<b>Date Rate</b>	Up to 10Gbps
<b>DC Power Requirements</b>	0.025A @ 3.3VDC Via Chassis Backplane
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	0.85" x 4.5" x 2.8" (21.59 mm x 114.3 mm x 71.12 mm)
<b>Weight</b>	12 oz. (340.2 grams)
<b>Warranty</b>	One (1) year warranty with 24/7/365 free Technical Support

Single-fiber CWDM/X models must be used in pairs. The Tx wavelengths on one end has to match the Rx wavelengths on the other.

### Ordering

SF CWDM/X	Description Wavelength (nm) Tx/Rx
8870-0t	2-Channel CWDM MUX, UPC/LC, <1.9dB Insertion Loss 1471/1491, 1511/1531
8871-0t	2-Channel CWDM MUX, UPC/LC, <1.9dB Insertion Loss 1491/1471, 1531/1511
8872-0t	2-Channel CWDM MUX, UPC/LC, <1.9dB Insertion Loss 1551/1571, 1591/1611
8873-0t	2-Channel CWDM MUX, UPC/LC, <1.9dB Insertion Loss 1571/1551, 1611/1591
8874-0t	4-Channel CWDM MUX, UPC/LC, <2.4dB Insertion Loss 1271/1291, 1311/1331, 1351/1371, 1431/1451
8875-0t	4-Channel CWDM MUX, UPC/LC, <2.4dB Insertion Loss 1291/1271, 1331/1311, 1371/1351, 1451/1431
8876-0t	4-Channel CWDM MUX, UPC/LC, <2.4dB Insertion Loss 1471/1491, 1511/1531, 1551/1571, 1591/1611
8877-0t	4-Channel CWDM MUX, UPC/LC, <2.4dB Insertion Loss 1491/1471, 1531/1511, 1571/1551, 1611/1591
SF CWDM/AD	Description Wavelength (nm) Tx/Rx
8878-xxt	1-Channel Lower Band A/D, UPC/LC, <1.9dB Insertion Loss xx = 27 (1271/1291), 31 (1311/1331), 35 (1351/1371), 39 (1391/1411), 43 (1431/1451) Common port = 1271 to 1451
8878-xxt	1-Channel Upper Band A/D, UPC/LC, <1.9dB Insertion Loss xx = 47 (1471/1491), 51 (1511/1531), 55 (1551/1571), 59 (1591/1611) Common port = 1471 to 1611
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C)	

## iConverter® Mounting Options and Accessories

### Wall Mount Bracket

#### Description

The iConverter wall mount bracket was designed to attach one iConverter 1-Module or 2-Module chassis to a wall, backboard or other flat surface.

#### Ordering

Wall Mount Bracket	Description
8249-0	Wall Mount Kit for standalone module without integrated mounting brackets



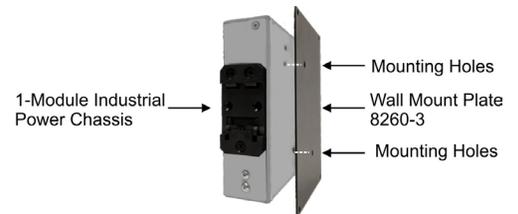
### Wall Mount Plate

#### Description

The wall mount plate is used to wall or rack mount the 1-Module Industrial Power Chassis. One wall mount plate is required per module.

#### Ordering

Wall Mount Plate	Description
8260-3	Wall Mount Plate (one is required per module)



### Rack Mount Shelf

#### Description

The 1U 19" rack mount shelf accommodates iConverter standalone media converters, iConverter 1-Module chassis, iConverter 2-Module chassis, iConverter GM4 5-Port, and GM4 PoE/HPoE Network Interface Devices.

Accommodates up to 4 standalone iConverter modules  
 Accommodates up to 3 GM4 5-Port, 1-Module or 2-Module Chassis  
 Accommodates up to 2 GM4 PoE modules



#### Specifications

Description	Rack Mount Shelf
Dimension (W x D x H)	19.0" x 7.09" x 1.72" (482.6 mm x 180.1 mm x 43.7 mm)
Warranty	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

Rack Mount Shelf	Description
8260-0	iConverter Rack-Mount Shelf

### Rack Mount Shelf for XM5 NID

#### Description

The 1U 19" rack mount shelf accommodates two iConverter XM5 Network Interface Devices (NIDs). The shelf accommodates 2 XM5 NIDs.



#### Specifications

Description	Rack Mount Shelf for XM5 NIDs
Dimension (W x D x H)	19.0" x 17.59" x 1.72" (482.6 mm x 446.8 mm x 43.7 mm)
Warranty	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

Rack Mount Shelf	Description
8261-0	iConverter 19" Rack-Mount Shelf for XM5 NID
8261-2	iConverter 23" Rack-Mount Shelf for XM5 NID

## Chassis Accessories

### Ordering

Accessories	Description
8091-2	iConverter 19-Module Chassis 23" Rack Mount Kit
8092-2	iConverter 5-Module Chassis 23" Rack Mount Kit
8096-1	iConverter Chassis 19" Cable Management Tray
8096-2	iConverter Chassis 23" Cable Management Tray
8090-0	iConverter Chassis Blank Module Panel

## DIN-Rail Mounting Clip

### Description

The DIN-Rail mounting clips accommodate any Omnitron product with wall mount brackets. The DIN Rail mounting clip attaches to the wall mount brackets on the module, allowing any wall mount module to be DIN Rail mounted.

### Ordering

DIN-Rail Clip	Description
8251-0	DIN Rail Mounting Clip Kit



## DIN-Rail Mounting Bracket

### Description

The DIN-Rail mounting bracket provides DIN Rail capabilities for iConverter standalone media converters and iConverter 1-Module chassis. This kit contains all the necessary components to provide DIN Rail mounting for several different mounting orientations.

### Ordering

DIN-Rail Bracket	Description
8250-0	DIN-Rail Mounting Bracket



## LGX Adapter for iConverter® CWDM Modules

### Description

The iConverter LGX Adapter (8099-0) provides an easy and cost-effective method to adapt passive iConverter CWDM Multiplexer modules to existing LGX chassis installations. The adapter fits over the front panel of an iConverter CWDM module and fastens to the module by tightening the thumb screw on the module. Once the adapter is mounted on the iConverter module, it can be plugged into a standard LGX chassis.



## miConverter® Unmanaged Compact/Tiny Media Converters

### miConverter® 18-Module Chassis

#### Powered Chassis

- Rack-mount 18 Module chassis for miConverter miniature media converters
- Provides high-density fiber distribution from copper switches
- Two chassis can be mounted in 3U of rack space
- Standard 19" rack-mount
- Media converters are secured in place providing reliable connection at all times



#### Description

The miConverter 18 Module Power Chassis is a cost-effective mounting and powering solution for miConverter miniature media converters. This compact chassis is ideal for consolidating multiple media converters into a high-density, rack mountable form factor. It can be deployed in Service Provider, Enterprise and Government applications where fiber optic links are distributed from UTP switch equipment. The miConverter chassis is suitable for Fiber-to-the-Desk, Campus LAN/WAN fiber networks and hybrid copper/fiber networks.

The chassis holds up to eighteen miConverter 10/100, 10/100 Plus, Gx and GX/T copper to fiber media converter modules with barrel-style DC connectors. It provides centralized power for all installed modules, and eliminates the need for individual power supplies. It is available with a single universal AC, 24VDC or 48VDC internal power supply.

The chassis is less than 1.5U high, and two chassis can be installed in 3U of rack space. It can be mounted in a standard 19" equipment rack, or it can be mounted in a 23" rack using optional 23" rack mount brackets.

#### Specifications

<b>Description</b>	18-Module Chassis for miConverter media converters
<b>AC Power Chassis Requirements</b>	100 to 240VAC 50/60Hz, 0.4A @ 120VAC IEC320 Socket
<b>DC Power Chassis Requirements</b>	+/- 18 to +/- 36VDC, 2.0A @ 24VDC 3-pin DC Terminal +/- 36 to +/- 60VDC, 1.0A @ 48VDC 3-pin DC Terminal
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	17.5" x 9.5" x 2.5" (444.5 mm x 241.3 mm x 63.5 mm)
<b>Weight</b>	7.20 lbs. (3.27 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

18-Module Chassis	Description
1020-1-t	miConverter 18-Module AC Powered Chassis
1025-1-t	miConverter 18-Module 48VDC Powered Chassis
1026-1-t	miConverter 18-Module 24VDC Powered Chassis
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
<b>W</b> = Wide temperature (-40 to 60°C)	

# miConverter® 1G Unmanaged Media Converter

## 1G Media Converters

### miConverter® GX/T

#### 10/100/1000 Copper to 100/1000 Fiber Ethernet Media Converter

- Miniature 10/100/1000BASE-T to 100/100BASE-X Ethernet media converter
- Supports user selectable link detection modes and configurable ports
- Supports 100BASE-X and 1000BASE-X SFP transceivers
- ST and SC 1000BASE-X fixed fiber ports
- Support frame sizes up to 9k bytes



#### Description

The miConverter GX/T is a miniature 10/100/1000BASE-T RJ-45 copper to 1000BASE-X fiber media converter that supports jumbo frames up to 10,240 bytes.

The Plug-and-Play capability of the miConverter GX/T simplifies fiber-to-the-laptop and fiber-to-the-desktop deployments. Both the fiber port and the RJ-45 port support auto-negotiation to achieve the best possible mode of operation (speed, duplex mode and Pause mode) between the devices. The auto-negotiation feature can be disabled on both ports (for manual configuration) using DIP-switches on the module.

The GX/T can be mounted in the miConverter 18-Module Power Chassis to consolidate individual modules into a rack-mount form factor that can be deployed where multiple fiber optic links are distributed from UTP switch equipment.

#### Specifications

<b>Description</b>	Unmanaged 10/100/100 Copper to 100/1000 Fiber Media Converter
<b>Frame Size</b>	Up to 9k bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.02A @ 120VAC
<b>DC Power Requirements</b>	+5.0 to +12.0VDC 0.35A @ 5VDC 2.5mm Barrel Connector  +5.0 to +12.0VDC 0.35A @ 5VDC 2-Pin Terminal Connector
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C, -40 to 75° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	1.71" x 4.10" x 0.84" (43.4 mm x 104.1 mm x 21.3 mm)
<b>Weight</b>	4 oz. (113.4 grams) w/ AC/DC Adapter: 12 oz. (340.2 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

When ordering Z temperature range models, power options 2,3,4,5 and 8 do not include an AC power cord.

[See 1000M Fiber Specifications for optical parameters.](#)

#### Ordering

GX/T	Description
1220-0-pt	ST 850nm MM 220/550m
1222-0-pt	SC 850nm MM 220/550m
1221-1-pt	ST 1310nm SM 12km
1223-1-pt	SC 1310nm SM 12km
1221-2-pt	ST 1310nm SM 34km
1223-2-pt	SC 1310nm SM 34km
1223-3-pt	SC 1310nm SM 80km
1223-4-pt	SC 1550nm SM 110km
1223-5-pt	SC 1550nm SM 140km
1230-0-pt	SC 13/15 MM-SF 220/550m
1231-0-pt	SC 15/13 MM-SF 220/550m
1230-1-pt	SC 13/15 SM-SF 20km
1231-1-pt	SC 15/13 SM-SF 20km
1230-2-pt	SC 13/15 SM-SF 40km
1231-2-pt	SC 15/13 SM-SF 40km
1239-0-pt	100/1000Mbps SFP
1239N-0-pt	1000Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 0 = No Power Adapter
- 1 = US AC/DC Adapter, 100 - 240 VAC included
- 2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 3 = European AC/DC Adapter, 100 - 240 VAC included
- 4 = UK AC/DC Adapter, 100 - 240 VAC included
- 5 = Australian AC/DC Adapter, 100 - 240 VAC included
- 6 = NO AC adapter. Includes USB power cable
- 8 = Japanese AC/DC Adapter, 100 - 240 VAC included
- 9 = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

W = Wide temperature (-40 to 60°C)

Z = Extended temperature (-40 to 75°C)

Y = Industrial temperature (-40 to 85° C), DC Terminal Model Only

# miConverter® 1G Unmanaged Media Converter

## miConverter® GX/T PoE/D

### 10/100/1000 Copper to 100/1000 Fiber Ethernet Media Converter with PoE/PD

- Miniature 10/1000BASE-T to 100/100BASE-X media converter powered by PoE
- Power-over-Ethernet (IEEE 802.3af PoE/PD) with redundant power options:
  - DC Power 8-60VDC (2-Pin Terminal) or
  - AC/DC power adapter (Barrel Connector)
- Supports 100BASE-X and 100BASE-X SFP transceivers
- ST, SC and LC 1000BASE-X fixed fiber ports



### Description

The miniature miConverter GX/T PoE/D is a rate-switching 10/100/1000 RJ-45 copper to 100/1000BASE-X fiber media converter that can be powered with Power over Ethernet (PoE) when connected to PoE switches and midspans. It can also be powered with DC power or AC power with an external power adapter.

The mode of operation can be configured using easily accessible DIP-switches.

The module features power redundancy with AC or DC external power options when used with PoE powering.

### Specifications

<b>Description</b>	Unmanaged 10/100/1000 Copper to 100/1000 Fiber Media Converter Powered by PoE
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.03A @ 120VAC
<b>DC Power Requirements</b>	+8.0 to +60.0VDC, 0.278A @ 9VDC 2.5mm Barrel Connector  +8.0 to +60.0VDC, 0.278A @ 9VDC 2-pin DC Terminal Connector  44 - 57VDC, 0.05A @ 48VDC PoE RJ-45 (Alt A & B)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.3af (15.40 watts max),
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	1.71" x 4.10" x 0.84" (43.4 mm x 104.1 mm x 21.3 mm) w/ Integrated Mounting Brackets 2.41" x 4.10" x 0.84" (61.2 mm x 104.1 mm x 21.3 mm)
<b>Weight</b>	4 oz. (113.4 grams) w/ AC/DC Adapter: 12 oz. (340.2 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

<b>GX/T PoE/D</b>	<b>Description</b>
1220D-0-bpt 1222D-0-bpt 1226D-0-bpt	ST 850nm MM 220/550m SC 850nm MM 220/550m LC 850nm MM 220/550m
1221D-1-bpt 1223D-1-bpt 1227D-1-bpt	ST 1310nm SM 12km SC 1310nm SM 12km LC 1310nm SM 12km
1223D-2-bpt 1223D-3-bpt 1223D-4-bpt 1223D-5-bpt	SC 1310nm SM 34km SC 1310nm SM 80km SC 1550nm SM 110km SC 1550nm SM 140km
1230D-0-bpt 1231D-0-bpt	SC 13/15 MM-SF 220/550m SC 15/13 MM-SF 220/550m
1230D-1-bpt 1231D-1-bpt 1230D-2-bpt 1231D-2-bpt	SC 13/15 SM-SF 20km SC 15/13 SM-SF 20km SC 13/15 SM-SF 40km SC 15/13 SM-SF 40km
1239D-0-bpt	100/1000Mbps SFP
MM = Multimode, SM = Single-mode, SF = Single-fiber	
<b>Mounting Brackets (b):</b> 0 = Without Integrated Mounting Brackets 1 = With Integrated Mounting Brackets	
<b>Power Options (p):</b> 0 = PoE/PD, No Power Adapter 1 = PoE/PD, US AC/DC Adapter, 100 - 240 VAC included 2 = PoE/PD, Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord 3 = PoE/PD, European AC/DC Adapter, 100 - 240 VAC included 4 = PoE/PD, UK AC/DC Adapter, 100 - 240 VAC included 5 = PoE/PD, Australian AC/DC Adapter, 100 - 240 VAC included 8 = PoE/PD, Japanese AC/DC Adapter, 100 - 240 VAC included 9 = PoE/PD, Direct DC input, 2 pin terminal connector, no AC/DC power adapter	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) W = Wide temperature (-40 to 60°C)	

See 1000M Fiber Specifications for optical parameters.

# miConverter® 1G Unmanaged Media Converter

## miConverter® GX

### 1000 Copper to 1000 Fiber Ethernet Media Converter

- Miniature 1000BASE-T to 100BASE-X Ethernet media converter
- Supports configurable RJ-45 and fiber ports
- Supports 1000BASE-X SFP transceivers
- ST, SC and LC fixed fiber ports
- Support unlimited frame sizes



### Description

The miConverter Gx is a miniature 1000BASE-T RJ-45 copper to 1000BASE-X fiber Gigabit Ethernet media converter that provides cost-effective fiber connectivity from Gigabit switches to diagnostic equipment, desktop and laptop computers.

The miConverter Gx features auto-negotiation, which allows connected network devices to auto-negotiate their Duplex and Pause modes. The miConverter Gx also provides manual configuration with built-in DIP-switches for compatibility with legacy Gigabit fiber products.

The GX can be mounted in the miConverter 18-Module Power Chassis to consolidate individual modules into a rack-mount form factor that can be deployed where multiple fiber optic links are distributed from UTP switch equipment.

### Specifications

<b>Description</b>	Unmanaged 1000 Copper to 1000 Fiber Media Converter
<b>Frame Size</b>	Unlimited frame sizes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.03A @ 120VAC
<b>DC Power Requirements</b>	+5.0 to +12.0VDC 0.5A @ 5VDC 0.3A @ 9VDC 2.5mm Barrel Connector +5.0 to +12.0VDC 0.5A @ 5VDC 0.3A @ 9VDC 2-Pin Terminal Connector +4.75 to +5.25VDC 0.5A @ 5VDC Micro-B Receptacle
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	1.71" x 4.10" x 0.84" (43.4 mm x 104.1 mm x 21.3 mm)
<b>Weight</b>	4 oz. (113.4 grams) w/ AC/DC Adapter: 12 oz. (340.2 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

Gx	Description
1200-0-pt	ST 850nm MM 220/550m
1202-0-pt	SC 850nm MM 220/550m
1206-0-pt	LC 850nm MM 220/550m
1201-1-pt	ST 1310nm SM 12km
1203-1-pt	SC 1310nm SM 12km
1207-1-pt	LC 1310nm SM 12km
1203-2-pt	SC 1310nm SM 34km
1203-3-pt	SC 1310nm SM 80km
1203-4-pt	SC 1550nm SM 110km
1203-5-pt	SC 1550nm SM 140km
1210-0-pt	SC 13/15 MM-SF 220/550m
1211-0-pt	SC 15/13 MM-SF 220/550m
1210-1-pt	SC 13/15 SM-SF 20km
1211-1-pt	SC 15/13 SM-SF 20km
1210-2-pt	SC 13/15 SM-SF 40km
1211-2-pt	SC 15/13 SM-SF 40km
1219-0-pt	1000Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 0 = No Power Adapter
- 1 = US AC/DC Adapter, 100 - 240 VAC included
- 2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 3 = European AC/DC Adapter, 100 - 240 VAC included
- 4 = UK AC/DC Adapter, 100 - 240 VAC included
- 5 = Australian AC/DC Adapter, 100 - 240 VAC included
- 6 = NO AC adapter. Includes USB power cable
- 6U = micro-B USB Power Input Connector, Type A to micro USB Cable
- 8 = Japanese AC/DC Adapter, 100 - 240 VAC included
- 9 = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

- <leave blank> = Commercial temperature (0 to 50°C)
- W = Wide temperature (-40 to 60°C)

See 1000M Fiber Specifications for optical parameters.

# miConverter® Tiny Unmanaged Media Converter

## 100M Media Converters

### miConverter® 10/100 and 10/100 Plus

#### 10/100 Copper to 100 Fiber Ethernet Media Converter

- Miniature 10/100BASE-T to 100BASE-X Ethernet media converter
- Multimode, single-mode and single-fiber options
- ST and SC fixed fiber ports
- 10/100 Plus supports user selectable link detection modes and configurable RJ-45 port



#### Description

The miniature miConverter 10/100 and miConverter 10/100 Plus are rate-switching 10/100 RJ-45 copper to 100BASE-X fiber media converters. miConverters provide cost-effective fiber connectivity from Ethernet switches to diagnostic equipment, desktop and laptop computers.

The miConverter 10/100 and miConverter 10/100 Plus can be mounted in the miConverter 18-Module Power Chassis to consolidate individual modules into a rack-mount form factor that can be deployed where multiple fiber optic links are distributed from UTP switch equipment.

#### Specifications

<b>Description</b>	Unmanaged 10/100 Copper to 100 Fiber Media Converter
<b>Frame Size</b>	Up to 1,536 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.03A @ 120VAC
<b>DC Power Requirements</b>	+5.0 to +12.0VDC 0.5A @ 5VDC, 0.3A @ 9VDC 2.5mm Barrel Connector
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	1.71" x 4.10" x 0.84" (43.4 mm x 104.1 mm x 21.3 mm)
<b>Weight</b>	4 oz. (113.4 grams) w/ AC/DC Adapter: 12 oz. (340.2 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

10/100	10/100 Plus	Description
1100-0-pt	1120-0-pt	ST 1310nm MM 5km
1102-0-pt	1122-0-pt	SC 1310nm MM 5km
1101-1-pt	1121-1-pt	ST 1310nm SM 30km
1103-1-pt	1123-1-pt	SC 1310nm SM 30km
1101-2-pt	1121-2-pt	ST 1310nm SM 60km
1103-2-pt	1123-2-pt	SC 1310nm SM 60km
1103-3-pt	1123-3-pt	SC 1550nm SM 120km
1110-0-pt	1130-0-pt	SC 13/15 MM-SF 5km
1111-0-pt	1131-0-pt	SC 15/13 MM-SF 5km
1110-1-pt	1130-1-pt	SC 13/15 SM-SF 20km
1111-1-pt	1131-1-pt	SC 15/13 SM-SF 20km
1110-2-pt	1130-2-pt	SC 13/15 SM-SF 40km
1111-2-pt	1131-2-pt	SC 15/13 SM-SF 40km
1110-3-pt	1130-3-pt	SC 13/15 SM-SF 60km
1111-3-pt	1131-3-pt	SC 15/13 SM-SF 60km

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 0 = No Power Adapter
- 1 = US AC/DC Adapter, 100 - 240 VAC included
- 2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 3 = European AC/DC Adapter, 100 - 240 VAC included
- 4 = UK AC/DC Adapter, 100 - 240 VAC included
- 5 = Australian AC/DC Adapter, 100 - 240 VAC included
- 6 = NO AC adapter. Includes USB power cable
- 8 = Japanese AC/DC Adapter, 100 - 240 VAC included

#### Operating Temperature Options (t):

- <leave blank> = Commercial temperature (0 to 50°C)
- W = Wide temperature (-40 to 60°C)

See 100M Fiber Specifications for optical parameters.

# miConverter® Tiny Unmanaged Media Converter

## miConverter® 10/100 PoE/D

### 10/100 Copper to 100 Fiber Ethernet Media Converter with PoE/PD

- Miniature 10/100BASE-T to 100BASE-X media converter powered by PoE
- Power-over-Ethernet (IEEE 802.3af PoE/PD) with redundant power options:
  - DC Power 8-60VDC (2-Pin Terminal) or
  - AC/DC power adapter (Barrel Connector)
- Supports 100BASE-X SFP transceivers
- ST, SC and LC fiber ports



### Description

The miniature miConverter 10/100 PoE/D is a rate-switching 10/100 RJ-45 copper to 100BASE-X fiber media converter that can be powered with Power over Ethernet (PoE) when connected to PoE switches and midspans. It can also be powered with DC power or AC power with an external power adapter.

The mode of operation can be configured using easily accessible DIP-switches.

The module features power redundancy with AC or DC external power options when used with PoE powering.

### Specifications

<b>Description</b>	Unmanaged 10/100 Copper to 100 Fiber Media Converter Powered by PoE
<b>Frame Size</b>	Up to 2,048 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.03A @ 120VAC
<b>DC Power Requirements</b>	+8.0 to +60.0VDC, 0.28A @ 9VDC 2.5mm Barrel Connector  +8.0 to +60.0VDC, 0.28A @ 9VDC 2-pin Terminal Connector  44 - 57VDC, 0.05A @ 48VDC PoE RJ-45 (Alt A & B)
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C, -40 to 75° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, IEEE 802.3af (15.40 watts max),
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	1.71" x 4.10" x 0.84" (43.4 mm x 104.1 mm x 21.3 mm) w/ Integrated Mounting Brackets 2.41" x 4.10" x 0.84" (61.2 mm x 104.1 mm x 21.3 mm)
<b>Weight</b>	4 oz. (113.4 grams) w/ AC/DC Adapter: 12 oz. (340.2 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

10/100 PoE/D	Description
1100D-0-bpt 1102D-0-bpt 1106D-0-bpt	ST 1310nm MM 5km SC 1310nm MM 5km LC 1310nm MM 5km
1101D-1-bpt 1103D-1-bpt 1107D-1-bpt	ST 1310nm SM 30km SC 1310nm SM 30km LC 1310nm SM 30km
1101D-2-bpt 1103D-2-bpt	ST 1310nm SM 60km SC 1310nm SM 60km
1103D-3-bpt	SC 1550nm SM 120km
1110D-0-bpt 1111D-0-bpt	SC 13/15 MM-SF 5km SC 15/13 MM-SF 5km
1110D-1-bpt 1111D-1-bpt 1110D-2-bpt 1111D-2-bpt 1110D-3-bpt 1111D-3-bpt	SC 13/15 SM-SF 20km SC 15/13 SM-SF 20km SC 13/15 SM-SF 40km SC 15/13 SM-SF 40km SC 13/15 SM-SF 60km SC 15/13 SM-SF 60km
1119D-0-bpt	100Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Mounting Brackets (b):

- 0 = Without Integrated Mounting Brackets
- 1 = With Integrated Mounting Brackets

#### Power Options (p):

- 0 = PoE/PD, No Power Adapter
- 1 = PoE/PD, US AC/DC Adapter, 100 - 240 VAC included
- 2 = PoE/PD, Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 3 = PoE/PD, European AC/DC Adapter, 100 - 240 VAC included
- 4 = PoE/PD, UK AC/DC Adapter, 100 - 240 VAC included
- 5 = PoE/PD, Australian AC/DC Adapter, 100 - 240 VAC included
- 8 = PoE/PD, Japanese AC/DC Adapter, 100 - 240 VAC included
- 9 = PoE/PD, Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

- <leave blank> = Commercial temperature (0 to 50°C)
- W = Wide temperature (-40 to 60°C)
- Z = Extended temperature (-40 to 75°C)
- Y = Industrial temperature (-40 to 85° C), DC Terminal Model Only

When ordering Z temperature range models, power options 2,3,4,5 and 8 do not include an AC power cord.

[See 100M Fiber Specifications for optical parameters.](#)

# miConverter® Tiny Unmanaged Media Converter

## 1G and 100M Tiny Media Converters

### miConverter® S-Series S/GXT and S/GXT+

#### Ultra-Compact 10/100/1000 Copper to 1000 Fiber Ethernet Media Converter

- Ultra compact Gigabit Ethernet copper to fiber media converter
- Smallest media converter available
- Supports 1000BASE-X SFP transceivers
- ST and SC fixed fiber ports
- S/GXT+ features smart Link Segment and Propagate (LSP) mode



### Description

miConverter S/GXT and S/GXT+ are Gigabit Ethernet fiber to 10/100/1000BASE-T media converters are ideal for mobile applications where light weight, compact size and low power are critical requirements. Weighing less than 2.5 oz. (72 grams), and about the length of a standard house key, the miConverter S-Series converters can conveniently slip into any pocket or laptop carrying case for easy portability.

The S-series features different fault detection and troubleshooting operations. The miConverter S/GXT port linking operates in Link Segment (LS) mode which enables quick identification of any failed segment of a network's cabling or equipment. In this mode, each of the converter's ports detects and displays link status independently of the status of the other port. As a result, a loss of link due to cable failure is seen on the port, providing immediate identification of the fault's location.

### Specifications

<b>Description</b>	Unmanaged 10/100/1000 Copper to 1000 Fiber Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.02A @ 120VAC
<b>DC Power Requirements</b>	0.5A @ 5VDC USB 1.x/2.x 0.9A @ 5VDC USB 3.x 1.0A @ 5VDC AC Power Adapter
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	1.75" x 2.25" x 0.84" (44.5 mm x 57.2 mm x 21.3 mm)
<b>Weight</b>	2.5 oz. (70.9 grams) w/ USB cable: 3.8 oz. (107.7 grams) w/ AC/DC Adapter: 12 oz. (340.2 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

DC Power Requirements depend on the SFP installed in the module. Please consult the data sheet for detailed information.

### Ordering

S/GXT	S/GXT+	Description
1620-0-pt	1660-0-pt	ST 850nm MM 220/550m
1620M-0-pt	1660M-0-pt	ST metal 850nm MM 220/550m
1622-0-pt	1666-0-pt	SC 850nm MM 220/550m
1621-1-pt	1661-1-pt	ST 1310nm SM 12km
1621M-1-pt	1661M-1-pt	ST metal 1310nm SM 12km
1623-1-pt	1667-1-pt	SC 1310nm SM 12km
1623-2-pt	1667-2-pt	SC 1310nm SM 34km
1630-1-y-pt	1670-1-y-pt	SC 13/15 SM-SF 20km
1631-1-y-pt	1671-1-y-pt	SC 15/13 SM-SF 20km
1630-2-y-pt	1670-2-y-pt	SC 13/15 SM-SF 40km
1631-2-y-pt	1671-2-y-pt	SC 15/13 SM-SF 40km
1639-0-pt	1679-0-pt	1000Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 0 = No Power Adapter
- 1 = US AC/DC Adapter, 100 - 240 VAC included
- 1T = US AC/DC Adapter, 100 - 240 VAC included, with travel case
- 3 = European AC/DC Adapter, 100 - 240 VAC included
- 4 = UK AC/DC Adapter, 100 - 240 VAC included
- 5 = Australian AC/DC Adapter, 100 - 240 VAC included
- 6 = NO AC adapter. Includes USB power cable
- 6T = NO AC adapter. Includes USB power cable, with travel case
- 8 = Japanese AC/DC Adapter, 100 - 240 VAC included
- 8T = Japanese AC/DC Adapter, 100 - 240 VAC included, with travel case

#### Operating Temperature Options (t):

- <leave blank> = Commercial temperature (0 to 50°C)
- W = Wide temperature (-40 to 60°C)
- Z = Extended temperature (-40 to 75°C) - S/GXT+ only

See [1000M Fiber Specifications for optical parameters.](#)

# miConverter® Tiny Unmanaged Media Converter

## miConverter® S-series S/FXT

### Ultra-Compact 10/100/1000 Copper to 100 Fiber Ethernet Media Converter

- Ultra compact Fast Ethernet copper to fiber media converter
- Smallest media converter available
- Supports 100BASE-X SFP transceivers
- ST and SC fixed fiber ports
- Supports frames up to 10,240 bytes



### Description

miConverter S/FXT Fast Ethernet fiber to 10/100/1000BASE-T media converters are ideal for mobile applications where light weight, compact size and low power are critical requirements. Weighing less than 2.5 oz. (72 grams), and about the length of a standard house key, the miConverter S-Series converters can conveniently slip into any pocket or laptop carrying case for easy portability.

The miConverter S-Series delivers plug-and-play set up with an RJ-45 port that auto-negotiates the speed, duplex mode and cross-over functions for laptops with 10BASE-T, 100BASE-T or 1000BASE-TX Ethernet. LEDs display status of power, network connectivity and data activity.

Easy to pack and convenient for mobile applications, the S-Series media converter is available with an optional traveling case that stores the media converter, power adapter, USB cable and other accessories.

### Specifications

<b>Description</b>	Unmanaged 10/100 Copper to 100 Fiber Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.02A @ 120VAC
<b>DC Power Requirements</b>	5.0VDC, 0.5A @ 5VDC USB micro-B
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	1.75" x 2.25" x 0.84" (44.5 mm x 57.2 mm x 21.3 mm)
<b>Weight</b>	2.5 oz. (70.9 grams) w/ USB cable: 3.8 oz. (107.7 grams) w/ AC/DC Adapter: 12 oz. (340.2 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

S/FXT	Description
1600-0-pt	ST 1310nm MM 5km
1600M-0-pt	ST metal 1310nm MM 5km
1602-0-pt	SC 1310nm MM 5km
1601-1-pt	ST 1310nm SM 30km
1601M-1-pt	ST metal 1310nm SM 30km
1603-1-pt	SC 1310nm SM 30km
1610-1-pt	SC 13/15 SM-SF 20km
1611-1-pt	SC 15/13 SM-SF 20km
1619-0-pt	100Mbps SFP model

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**

- 0 = No Power Adapter
- 1 = US AC/DC Adapter, 100 - 240 VAC included
- 1T = US AC/DC Adapter, 100 - 240 VAC included, with travel case
- 3 = European AC/DC Adapter, 100 - 240 VAC included
- 4 = UK AC/DC Adapter, 100 - 240 VAC included
- 5 = Australian AC/DC Adapter, 100 - 240 VAC included
- 6 = NO AC adapter. Includes USB power cable
- 6T = NO AC adapter. Includes USB power cable, with travel case
- 8 = Japanese AC/DC Adapter, 100 - 240 VAC included
- 8T = Japanese AC/DC Adapter, 100 - 240 VAC included, with travel case

**Operating Temperature Options (t):**

- <leave blank> = Commercial temperature (0 to 50°C)
- W = Wide temperature (-40 to 60°C)

[See 100M Fiber Specifications for optical parameters.](#)

## miConverter® Mounting Options and Accessories

### Wall Mount for miConverter®

#### Description

The Wall Mounting kit (1091-0) is installed on the side of the miConverter modules and allows the module to be attached to a wall, backboard or other flat surface.



### Wall Mount Bracket for miConverter® S-Series

#### Description

The Wall Mounting Bracket (1691-0) is installed on the top of the miConverter S-Series modules and allows the module to be attached to a wall, backboard or other flat surface.



### DIN-Rail Mounting Clip for miConverter®

#### Description

The DIN Rail mounting clips (8252-0) provides DIN Rail capabilities for miConverter modules. The DIN Rail mounting clip attaches to the side of the module.



### Ordering

Accessories	Description
1091-0	Wall Mount Kit for miConverter
1691-0	Wall Mount Bracket for miConverter S-Series
8252-0	miConverter DIN Rail Mounting Clip

### Travel Case for miConverter® S-Series

#### Description

The miConverter S-Series media converter is available with an optional traveling case that stores the media converter, power adapter, USB cable and other accessories. See ordering information for the S-Series.



# FlexPoint® Media Converter Chassis

## FlexPoint® Unmanaged Stand-Alone Media Converters

### FlexPoint® 14 Module Chassis

#### Redundant Powered Chassis

- Rack-mount 14 Module chassis for FlexPoint media converters
- Provides high-density fiber distribution from copper switches
- Dual hot-swappable power supplies ensure continuous network operation
- Standard 19" rack-mount dimensions
- Converters are individually secured and hot-swappable



#### Description

The FlexPoint Powered Chassis is a 19" rack-mount chassis that houses up to 14 standalone FlexPoint media converter modules. The redundant power supplies are essential where reliability is important, and in mission-critical applications to ensure continuous operation.

Both of the universal AC or DC power supplies are hot-swappable and can be used in any combination. In case of a failure, a power supply can be hot-replaced while the second power supply supports the operation of the chassis.

The power control logic of the Powered Chassis provides load-sharing between the power supplies, increasing reliability and operational lifetime. The control logic provides power monitoring and an LED display for each supply in order to assist in status monitoring, rapid fault-isolation and network management.

#### Specifications

<b>Description</b>	14 Module Chassis for FlexPoint media converters
<b>AC Power Chassis Requirements</b>	100 to 240VAC 50/60Hz, 1.5A @ 120VAC IEC 320 C14
<b>DC Power Chassis Requirements</b>	+/- 38 to +/- 60VDC, 3.0A @ 48VDC 3-Pin Terminal (Isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	19.0" x 9.5" x 3.5" (482.6 mm x 241.3 mm x 88.9 mm)
<b>Weight</b>	6 lbs. (2.72 kg.)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

14 Module Chassis	Description
4385-t	FlexPoint 14-Module 48VDC Dual-Power Supply Chassis
4386-t	FlexPoint 14-Module 48VDC Single-Power Supply Chassis
4395	FlexPoint 14-Module AC Dual-Power Supply Chassis
4396	FlexPoint 14-Module AC Single-Power Supply Chassis
4389-t	FlexPoint 14-Module Spare 48VDC Power Supply
4399	FlexPoint 14-Module Spare AC Power Supply

#### Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 50°C)

W = Wide temperature (-40 to 60°C) - DC Power Chassis only

# FlexPoint® 1G Unmanaged Media Converters

## 1G Media Converter

### FlexPoint® GX/T

#### 10/100/1000 Copper to 100/1000 Fiber Ethernet Media Converter

- Cost-effective, 10/100/1000BASE-T to 100/1000BASE-X Ethernet media converter
- Fiber and copper ports support auto or manual negotiation
- Supports Link Modes for remote detection of link faults
- User selectable Link Propagate for quick fault detection
- Supports 100BASE-X and 1000BASE-X SFP transceivers
- ST, SC and LC 1000BASE-X fixed fiber ports



#### Description

The FlexPoint GX/T is a 10/100/1000BASE-T copper to 1000BASE-X fiber media converter that supports jumbo frames up to 10,240 bytes. The GX/T features Small Form Pluggable (SFP) transceivers that support both 100BASE-X and 1000BASE-X for interoperability with Gigabit and Fast Ethernet fiber equipment.

A variety of testing and fault detection tools are provided for easy installation and troubleshooting. The GX/T supports Port Loop-Back, IEEE defined Far-End-Fault and Link Fault bit as Remote Fault indicators. The GX/T generates a remote fault indicator when it detects link fault conditions, and reports detection of these signals by displaying status on the LED. Through user DIP-switch configuration, the detection of these indicators or link modes can also be propagated to the other port on the GX/T as a means of notifying connected end devices of the link fault.

Diagnostic status LED indicators assist in network installation and maintenance. The LEDs report the availability of power, port activity and link status and duplex mode.

#### Specifications

<b>Description</b>	Unmanaged 10/100/1000 Copper to 100/1000 Fiber Media Converter
<b>Frame Size</b>	Up to 10,240 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.03A @ 120VAC
<b>DC Power Requirements</b>	+5.0 to +32.0VDC, 0.3A @ 9VDC 2.5mm Barrel Connector +4.75 to +5.25VDC, 0.5A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

GX/T	Description
4706-pt	ST 850nm MM 220/550m
4700-pt	SC 850nm MM 220/550m
4714-pt	LC 850nm MM 220/550m
4707-pt	ST 1310nm SM 12km
4701-pt	SC 1310nm SM 12km
4715-pt	LC 1310nm SM 12km
4702-pt	SC 1310nm SM 34km
4716-pt	LC 1310nm SM 34km
4703-pt	SC 1550nm SM 80km
4717-pt	LC 1550nm SM 80km
4704-pt	SC 1550nm SM 110km
4705-pt	SC 1550nm SM 140km
4710-pt	SC 13/15 SM-SF 20km
4711-pt	SC 15/13 SM-SF 20km
4712-pt	SC 13/15 SM-SF 40km
4713-pt	SC 15/13 SM-SF 40km
4719-pt	100/1000Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**  
**0** = No Power Adapter  
**1** = US AC/DC Adapter, 100 - 240 VAC included  
**2** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**Operating Temperature Options (t):**  
**<leave blank>** = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See 1000M Fiber Specifications for optical parameters.

# FlexPoint® 1G Unmanaged Media Converters

## FlexPoint® Gx

### 1000 Copper to 1000 Fiber Ethernet Media Converter

- Cost-effective, 1000BASE-T to 1000BASE-X Ethernet media converter
- RJ-45 copper port supports Full and Half-duplex operation
- Features a crossover switch for easy connection to hubs, switches or workstations
- Fiber port supports auto and manual negotiation
- User selectable Link Propagate for quick fault detection
- ST, SC, MT-RJ and LC fixed fiber ports



### Description

The FlexPoint Gx is a 1000BASE-T copper to 1000BASE-X fiber media converter that provides reliable and cost-effective network connectivity and fiber extension.

The FlexPoint Gx features an auto-sensing RJ-45 port that adjusts to the duplex and pause mode of the attached device. A switch provides manual control over the Half/Full-Duplex operation of RJ-45 port. The port features a crossover switch that facilitates connection to a workstation or switch.

Network flow control is supported via an auto-selected or user-selected Pause function that assists in management of network congestion.

Diagnostic data is provided through LED indicators that assist in network installation and maintenance. The LEDs report the availability of power, port activity and link status, duplex mode and error indicators.

### Specifications

<b>Description</b>	Unmanaged 1000 Copper to 1000 Fiber Media Converter
<b>Frame Size</b>	Up to 10K bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.04A @ 120VAC
<b>DC Power Requirements</b>	+6.0 to +15.0VDC, 0.4A @ 9VDC 2.5mm Barrel Connector +4.75 to +5.25VDC, 0.6A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

Gx	Description
4376-pt	ST 850nm MM 220/550m
4370-pt	SC 850nm MM 220/550m
4670-pt	MT-RJ 850nm MM 220/550m
4672-pt	LC 850nm MM 220/550m
4377-pt	ST 1310nm SM 12km
4371-pt	SC 1310nm SM 12km
4671-pt	MT-RJ 1310nm SM 12km
4673-pt	LC 1310nm SM 12km
4372-pt	SC 1310nm SM 34km
4674-pt	LC 1310nm SM 34km
4373-pt	SC 1550nm SM 80km
4675-pt	LC 1550nm SM 80km
4374-pt	SC 1550nm SM 110km
4676-pt	LC 1550nm SM 110km
4375-pt	SC 1550nm SM 140km
4677-pt	LC 1550nm SM 140km

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**  
**0** = No Power Adapter  
**1** = US AC/DC Adapter, 100 - 240 VAC included  
**2** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**Operating Temperature Options (t):**  
**<leave blank>** = Commercial temperature (0 to 50°C)  
**W** = Wide temperature (-40 to 60°C)

See 1000M Fiber Specifications for optical parameters.

# FlexPoint® 1G Unmanaged Media Converters

## FlexPoint® 1000FF

### 1000 Fiber to 1000 Fiber Media Converter

- Cost-effective, Single-mode to Multimode protocol-transparent fiber converter
- Plug-and-play installation requires no manual configuration
- Operates with a constant rate signal from 500Mbps to 1250Mbps
- Supports auto-negotiation of duplex mode
- SC fixed fiber ports



### Description

The FlexPoint 1000FF is a protocol-transparent fiber converter that provides reliable and cost-effective extension of network distances by connecting multimode fiber networks or devices over single-mode fiber cabling.

No manual configuration is required with the plug-and-play FlexPoint 1000FF. Connect the fiber cables to the appropriate interface and the installation is complete.

The FlexPoint 1000FF is designed to operate with a constant rate signal between 500Mbps to 1250Mbps allowing the converter to be used in Ethernet networks as well as other fiber-to-fiber protocol applications.

### Specifications

<b>Description</b>	Unmanaged 1000 Fiber to Fiber Media Converter
<b>Frame Size</b>	Unlimited frame sizes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.04A @ 120VAC
<b>DC Power Requirements</b>	+6.0 to +15.0VDC, 0.2A @ 9VDC 2.5mm Barrel Connector +4.75 to +5.25VDC, 0.5A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, Protocol Transparent
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

1000FF	Description
4432-p	Port 1: SC 850nm MM 220/550m Port 2: SC 850nm MM 220/550m
4433-p	Port 1: SC 850nm MM 220/550m Port 2: SC 1310nm SM 12km
4440-p	Port 1: SC 850nm MM 220/550m Port 2: SC 1310nm SM 34km
4437-p	Port 1: SC 850nm MM 220/550m Port 2: SC 1550nm SM 80km
4434-p	Port 1: SC 1310nm SM 12km Port 2: SC 1310nm SM 12km
4441-p	Port 1: SC 1310nm SM 12km Port 2: SC 1310nm SM 34km

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**  
**0** = No Power Adapter  
**1** = US AC/DC Adapter, 100 - 240 VAC included  
**2** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**Operating Temperature:**  
**<leave blank>** = Commercial temperature (0 to 50°C)

See [1000M Fiber Specifications for optical parameters.](#)

# FlexPoint® OC-12 Unmanaged Media Converters

## FlexPoint® OC12FF

### OC-12 Fiber to OC-12 Fiber Media Converter

- Cost-effective, Single-mode to Multimode protocol-transparent fiber converter
- Plug-and-play installation requires no manual configuration
- Supports auto-negotiation of duplex mode
- SC fixed fiber ports



### Description

The FlexPoint OC12FF is a protocol-transparent fiber converter that provides reliable and cost-effective extension of network distances by connecting multimode fiber networks or devices over single-mode fiber cabling.

No manual configuration is required with the plug-and-play FlexPoint OC12FF. Connect the fiber cables to the appropriate interface and the installation is complete.

### Specifications

<b>Description</b>	Unmanaged OC-12 Fiber to Fiber Media Converter
<b>Frame Size</b>	Unlimited frame sizes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.04A @ 120VAC
<b>DC Power Requirements</b>	+6.0 to +15.0VDC, 0.2A @ 9VDC 2.5mm Barrel Connector +4.75 to +5.25VDC, 0.5A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	SONET OC-12, SDH STM-4
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

OC12FF	Description
4461-x	Port 1: SC 1310nm MM 550m Port 2: SC 1310nm SM 12km
4463-x	Port 1: SC 1310nm MM 550m Port 2: SC 1310nm SM 34km
4469-x	Port 1: SC 1310nm MM 550m Port 2: SC 1550nm SM 80km
MM = Multimode, SM = Single-mode, SF = Single-fiber	
<b>Power Options (p):</b> 0 = No Power Adapter 1 = US AC/DC Adapter, 100 - 240 VAC included 2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>Operating Temperature:</b> <leave blank> = Commercial temperature (0 to 50°C)	

See OC-12 Fiber Specification for optical parameters.

# FlexPoint® 100M Unmanaged Media Converters

## 100M Media Converters

### FlexPoint® 100Fx/Tx

#### 100 Copper to 100 Fiber Ethernet Media Converter

- Cost-effective, 100BASE-TX to 100BASE-X Ethernet media converter
- Supports auto-negotiation of duplex modes
- Features a crossover switch for easy connection to hubs, switches or workstations
- ST, SC, MT-RJ and LC fixed fiber ports



#### Description

The FlexPoint 100Fx/Tx is a 100BASE-TX copper to 100BASE-X fiber media converter that provides reliable and cost-effective network connectivity and fiber extension.

The FlexPoint 100Fx/Tx RJ-45 port auto-negotiates to the highest level of performance supported by the attached device. Manual switch settings and LED indicators with on-the-label descriptions enable easy configuration to legacy devices or matching specific network requirements.

Diagnostic data is provided through LED indicators that assist in network installation and maintenance. The LEDs report the availability of power, port activity and link status, duplex mode and error indicators.

#### Specifications

<b>Description</b>	Unmanaged 100 Copper to 100 Fiber Media Converter
<b>Frame Size</b>	Unlimited frame sizes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.03A @ 120VAC
<b>DC Power Requirements</b>	+6.0 to +15.0VDC, 0.3A @ 9VDC 2.5mm Barrel Connector +4.75 to +5.25VDC, 0.5A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

100Fx/Tx	Description
4332-pt	ST 1310nm MM 5km
4330-pt	SC 1310nm MM 5km
4336-pt	MT-RJ 1310nm MM 5km
4353-1pt	LC 1310nm MM 5km
4333-pt	ST 1310nm SM 30km
4331-pt	SC 1310nm SM 30km
4353-2pt	LC 1310nm SM 30km
4335-pt	ST 1310nm SM 60km
4334-pt	SC 1310nm SM 60km
4353-3pt	LC 1310nm SM 60km
4351-x	SC 1550nm SM 120km
4353-4x	LC 1550nm SM 120km
4352-1x	SC 13/15 SM-SF 20km
4352-2x	SC 15/13 SM-SF 20km
MM = Multimode, SM = Single-mode, SF = Single-fiber	
<b>Power Options (p):</b>	
0 = No Power Adapter	
1 = US AC/DC Adapter, 100 - 240 VAC included	
2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	

See [100M Fiber Specifications](#) for optical parameters.

# FlexPoint® 100M Unmanaged Media Converters

## FlexPoint® 10/100

### 10/100 Copper to 100 Fiber Ethernet Media Converter

- Cost-effective, 10/100BASE-T to 100BASE-X Ethernet media converter
- RJ-45 copper port supports auto or manual negotiation
- Features a crossover switch for easy connection to hubs, switches or workstations
- Supports 100BASE-X SFP transceivers
- ST, SC and LC fixed fiber ports



### Description

The FlexPoint 10/100 is a modular 10BASE-T or 100BASE-TX copper to 100BASE-X fiber media converter that provides reliable and cost-effective network connectivity and fiber extension.

The FlexPoint 10/100 features a 10/100 auto-sensing RJ-45 port that adjusts to the highest level of performance supported by the attached device. An override switch provides manual control over the 10/100 operation of the RJ-45 port and the Half/Full-Duplex operation of both the fiber and RJ-45 ports.

When configured for auto-negotiation, the RJ-45 port automatically detects and sets MDI/MDI-X crossover. When configured for manual operation, the FlexPoint 10/100 features a manual switch to provide the MDI/MDI-X crossover.

Diagnostic data is provided through LED indicators that assist in network installation and maintenance. The LEDs report the availability of power, port activity and link status, duplex mode and error indicators.

### Specifications

<b>Description</b>	Unmanaged 10/100 Copper to 100 Fiber Media Converter
<b>Frame Size</b>	Up to 1536 bytes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.06A @ 120VAC
<b>DC Power Requirements</b>	+5.0 to +32.0VDC, 0.5A @ 9VDC 2.5mm Barrel Connector +5.0 to +32.0VDC, 0.5A @ 9VDC 2 Pin DC Terminal Connector (non-isolated) +4.75 to +5.25VDC, 0.8A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C, -40 to 60° C and -40 to 75° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

10/100	Description
4342-pt	ST 1310nm MM 5km
4340-pt	SC 1310nm MM 5km
4355-1pt	LC 1310nm MM 5km
4343-pt	ST 1310nm SM 30km
4341-pt	SC 1310nm SM 30km
4355-2pt	LC 1310nm SM 30km
4345-pt	ST 1310nm SM 60km
4344-pt	SC 1310nm SM 60km
4355-3pt	LC 1310nm SM 60km
4349-pt	SC 1550nm SM 120km
4355-4pt	LC 1550nm SM 120km
4357-1pt	SC 13/15 SM-SF 20km
4357-2pt	SC 15/13 SM-SF 20km
4359-0pt	100Mbps SFP

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

- 0 = No Power Adapter
- 1 = US AC/DC Adapter, 100 - 240 VAC included
- 2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 9 = 2 pin DC terminal connector (non-isolated)

#### Operating Temperature Options (t):

- <leave blank> = Commercial temperature (0 to 50°C)
- W = Wide temperature (-40 to 60°C)
- Z = Extended temperature (-40 to 75°C)

[See 100M Fiber Specifications for optical parameters.](#)

# FlexPoint® 100M Unmanaged Media Converters

## FlexPoint® 100FF

### 100 Fiber to 100 Fiber Media Converter

- Cost-effective, Single-mode to Multimode protocol-transparent fiber converter
- Plug-and-play installation requires no manual configuration
- Operates with a constant rate signal from 1Mbps to 100Mbps
- Supports auto-negotiation of duplex mode
- ST and SC fixed fiber ports



### Description

The FlexPoint 100FF is a protocol-transparent fiber converter that provides reliable and cost-effective extension of network distances by connecting multimode fiber networks or devices over single-mode fiber cabling.

No manual configuration is required with the plug-and-play FlexPoint 100FF. Connect the fiber cables to the appropriate interface and the installation is complete.

The FlexPoint 100FF is designed to operate with a constant rate signal between 1Mbps to 100Mbps allowing the converter to be used in Ethernet networks as well as other fiber-to-fiber protocol applications.

### Specifications

<b>Description</b>	Unmanaged 100 Fiber to Fiber Media Converter
<b>Frame Size</b>	Unlimited frame sizes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.04A @ 120VAC
<b>DC Power Requirements</b>	+6.0 to +15.0VDC, 0.2A @ 9VDC 2.5mm Barrel Connector +4.75 to +5.25VDC, 0.5A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, Protocol Transparent
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

100FF	Description
4420-p	Port 1: ST 1310nm MM 5km Port 2: ST 1310nm MM 5km
4421-p	Port 1: SC 1310nm MM 5km Port 2: SC 1310nm MM 5km
4414-6p	Port 1: ST 850nm MM 2km Port 2: ST 1310nm SM 30km
4415-6p	Port 1: SC 850nm MM 2km Port 2: SC 1310nm SM 30km
4410-p	Port 1: ST 1310nm MM 5km Port 2: ST 1310nm SM 30km
4411-p	Port 1: SC 1310nm MM 5km Port 2: SC 1310nm SM 30km
4412-p	Port 1: ST 1310nm MM 5km Port 2: ST 1310nm SM 60km
4413-p	Port 1: SC 1310nm MM 5km Port 2: SC 1310nm SM 60km
4425-p	Port 1: SC 1310nm MM 5km Port 2: SC 1550nm SM 120km
4423-p	Port 1: SC 1310nm SM 60km Port 2: SC 1550nm SM 120km

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

0 = No Power Adapter

1 = US AC/DC Adapter, 100 - 240 VAC included

2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

#### Operating Temperature:

<leave blank> = Commercial temperature (0 to 50°C)

See 100M Fiber Specifications for optical parameters.

# FlexPoint® OC-3 Unmanaged Media Converters

## FlexPoint® OC3FF

### OC-3 Fiber to OC-3 Fiber Media Converter

- Cost-effective, Single-mode to Multimode protocol-transparent fiber converter
- Plug-and-play installation requires no manual configuration
- Operates with a constant rate signal from 1Mbps to 155Mbps
- Supports auto-negotiation of duplex mode
- ST and SC fixed fiber ports



### Description

The FlexPoint OC3FF is a protocol-transparent fiber converter that provides reliable and cost-effective extension of network distances by connecting multimode fiber networks or devices over single-mode fiber cabling.

No manual configuration is required with the plug-and-play FlexPoint OC3FF. Connect the fiber cables to the appropriate interface and the installation is complete.

The FlexPoint OC3FF is designed to operate with a constant rate signal between 1Mbps to 155Mbps allowing the converter to be used in ATM networks as well as other fiber-to-fiber protocol applications.

### Specifications

<b>Description</b>	Unmanaged OC-3 Fiber to Fiber Media Converter
<b>Frame Size</b>	Unlimited frame sizes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.04A @ 120VAC
<b>DC Power Requirements</b>	+6.0 to +15.0VDC, 0.2A @ 9VDC 2.5mm Barrel Connector +4.75 to +5.25VDC, 0.5A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	SONET OC-3, SDH STM-1, Protocol Transparent
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

OC3FF	Description
4454-6p	Port 1: ST 850nm MM 2km Port 2: ST 1310nm SM 30km
4455-6p	Port 1: SC 850nm MM 2km Port 2: SC 1310nm SM 30km
4456-6p	Port 1: ST 850nm MM 2km Port 2: ST 1310nm SM 60km
4457-6p	Port 1: SC 850nm MM 2km Port 2: SC 1310nm SM 60km
4450-p	Port 1: ST 1310nm MM 5km Port 2: ST 1310nm SM 30km
4451-p	Port 1: SC 1310nm MM 5km Port 2: SC 1310nm SM 30km
4452-p	Port 1: ST 1310nm MM 5km Port 2: ST 1310nm SM 60km
4453-p	Port 1: SC 1310nm MM 5km Port 2: SC 1310nm SM 60km
4458-p	Port 1: SC 1310nm MM 5km Port 2: SC 1550nm SM 120km
4459-p	Port 1: SC 1310nm SM 30km Port 2: SC 1550nm SM 120km
4650-p	Port 1: SC 1310nm MM 5km Port 2: SC 13/15 SM-SF 20km
4651-p	Port 1: SC 1310nm MM 5km Port 2: SC 15/13 SM-SF 20km

MM = Multimode, SM = Single-mode, SF = Single-fiber

#### Power Options (p):

0 = No Power Adapter

1 = US AC/DC Adapter, 100 - 240 VAC included

2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

#### Operating Temperature:

<leave blank> = Commercial temperature (0 to 50°C)

See OC-3 Fiber Specifications for optical parameters.

# FlexPoint® 10M Unmanaged Media Converters

## 10M Media Converters

### FlexPoint® 10FL/T

#### 10 Copper to 10 Fiber Ethernet Media Converter

- Cost-effective, 10BASE-T to 10BASE-FL Ethernet media converter
- RJ-45 copper port support Full or Half Duplex
- Features a crossover switch for easy connection to hubs, switches or workstations
- Supports Link Propagate for remote detection of link faults
- ST and SC fixed fiber ports



#### Description

The FlexPoint 10FL/T is a 10BASE-T copper to 10BASE-FL fiber media converter that provides reliable and cost-effective network connectivity and fiber extension.

The FlexPoint 10FL/T supports Link Propagate, which is a fault detection tool that provides a local indication of a remote link loss by disabling the port and propagating the loss of link from one port to the other.

The FlexPoint 10FL/T features descriptions of the LED indicators on the label for easy in-the-field installation and maintenance. The LEDs report the availability of power, port activity and link status, speed and duplex modes.

#### Specifications

<b>Description</b>	Unmanaged 10 Copper to 10 Fiber Media Converter
<b>Frame Size</b>	Unlimited frame sizes
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.02A @ 120VAC
<b>DC Power Requirements</b>	+8.0 to +15.0VDC, 0.2A @ 9VDC 2.5mm Barrel Connector 4.75 to 5.25VDC, 0.5A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

10FL/T	Description
4300-p	ST 850nm MM 2km
4303-p	SC 850nm MM 2km
4302-p	ST 1310nm MM 5km
4301-p	ST 1310nm SM 30km
4304-p	ST 1310nm SM 60km
4306-p	SC 1550nm SM 85km
4307-p	SC 1550nm SM 120km

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**  
0 = No Power Adapter  
1 = US AC/DC Adapter, 100 - 240 VAC included  
2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**Operating Temperature:**  
<leave blank> = Commercial temperature (0 to 50°C)

[See 10M Fiber Specifications for optical parameters.](#)

# FlexPoint® 10M Unmanaged Media Converters

## FlexPoint® 10T/2

### 10 Copper to 10 Coax Ethernet Media Converter

- Cost-effective, 10BASE-T copper to 10BASE-2 coax Ethernet media converter
- Seamlessly connects 10BASE-2 devices to 10BASE-T hubs or workstations
- Supports 50 ohm coax
- Features switch selectable coax line termination
- Features copper crossover switch and automatic polarity detection, correction and indication



### Description

The FlexPoint 10T/2 is a Half-Duplex 10BASE-T copper to 10BASE-2 coax media converter that facilitates the connection of a coax segment to a 10BASE-T hub or workstation.

The FlexPoint 10T/2 features a BNC connector supporting 50 ohm cabling with distances up to 185m. Per IEEE 802.3 standard, up to 30 workstations can be attached to the coax segment. A termination switch provides a convenient 50 ohm cable termination.

Descriptions of the LED indicators are provided on the label for easy in-the-field installation and maintenance. The LEDs report the availability of power, port activity and link status, polarity reversal detection and correction, collision and jabbers.

### Specifications

<b>Description</b>	Unmanaged 10 Copper to 10 Coax Media Converter
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.09A @ 120VAC
<b>DC Power Requirements</b>	+8.0 to +15.0VDC, 0.42A @ 9VDC 2.5mm Barrel Connector +4.75 to +5.25VDC, 0.8A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

10T/2	Description
4320-pt	100m (Copper) and 185m (Coax)
<b>Power Options (p):</b>	
0 = No Power Adapter	
1 = US AC/DC Adapter, 100 - 240 VAC included	
2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	

# FlexPoint® 10M Unmanaged Media Converters

## FlexPoint® 10AUI/T

### AUI to 10 Copper Ethernet Transceiver

- Cost-effective, IEEE 802.3 AUI to 10BASE-T copper transceiver
- Half-duplex operation
- Connects to any AUI host, powered or non-powered
- Multiple power options
- Switch selectable SQE function



### Description

The FlexPoint 10AUI/T is a 10BASE-T to Attachment Unit Interface (AUI) converter. The transceiver provides the physical medium conversion between units equipped with the AUI and the unshielded twisted pair (UTP) connectors.

The FlexPoint 10AUI/T Transceiver operates in Half-Duplex. It supports switch-enabled SQE function, also known as heartbeat. This signal tests the collision detection electronics of the transceiver, and informs the Ethernet interface that the collision detection circuits and signal paths are working correctly

Descriptions of the LED indicators are provided on the label for easy in-the-field configuration, installation and maintenance.

The LEDs report the availability of power, port activity and link status, collision and jabbers. The Collision/Jabber LED provides error indications. Collisions are the result of multiple hosts trying to use an Ethernet segment at the same time while jabbers are frames that exceed the maximum frame size.

### Specifications

<b>Description</b>	Unmanaged AUI to 10 Copper Transceiver
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.01A @ 120VAC
<b>DC Power Requirements</b>	+8.0 to +15.0VDC, 0.1A @ 9VDC 2.5mm Barrel Connector +4.75 to +5.25VDC, 0.2A @ 5VDC Molex Connector +8.0 to +15VDC, 0.07A @ 12VDC AUI Connector
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

10AUI/T	Description
4321-pt	100m (Copper) and 50m (AUI)
<b>Power Options (p):</b>	
0 = No Power Adapter	
1 = US AC/DC Adapter, 100 - 240 VAC included	
2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	

# FlexPoint® Communication Media Converters

## Communication Media Converters

### FlexPoint® T1/E1

#### T1/E1 Copper to Fiber Media Converter

- Cost-effective, T1/E1 copper to fiber media converter
- Supports ANSI, AT&T, ITU and ETSI standards
- Supports T1, E1 and Primary Rate Interface voice or data
- Supports AMI, B8ZS and HDB3 line codes
- Features a crossover switch for easy connections to PBXs or CSUs
- ST and SC fixed fiber ports



#### Description

The FlexPoint T1/E1 media converter provides standard T1 (1.544Mbps) or E1 (2.048Mbps) copper to fiber conversion and can be used to extend the demarcation point between service provider and networking equipment. T1/E1 media converters operate in pairs, providing distance extension over fiber.

Designed as a transparent repeater, the FlexPoint T1/E1 supports standard T1, E1 and Primary Rate Interface (PRI), voice or data. The converter also supports AMI, B8ZS and HDB3 line codes. DIP-switches provide easy configuration of T1/E1 line codes and line build-out.

A crossover switch makes it simple to connect the FlexPoint T1/E1 converter to PBXs or CSUs and eliminates the need for a crossover cable.

Diagnostic features include local loopback, remote loopback and all 1's insertion (AIS) modes for the copper or fiber segments. Local loopback validates connectivity to local T1/E1 lines, while remote loopback validates the entire fiber segment from one unit without having to make adjustments on both ends. Dry contact relay option allows a separate T1/E1 alarm circuit to be notified when a loss of power is detected.

#### Specifications

Description	Unmanaged T1/E1 Copper to Fiber Media Converter
<b>Date Rate</b>	1.544Mbps (T1 and ISDN PRI) 2.048Mbps (E1)
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.05A @ 120VAC
<b>DC Power Requirements</b>	+6.0 to +15.0VDC, 0.5A @ 9VDC 2.5mm Barrel Connector +4.75 to +5.25VDC, 0.6A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	ANSI, AT&T, ITU AND ETSI
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

T1/E1	Description
4472-p	ST 1310nm MM 5km
4470-p	SC 1310nm MM 5km
4473-p	ST 1310nm SM 30km
4471-p	SC 1310nm SM 30km
4474-p	SC 1310nm SM 60km
MM = Multimode, SM = Single-mode, SF = Single-fiber	
<b>Power Options (p):</b>	
0 = No Power Adapter	
1 = US AC/DC Adapter, 100 - 240 VAC included	
2 = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord	
<b>Operating Temperature:</b>	
<leave blank> = Commercial temperature (0 to 50°C)	

See [100M Fiber Specifications](#) for optical parameters.

# FlexPoint® Communication Media Converters

## FlexPoint® RS232

### Serial RS-232 to Fiber Media Converter

- Cost-effective, asynchronous serial RS-232 to fiber media converter
- Supports speeds up to 115,200 baud
- Features a DTE/DCE switch for easy connection to most serial equipment
- Supports hardware flow control via RTS, CTS, DCD, DTR and DSR
- Feature remote loopback capability for remote fiber testing
- ST, SC and LC fixed fiber ports



### Description

The FlexPoint 232 is a RS-232 to fiber media converter that provides reliable and cost-effective fiber extension for serial connections.

The asynchronous RS-232 interface supports speeds up to 115,200 baud and supports RTS, CTS, DCD, DTR, and DSR hardware flow control signals providing plug and play connectivity with most serial devices. It features a switch for convenient connection to DTE or DCE equipment.

The FlexPoint 232 features descriptions of the LED indicators on the label for easy in-the-field installation and maintenance. The LEDs report the availability of power, DTE/DCE selection, fiber loopback status, port activity and link status.

The FlexPoint 232 features remote loopback capability by testing the fiber link end-to-end from one physical location.

### Specifications

<b>Description</b>	Unmanaged Serial RS-232 to Fiber Media Converter
<b>Data Rate</b>	Up to 115,200 baud (asynchronous)
<b>AC Power Requirements</b>	100 to 240VAC 50/60Hz, 0.05A @ 120VAC
<b>DC Power Requirements</b>	+6.0 to +15.0VDC, 0.5A @ 9VDC 2.5mm Barrel Connector +4.75 to +5.25VDC, 0.6A @ 5VDC Molex Connector
<b>Environment</b>	Operating: 0 to 50° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	EIA / TIA 232C/D/E
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.0" x 4.0" x 1.0" (76.2 mm x 101.6 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

RS232	Description
4481-p	ST 850nm MM 2.5km
4480-p	SC 850nm MM 2.5km
4483-p	ST 1310nm MM 5km
4482-p	SC 1310nm MM 5km
4489-1p	LC 1310nm MM 5km
4485-p	ST 1310nm SM 30km
4484-p	SC 1310nm SM 30km
4489-2p	LC 1310nm SM 30km
4486-p	SC 1310nm SM 60km
4482-2p	SC 13/15 MM-SF 5km
4482-3p	SC 15/13 MM-SF 5km

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Power Options (p):**  
**0** = No Power Adapter  
**1** = US AC/DC Adapter, 100 - 240 VAC included  
**2** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord

**Operating Temperature:**  
 <leave blank> = Commercial temperature (0 to 50°C)

See [100M Fiber Specifications](#) for optical parameters.

# FlexPoint® Accessories

## FlexPoint® Mounting Options and Accessories

### FlexPoint™ 5-Module Shelf

#### Description

The rack-mounting shelf holds up to five standalone FlexPoint media converter modules. Each converter is individually powered in order to provide a low-cost solution in a compact installation space.



#### Specifications

<b>Description</b>	5-Module Shelf
<b>Dimension (W x D x H)</b>	19.0" x 5.0" x 1.75" (482.6 mm x 127 mm x 44.5 mm)
<b>Weight</b>	2 lbs. (0.91 kg.)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

5-Module Shelf	Description
4392	FlexPoint 5-Module Rack-Mount Shelf

### FlexPoint® DC Adapter

#### Description

The FlexPoint DC Converter allows any FlexPoint media converter to be powered from an 18 to 60VDC power source. Not for use in the FlexPoint 5-Module Rack-Mount Shelf



#### Specifications

<b>Description</b>	DC Adapter
<b>DC Power Requirements</b>	+/-18 to +/-60VDC, 0.3A @ 48VDC 3 Pin Terminal Connector (Isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 65° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class A <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	3.1" x 4.3" x 1.0" (78.7 mm x 109.2 mm x 25.4 mm)
<b>Weight</b>	6 oz. (170.1 grams)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

#### Ordering

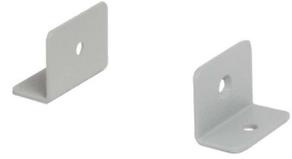
DC Adapter	Description
4384-t	FlexPoint 18-60VDC Power Adapter
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
W = Wide temperature (-40 to 60°C)	

# FlexPoint® Accessories

## Wall Mount for FlexPoint® DC Adapter

### Description

The Wall-Mounting kit is installed on the side of the FlexPoint DC Adapter module (4381) and allows the module to be attached to a wall, backboard or other flat surface.



## Wall Mount for FlexPoint®

### Description

The FlexPoint Wall-Mounting kit (4380) is installed on the side of the module and allow the module to be attached to a wall, backboard or other flat surface.



## DIN-Rail Mounting Bracket for FlexPoint®

### Description

The DIN Rail Mounting Bracket (8250-0) provides DIN Rail capabilities for FlexPoint media converters. This kit contains all the necessary components to provide DIN Rail mounting for several different mounting orientations.

### Ordering

Accessories	Description
4380	FlexPoint Wall Mounting Hardware Kit
4381	FlexPoint Wall Mounting Hardware Kit for FlexPoint DC Adapter
8250-0	DIN Rail Mounting Bracket



# FlexSwitch™ 10G Unmanaged Switch

## FlexSwitch™ 2X4GT

### 6 Port Ethernet Switch with Two 10G Ports and Four 10/100/1000 Ports

- Unmanaged 6 Port Ethernet Switch with 1G/10G fiber uplink port
- One 10/100/1000 or 10G copper port
- 4 10/100/1000 copper ports
- Supports standard/CWDM/DWDM SFP/SFP+ transceivers
- Supports standard/CWDM/DWDM XFP transceivers
- Supports MAC learning
- Supports 10,056 byte jumbo frames



### Description

The FlexSwitch 2X4GT is a six-port Ethernet switch with four 10/100/1000 RJ-45 ports, one 10G SFP+ or XFP fiber port, and one RJ-45 port that auto-negotiates to Gigabit or 10G (1000BASE-T/10GBASE-T). FlexSwitch 2X4GT models that support 10G SFP+ transceivers also support Gigabit transceivers for a seamless upgrade path from a Gigabit to a 10G fiber link. This compact, unmanaged switch features rate-switching and MAC learning for bridging Gigabit and 10 Gigabit Ethernet networks.

The 10G fiber port is compatible with all MSA compliant Gigabit SFP, 10G SFP+ and XFP transceivers (depending on the model), including xWDM optics, 10GBASE-LRM, and direct attach cables.

The Gigabit/10G RJ-45 port is capable of 10G rates up to 100 meters of CAT-6A (or better) cabling, and conserves energy by operating in Short Reach mode when the cabling is less than 30 meters. The four 10/100/1000 RJ-45 ports support bridging, auto negotiation for data-rate and duplex mode, and auto MDI/MDI-X that eliminates the need for crossover cables.

### Specifications

<b>Description</b>	Unmanaged 6 Port Ethernet Switch with 1/10G Fiber Uplink
<b>Frame Size</b>	Up to 10,056 bytes
<b>AC Power Requirements</b>	100 to 240VAC, 50/60Hz, 0.228A @ 120VAC 2.5mm Barrel Connector
<b>DC Power Requirements</b>	+9 to +16VDC, 2.64A max 2-Pin Terminal (non-isolated)
<b>Environment</b>	Operating: 0 to 50° C and -40 to 60° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	IEEE 802.3, 802.3an, 802.3az
<b>Compliances</b>	<b>Safety:</b> UL, cUL, CE Mark, UKCA <b>EMI:</b> FCC Class B (using shielded twisted pair cables) <b>ACT:</b> TAA, BAA, NDAA <b>Environmental:</b> REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	4.5" x 6.0" x 2.0" (114 mm x 152 mm x 51 mm)
<b>Weight</b>	1.5 lbs (0.68 kg)
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

2X4GT	Description
6900-0-0pt	1G/10G SFP+ and 10/100/1000 RJ-45 ports
6900-0-1pt	1G/10G SFP+, 1 10G RJ-45 ports and 4 10/100/1000 RJ-45 ports
6900-1-0pt	10G XFP and 10/100/1000 RJ-45 ports
6900-1-1pt	10G XFP, 1 10G RJ-45 ports and 4 10/100/1000 RJ-45 ports

#### Power Options (p):

- 1** = US AC/DC Adapter, 100 - 240 VAC included
- 2** = Universal AC/DC Adapter, 100 - 240 VAC included, No Power Cord
- 8** = Direct DC input, 2 pin terminal connector, no AC/DC power adapter

#### Operating Temperature Options (t):

- <leave blank>** = Commercial temperature (0 to 50°C)
- W** = Wide temperature (-40 to 60°C)

# OmniLight® LGX DWDM Overview

## OmniLight® LGX DWDM Overview

### OmniLight® DWDM Product Family

The demand for more bandwidth is forcing network operators, service providers and enterprises to increase the capacity of fiber networks, without significant upgrades to existing equipment investment. The OmniLight family of passive optical products modules and chassis support the highest port density available in the LGX form factor, and provides a versatile and cost-effective solution to leverage existing fiber infrastructure.

The OmniLight family of products consists of standard LGX chassis and passive LGX DWDM optical modules that provide a scalable and high-density solution for distributing wavelength services from Central Offices, Headends and Data Centers.

OmniLight DWDM modules expand fiber capacity with up to 24 channels, and up to 10G per channel. They support legacy 1310, 1550 pass band ports, and OTDR port for fiber troubleshooting and testing. The passive optical modules support dual fiber duplex and/or single-fiber simplex (BIDI) with an optional cascade port for future capacity expansion, and unidirectional/bidirectional monitoring ports for diagnostics and testing.

The innovative LGX chassis design can house up to 14 full-size LGX modules or up to 28 half-size LGX modules. The OmniLight rack mount shelf can house up to 3 full-size LGX modules or 6 half-size LGX modules, and is an ideal solution for street cabinet installations. The chassis and rack mount shelf can house any combination of DWDM modules, and can be deployed in intra and inter data center connectivity, fiber to the curb and fiber to the building applications.

OmniLight customers can preserve their investment in existing iConverter CWDM equipment by seamlessly migrating to the industry standard LGX form factor using the iConverter LGX adapter.

The versatility and flexibility of the OmniLight passive optical modules and chassis makes an ideal solution for telecom and cable operators to deliver passive Broadband Ethernet, Mobile Backhaul and Fronthaul, X-PON, FTTx, Multiple Dwelling Unit (MDU) and Multiple-Tenant Unit (MTU) services.

# OmniLight® LGX Shelf

## OmniLight® 3 Module Shelf

### LGX CWDM and DWDM Passive Optical Modules

- Supports full-size and half-size OmniLight LGX modules
- Supports and third-party LGX form factor module
- 1RU rack space
- 19" or 23" rack mount



### Description

The OmniLight Rack-Mount Shelf support any combination of full-size and half-size OmniLight LGX modules, or any third-party CWDM, DWDM or EPON LGX form factor modules. Both the shelf can be installed in 19" or 23" racks.

The 1RU OmniLight 3-Module Rack-Mount Shelf is the first in the industry to support three standard LGX modules or six half-width LGX modules, and can be deployed at curb-side cabinets for remote terminal deployments.

### Specifications

<b>Description</b>	3 Module Shelf
<b>Capacity</b>	3 LGX modules or 6 Half-Size LGX modules
<b>Dimension (W x D x H)</b>	17.5" x 8.13" x 1.75" (444.5mm x 206.5mm x 44.45mm)
<b>Weight</b>	3.38 lbs (1.54 kg) without modules
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

Shelf	Description
5800-5	OmniLight 3 Module 1-RU Passive Shelf

# OmniLight® LGX Chassis

## OmniLight® 14 Module Chassis

### LGX CWDM and DWDM Passive Optical Modules

- Supports full-size and half-size OmniLight LGX modules
- Supports and third-party LGX form factor module
- 3RU rack space
- 19" or 23" rack mount



### Description

The OmniLight 14 Module Chassis support any combination of full-size and half-size OmniLight LGX modules, or any third-party CWDM, DWDM or EPON LGX form factor modules. Both the chassis can be installed in 19" or 23" racks.

The 3RU OmniLight Chassis can support 14 standard LGX modules or 28 half-size LGX modules, and provides a high-density solution for distributing wavelength services from Central Offices, head ends and data centers.

### Specifications

<b>Description</b>	14 Module Shelf
<b>Capacity</b>	14 LGX modules or 28 Half-Size LGX modules
<b>Dimension (W x D x H)</b>	17.5" x 11.0" x 5.2 (444.5mm x 279.4mm x 132.1mm)
<b>Weight</b>	7 lbs (3.18 kg) without modules
<b>Warranty</b>	Lifetime warranty with 24/7/365 free Technical Support

### Ordering

<b>Shelf</b>	<b>Description</b>
5800-1	OmniLight 14 Module 3-RU Passive Chassis

# OmniLight® LGX DWDM Modules

## OmniLight® DWDM Multiplexer/Demultiplexer with Tap and Expansion Ports 8 Channel DWDM Multiplexer with Optional OTDR Port

- 8 Channel DWDM MUX/DEMUX with Tap and Expansion Ports
- Optional OTDR port available
- Scalable for new deployments and network upgrade using the expansion port
- Protocol and rate transparent for applications up to 10Gbps
- LC/UPC connectors
- Can be installed in any OmniLight chassis



### Description

OmniLight 8-Channel LGX Dual Fiber DWDM MUX/DEMUX modules support DWDM channels 28 through 35, 36 through 43 and 52 through 59 in 100GHz spacing. An expansion port is available to cascade multiple DWDM MUX/DEMUX modules, doubling the capacity of the common fiber link to 16 channels or tripling the capacity to 24 channels. Tap ports are available to monitor the optical levels of the incoming and outgoing common channels. An optional Optical Time Domain Reflectometer (OTDR) port is available which provides the ability to test the integrity of the fiber optic link without disturbing the wavelength channels.

### Specifications

<b>Description</b>	8-Channel Dual Fiber DWDM MUX/DEMUX
<b>Date Rate</b>	Up to 10Gbps
<b>Environment</b>	Operating: 0 to 50° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Compliances</b>	
<b>Safety:</b>	UL, cUL, CE Mark, UKCA
<b>Environmental:</b>	REACH, RoHS, WEEE
<b>Dimension (W x D x H)</b>	1.162" x 6.12" x 5.10" (29.51 mm x 155.45 mm x 129.5 mm)
<b>Weight</b>	1.0 lbs. (453.6 grams)
<b>Warranty</b>	One (1) year warranty with 24/7/365 free Technical Support
See Data sheet for detailed specifications.	

### Ordering

8-Ch DWDM	Description
5520-101	8-Channel DWDM MUX/DEMUX Ch 28 - Ch 35 with Expansion Port and Tap Ports
5520-102	8-Channel DWDM MUX/DEMUX Ch 28 - Ch 35 with Expansion Port, Tap Ports and OTDR
5520-103	8-Channel DWDM MUX/DEMUX Ch 36 - Ch 43 with Expansion Port and Tap Ports
5520-104	8-Channel DWDM MUX/DEMUX Ch 36 - Ch 43 with Expansion Port, Tap Ports and OTDR
5520-105	8-Channel DWDM MUX/DEMUX Ch 52 - Ch 59 with Expansion Port and Tap Ports
5520-106	8-Channel DWDM MUX/DEMUX Ch 52 - Ch 59 with Expansion Port, Tap Ports and OTDR

#### Channels and wavelengths:

C28 = 1554.94nm, C29 = 1554.13nm, C30 = 1553.33nm, C31 = 1552.52nm,  
C32 = 1551.72nm, C33 = 1550.92nm, C34 = 1550.12nm, C35 = 1549.32nm,  
C36 = 1548.51nm, C37 = 1547.72nm, C38 = 1546.92nm, C39 = 1546.12nm,  
C40 = 1545.32nm, C41 = 1544.53nm, C42 = 1543.73nm, C43 = 1542.94nm  
C52 = 1535.82nm, C53 = 1535.04nm, C54 = 1534.25nm, C55 = 1533.47nm,  
C56 = 1532.68nm, C57 = 1534.90nm, C58 = 1531.12nm, C59 = 1530.33nm

## OmniLight® Mounting Options and Accessories

### LGX Adapter for iConverter® CWDM Modules

#### Description

The iConverter LGX Adapter (8099-0) provides an easy and cost-effective method to adapt passive iConverter CWDM Multiplexer modules to existing LGX chassis installations. The adapter fits over the front panel of an iConverter CWDM module and fastens to the module by tightening the thumb screw on the module. Once the adapter is mounted on the iConverter module, it can be plugged into a standard LGX chassis.



### DIN-Rail Mounting Bracket

#### Description

The DIN Rail Mounting Bracket (8250-0) provides DIN Rail capabilities for iConverter 1-Module Passive chassis. This kit contains all the necessary components to provide DIN Rail mounting for several different mounting orientations.



### Wall Mount

#### Description

The iConverter Wall-Mounting kit (8249-0) was designed to attach one iConverter 1-Module Passive Chassis to a wall, backboard or other flat surface.



### OmniLight® Chassis and Shelf 23" Rack Mount Bracket

The 23" Rack Mount Bracket (5800-20) allows the OmniLight Chassis or Shelf to be mounted in a 23" rack.

#### Ordering

Accessories	Description
8099-0	iConverter LGX Adapter
8249-0	Wall Mounting Kit
8250-0	DIN Rail Mounting Bracket
5800-20	23" Rack Mounting Bracket

# Optical Transceivers Overview

## Optical Transceiver Overview

### SFP Transceivers

Small Form Pluggable (SFP) and 10 Gigabit SFP+ and XFP Optical Transceivers are interchangeable, compact media connectors. Omnitron SFP, SFP+ and XFP transceivers enable connectivity to a wide variety of fiber optic cables and wavelengths, including single-fiber, single-mode and multimode.

Optical Transceivers are used to customize iConverter®, FlexPoint®, OmniConverter®, RuggedNet®, miConverter® and third party equipment to meet specific networking protocols and media requirements. They support multimode dual fiber, single-mode dual fiber, single-mode single-fiber, Coarse Wave Division Multiplexing and Unshielded Twisted Pair copper cabling.

Based on the MSA SFF-8472 standard, Omnitron SFPs provide enhanced digital diagnostic information not available on most SFPs. SNMP management software, such as NetOutlook®, can collect real-time diagnostic information including fiber optic power, voltage and temperature of the SFP transceiver.

Omnitron SFP, SFP+ and XFP transceivers enable connectivity to a wide variety of fiber optic cables and wavelengths, including single-fiber, single-mode and multimode.

- For use with all Omnitron products and third party equipment that supports SFPs
- LC Connectors
- Compliant with MSA SFF-8472 and INF-8077i standard, which provides interoperability with other network devices
- Compliant with IEEE 802.3u Fast Ethernet, 802.3z Gigabit Ethernet and 802.3ae 10Gbps Ethernet specifications
- Supports operational data rates for SONET OC-3/12/48, SDH STM-1/4/16, and Fibre Channel x1/x2
- Industrial (-40 to 85°C) temperature range available
- Low EMI metal enclosure

# 10G XFP Transceivers

## 10G Ethernet XFP Transceivers

### 10G Ethernet, SONET OC-192, STM-64 and Fibre Channel x10

- Omnitron XFP Optical Transceivers enable flexible fiber connectivity
- Compatible with iConverter® 10G media converter modules and Network Interface Devices that support SFP+ transceivers
- Compatible with OmniConverter® and RuggedNet® switches that support SFP transceivers
- Supports 10G Ethernet, SONET OC-192, SDH STM-64 and Fibre Channel x10
- LC ports



### Description

Omnitron Small Form Pluggable XFP Optical Transceivers are interchangeable, compact media connectors. They enable a single network device to connect to a wide variety of fiber cable types and distances. XFP Optical Transceivers are used to customize iConverter® products to meet specific networking protocols and media requirements. They support multimode dual fiber, single-mode dual fiber and single-mode single-fiber.

### Specifications

<b>Description</b>	10G Ethernet, SONET OC-192, SDH STM-64, Fibre Channel x10 XFP Transceivers
<b>Environment</b>	Operating: 0 to 50° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	MSA SFF-8472, INF-8077i
<b>Warranty</b>	One year warranty with 24/7/365 free Technical Support

### Ordering

XFP	Description
7426-0t	850nm, MM, 0.3km, Tx min -7.3, Tx max -1, Rx min -11.1, Rx max -1
7427-1t	1310nm, SM, 10km, Tx min -5.2, Tx max 0.5, Rx min -12.6, Rx max 0.5
7427-2t	1550nm, SM, 40km, Tx min -1, Tx max 2, Rx min -15, Rx max -1
7427-3t	1550nm, SM, 80km, Tx min 0, Tx max 4, Rx min -23, Rx max -7
7430-0t	1270/1330nm SM-SF, 10km, Tx min -5, Tx max 0, Rx min -14, Rx max 0.5
7431-0t	1330/1270nm SM-SF, 10km, Tx min -5, Tx max 0, Rx min -14, Rx max 0.5
7430-1t	1270/1330nm SM-SF, 20km, Tx min -2, Tx max 2, Rx min -16, Rx max 0.5
7431-1t	1330/1270nm SM-SF, 20km, Tx min -2, Tx max 2, Rx min -16, Rx max 0.5
7430-2t	1270/1330nm SM-SF, 40km, Tx min 1, Tx max 5, Rx min -16, Rx max 0.5
7431-2t	1330/1270nm SM-SF, 40km, Tx min 1, Tx max 5, Rx min -16, Rx max 0.5
MM = Multimode, SM = Single-mode, SF = Single-fiber	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
Z = Wide temperature (-40 to 85°C)	

# 10G SFP+ Transceivers

## 10G Ethernet SFP+ Transceivers

### 10G Ethernet

- Omnitron SFP+ Optical Transceivers enable flexible fiber connectivity
- Compatible with iConverter® 10G media converter modules and Network Interface Devices that support SFP+ transceivers
- Compatible with OmniConverter® and RuggedNet® switches that support SFP+ transceivers
- Compliant with IEEE 802.3ae 10Gbps Ethernet specifications
- LC ports



### Description

Omnitron Small Form Pluggable SFP+ Optical Transceivers are interchangeable, compact media connectors. They enable a single network device to connect to a wide variety of fiber and copper cable types and distances. SFP+ Optical Transceivers are used to customize iConverter, OmniConverter and RuggedNet products to meet specific networking protocols and media requirements. They support multimode dual fiber, single-mode dual fiber and single-mode single-fiber.

### Specifications

<b>Description</b>	10G Ethernet SFP+ Transceivers
<b>Environment</b>	Operating: 0 to 50° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	MSA SFF-8472, INF-8077i
<b>Warranty</b>	One year warranty with 24/7/365 free Technical Support

### Ordering

SFP+	Description
7406-0t	850nm, MM, 0.3km, Tx min -7.3, Tx max -1, Rx min -11.1, Rx max -1
7406-6t	1310nm, MM, 0.22km, Tx min -4.5, Tx max 0.5, Rx min -6.5, Rx max 0.5
7407-1t	1310nm, SM, 10km, Tx min -5.2, Tx max 0.5, Rx min -12.6, Rx max 0.5
7407-2t	1550nm, SM, 40km, Tx min -1, Tx max 2, Rx min -15, Rx max -1
7407-3t	1550nm, SM, 80km, Tx min 0, Tx max 5, Rx min -23, Rx max -8
7410-0t	12710/1330nm SM-SF, 10km, Tx min -5, Tx max 0, Rx min -14, Rx max 0.5
7411-0t	1330/1270nm SM-SF, 10km, Tx min -5, Tx max 0, Rx min -14, Rx max 0.5
7410-1t	1270/1330nm SM-SF, 20km, Tx min -2, Tx max 2, Rx min -16, Rx max 0.5
7411-1t	1330/1270nm SM-SF, 20km, Tx min -2, Tx max 2, Rx min -16, Rx max 0.5
7410-2t	1270/1330nm SM-SF, 40km, Tx min 1, Tx max 5, Rx min -16, Rx max 0.5
7411-2t	1330/1270nm SM-SF, 40km, Tx min 1, Tx max 5, Rx min -16, Rx max 0.5
MM = Multimode, SM = Single-mode, SF = Single-fiber	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
Z = Wide temperature (-40 to 85°C)	

# 10G CWDM XFP Transceivers

## 10G Ethernet CWDM XFP Transceivers

### 10G Ethernet, SONET OC-192, STM-64 and Fibre Channel x10

- Omnitron XFP Optical Transceivers enable flexible fiber connectivity
- Compatible with iConverter® 10G media converter modules and Network Interface Devices that support XFP transceivers
- Supports standard wavelengths in the spectrum defined by ITU-T G.694.2
- Supports 10G Ethernet, SONET OC-192, SDH STM-64 and Fibre Channel x10
- LC ports



### Description

Omnitron Small Form Pluggable 10 Gigabit XFP optical transceivers are interchangeable compact fiber connectors that enable a single network device to connect to a wide variety of fiber optic cable types and distances.

Omnitron CWDM Optical Transceivers are used to customize iConverter products to meet specific networking protocols and media requirements. They support single-mode dual fiber applications with Coarse Wave Division Multiplexing (CWDM) wavelengths.

### Specifications

<b>Description</b>	10G Ethernet, SONET OC-192, SDH STM-64, Fibre Channel x10 CWDM XFP Transceivers
<b>Environment</b>	Operating: 0 to 50° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	MSA SFF-8472, INF-8077i
<b>Warranty</b>	One year warranty with 24/7/365 free Technical Support

### Ordering

XFP	Description
75xx-1t	1271nm - 1451nm, SM, 10km, Link budget 11 Tx min -3, Tx max 1, Rx min -14, Rx max 0.5
75yy-1t	1471nm - 1611nm, SM, 10km, Link budget 11 Tx min -3, Tx max 1, Rx min -14, Rx max 0.5
75xx-2t	1271nm - 1331nm, SM, 40km, Link budget 16 Tx min 1, Tx max 5, Rx min -15, Rx max 0
75yy-2t	1471nm - 1611nm, SM, 40km, Link budget 15 Tx min -1, Tx max 4, Rx min -16, Rx max -1
75yy-2LHt	1471nm - 1611nm, SM, 70km, Link budget 23 Tx min 0, Tx max 4, Rx min -23, Rx max -7
SM = Single-mode	
<b>Wavelength Options (xx):</b> 27 = 1271nm, 29 = 1291nm, 31 = 1311nm, 33 = 1331nm, 35 = 1351nm, 37 = 1371nm, 39 = 1391nm, 41 = 1411nm, 43 = 1431nm, 45 = 1451nm	
<b>Wavelength Options (yy):</b> 47 = 1471nm, 49 = 1491nm, 51 = 1511nm, 53 = 1531nm, 55 = 1551nm, 57 = 1571nm, 59 = 1591nm, 61 = 1611nm	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) Z = Wide temperature (-40 to 85°C)	

# 10G CWDM SFP+ Transceivers

## 10G Ethernet CWDM SFP+ Transceivers

### 10G Ethernet

- Omnitron SFP+ Optical Transceivers enable flexible fiber connectivity
- Compatible with iConverter® 10G media converter modules and Network Interface Devices that support SFP+ transceivers
- Compatible with OmniConverter® and RuggedNet® switches that support SFP+ transceivers
- Compliant with IEEE 802.3ae 10Gbps Ethernet specifications
- LC ports



### Description

Omnitron Small Form Pluggable 10 Gigabit SFP+ optical transceivers are interchangeable compact fiber connectors that enable a single network device to connect to a wide variety of fiber optic cable types and distances.

Omnitron CWDM Optical Transceivers are used to customize iConverter, OmniConverter and RuggedNet products to meet specific networking protocols and media requirements. They support single-mode dual fiber applications with Coarse Wave Division Multiplexing (CWDM) wavelengths.

### Specifications

<b>Description</b>	10G Ethernet CWDM SFP+ Transceivers
<b>Environment</b>	Operating: 0 to 50° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	MSA SFF-8472, INF-8077i
<b>Warranty</b>	One year warranty with 24/7/365 free Technical Support

### Ordering

SFP+	Description
73xxE-1t	1271nm - 1451nm, SM, 10km, Link budget 8.4 Tx min -6, Tx max -0.5, Rx min -14.4, Rx max 0.5
73yyE-1t	1471nm - 1611nm, SM, 10km, Link budget 8.4 Tx min -6, Tx max -0.5, Rx min -14.4, Rx max 0.5
73xxE-2t	1271nm - 1331nm, SM, 40km, Link budget 16 Tx min 1, Tx max 5, Rx min -15, Rx max 0
73yyE-2t	1471nm - 1611nm, SM, 40km, Link budget 15 Tx min -1, Tx max 3, Rx min -16, Rx max -1
SM = Single-mode	
<b>Wavelength Options (xx):</b> 27 = 1271nm, 29 = 1291nm, 31 = 1311nm, 33 = 1331nm, 35 = 1351nm, 37 = 1371nm, 39 = 1391nm, 41 = 1411nm, 43 = 1431nm, 45 = 1451nm	
<b>Wavelength Options (yy):</b> 47 = 1471nm, 49 = 1491nm, 51 = 1511nm, 53 = 1531nm, 55 = 1551nm, 57 = 1571nm, 59 = 1591nm, 61 = 1611nm	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) Z = Wide temperature (-40 to 85°C)	

# 10G DWDM SFP+ and XFP Transceivers

## 10G Ethernet DWDM SFP+ and XFP Transceivers

### 10G Ethernet

- Omnitron SFP+ and XFP Optical Transceivers enable flexible fiber connectivity
- Supports Dense Wave Division Multiplexing (DWDM) optics
- Supports standard channels in the spectrum defined by ITU Grid C-Band, 100GHz - spacing
- Supports 10G Ethernet
- LC ports



### Description

Omnitron Small Form Pluggable 10 Gigabit XFP optical transceivers are interchangeable compact fiber connectors that enable a single network device to connect to a wide variety of fiber optic cable types and distances.

Omnitron DWDM Optical Transceivers are used to customize iConverter products to meet specific networking protocols and media requirements. They support single-mode dual fiber applications with Dense Wave Division Multiplexing (DWDM) wavelengths.

DWDM Optical Transceivers support wavelengths between 1525–1565 nm (C band) with 100GHz spacing.

### Specifications

<b>Description</b>	10G Ethernet DWDM SFP+ and XFP Transceivers
<b>Environment</b>	Operating: 0 to 50° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	MSA SFF-8472, INF-8077i
<b>Warranty</b>	One year warranty with 24/7/365 free Technical Support

### Ordering

DWDM	Description
76xxE-2t	SFP+, 100GHz Spacing, SM, 40km, Link budget 15 Tx min -1, Tx max 4, Rx min -16, Rx max 0.5
76xxE-3t	SFP+, 100GHz Spacing, SM, 80km, Link budget 23 Tx min -1, Tx max 3, Rx min -24, Rx max -7
77xx-2t	XFP, 100GHz Spacing, SM, 40km, Link budget 15 Tx min -1, Tx max 4, Rx min -16, Rx max 0.5
77xx-3t	XFP, 100GHz Spacing, SM, 80km, Link budget 24 Tx min 0, Tx max 5, Rx min -24, Rx max -7
SM = Single-mode	
<b>Channel and Wavelength Options (xx):</b>	
<b>18</b> = 1563.05nm, <b>19</b> = 1562.23nm, <b>20</b> = 1561.42nm, <b>21</b> = 1560.61nm, <b>22</b> = 1559.79nm, <b>23</b> = 1558.98nm, <b>24</b> = 1558.17nm, <b>25</b> = 1557.36nm, <b>26</b> = 1556.55nm, <b>27</b> = 1555.75nm, <b>28</b> = 1554.94nm, <b>29</b> = 1554.13nm, <b>30</b> = 1553.33nm, <b>31</b> = 1552.52nm, <b>32</b> = 1551.72nm, <b>33</b> = 1550.92nm, <b>34</b> = 1550.12nm, <b>35</b> = 1549.32nm, <b>36</b> = 1548.51nm, <b>37</b> = 1547.72nm, <b>38</b> = 1546.92nm, <b>39</b> = 1546.12nm, <b>40</b> = 1545.32nm, <b>41</b> = 1544.53nm, <b>42</b> = 1543.73nm, <b>43</b> = 1542.94nm, <b>44</b> = 1542.14nm, <b>45</b> = 1541.35nm, <b>46</b> = 1540.56nm, <b>47</b> = 1539.77nm, <b>48</b> = 1538.98nm, <b>49</b> = 1538.19nm, <b>50</b> = 1537.40nm, <b>51</b> = 1536.61nm, <b>52</b> = 1535.82nm, <b>53</b> = 1535.04nm, <b>54</b> = 1534.25nm, <b>55</b> = 1533.47nm, <b>56</b> = 1532.68nm, <b>57</b> = 1531.90nm, <b>58</b> = 1531.12nm, <b>59</b> = 1530.33nm, <b>60</b> = 1529.55nm, <b>61</b> = 1528.77nm	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
<b>Z</b> = Wide temperature (-40 to 85°C)	

# 2.5G SFP Transceivers

## 2.5G Ethernet SFP Transceivers

### Fibre Channel x2, SONET OC-48 and STM-16

- Omnitron SFP Optical Transceivers enable flexible fiber and copper connectivity
- Compatible with iConverter® xFF transponder modules
- Supports Digital Diagnostic capability
- LC ports



### Description

Omnitron Small Form Pluggable (SFP) Optical Transceivers are interchangeable, compact media connectors. They enable a single network device to connect to a wide variety of fiber and copper cable types and distances. SFP Optical Transceivers are used to customize iConverter and most 3rd party products to meet specific networking protocols and media requirements. They support multimode dual fiber and single-mode dual fiber.

### Specifications

<b>Description</b>	Fibre Channel x2, SONET OC-48 and STM-16 SFP Transceivers
<b>Environment</b>	Operating: 0 to 50° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	MSA SFF-8472, INF-8077i
<b>Warranty</b>	One year warranty with 24/7/365 free Technical Support

### Ordering

SFP	Description
7226-0t	850nm, MM, 300m, Tx min -9, Tx max -3, Rx min -17, Rx max 0
7227-1t	1310nm, SM, 15km, Tx min -10, Tx max -3, Rx min -18, Rx max -3
7227-2t	1310nm, SM, 40km, Tx min -2, Tx max 3, Rx min -27, Rx max -9
7227-3t	1550nm, SM, 80km, Tx min -2, Tx max 4, Rx min -20, Rx max 0

MM = Multimode, SM = Single-mode

**Operating Temperature Options (t):**  
<leave blank> = Commercial temperature (0 to 50°C)  
Z = Wide temperature (-40 to 85°C)

# 1G SFP Transceivers

## Gigabit Ethernet SFP Transceivers

### Gigabit Ethernet, Fibre Channel x1, SONET OC-12 and SDH STM-4

- Omnitron SFP Optical Transceivers enable flexible fiber and copper connectivity
- Compatible with iConverter® media converter modules, T1/E1 Multiplexers and Network Interface Devices that support SFP transceivers
- Compatible with FlexPoint™, OmniConverter®, RuggedNet® and miConverter™ media converter modules that support SFP transceivers
- Compliant with IEEE 802.3z Gigabit Ethernet specifications
- LC ports



### Description

Omnitron Small Form Pluggable (SFP) Optical Transceivers are interchangeable, compact media connectors. They enable a single network device to connect to a wide variety of fiber and copper cable types and distances. SFP Optical Transceivers are used to customize iConverter, FlexPoint, OmniConverter, RuggedNet, miConverter and most 3rd party products to meet specific networking protocols and media requirements. They support multimode dual fiber, single-mode dual fiber, single-mode single-fiber, Coarse Wave Division Multiplexing and Unshielded Twisted Pair copper cabling.

### Specifications

<b>Description</b>	Gigabit Ethernet, Fibre Channel, SONET OC-12 and SDH STM-4 SFP Transceivers
<b>Environment</b>	Operating: 0 to 50° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	MSA SFF-8472, INF-8077i
<b>Warranty</b>	One year warranty with 24/7/365 free Technical Support

### Ordering

SFP	Description
7206-0t	850nm, MM, 220/550m, Tx min -9.5, Tx max -4, Rx min -17, Rx max -3
7206-6t	1310nm, MM, 2km, Tx min -9.5, Tx max -3, Rx min -19.5, Rx max -3
7207-1t	1310nm, SM, 12km, Tx min -9.5, Tx max -3, Rx min -21, Rx max -3
7207-2t	1310nm, SM, 34km, Tx min -5, Tx max 0, Rx min -24, Rx max -3
7207-3t	1550nm, SM, 80km, Tx min -4, Tx max 1, Rx min -24, Rx max -3
7207-4t	1550nm, SM, 110km, Tx min 0, Tx max 5, Rx min -24, Rx max -3
7207-5t	1550nm, SM, 140km, Tx min 2, Tx max 5, Rx min -30, Rx max -8
7207-6t	1550nm, SM, 160km, Tx min 1, Tx max 5, Rx min -33, Rx max -8
7214-0t	13/15 MM-SF, 220/550m, Tx min -9, Tx max -3, Rx min -18, Rx max -3
7215-0t	15/13 MM-SF, 220/550m, Tx min -9, Tx max -3, Rx min -18, Rx max -3
7214-1t	13/15 SM-SF, 20km, Tx min -9, Tx max -3, Rx min -21, Rx max -3
7215-1t	15/13 SM-SF, 20km, Tx min -9, Tx max -3, Rx min -21, Rx max -3
7214-2t	13/15 SM-SF, 40km, Tx min -3, Tx max 2, Rx min -23, Rx max -3
7215-2t	15/13 SM-SF, 40km, Tx min -3, Tx max 2, Rx min -23, Rx max -3
7214-3t	13/15 SM-SF, 60km, Tx min 0, Tx max 5, Rx min -24, Rx max -1
7215-3t	15/13 SM-SF, 60km, Tx min -2, Tx max 4, Rx min -25, Rx max -1
7216-1t	1310/1490 SM-SF, 20km, Tx min -9, Tx max -3, Rx min -21, Rx max -3
7217-1t	1490/1310 SM-SF, 20km, Tx min -9, Tx max -3, Rx min -21, Rx max -3
7216-2t	1310/1490 SM-SF, 40km, Tx min -3, Tx max 0, Rx min -20, Rx max -3
7217-2t	1490/1310 SM-SF, 40km, Tx min -3, Tx max 0, Rx min -20, Rx max -3
7218-3t	1510/1570 SM-SF, 80km, Tx min -4, Tx max 1, Rx min -26, Rx max 0
7219-3t	1570/1510 SM-SF, 80km, Tx min -4, Tx max 1, Rx min -26, Rx max 0
7299-RJt	1000Mbps RJ-45
7299-RJ-Glt	10/100/1000Mbps RJ-45

MM = Multimode, SM = Single-mode, SF = Single-fiber

**Operating Temperature Options (t):**  
 <leave blank> = Commercial temperature (0 to 50°C)  
 Z = Wide temperature (-40 to 85°C)

# 1G CWDM SFP Transceivers

## Gigabit Ethernet CWDM SFP Transceivers

### Gigabit Ethernet, SONET OC-12 and SDH STM-4

- Omnitron optical CWDM transceivers enable flexible fiber and copper connectivity between existing equipment and CWDM Multiplexers
- Compatible with iConverter® media converter modules, T1/E1 Multiplexers and Network Interface Devices that support SFP transceivers
- Compatible with FlexPoint™, OmniConverter®, RuggedNet® and miConverter™ media converter modules that support SFP transceivers
- Compliant with IEEE 802.3z Gigabit Ethernet specifications
- Supports standard wavelengths in the spectrum defined by ITU-T G.694.2



### Description

Omnitron Small Form Pluggable (SFP) optical CWDM transceivers are interchangeable compact fiber connectors that enable connectivity between existing network equipment and CWDM passive devices.

Omnitron optical CWDM transceivers can be used with iConverter, FlexPoint, OmniConverter, RuggedNet and miConverter products that support SFP transceivers. CWDM transceivers support single-mode dual fiber applications with Coarse Wave Division Multiplexing (CWDM) wavelengths.

### Specifications

<b>Description</b>	Gigabit Ethernet, SONET OC-12 and SDH STM-4 SFP Transceivers
<b>Environment</b>	Operating: 0 to 50° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	MSA SFF-8472, INF-8077i
<b>Warranty</b>	One year warranty with 24/7/365 free Technical Support

### Ordering

SFP	Description
73xx-1t	1271nm - 1451nm, SM, 40km, Link budget 19 Tx min -5, Tx max 0, Rx min -24, Rx max -3
73yy-1t	1471nm - 1611nm, SM, 40km, Link budget 19 Tx min -5, Tx max -0, Rx min -24, Rx max -3
73yy-4t	1471nm - 1611nm, SM, 80km, Link budget 24 Tx min 0, Tx max 5, Rx min -24, Rx max -3
73yy-5t	1471nm - 1611nm, SM, 120km, Link budget 32 Tx min 0, Tx max 5, Rx min -32, Rx max -9
73yy-6t	1471nm - 1611nm, SM, 150km, Link budget 37 Tx min 2, Tx max 7, Rx min -35, Rx max -9
SM = Single-mode	
<b>Wavelength Options (xx):</b> 27 = 1271nm, 29 = 1291nm, 31 = 1311nm, 33 = 1331nm, 35 = 1351nm, 37 = 1371nm, 39 = 1391nm, 41 = 1411nm, 43 = 1431nm, 45 = 1451nm	
<b>Wavelength Options (yy):</b> 47 = 1471nm, 49 = 1491nm, 51 = 1511nm, 53 = 1531nm, 55 = 1551nm, 57 = 1571nm, 59 = 1591nm, 61 = 1611nm	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) Z = Wide temperature (-40 to 85°C)	

# 100M SFP Transceivers

## Fast Ethernet SFP Transceivers

### Fast Ethernet, SONET OC-3 and SDH STM-1

- Omnitron SFP Optical Transceivers enable flexible fiber and copper connectivity
- Compatible with iConverter® media converter modules, T1/E1 Multiplexers and Network Interface Devices that support SFP transceivers
- Compatible with FlexPoint™, OmniConverter®, RuggedNet® and miConverter™ media converter modules that support SFP transceivers
- Compliant with IEEE 802.3u Fast Ethernet specifications
- LC ports



### Description

Omnitron Small Form Pluggable (SFP) Optical Transceivers are interchangeable, compact media connectors. They enable a single network device to connect to a wide variety of fiber and copper cable types and distances. SFP Optical Transceivers are used to customize iConverter, FlexPoint, OmniConverter, RuggedNet, miConverter and most 3rd party products to meet specific networking protocols and media requirements. They support multimode dual fiber, single-mode dual fiber, single-mode single-fiber, Coarse Wave Division Multiplexing.

### Specifications

<b>Description</b>	Fast Ethernet, SONET OC-3 and SDH STM-1 SFP Transceivers
<b>Environment</b>	Operating: 0 to 50° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	MSA SFF-8472, INF-8077i
<b>Warranty</b>	One year warranty with 24/7/365 free Technical Support

### Ordering

SFP	Description
7006-0t	1310nm, MM, 5km, Tx min -20, Tx max -14, Rx min -31, Rx max -14
7007-1t	1310nm, SM, 30km, Tx min -15, Tx max -8, Rx min -32, Rx max -8
7007-2t	1310nm, SM, 60km, Tx min -5, Tx max 0, Rx min -35, Rx max -3
7007-3t	1550nm, SM, 120km, Tx min -5, Tx max 0, Rx min -35, Rx max -3
7014-0t	13/15 MM-SF, 5km, Tx min -15, Tx max 0, Rx min -28, Rx max -3
7015-0t	15/13 MM-SF, 5km, Tx min -15, Tx max 0, Rx min -28, Rx max -3
7014-1t	13/15 SM-SF, 30km, Tx min -14, Tx max -8, Rx min -32, Rx max -3
7015-1t	15/13 SM-SF, 30km, Tx min -14, Tx max -8, Rx min -32, Rx max -3
7014-2t	13/15 SM-SF, 50km, Tx min -8, Tx max 0, Rx min -34, Rx max -3
7015-2t	15/13 SM-SF, 50km, Tx min -8, Tx max 0, Rx min -34, Rx max -3
7014-3t	13/15 SM-SF, 80km, Tx min 0, Tx max 5, Rx min -34, Rx max -3
7015-3t	15/13 SM-SF, 80km, Tx min 0, Tx max 5, Rx min -34, Rx max -3
MM = Multimode, SM = Single-mode, SF = Single-fiber	
<b>Operating Temperature Options (t):</b>	
<leave blank> = Commercial temperature (0 to 50°C)	
Z = Wide temperature (-40 to 85°C)	

# 100M CWDM SFP Transceivers

## Fast Ethernet CWDM SFP Transceivers

### Fast Ethernet, SONET OC-3 and SDH STM-1

- Omnitron optical CWDM transceivers enable flexible fiber connectivity between existing equipment and CWDM Multiplexers
- Compatible with iConverter® media converter modules, T1/E1 Multiplexers and Network Interface Devices that support SFP transceivers
- Compatible with FlexPoint™, OmniConverter®, RuggedNet® and miConverter™ media converter modules that support SFP transceivers
- Compliant with IEEE 802.3u Fast Ethernet specifications
- Supports standard wavelengths in the spectrum defined by ITU-T G.694.2



### Description

Omnitron Small Form Pluggable (SFP) optical CWDM transceivers are interchangeable compact fiber connectors that enable connectivity between existing network equipment and CWDM passive devices.

Omnitron optical CWDM transceivers can be used with iConverter, FlexPoint, OmniConverter, RuggedNet and miConverter products that support SFP transceivers. CWDM transceivers support single-mode dual fiber applications with Coarse Wave Division Multiplexing (CWDM) wavelengths.

### Specifications

<b>Description</b>	Fast Ethernet, SONET OC-3 and SDH STM-1 SFP Transceivers
<b>Environment</b>	Operating: 0 to 50° C and -40 to 85° C Humidity: 5% to 95% (non-condensing) Altitude: -100m to 4,000m
<b>Standards</b>	MSA SFF-8472, INF-8077I
<b>Warranty</b>	One year warranty with 24/7/365 free Technical Support

### Ordering

SFP	Description
71xx-1t	1271nm - 1451nm, SM, 60km, Link budget 29 Tx min -5, Tx max 0, Rx min -34, Rx max -3
71xx-2t	1271nm - 1451nm, SM, 80km, Link budget 33 Tx min -3, Tx max 2, Rx min -36, Rx max -3
71xx-3t	1271nm - 1451nm, SM, 100km, Link budget 36 Tx min 0, Tx max 5, Rx min -36, Rx max -3
71yy-4t	1471nm - 1611nm, SM, 120km, Link budget 29 Tx min -5, Tx max 0, Rx min -34, Rx max -3
71yy-5t	1471nm - 1611nm, SM, 140km, Link budget 33 Tx min -3, Tx max 2, Rx min -36, Rx max -3
71yy-6t	1471nm - 1611nm, SM, 150km, Link budget 36 Tx min 0, Tx max 5, Rx min -36, Rx max -3
SM = Single-mode	
<b>Wavelength Options (xx):</b> 27 = 1271nm, 29 = 1291nm, 31 = 1311nm, 33 = 1331nm, 35 = 1351nm, 37 = 1371nm, 39 = 1391nm, 41 = 1411nm, 43 = 1431nm, 45 = 1451nm	
<b>Wavelength Options (yy):</b> 47 = 1471nm, 49 = 1491nm, 51 = 1511nm, 53 = 1531nm, 55 = 1551nm, 57 = 1571nm, 59 = 1591nm, 61 = 1611nm	
<b>Operating Temperature Options (t):</b> <leave blank> = Commercial temperature (0 to 50°C) Z = Wide temperature (-40 to 85°C)	

# Fiber Optic Specifications

## Fiber Optic Specifications

### 10M, 100M and 1000M Fiber Specifications

All fixed fiber products have the following optical specifications.

10M Optical Specification								
Fiber Type	Distances	Wavelength (nm)	Min. Tx Power (dBm)	Max. Tx Power (dBm)	Min. Rx Power (dBm)	Max. Rx Power (dBm)	Min Attenuation (dB)	Link Budget (dB)
MM/DF	2km	850	-21	-11	-31	-11	-	10
MM/DF	5km	1310	-21	-11	-31	-11	-	10
SM/DF	30km	1310	-15	-8	-31	-8	-	16
SM/DF	60km	1310	-5	0	-31	-3	3	26
SM/DF	85km	1550	-7	0	-28	-3	3	21
SM/DF	120km	1550	-5	0	-31	-3	3	26
SM/SF <sup>1</sup>	20km	1310 / 1550	-15	-5	-30	-3	-	15
SM/SF <sup>1</sup>	20km	1550 / 1310	-15	-5	-30	-3	-	15
SM/SF <sup>1</sup>	40km	1310 / 1550	-8	0	-30	-3	3	22
SM/SF <sup>1</sup>	40km	1550 / 1310	-8	0	-30	-3	3	22
100M Optical Specifications								
MM/DF	5km	1310	-24	-14	-31	-14	-	7
SM/DF	30km	1310	-15	-8	-31	-8	-	16
SM/DF	60km	1310	-5	0	-31	-3	3	26
SM/DF	120km	1550	-5	0	-31	-3	3	26
MM/SF <sup>1</sup>	5km	1310 / 1550	-8	0	-28	0	-	20
MM/SF <sup>1</sup>	5km	1550 / 1310	-8	0	-28	0	-	20
SM/SF <sup>1</sup>	20km	1310 / 1550	-15	-5	-30	-3	-	15
SM/SF <sup>1</sup>	20km	1550 / 1310	-15	-5	-30	-3	-	15
SM/SF <sup>1</sup>	40km	1310 / 1550	-8	0	-30	-3	3	22
SM/SF <sup>1</sup>	40km	1550 / 1310	-8	0	-30	-3	3	22
SM/SF <sup>1</sup>	60km	1310 / 1550	-5	0	-31	-3	3	26
SM/SF <sup>1</sup>	60km	1550 / 1310	-5	0	-31	-3	3	26
1000M Optical Specifications								
MM/DF	220/550m <sup>2</sup>	850	-10	-4	-17	-3	-	7
MM/DF	2km	1310	-9.5	-3	-19.5	-3	-	10
SM/DF	12km	1310	-9.5	-3	-19.5	-3	-	10
SM/DF	34km	1310	-5	0	-23	-3	3	18
SM/DF	80km	1550	-5	0	-23	-3	3	18
SM/DF	110km	1550	0	5	-24	-3	8	24
SM/DF	140km	1550	2	5	-28	-8	13	30
MM/SF <sup>1</sup>	220/550m <sup>2</sup>	1310/1550	-9	-3	-18	-3	-	9
MM/SF <sup>1</sup>	220/550m <sup>2</sup>	1550/1310	-9	-3	-18	-3	-	9
SM/SF <sup>1</sup>	20km	1310/1550	-9.5	-3	-20	-3	-	10.5
SM/SF <sup>1</sup>	20km	1550/1310	-9.5	-3	-20	-3	-	10.5
SM/SF <sup>1</sup>	40km	1310/1550	-3	0	-20	-3	3	17
SM/SF <sup>1</sup>	40km	1550/1310	-3	0	-20	-3	3	17

<sup>1</sup> When using single-fiber (SF) media converter models, the Tx wavelength on one end has to match the Rx wavelength on the other.

<sup>2</sup> 62.5/125µm, 100/140µm multimode fiber up to 220m. 50/125µm multimode fiber up to 550m.

MM = Multimode, SM = Single-mode, DF = Dual Fiber, SF = Single-fiber

# Fiber Optic Specifications

## OC-3 and OC-12 Fiber Specifications

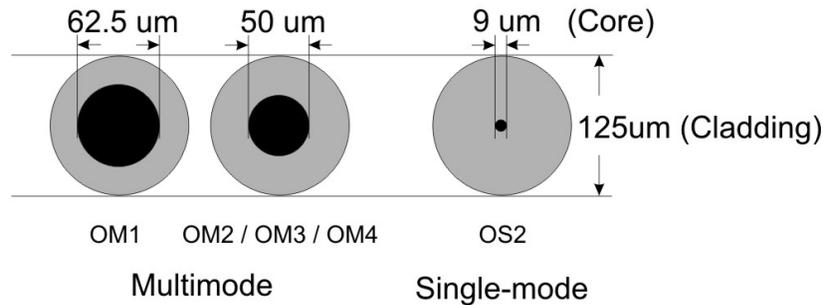
All fixed fiber products have the following optical specifications.

OC-3 Optical Specifications								
Fiber Type	Distances	Wavelength (nm)	Min. Tx Power (dBm)	Max. Tx Power (dBm)	Min. Rx Power (dBm)	Max. Rx Power (dBm)	Min Attenuation (dB)	Link Budget (dB)
MM/DF	2km	850	-10	-4	-24	-3	-	14
MM/DF	5km	1310	-24	-14	-31	-14	-	7
SM/DF	30km	1310	-15	-8	-31	-8	-	16
SM/DF	60km	1310	-5	0	-31	-3	3	26
SM/DF	120km	1550	-5	0	-31	-3	3	26
SM/SF <sup>1</sup>	20km	1310 / 1550	-15	-5	-30	-3	-	15
SM/SF <sup>1</sup>	20km	1550 / 1310	-15	-5	-30	-3	-	15
SM/SF <sup>1</sup>	40km	1310 / 1550	-8	0	-30	-3	3	22
SM/SF <sup>1</sup>	40km	1550 / 1310	-8	0	-30	-3	3	22
OC-12 Optical Specifications								
MM/DF	220/550m <sup>2</sup>	1310	-20	-14	-26	-14	-	6
SM/DF	12km	1310	-9.5	-3	-19.5	-3	-	10
SM/DF	34km	1310	-5	0	-23	-3	3	18
SM/DF	80km	1550	-5	0	-23	-3	3	18
SM/SF <sup>1</sup>	20km	1310/1550	-9.5	-3	-20	-3	-	10.5
SM/SF <sup>1</sup>	20km	1550/1310	-9.5	-3	-20	-3	-	10.5

<sup>1</sup> When using single-fiber (SF) media converter models, the Tx wavelength on one end has to match the Rx wavelength on the other.  
<sup>2</sup> 62.5/125µm, 100/140µm multimode fiber up to 220m. 50/125µm multimode fiber up to 550m.  
 MM = Multimode, SM = Single-mode, DF = Dual Fiber, SF = Single-fiber

## Fiber Optic Core vs Speed and Distance

### Fiber Core Types



### Distance / Speed on Multimode Fiber

Catalog	Type	Core	1G	10G	40G
OM1	Multimode	62.5 micron	220 meters	33 meters	-
OM2	Multimode	50 micron	550 meters	82 meters	-
OM3	Multimode	50 micron	550 meters	300 meters	100 meters
OM4	Multimode	50 micron	550 meters	400 meters	150 meters

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