OST Omnitron Systems
Technology, Inc.

2009 / 2010 Product Catalog

Media Converters,
Multiplexers and
Network Interface Devices
for Carrier Ethernet and
Enterprise Networks

About Omnitron

Omnitron was founded in 1992 and is headquartered in Irvine California.

Omnitron provides carrier-class fiber access connectivity solutions for Service Providers, Governments, Enterprises and Utilities who are driving fiber to the network's edge to deliver advanced services, bandwidth and security.

Omnitron solutions improve the flexibility, scalability and performance of any size network, from Enterprise Local Area Networks to Wide Area Networks, and Fiber Access Networks to Metropolitan Ethernet Networks.

Omnitron's managed and unmanaged fiber access media converters, Network Interface Devices, T1/E1 and CWDM multiplexers provide reliable fiber connectivity and leverage existing assets and infrastructure to reduce costs. This broad and diverse product offering supports a wide variety of network protocols, data rates and cabling media.

Omnitron's knowledgeable and dependable technical support staff is available 24/7 to assist you with your network applications or installations. Omnitron products are available through resellers, VARs, system integrators and distributors worldwide.

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The *iConverter*® family consists of managed media converters, Network Interface Devices (NIDs), CWDM Multiplexers and T1/E1 Multiplexers. This modular system provides fiber connectivity in Broadband Metropolitan, First Mile Fiber-to-the-X and Enterprise Local Area Network (LAN) applications.

iConverter modules create a true multi-service platform that transports a variety of network protocols over existing 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.

Management for *iConverter* media converters and multiplexers is enabled by installing a management module in the same chassis as the media converters and multiplexers. *iConverter* Network Interface Devices (NIDs) are media converters with integrated management functions for service provisioning and Operation, Administration and Maintenance (OAM). The NIDs can also serve as a management module for other *iConverter* modules when installed in a chassis.

Management functions can be accessed locally through the serial console port, or remotely through IP-based management protocols, including SNMPv1/2c/3, TELNET and FTP. Management VLAN provides protection for IP-based protocols by isolating the management data from user data.

Management functions can also be accessed remotely through one of the supported IP-less protocols, either 802.3ah OAM extensions or Omnitron's Secure OAM. Up to 18 remote NIDs and chassis can be managed by a single IP address using an IP-less protocol.

SNMP management can be accessed either via Omnitron's *NetOutlook*® SNMP-based network management software, or third-party SNMP software.

iConverter equipment is MEF 9, MEF 14, MEF 21, NEBS Level 3, UL and CE certified. 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 extended temperature range (-40 to +75°C).

Visit www.omnitron-systems.com for detailed specifications, application examples, white papers and the latest information on new products.

Technologies Supported:

10, 100, 1000 and 10 Gigabit Ethernet

1/2/4/10 Gigabit Fibre Channel

T1(DS1)/E1, T3(DS3)/E3

OC-3, OC-12, OC-48, OC-192

STM-1, STM-4, STM-16, STM-64

Serial RS-232/422/485 and X21

Standard & CWDM SFP/SFP+/XFPs

Module Types:

Copper UTP to Fiber

Fiber to Fiber

Coax to Fiber

4-Port Copper Switch

T1/E1 Multiplexer

CWDM Multiplexer

CWDM Transponder

Service Provider Access Networks

To support Carrier-Grade Ethernet services, *iConverter* Network Interface Devices feature:

- IEEE 802.3ah Link OAM monitoring and trouble-shooting
- IEEE 802.1ag End-to-End Service OAM Fault Detection and Management
- ITU-T Y.1731 End-to-End Service OAM Performance Monitoring
- CE-VLAN to Provider VLAN (Q-in-Q) mapping to enable E-LINE and E-LAN service multiplexing
- Quality of Service (QoS) Prioritization
- Class of Service (CoS) Traffic Classification
- Optical and Port statistics for performance monitoring
- Granular Rate Limiting per port, per service and per CoS
- Jumbo Frames up to 10,240 bytes

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, select *iConverter* media converters feature:

- Pluggable transceivers for standard and CWDM wavelengths (available in SFP, SFP+ and XFP)
- Quality of Service (QoS) Prioritization
- VLAN Technology
- Port VLAN and Port Access Controls
- Auto Negotiation
- Auto Crossover (MDI/MDI-X)
- Bandwidth Control
- Jumbo Frames up to 10,240 bytes
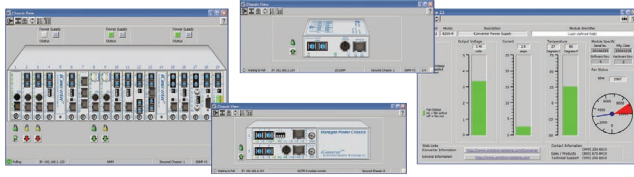
NetOutlook ®

SNMP Management Software

NetOutlook is an intuitive, SNMP-based Network Management Software application that provides detailed, real-time network status and control of *iConverter* equipment. Managing a chassis and its modules requires the installation of an *iConverter* Network Management Module (NMM2) or a media converter with integrated management in the chassis. *NetOutlook* supports IP-based and IP-less (Secure OAM or 802.3ah) management access of *iConverter* Network Interface Devices.

Using *NetOutlook*, network managers can monitor and configure a wide variety of chassis, module and port-level functions, including the ability to override physical DIP-switch settings. Traps can be reported for specific events such as individual module and link status, temperature range violation, and power supply failure (including Dying Gasp).

NetOutlook supports SNMPv1, SNMPv2c and SNMPv3. SNMPv3 provides secure access to network devices by a combination of authenticating and encrypting packets over the network.

With *NetOutlook*, network managers can lower operational costs (OPEX) associated with truck rolls to edge equipment locations, reduce down time by quickly detecting and diagnosing network problems, and remotely configure network parameters to restore services.

- SNMP-based GUI management software (SNMPv1/2c/3)
- Supports IP-based and IP-less management access of *iConverter* NID modules
- Remotely monitors and configures chassis, module and port functions and operational modes
- Enables Ethernet services by provisioning Provider VLANs, Rate-Limiting, CoS Mapping and Traffic Filtering
- Reports trap notifications of user-specified network events
- Ethernet service fault monitoring and performance statistics reporting
- Displays digital diagnostic information for pluggable transceivers
- Loads and saves configurations to and from local files
- Compatible with Windows 2000/XP/Vista

Model	Description
8100-0	*NetOutlook* SNMP Network Management Software

iConverter NMM2

Network Management Module

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 management backplane. Additionally, all remote NIDs linked to the managed *iConverter* chassis may be managed by the installed NMM2 through a secure IP-less OAM channel.

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 can provide local access and configuration from a PC or modem.

Management is accessed either via *NetOutlook*®, Omnitron's SNMP-Based Network Management Software, or third party SNMP management software. An intuitive Command Line Interface (CLI) can be accessed either via the serial port or TELNET.

The NMM2 provides comprehensive provisioning support for all local and remote *iConverter* modules, including port settings, VLANs and rate limiting.

The NMM2 manages remote NIDs connected to the managed chassis via an IP-less OAM channel. Using a single IP address, an NMM2 installed in a 19-Module chassis can manage up to 18 local plug-in modules and 18 remote NIDs.

- Provides management via SNMP, TELNET or FTP
- Managed via Omnitron's *NetOutlook* SNMP GUI, or third-party SNMP management software
- In-band management via the chassis Ethernet backplane port or out-of-band via the front-panel RJ-45 Ethernet port
- Built-in management VLAN support prioritizes and isolates management traffic from user traffic
- Enables Remote OAM (Secure IP-less or 802.3ah) for *iConverter* NID modules
- Firmware upgrades via serial port or FTP
- Supports Dying Gasp and a variety of other traps

Description	Model
8000N-0	Network Management Module (NMM2)
8081-3	NMM2 Serial Cable (DB-9, 3 ft.)

iConverter 19-Module Managed Chassis

The 2U (3.5 inch) high *iConverter* 19-Module Managed Chassis can be mounted in a 19 or 23-inch rack, and features three redundant, load-sharing power supplies. The high-density chassis supports universal AC, 24VDC or 48VDC hot-swappable power supplies that can be used in any combination, and features an Ethernet backplane for connectivity between modules.

Configuration	60W AC	120W AC	24VDC/66W	48VDC/66W	48VDC/120W
1 Power Supply	8200-1	8201-1	8206-1	8205-1	8207-1
2 Power Supplies	8200-2	8201-2	8206-2	8205-2	8207-2
3 Power Supplies	8200-3	8201-3	8206-3	8205-3	8207-3
Spare Power Supply	8200-9	8201-9	8206-9	8205-9	8207-9
23" Rack Mount Kit	8091-2				
Blank Module Panel	8090-0				

iConverter 5-Module Managed Chassis

The 1U (1.75 inch) high *iConverter* 5-Module Managed Chassis features an Ethernet backplane for connectivity between modules, and dual power supplies for load-sharing and power redundancy. Universal AC, 24VDC or 48VDC power supplies are hot-swappable and can be used in any combination.

Configuration	33W AC	24VDC/33W	48VDC/33W
1 Power Supply	8220-1	8226-1	8225-1
2 Power Supplies	8220-2	8226-2	8225-2
Spare Power Supply	8220-9	8226-9	8225-9
23" Rack Mount Kit	8092-2		
Blank Module Panel	8090-0		

iConverter 2-Module Managed Chassis

The *iConverter* 2-Module Chassis features a single internal universal AC or DC power supply and an Ethernet backplane.

Configuration	AC/6.5W	AC/16.5W	DC/6.6W	DC/16.5W
One (1) Power Supply	8230-0	8235-0	8235-0	8236-0
1 Power Supply w/ Dying Gasp	8230-1	8235-1	8235-1	8236-1
Wall Mounting Hardware Kit	8249-0			
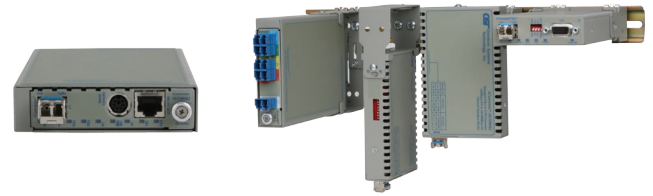
iConverter 1-Module Chassis and DIN Rail Brackets

The 1 inch high 1-Module Chassis uses an external AC/DC power adapter, is tabletop or wall-mountable and supports a single *iConverter* module. DIN-Rail brackets for 1-Module chassis and standalone modules support four mounting orientations.

Configuration	US AC	UNIV AC	48VDC
1-Module Chassis*	8240-1	8240-2	8242-9
1-Module Chassis with Dying Gasp Support	8241-1	8241-2	8243-9
Wall Mounting Hardware Kit	8249-0		
DIN Rail Mounting Kit	8250-0		

* See the 1-Module Chassis Data Sheet for additional power options and model numbers.

iConverter 1-Module Redundant Power Chassis with PoE/PD

The 1-Module Redundant Power Chassis with PoE features redundant DC or DC/PoE power with load sharing. Two optional 10/100BASE-T UTP ports connect to the installed module via the Ethernet backplane, and support auto-negotiation, Full/Half-Duplex and auto-crossover. LEDs provide power status, UTP data rate and link activity.

- Supports 9-28VDC (terminal or barrel) or 24-60VDC (terminal)
- PoE power (PD type of device) via optional Ethernet port
- Four optional contact closure alarm sensors

Model	Contact Closures	UTP Ports	Redundant Power	AC Power Supply
8245-111	-	-	(2) 9-28VDC Barrel	(2) US
8245-112	-	-	(2) 9-28VDC Barrel	(2) Universal
8247-220	X	-	(2) 9-28VDC Terminal	-
8248-111	X	X	(2) 9-28VDC Barrel	(2) US
8248-112	X	X	(2) 9-28VDC Barrel	(2) Universal
8248-220	X	X	(2) 9-28VDC Terminal	-
8248-312	X	X	9-28VDC Barrel + 24-60VDC Terminal	(1) Universal
8248-320	X	X	9-28VDC Terminal + 24-60VDC Terminal	-
8248-512	X	X	PoE + 9-28VDC Barrel	(1) Universal
8248-520	X	X	PoE + 9-28VDC Terminal	-

Modules not included with chassis. Consult data sheet or factory for additional configurations. Dying Gasp functionality requires installation of a management module that supports Dying Gasp. For Wide Temperature chassis (-40 to +60°C), add a "W" to the end of the part number. Contact Omnitron for extended temperature chassis (-40 to +75°C).

iConverter GM3 Network Interface Devices (NIDs)

iConverter GM3 Ethernet NIDs ensure end-to-end carrier-class Ethernet services by supporting multi-service provisioning and operation, administration and maintenance (OAM) features, right at the customer premise.

The GM3 meets today's demand for high-capacity and scalable optical Ethernet service delivery, while providing the fault detection and performance monitoring OAM capabilities expected by the service provider. Meeting MEF, ITU and industry requirements for Ethernet User to Network Interface (UNI), the GM3 terminates metro optical Ethernet access over Fast or Gigabit Ethernet fiber networks (dual-fiber, single-fiber, CWDM).

Service provisioning allows the provider to offer tiered revenue generation according to Service Level Agreements (SLA) based on data rate, Class of Service prioritization and service differentiation. Ethernet OAM provides the fault detection and performance monitoring necessary to ensure proper enforcement and compliance to SLAs.

- Functions as a multi-service NID or transport NID
- Available as a chassis plug-in module or standalone unit
- Supports IEEE 802.1ag and ITU-T Y.1731 Service OAM for end-to-end fault detection and performance monitoring
- Supports IEEE 802.3ah Link OAM
- Remote management through TELNET, SNMPv1/2c/3 and IP-less 802.3ah OAM extensions
- IEEE 802.1ad Provider VLAN and Q-in-Q tag stacking for E-Line and E-LAN service multiplexing
- Granular Rate Limiting using Committed Information Rate (CIR) and Committed Burst Size (CBS)
- Quality of Service (QoS) Prioritization
- Class of Service (CoS) Traffic Classification
- Small Form Pluggable (SFP) transceivers for standard or CWDM applications
- Supports Gigabit and Fast Ethernet fiber access networks
- Customer network service port available in copper RJ-45 or SFP Fiber interfaces
- Supports uplink redundancy with Rapid Spanning Tree protocol
- 10,240 byte Jumbo frames
- Commercial, wide and extended temperature ranges
- MEF 9, MEF 14 and MEF 21 Certified Compliant

Service OAM Functions

IEEE 802.1ag "Connectivity Fault Management" defines multi-level, continuous fault monitoring of Ethernet services for subscriber, service provider and network operator. Key features include:

- Continuity Check – A periodic keep-alive message exchanged between end-points of an Ethernet service in a domain level.
- Link Trace – An Administrator initiated command to trace intermediate points from one end-point to another end-point of an Ethernet service.
- Loop Back – An Administrator initiated command for an end-point to request response from an intermediate-point or another end-point of an Ethernet service.

ITU-T Y.1731 defines continuous performance monitoring to ensure compliance to SLAs established between the service provider and the subscriber. Key SLA parameters include:

- Frame Delay – The amount of time it takes a frame to travel from end-point to end-point of an Ethernet service.
- Frame Delay Variation (Jitter) – The statistical difference in the collection of Frame Delay readings between the end-points.
- Frame Loss – The number of frames lost between the end-points of an Ethernet service.
- Availability - The percentage of the time the service is operational.

Port			Fiber	Distance	Wavelength (nm)	Connector Type	
P1	P2	P3				ST	SC
FF	UTP	-	MM/DF	220/550m	850	8920P-0	8922P-0
FF	UTP	-	SM/DF	12km	1310	8921P-1	8923P-1
FF	UTP	-	SM/DF	34km	1310	-	8923P-2
FF	UTP	-	SM/DF	80km	1550	-	8923P-3
FF	UTP	-	SM/DF	110km	1550	-	8923P-4
FF	UTP	-	SM/DF	140km	1550	-	8923P-5
FF	UTP	-	SM/SF	20km	1310/1550	-	8930P-1
FF	UTP	-	SM/SF	20km	1550/1310	-	8931P-1
FF	UTP	-	SM/SF	40km	1310/1550	-	8930P-2
FF	UTP	-	SM/SF	40km	1550/1310	-	8931P-2
SFP	UTP	-	8939P-0**				
SFP	SFP	UTP	8975P-0**				
UTP	UTP	SFP	8970P-0**				
UTP	UTP	-	8989P-0				
SFP	SFP	-	8999P-0**				
UTP = Unshielded Twisted Pair, FF = Fixed Fiber, SPF = Small Form Pluggable							

** Order Fiber or Copper SFPs separately. See SFP ordering information on pages 50 and 51.

To order a standalone model, add a suffix to the model number as follows:
- A: Tabletop with US AC to DC Power Supply Adapter (supports DIN-rail Bracket)
- B: Tabletop with Universal AC to DC Power Supply Adapter (supports DIN-rail Bracket)
- C: Tabletop with DC Power Terminal Connector (supports DIN-rail Bracket)
- D: Wall-mount with US AC to DC Power Supply Adapter
- E: Wall-mount with Universal AC to DC Power Supply Adapter
- F: Wall-mount with DC Power Terminal Connector
For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.

iConverter M2 Network Interface Devices

iConverter M2 Class Network Interface Devices (NIDs) are intelligent media converters with integrated IP-based and IP-less (Secure OAM or 802.3ah) management that support advanced networking capabilities.

The M2 NIDs provide MEF 9 and 14 certified Ethernet service demarcation in telecom networks, and mission critical managed fiber links in Next-Generation enterprise networks. The carrier-grade M2 NIDs support 802.3ah Link OAM performance monitoring and fault detection. They are available as plug-in modules, or as standalone wall-mounted or tabletop units with optional DIN-rail mount. The *iConverter* standalone NID provides a managed demarcation point, and the plug-in module can manage a chassis of modules or be managed as a regular converter by another management module.

- Remote management through TELNET, SNMPv1/2c/3 and IP-less 802.3ah OAM extensions
- 802.3ah Link OAM Fault Detection and Performance Monitoring
- 802.1Q Tag VLAN with Q-in-Q and 802.1ad Provider VLAN for terminating Ethernet Virtual Circuits
- Secure IP-less and 802.3ah OAM Management Channels
- 802.1p Quality of Service (QoS) prioritization
- Port Rate Limiting, Port Access Control and MIB statistics
- Advanced Link Fault Detection and Propagation modes
- Fixed fiber connectors for dual or single-fiber
- Small Form Pluggable (SFP) fiber transceivers for standard and CWDM wavelengths
- 2,048 byte (Fast Ethernet modules) and 10,240 byte (Gigabit modules) Jumbo Frames
- Granular 64Kbps Rate Limiting
- L2CP Policy Control

Fiber to Fiber Ethernet NIDs
2FXM2 100BASE-FX to 100BASE-FX NIDs
2GXM2 1000BASE-X to 1000BASE-X NIDs

The 100Mbps 2FXM2 and the Gigabit 2GXM2 are fiber to fiber Ethenet demarcation NIDs.

Description	Model
2FXM2 100Mbps Fiber to Fiber NID	8959N-0
2GXM2 Gigabit Fiber to Fiber NID	8999N-0

Copper to Fiber Ethernet NIDs
10/100M2 10/100BASE-TX to 100Base-FX NIDs
GX/TM2 10/100/1000BASE-T to 1000BASE-X NIDs

The 10/100Mbps 10/100M2 and the 10/100/1000Mbps GX/TM2 are copper to fiber Ethernet demarcation NIDs.

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
iConverter 10/100M2						
MM	5km	1310	8900N-0	8902N-0	8904N-0	8906N-0
SM	30km	1310	8901N-1	8903N-1	8905N-1	8907N-1
SM	60km	1310	8901N-2	8903N-2	-	8907N-2
SM	120km	1550	-	8903N-3	-	8907N-3
SM-SF	20km	1310/1550	-	8910N-1*	-	-
SM-SF	20km	1550/1310	-	8911N-1*	-	-
SM-SF	40km	1310/1550	-	8910N-2*	-	-
SM-SF	40km	1550/1310	-	8911N-2*	-	-
SFP**	8919N-0					
iConverter GX/TM2						
MM	220m/500m	850	8920N-0	8922N-0	8924-0	8926-0
SM	12km	1310	8921N-1	8923N-1	8925-1	8927N-1
SM	34km	1310	-	8923N-2	-	8927N-2
SM	80km	1550	-	8923N-3	-	8927N-3
SM	110km	1550	-	8923N-4	-	8927N-4
SM	140km	1550	-	8923N-5	-	8927N-5
SM-SF	20km	1310/1550	-	8930N-1*	-	-
SM-SF	20km	1550/1310	-	8931N-1*	-	-
SM-SF	40km	1310/1550	-	8930N-2*	-	-
SM-SF	40km	1550/1310	-	8931N-2*	-	-
SFP	8939N-0**					

* Single-fiber converters must be used in pairs.
** Order SFPs separately. See SFP ordering information on pages 50 and 51.

To order a standalone model, add a suffix to the model number as follows:
- A: Tabletop with US AC to DC Power Supply Adapter (supports DIN-rail Bracket)
- B: Tabletop with Universal AC to DC Power Supply Adapter (supports DIN-rail Bracket)
- C: Tabletop with DC Power Terminal Connector (supports DIN-rail Bracket)
- D: Wall-mount with US AC to DC Power Supply Adapter
- E: Wall-mount with Universal AC to DC Power Supply Adapter
- F: Wall-mount with DC Power Terminal Connector
For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.

iConverter XG

10 Gigabit Converter/Transponder Modules

The *iConverter* XG is a 10 Gigabit, protocol-transparent media converter with two pluggable transceiver ports. The *iConverter* XG is available as a compact, unmanaged standalone unit, or as a managed plug-in module. The XG can be used as a copper-to-fiber converter, a fiber mode converter, a SFP+ to XFP adapter, a WDM transponder or a fiber repeater supporting the three Rs (regeneration, retiming and reshaping). Built-in loopback functions, on-board status LEDs and link fault propagation modes facilitate easy setup and quick troubleshooting.

- Supports 100% traffic throughput with no packet size limits
- Protocol transparent from 9.95Gbps to 11.32Gbps
- Supports XFP and SFP+ transceivers
- Compatible with SFP+ copper direct attach cable (Twinax)
- Supports fiber transceiver digital diagnostics reporting and alarm notification
- 10GBASE-CX4 XFPs enable 10G copper to fiber conversion

Port 1	Port 2	Model #
SFP+	SFP+	8599-00
SFP+	XFP	8599-01
XFP	XFP	8599-11

** Order SFP+ and XFP transceivers separately. See ordering information on page 50.

To specify standalone module type and power options, add a suffix to the model number:
- A: Tabletop with US AC to DC Power Supply Adapter (supports DIN-rail Bracket)
- B: Tabletop with Universal AC to DC Power Supply Adapter (supports DIN-rail Bracket)
- C: Tabletop with DC Power Terminal Connector (supports DIN-rail Bracket)
- D: Wall-mount with US AC to DC Power Supply Adapter
- E: Wall-mount with Universal AC to DC Power Supply Adapter
- F: Wall-mount with DC Power Terminal Connector
For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
For extended temperature (-40 to +75°C), add a "Z" to the end of the model number.

iConverter GX/T

10/100/1000 Ethernet UTP to Fiber Converter Modules

The *iConverter* GX/T provides 10/100/1000BASE-T UTP copper to 1000BASE-X Gigabit fiber conversion, and supports advanced networking features and link fault detection modes.

- Supports the IEEE 802.1Q VLAN and the IEEE 802.1p QoS prioritization standards
- Port Access Control and reporting of MIB Statistics
- Multimode (MM), single-mode (SM) and single-fiber (SF)
- ST, SC, MT-RJ or LC fiber connectors
- User-selectable or auto-negotiation for Pause and Full/Half-Duplex
- Advanced Fault Detection modes for quick fault detection, isolation and reporting
- Ethernet backplane ports for expansion to adjacent modules

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
MM	220m/550m	850	8520-0	8522-0	8524-0	8526-0
SM	12km	1310	8521-1	8523-1	8525-1	8527-1
SM	34km	1310	-	8523-2	-	8527-2
SM	80km	1550	-	8523-3	-	8527-3
SM	110km	1550	-	8523-4	-	8527-4
SM	140km	1550	-	8523-5	-	8527-5
SM-SF	20km	1310/1550	-	8530-1*	-	-
SM-SF	20km	1550/1310	-	8531-1*	-	-
SM-SF	40km	1310/1550	-	8530-2*	-	-
SM-SF	40km	1550/1310	-	8531-2*	-	-

* Single-fiber converters must be used in pairs.
For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.

iConverter Gx AN

Gigabit Ethernet UTP to Fiber Converter Modules

The *iConverter* Gx AN provides 1000BASE-T UTP copper to 1000BASE-X Gigabit fiber conversion, and is available as a unmanaged standalone unit, or as a managed chassis plug-in module. The Gx AN supports auto-negotiation on both ports, and a variety of link fault detection modes for easy fault detection and isolation.

- Multimode (MM), single-mode (SM) and single-fiber (SF)
- ST, SC, MT-RJ and LC fiber connectors
- SFP transceivers for standard and CWDM wavelengths
- User-selectable UTP port auto-negotiation for Pause and Full/Half-Duplex
- Fiber port manual or auto-negotiation
- Advanced Fault Detection modes for quick fault detection, isolation and reporting

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
MM	220m/550m	850	8500N-0	8502N-0	8504N-0	8506N-0
SM	12km	1310	8501N-1	8503N-1	8505N-1	8507N-1
SM	34km	1310		8503N-2	-	8507N-2
SM	80km	1550		8503N-3	-	8507N-3
SM	110km	1550		8503N-4	-	8507N-4
SM	140km	1550		8503N-5	-	8507N-5
SM-SF	20km	1310/1550		8510N-1*	-	-
SM-SF	20km	1550/1310		8511N-1*	-	-
SM-SF	40km	1310/1550		8510N-2*	-	-
SM-SF	40km	1550/1310		8511N-2*	-	-
SFP	8519N-0**					

*Single-fiber converters must be used in pairs.
** Order SFP separately. See SFP ordering information on pages 50 and 51.

To order a standalone Gx AN model, add a suffix to the model number as follows:
- A: Tabletop with US AC to DC Power Supply Adapter (supports DIN-rail Bracket)
- B: Tabletop with Universal AC to DC Power Supply Adapter (supports DIN-rail Bracket)
- C: Tabletop with DC Power Terminal Connector (supports DIN-rail Bracket)
- D: Wall-mount with US AC to DC Power Supply Adapter
- E: Wall-mount with Universal AC to DC Power Supply Adapter
- F: Wall-mount with DC Power Terminal Connector
For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Example 8502N-0-AW = MM, 220m/550m, 850nm, SC, Tabletop with US AC Power Supply, wide temperature.
Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.
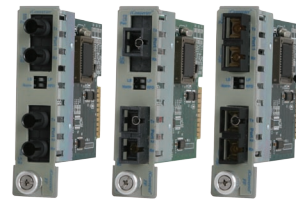
iConverter GX/X and GX/F

Gigabit Switch/Fiber Converters and

Gigabit to Fast Ethernet Switch/Fiber Converters

The *iConverter* GX/X is a Gigabit to Gigabit Ethernet fiber to fiber converter, and the *iConverter* GX/F is a Gigabit to Fast Ethernet bridging fiber to fiber converter. They provide single mode to multimode and dual fiber to single-fiber conversion, and perform regeneration, retiming and reshaping of the fiber optic signal.

- Supports IEEE 802.1Q VLAN and the 802.1p QoS standards
- Ethernet backplane ports for expansion to adjacent modules

Fiber Port 1/Port 2	Distance Port 1/Port 2	Wavelength (nm) Port 1/Port 2	Connector Type		
			SC	MT-RJ	LC
iConverter GX/X					
MM/MM	550m/550m	850/850	8542-00	8544-00	-
SM/MM	12km/550m	1310/850	8543-10	-	-
SM/SM	12km/12km	1310/1310	8543-11	8545-11	8547-11
SM/SM	34km/34km	1310/1310	8543-22	-	8547-22
SM/SM	80km/80km	1550/1550	8543-33	-	8547-33
2 X SM-SF	20km/20km	13,15/13,15	8554-11*	-	-
2 X SM-SF	20km/20km	15,13/15,13	8557-11*	-	-
iConverter GX/F					
MM/MM	550m/5km	850/1310	8562-00	8564-00	-
MM/SM	550m/30km	850/1310	8562-01	8564-01	-
MM/SM	550m/60km	850/1310	8562-02	-	-
MM/SM	550m/120km	850/1550	8562-03	-	-
SM/MM	12km/5km	1310/1310	8563-10	8565-10	-
SM/SM	12km/30km	1310/1310	8563-11	8565-11	8567-11
SM/SM	12km/60km	1310/1310	8563-12	-	8567-12
SM/SM	12km/120km	1310/1550	8563-13	-	8567-13
MM/SM-SF	550m/20km	850/13,15	8562-05*	-	-
MM/SM-SF	550m/20km	850/15,13	8562-07*	-	-
MM/SM-SF	550m/40km	850/13,15	8562-06*	-	-
MM/SM-SF	550m/40km	850/15,13	8562-08*	-	-
SM/SM-SF	12km/20km	1310/13,15	8563-15*	-	-
SM/SM-SF	12km/20km	1310/15,13	8563-17*	-	-
SM/SM-SF	12km/40km	1310/13,15	8563-16*	-	-
SM/SM-SF	12km/40km	1310/15,13	8563-18*	-	-

* Single-fiber converters must be used in pairs.
For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.

iConverter **100FF and 1000FF**

Fast and Gigabit Ethernet Fiber to Fiber Converter Modules

The *iConverter* 100FF and 1000FF multimode to single-mode fiber converter modules extend network distances and connect dissimilar fiber network cabling. Modules are available to support Fast Ethernet and Gigabit Ethernet.

- Converts multimode (MM) to single-mode (SM) dual fiber and dual fiber to single-fiber (SF)
- Advanced Fault Detection modes for quick fault detection, isolation and reporting

Fiber Port 1/Port 2	Distance Port 1/Port 2	Wavelength (nm) Port 1/Port 2	Connector Type	
			ST	SC
iConverter 100FF				
MM/SM	5km/30km	1310/1310	8620-1	8622-1
MM/SM	5km/60km	1310/1310	8620-2	8622-2
MM/SM	5km/120km	1310/1550	-	8622-3
MM/SM-SF*	5km/20km	1310/1310-1550	8630-1**	8634-1**
MM/SM-SF*	5km/20km	1310/1550-1310	8631-1**	8635-1**
MM/SM-SF*	5km/40km	1310/1310-1550	8630-2**	8634-2**
MM/SM-SF*	5km/40km	1310/1550-1310	8631-2**	8635-2**
SM/SM-SF*	30km/20km	1310/1310-1550	8632-1**	8636-1**
SM/SM-SF*	30km/20km	1310/1550-1310	8633-1**	8637-1**
SM/SM-SF*	30km/40km	1310/1310-1550	8632-2**	8636-2**
SM/SM-SF*	30km/40km	1310/1550-1310	8633-2**	8637-2**
iConverter 1000FF				
MM/SM	550m/12km	850/1310	-	8642-1
MM/SM	550m/34km	850/1310	-	8642-2
MM/SM	550m/80km	850/1550	-	8642-3
SM/SM	12km/34km	1310/1310	-	8643-2
SM/SM	12km/80km	1310/1550	-	8643-3
MM/SM-SF	550m/20km	850/1310-1550	-	8650-1**
MM/SM-SF	550m/20km	850/1550-1310	-	8651-1**
SM/SM-SF	12km/20km	1310/1310-1550	-	8652-1**
SM/SM-SF	12km/20km	1310/1550-1310	-	8653-1**
SM/SM-SF	12km/40km	1310/1310-1550	-	8652-2**
SM/SM-SF	12km/40km	1310/1550-1310	-	8653-2**

* All single-fiber ports are SC connectors.
** Single-fiber converters must be used in pairs.
Refer to OC3FF and OC12FF on page 34 for Standalone module ordering information.
For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.
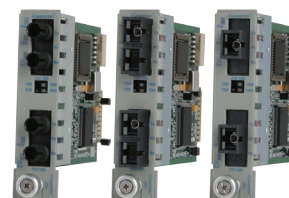
iConverter **2Fx**

Two-Port Fast Ethernet Fiber Converter/Repeater Modules

The *iConverter* 2Fx is a two-port, 100BASE-FX to 100BASE-FX managed optical switch module that operates as a fiber to fiber repeater and converter. It performs regeneration, retiming and reshaping of the Ethernet signals. The 2Fx features two Ethernet backplane ports for connectivity to adjacent modules, enabling scalable, multi-module configurations such as redundant rings or fiber distribution switches.

- Supports IEEE 802.1Q VLAN with Q-in-Q and IEEE 802.1p QoS prioritization standards
- Individual Port Bandwidth and Port Access Controls
- Reporting of MIB Statistics
- Multimode (MM), single-mode (SM) and single-fiber (SF)
- ST, SC, MT-RJ and LC fiber connectors
- Advanced Fault Detection modes for quick fault detection, isolation and reporting
- Ethernet backplane ports for connectivity to adjacent modules

Fiber Port 1/Port 2	Distance Port 1/Port 2	Wavelength (nm) Port 1/Port 2	Connector Type			
			ST	SC	MT-RJ	LC
MM/MM	5km	1310/1310	8440-0	8442-0	8444-0	8446-0
SM/SM	30km	1310/1310	8441-1	8443-1	8445-1	8447-1
SM/SM	60km	1310/1310	8441-2	8443-2	-	8447-2
SM/SM	120km	1550/1550	-	8443-3	-	8447-3
2 X SM-SF	20km	13-15/13-15	-	8450-1*	-	-
2 X SM-SF	20km	15-13/15-13	-	8451-1*	-	-
2 X SM-SF	40km	13-15/13-15	-	8450-2*	-	-
2 X SM-SF	40km	15-13/15-13	-	8451-2*	-	-

* Single-fiber converters must be used in pairs.
For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.
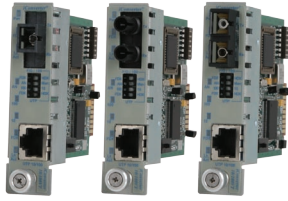
iConverter 10/100 and 10/100VT

10/100 Ethernet UTP to Fiber Converter Modules

The *iConverter* 10/100 and 10/100VT convert 10/100Mbps UTP copper to 100BASE-FX fiber.

- Multimode (MM), single-mode (SM) and single-fiber (SF)
- Advanced Fault Detection modes for quick fault detection, isolation and reporting
- Ethernet backplane ports for expansion to adjacent modules

The *iConverter* 10/100VT supports these additional features:

- UTP Auto-crossover
- IEEE 802.1Q VLAN with Q-in-Q and the IEEE 802.1p QoS prioritization standards
- Individual Port Bandwidth and Port Access Controls
- Reporting of MIB Statistics
- Symmetrical Fault Detection mode

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
iConverter 10/100						
MM	5km	1310	8380-0	8382-0	8384-0	8386-0
SM	30km	1310	8381-1	8383-1	8385-1	8387-1
SM	60km	1310	8381-2	8383-2	-	8387-2
SM	120km	1550	-	8383-3	-	8387-3
SM-SF	20km	1310/1550	-	8390-1*	-	-
SM-SF	20km	1550/1310	-	8391-1*	-	-
SM-SF	40km	1310/1550	-	8390-2*	-	-
SM-SF	40km	1550/1310	-	8391-2*	-	-
SM-SF	60km	1310/1550	-	8390-3*	-	-
SM-SF	60km	1550/1310	-	8391-3*	-	-
iConverter 10/100VT						
MM	5km	1310	8800-0	8802-0	8804-0	8806-0
SM	30km	1310	8801-1	8803-1	8805-1	8807-1
SM	60km	1310	8801-2	8803-2	-	8807-2
SM	120km	1550	-	8803-3	-	8807-3
SM-SF	20km	1310/1550	-	8810-1*	-	-
SM-SF	20km	1550/1310	-	8811-1*	-	-
SM-SF	40km	1310/1550	-	8810-2*	-	-
SM-SF	40km	1550/1310	-	8811-2*	-	-

*Single-Fiber converters must be used in pairs.
For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.

iConverter 100Fx/Tx, 10FL/T and 10T/2

100Mbps and 10Mbps Ethernet Converter Modules

The *iConverter* 100Fx/Tx provides 100BASE-TX UTP copper to 100BASE-FX fiber conversion with auto-negotiation for Full/Half-Duplex. It supports Link Segmentation, Link Propagation and Remote Fault Detection modes, and features a crossover switch.

The 10FL/T is a 10BASE-FL fiber to 10BASE-T UTP media converter that supports Full/Half-Duplex and auto-crossover. It features Remote Fault Detection, Link Segmentation and Link Propagation modes.

The 10T/2 is a 10BASE-T UTP to 10BASE-2 coax media converter that supports 50 ohm coax to a distance of 185m, and up to 30 workstations. It features Ethernet backplane ports for expansion to adjacent modules.

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
iConverter 100Fx/Tx						
MM	5km	1310	8360-0	8362-0	8364-0	8366-0
SM	30km	1310	8361-1	8363-1	8365-1	8367-1
SM	60km	1310	8361-2	8363-2	-	8367-2
SM	120km	1550	-	8363-3	-	8367-3
SM-SF	20km	1310/1550	-	8370-1*	-	-
SM-SF	20km	1550/1310	-	8371-1*	-	-
SM-SF	40km	1310/1550	-	8370-2*	-	-
SM-SF	40km	1550/1310	-	8371-2*	-	-
SM-SF	60km	1310/1550	-	8370-3*	-	-
SM-SF	60km	1550/1310	-	8371-3*	-	-
iConverter 10FL/T						
MM	2km	850	8300-0	8302-0	-	-
MM	5km	1310	8300-1	-	8304-1	-
SM	30km	1310	8301-1	8303-1	8305-1	8307-1
SM	60km	1310	8301-2	8303-2	-	8307-2
SM	120km	1550	-	8303-3	-	8307-3
SM-SF	20km	1310/1550	-	8310-1*	-	-
SM-SF	20km	1550/1310	-	8311-1*	-	-
SM-SF	40km	1310/1550	-	8310-2*	-	-
SM-SF	40km	1550/1310	-	8311-2*	-	-
iConverter 10T/2						
8340-0		100m UTP			185m Coax	

*Single-Fiber converters must be used in pairs.
For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.

iConverter **4Tx and 4TxVT**

4-Port 10/100 Ethernet Switch Modules

The *iConverter* 4Tx and 4TxVT are compact, managed 4-port 10/100 Ethernet switches with backplane ports for expansion to adjacent modules in the chassis. They provide plug-and-play capability with auto-negotiation and auto-crossover features that eliminate the need for manual port configuration and crossover cables. When used in a 2 or 5-Module Chassis with an *iConverter* NID module, the 4Tx or 4TxVT provide a remotely managed, multi-port demarcation switch. They can also be used as unmanaged standalone switches in a 1-Module *iConverter* chassis.

The *iConverter* 4Tx features Port VLAN, Port Access Control and reporting of MIB Statistics.

The *iConverter* 4TxVT extends the capabilities of the 4Tx with per-port based Bandwidth Control and support of the IEEE 802.1Q VLAN (including Q-in-Q multi-stacking) and the IEEE 802.1p QoS standards.

- 10/100BASE-TX 4-Port UTP switch module with 1,536 bytes maximum frame size
- Supports Port VLAN, Port Access Control and reporting of MIB Statistics
- RJ-45 auto-crossover eliminates need for a crossover cable
- Ethernet backplane ports for expansion to adjacent modules
- 4TxVT also supports Tag VLAN with Q-in-Q, QoS and per-port based Bandwidth Control

Module	Ports	Distance	Model Number
iConverter 4Tx	4 UTP	100m	8480-4
iConverter 4TxVT	4 UTP	100m	8481-4

For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Contact Omnitron for extended temperature (-40 to +75°C) models.

iConverter **Tx/2Fx and Tx/2Tx**

Fast Ethernet UTP to Redundant Fiber and

Fast Ethernet UTP to Redundant UTP Converter Modules

The *iConverter* Fast Ethernet redundant link modules convert a single copper cable to redundant copper or redundant fiber links, and are designed for resilient networks that require link redundancy.

- 100 microseconds hot fail-over backup
- User-selectable or auto-negotiation for Full/Half-Duplex
- Link Segmentation, Link Propagation and Remote Fault Detection modes
- Crossover switch for easy installation

Fiber/UTP	Distance	Wavelength (nm)	Connector Type				
			ST	SC	MT-RJ	LC	RJ-45
iConverter Tx/2Fx							
MM	5km	1310	8420-0	8422-0	8424-0	8426-0	-
SM	30km	1310	8421-1	8423-1	8425-1	8427-1	-
SM	60km	1310	8421-2	8423-2	-	8427-2	-
SM	120km	1550	-	8423-3	-	8427-3	-
SM-SF	20km	1310/1550	-	8430-1*	-	-	-
SM-SF	20km	1550/1310	-	8431-1*	-	-	-
SM-SF	40km	1310/1550	-	8430-2*	-	-	-
SM-SF	40km	1550/1310	-	8431-2*	-	-	-
SM-SF	60km	1310/1550	-	8430-3*	-	-	-
SM-SF	60km	1550/1310	-	8431-3*	-	-	-
iConverter Tx/2Tx							
UTP	100m	N/A	-	-	-	-	8400-0

*Single-Fiber converters must be used in pairs.
For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.

Module Name	Model Number	10 Mbps	100 Mbps	1000 Mbps	10 Gbps	# Fiber	SFP/SFP+/XFP	# Copper	Backplane	IP-Based (TELNET/SNMP) with Management VLAN	Secure IP-Less OAM	IEEE 802.3ah	IEEE 802.1ag/ITU-T Y.1731	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	Catalog Page Number
NMM2	8000N	✓	✓					1	✓	✓															7
GM3	8920P-8999P	See Ordering Table on Page 11							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10,240	✓*	✓	✓	✓	✓	10
GX/TM2	8920N-8939N	✓	✓	✓		1	✓**	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10,240	✓*	✓	✓	✓	✓	13
2GXM2	8999N			✓		2	✓**		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10,240	✓*	✓	✓	✓	✓	12
10/100M2	8900N-8919N	✓	✓			1	✓	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2,048	✓*	✓	✓	✓	✓	13
2FXM2	8959N		✓			2	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2,048	✓*	✓	✓	✓	✓	12
XG	8599				✓		✓**												UNL			✓	✓	✓	14
xFF	8699	Up to 4 Gbps				2	✓												UNL		✓				35
GX/T	8520-8529	✓	✓	✓		1		1	✓					✓	✓	✓		✓	1,536		✓	✓	✓		15
Gx AN	8500N-8519N			✓		1	✓	1											UNL		✓				16
GX/X	8540-8559			✓		2			✓					✓	✓	✓		✓	1,536		✓	✓	✓		17
GX/F	8560-8569		✓	✓		2			✓					✓	✓	✓		✓	1,536		✓	✓	✓		17
1000FF	8640-8659			✓		2													UNL		✓				18
10/100VT	8800-8819	✓	✓			1		1	✓					✓	✓	✓	✓	✓	1,536	✓	✓	✓	✓		20
10/100	8380-8399	✓	✓			1		1	✓										1,522		✓				20
100Fx/Tx	8360-8379		✓			1		1											UNL		✓				21
2Fx	8440-8459		✓			2			✓					✓	✓	✓	✓	✓	1,536	✓	✓	✓	✓		19
100FF	8620-8639		✓			2													UNL		✓				18
10FL/T	8300-8319	✓				1		1											UNL		✓				21
10T/2	8340	✓						2	✓										6,250						21
4Tx	8480	✓	✓					4	✓						✓	✓			1,536		✓				22
4TxVT	8481	✓	✓					4	✓					✓	✓	✓	✓	✓	1,536	✓	✓				22
Tx/2Fx	8420-8439		✓			2		1											UNL			✓	✓		23
Tx/2Tx	8400		✓					3											UNL			✓	✓		23

Legend
UNL Unlimited frame packet size
* Enhanced Rate Limiting in 64k increments
** Supports Copper pluggable transceivers

Link Modes:
LP Link Propagation
RFD Remote Fault Detection
SFD Symmetrical Fault Detection
ASY Asymmetrical Link Propagation

iConverter **T1/E1**

T1/E1 Copper to Fiber Media Converter Modules

The *iConverter* T1/E1 converts UTP or coax copper to multimode or single-mode fiber to extend T1 or E1 to distances up to 120km. A variety of test modes facilitate easy installation and testing of the fiber link without the need for external test equipment.

- Converts UTP or coax T1 or E1 to fiber
- ST, SC, MT-RJ and LC fiber connectors
- SFP transceivers for standard and CWDM wavelengths
- Multimode (MM), single-mode (SM) and single-fiber (SF)
- Supports ANSI, AT&T, ITU and ETSI standards
- Supports AMI, B8ZS and HDB3 line codes
- User-selectable Local Loopback and a variety of test modes
- Crossover switch on RJ-45/RJ-48 port for easy configuration

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
iConverter T1/E1 Copper RJ-45/RJ-48 to Fiber						
SFP		8719-0**				
MM	5km	1310	8700-0	8702-0	8704-0	8706-0
SM	30km	1310	8701-1	8703-1	8705-1	8707-1
SM	60km	1310	8701-2	8703-2	-	8707-2
SM	120km	1550	-	8703-3	-	8707-3
SM-SF	20km	1310/1550	-	8710-1*	-	-
SM-SF	20km	1550/1310	-	8711-1*	-	-
SM-SF	40km	1310/1550	-	8710-2*	-	-
SM-SF	40km	1550/1310	-	8711-2*	-	-
iConverter T1/E1 Copper Coax + RJ-45/RJ-48 to Fiber*						
SFP		8739-0**				
MM	5km	1310	8720-0	8722-0	8724-0	8726-0
SM	30km	1310	8721-1	8723-1	8725-1	8727-1
SM	60km	1310	8721-2	8723-2	-	8727-2
SM	120km	1550	-	8723-3	-	8727-3
SM-SF	20km	1310/1550	-	8730-1*	-	-
SM-SF	20km	1550/1310	-	8731-1*	-	-
SM-SF	40km	1310/1550	-	8730-2*	-	-
SM-SF	40km	1550/1310	-	8731-2*	-	-

*The T1/E1 Copper Coax + RJ-45/RJ-48 to Fiber converter is only available as a 2-slot chassis plug-in module, and not compatible with 5-Module or 1-Module chassis.

** Order SFPs separately. See SFP ordering information on pages 50 and 51.

See additional ordering information on page 27.

iConverter **T3/E3**

T3/E3 Media Converter Modules

The *iConverter* T3/E3 converts T3/DS3 or E3 coax to fiber. The T3/E3 operates with framed or unframed data, and can operate with channelized or unchannelized data streams. The T3/E3 operates in pairs extending distances up to 120km.

- T3 or E3 copper to fiber converter
- ST, SC, MT-RJ and LC fiber connectors
- SFP transceivers for standard and CWDM wavelengths
- Multimode (MM), single-mode (SM) and single-fiber (SF)
- Distances up to 120km
- Supports ANSI, ETSI and ITU specifications
- Supports B3ZS for T3 (DS3) and HDB3 for E3 codes
- Individual coax and fiber port enable/disable
- Local and remote loopback for easy installation

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
SFP		8759-0**				
MM	5km	1310	8740-0	8742-0	8744-0	8746-0
SM	30km	1310	8741-1	8743-1	8745-1	8747-1
SM	60km	1310	8741-2	8743-2	-	8747-2
SM	120km	1550	-	8743-3	-	8747-3
SM-SF	20km	1310/1550	-	8750-1*	-	-
SM-SF	20km	1550/1310	-	8751-1*	-	-
SM-SF	40km	1310/1550	-	8750-2*	-	-
SM-SF	40km	1550/1310	-	8751-2*	-	-

* Single-Fiber converters must be used in pairs.

** Order SFP separately. See SFP ordering information on pages 50 and 51.

To order an unmanaged standalone module, add a suffix the model number as follows:
D = Wall-Mount with External US AC Power Supply
E = Wall-Mount with External Universal AC Power Supply
F = Wall-Mount with DC Terminal Power

For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
For extended temperature (-40 to +75°C), add a "Z" to the end of the model number.

Example: 8740-0-DW = T3/E3, MM, 5km, 1310, Wall-Mount External US AC Power Supply, wide temperature

For other configurations, please contact Omnitron.
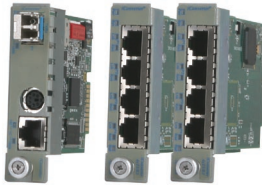
iConverter 4xT1/E1 MUX and TM3 Transport

Modular T1/E1 Multiplexer Solution

iConverter T1/E1 multiplexer and transport modules combine to provide a flexible and scalable T1/E1 fiber multiplexer.

This modular solution is comprised of the *iConverter* TM3 fiber transport module and the *iConverter* 4xT1/E1 4-port multiplexer module installed in a 2, 5 or 19-module chassis. Each TM3 can support up to four 4xT1/E1 MUX modules, for multiplexing up to sixteen T1/E1 circuits per fiber transport link. Ethernet traffic can also be multiplexed with the T1/E1 traffic through a 10/100/1000 UTP port.

The modular T1/E1 multiplexers operate in a back-to-back configuration, with one TM3 transport module at each end of the fiber link.

Monitoring, configuration and remote testing is accessed through the TM3 serial console port, IP-based SNMP or IP-less OAM channels.

- 24 hour T1/E1 statistic logging
- Supports remotely-initiated T1 loop-up commands
- Manageable via SNMP, TELNET or serial port
- Optional external clock I/O port

iConverter TM3 Transport Module					
Fiber	Distance	Wavelength (nm)	Connector Type		
			ST	SC	SFP
SFP	-	-	-	-	2439-0-T**
MM-DF	220/550m	850	2420-0-T	2422-0-T	-
MM-DF	12km	1310	2421-1-T	2423-1-T	-
SM-DF	34km	1310	2421-2-T	2423-2-T	-
SM-DF	80km	1550	-	2423-3-T	-
SM-DF	110km	1550	-	2423-4-T*	-
SM-DF	140km	1550	-	2423-5-T*	-
SM-SF	20km	1550/1310	-	2430-1-T*	-
SM-SF	20km	1310/1550	-	2431-1-T*	-
SM-SF	40km	1310/1550	-	2430-2-T*	-
SM-SF	40km	1550/1310	-	2431-2-T*	-

* Single-Fiber modules must be ordered in pairs.
** Order SFP separately. See SFP ordering information on pages 50 and 51.

To order a wide temperature (-40 to 60°C) TM3 module, add a "W" to the end of the model number.

iConverter 4xT1/E1 MUX Module		
Number of Ports	4 T1/E1	4 T1/E1 with Clock I/O
Model Number	8485-4	8486-4

To order a wide temperature (-40 to 60°C) 4xT1/E1 module, add a "W" to the end of the model number.

iConverter T1/E1 MUX/M

16-Port T1/E1 Fixed-Configuration Multiplexers

The *iConverter* T1/E1 MUX multiplexes up to sixteen T1s or E1s and one 10/100/1000 Ethernet onto a fiber optic transport link.

The T1/E1 MUXes operate in a back-to-back configuration, with one multiplexer at each end of the fiber transport link. The T1/E1 copper interfaces are available in 4, 8, 12 or 16 RJ-48 port configurations.

- Small Form Pluggable (SFP) transceivers or fixed fiber connectors
- Supports multimode, single-mode dual fiber and single-mode single-fiber in standard and CWDM wavelengths
- Manageable via SNMP, TELNET or serial port
- Configurable alarm relay contacts for audio/visual fault notification
- Supports local and remote loop-back modes

Fiber	Distance	Wavelength (nm)	Connector Type		
			ST	SC	SFP
SFP	-	-	-	-	2439-0**
MM-DF	220/550m	850	2420-0	2422-0	-
MM-DF	12km	1310	2421-1	2423-1	-
SM-DF	34km	1310	-	2423-2	-
SM-DF	80km	1550	-	2423-3	-
SM-DF	110km	1550	-	2423-4	-
SM-DF	140km	1550	-	2423-5	-
SM-SF	20km	1550/1310	-	2430-1*	-
SM-SF	20km	1310/1550		2431-1*	-
SM-SF	40km	1310/1550	-	2430-2*	-
SM-SF	40km	1550/1310	-	2431-2*	-
9140-3		Adapter Cable RJ-48 to BNC 3 ft			

To order the number of T1/E1 ports in the chassis, add a number from the list below to the part number as shown: 24xx-x-**Y**z	To order AC or DC power supplies, add a number from the list below to the end of the part number as shown: 24xx-x-y**Z**
1 - 4 ports total 2 - 8 ports total 3 - 12 ports total 4 - 16 ports total	1 - One AC Power Supply 2 - Two AC Power Supplies 3 - One 48VDC Power Supply 4 - Two 48VDC Power Supplies 5 - One 24VDC Power Supply 6 - Two 24VDC Power Supplies

For wide temperature (-40 to 60°C), add a "W" to the end of the model number - 24xx-x-yz**W**
Example: 2421-0-46W = MM-DF, 12km, 850nm, Four 4-Port MUX Modules (16 ports total), Two 24VDC Power Supplies, wide temperature.

* Single-Fiber MUXes Tx and Rx are reversed at each end. For example the 2430-1 must be ordered with the 2431-1

** Order SFP separately. See SFP ordering information on pages 50 and 51.

iConverter **4xT1/E1 MUX and 4xT1/E1 MUX/M**

T1/E1 Managed and Unmnaged Fixed-Configuration Multiplexers

The *iConverter* Managed and Unmanaged 4xT1/E1 MUXes multiplex up to four T1/E1 copper circuits and an Ethernet UTP service onto a fiber optic transport link. The 4xT1/E1 MUXes operate in a back-to-back configuration, with one multiplexer at each end of the fiber link.

The four copper ports support RJ-48 connectors for balanced T1/E1 applications. An optional adapter cable is available to convert to BNC interfaces for unbalanced E1 transport applications.

The 4xT1/E1 MUXes are available with AC or DC power. The AC models accept AC power input ranging from 100VAC to 240VAC, 50/60Hz, and the DC models accept 18VDC to 60VDC.

- Supports multimode, single-mode dual fiber and single-mode single-fiber in standard and CWDM wavelengths
- Small Form Pluggable (SFP) transceivers or fixed fiber connectors
- Configurable alarm relay contacts for audio/visual fault notification
- AMI, B8ZS and HDB3 line codes
- Local and remote loop-back, and circuit test modes
- Alarm relay and LEDs provide fault notification for loss of power, LOS and AIS

iConverter **4xT1/E1 MUX/M**

Managed Fixed-Configuration T1/E1 Multiplexers

- 10/100/1000 UTP Ethernet multiplexed with up to four independent T1 or E1 circuits
- Managed via local serial port, TELNET or SNMP

Fiber	Distance	Wavelength (nm)	Connector Type		
			ST	SC	SFP
MM-DF	220/550m	850	8820N-5	8822N-5	8839N-0**
MM-DF	12km	1310	8820N-0	8822N-0	
SM-DF	34km	1310	8821N-1	8823N-1	
SM-DF	80km	1310		8823N-2	
SM-DF	110km	1550	-	8823N-3	
SM-DF	140km	1550	-	8823N-5	
SM-SF	20km	1310/1550	-	8830N-1*	-
SM-SF	20km	1550/1310	-	8831N-1*	-
SM-SF	40km	1310/1550	-	8830N-2*	-
SM-SF	40km	1550/1310	-	8831N-2*	-
9140-3	Adapter Cable RJ-48 to BNC 3 ft				

* Single-Fiber MUXes have the Tx and Rx reversed at each end. For example, the 8830N-1 must be ordered with the 8831N-1.
** Order SFP separately. See SFP ordering information on pages 50 and 51.

To order AC power, add a "B" to the model number - 88xx-x-**B**
To order DC power, add a "C" to the model number - 88xx-x-**C**
To order wide temperature (-40 to 60°C), add a "W" to the end of the model number - 88xxN-x-x**W**
Example: 8820N-0-BW = MM-DF, 12km, 1310nm, ST, AC power, wide temperature

iConverter **4xT1/E1 MUX**

Unmanaged Fixed-Configuration T1/E1 Multiplexers

- Optional 10/100 UTP Ethernet multiplexed with up to four independent T1 or E1 circuits
- Cost-effective, unmanaged T1/E1 Multiplexer

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
SFP	8839-0**					
MM-DF	2km	850	8820-5	8822-5	-	-
MM-DF	5km	1310	8820-0	8822-0	8824-0	8826-0
SM-DF	30km	1310	8821-1	8823-1	8825-1	8827-1
SM-DF	60km	1310		8823-2	-	8827-2
SM-DF	120km	1550	-	8823-3	-	8827-3
SM-SF	20km	1310/1550	-	8830-1*	-	-
SM-SF	20km	1550/1310	-	8831-1*	-	-
SM-SF	40km	1310/1550	-	8830-2*	-	-
SM-SF	40km	1550/1310	-	8831-2*	-	-
9140-3	Adapter Cable RJ-48 to BNC 3 ft					

* Single-Fiber MUXes have the Tx and Rx reversed at each end. For example, the 8830-1 must be ordered with the 8831-1.
** Order SFP separately. See SFP ordering information on pages 50 and 51.

To order an optional 10/100 Ethernet port, add a "U" to the model number - 88xx**U**-x-x
To order AC power, add a "B" to the model number - 88xx-x-**B**
To order DC power, add a "C" to the model number - 88xx-x-**C**
To order wide temperature (-40 to 60°C), add a "W" to the end of the model number - 88xx-x-x**W**
Example: 8820U-5-BW = MM-DF, 2km, 850nm, ST, 10/100 Ethernet port, AC power, wide temperature

iConverter **X21**

Serial X.21 to Fiber Converter Modules

The *iConverter* X21 serial-to-fiber media converter supports X.21 and RS-530 applications, and features 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.

- X.21 and RS-530[1] serial to fiber media converter
- Auto-configuration of baud rates
- DCE-sourced or terminal clock modes
- Supports serial data rates up to 8.192Mbps
- Supports different serial interface genders
- Features local loop-back for easy testing of fiber and serial interfaces
- Available as a manageable plug-in module and unmanaged standalone unit
- Small Form Pluggable (SFP) transceivers for standard or CWDM wavelengths
- ST, SC, LC and MT-RJ fixed-fiber connectors

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
SFP		8859-0**				
MM	2km	850	8840-5	-	-	-
MM	5km	1310	8840-0	8842-0	8844-0	8846-0
SM	30km	1310	8841-1	8843-1	8845-7	8847-1
SM	60km	1310	8841-2	8843-2	-	8847-2
SM	120km	1550	-	8843-3	-	8847-3
SM-SF	20km	1310/1550	-	8850-1*	-	-
SM-SF	20km	1550/1310	-	8851-1*	-	-
SM-SF	40km	1310/1550	-	8850-2*	-	-
SM-SF	40km	1550/1310	-	8851-2*	-	-

[1] Supports RS-530 DCE and DTE co-directional timing, Tx and Rx data, and two control lines.
* Single-fiber converters must be used in pairs.
** Order SFP separately. See SFP ordering information on pages 50 and 51.

To order an unmanaged standalone model, add a suffix to the model number as follows:
- A: Tabletop with US AC Power Supply Adapter (supports DIN-rail Bracket)
- B: Tabletop with Universal AC Power Supply Adapter (supports DIN-rail Bracket)
- C: Tabletop with DC Power Terminal Connector (supports DIN-rail Bracket)
- D: Wall-mount with US AC Power Supply Adapter
- E: Wall-mount with Universal AC Power Supply Adapter
- F: Wall-mount with DC Power Terminal Connector

For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
For extended temperature (-40 to +75°C), add a "Z" to the end of the model number.

Example: 8840-0-AW = MM, 5km, 1310, ST, Wall-mount with US AC Power Supply Adapter, wide temperature.

iConverter **RS232 and RS422/485**

Serial RS232 & RS422/485 to Fiber Converter Modules

The *iConverter* RS232 and *iConverter* RS422/485 are serial to fiber converters that extend serial protocol over fiber. They provide easy connection to serial devices with a full complement of control signaling lines and DIP-switch selection for DTE or DCE connections. The serial port interface is available with a DB-9 connector or a terminal block connector for field wiring.

- The RS232 provides automatic baud rate detection
- The RS422/485 provides automatic Full-Duplex baud rate detection in Point-to-Point operation
- The RS422/485 supports point-to-multipoint operation in Half-Duplex and Full-Duplex at baud rates up to 921,600 baud
- Both the RS232 and RS422/485 feature a remote fiber loopback switch for easy testing of fiber link, even during serial transmission

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
iConverter RS232						
MM	5km	1310	8760-0	8762-0	8764-0	8766-0
SM	30km	1310	8761-1	8763-1	8765-1	8767-1
SM	60km	1310	8761-2	8763-2	-	8767-2
SM	120km	1550	-	8763-3	-	8767-3
SM-SF	20km	1310/1550	-	8770-1*	-	-
SM-SF	20km	1550/1310	-	8771-1*	-	-
SM-SF	40km	1310/1550	-	8770-2*	-	-
SM-SF	40km	1550/1310	-	8771-2*	-	-
iConverter RS422/485						
MM	5km	1310	8780-0	8782-0	8784-0	8786-0
SM	30km	1310	8781-1	8783-1	8785-1	8787-1
SM	60km	1310	8781-2	8783-2	-	8787-2
SM	120km	1550	-	8783-3	-	8787-3
SM-SF	20km	1310/1550	-	8790-1*	-	-
SM-SF	20km	1550/1310	-	8791-1*	-	-
SM-SF	40km	1310/1550	-	8790-2*	-	-
SM-SF	40km	1550/1310	-	8791-2*	-	-

* Single-Fiber converters must be used in pairs.
For modules with terminal block serial ports, add a "T" before the dash "-" in the model number. Examples: 8760**T**-0, 8780**T**-0.

For wide temperature (-40 to 60°C), add a "W" to the end of the model number.
Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.

iConverter OC3FF and OC12FF

Multimode to Single-mode Converter Modules

The *iConverter* OC3FF and OC12FF multimode to single-mode fiber converter modules extend network distances and connect dissimilar fiber cabling. Modules are available to support OC3/STM-1 and OC12/STM-4 technologies.

- Converts multimode (MM) to single-mode (SM) dual fiber and dual fiber to single-fiber (SF)
- Remote Fault Detection and Link Propagation modes

Fiber Port 1/Port 2	Distance Port 1/Port2	Wavelength (nm) Port 1/Port2	Connector Type	
			ST	SC
iConverter OC3FF				
MM/SM	5km/30km	1310/1310	8660-1	8661-1
MM/SM	5km/60km	1310/1310	8660-2	8661-2
MM/SM	5km/120km	1310/1550	-	8661-3
MM/SM-SF	5km/20km	1310/13-15	8670-1*	8674-1*
MM/SM-SF	5km/20km	1310/15-13	8671-1*	8675-1*
MM/SM-SF	5km/40km	1310/13-15	8670-2*	8674-2*
MM/SM-SF	5km/40km	1310/15-13	8671-2*	8675-2*
SM/SM-SF	30km/20km	1310/13-15	8672-1*	8676-1*
SM/SM-SF	30km/20km	1310/15-13	8673-1*	8677-1*
SM/SM-SF	30km/40km	1310/13-15	8672-2*	8676-2*
SM/SM-SF	30km/40km	1310/15-13	8673-2*	8677-2*
iConverter OC12FF				
MM/SM	550m/12km	1310/1310	-	8681-1
MM/SM	550m/34km	1310/1310	-	8681-2
MM/SM	550m/80km	1310/1550	-	8681-3
MM/SM-SF	550m/20km	1310/13-15	-	8690-1*
MM/SM-SF	550m/20km	1310/15-13	-	8691-1*
SM/SM-SF	12km/20km	1310/13-15	-	8692-1*
SM/SM-SF	12km/20km	1310/15-13	-	8693-1*

* Single-fiber converters must be used in pairs. All single-fiber ports are SC connectors.

To order an unmanaged standalone model, add a suffix to the model number as follows:
D = Wall-Mount with External US AC Power Supply Adapter
E = Wall-Mount with External Universal AC Power Supply Adapter
F = Wall-Mount with DC Terminal Power

For wide temperature (-40 to 60°C), add a "W" to the end of the model number.

Example: 8660-1-DW = MM/SM, 5km/30km, 1310, ST Connector, Wall-Mount External US AC Power Supply, wide temperature

Contact Omnitron for other fiber options and extended temperature (-40 to +75°C) models.

iConverter xFF

SFP to SFP Media Converter/Transponder Modules

The *iConverter* xFF is a protocol-transparent, SFP to SFP media converter that provides reliable and cost-effective conversion between different optical wavelengths, multimode and single-mode fiber, and dual and single-fiber networks.

- SFP to SFP fiber converter and wavelength transponder
- Supports data rates of 1Mbps to 4.25Gbps
- Supports Fast and Gigabit Ethernet, OC-3 (STM-1), OC-12 (STM-4), OC-48 (STM-16) and 1/2/4 Gigabit Fibre Channel
- Wavelength conversion for CWDM and DWDM applications
- User-selectable link fault detection modes

Model #	Description
8699-0*	xFF Chassis Plug-in Module

iConverter OC3/STM1

OC-3/STM-1 Coax to Fiber Media Converter Modules

The *iConverter* OC3/STM1 converts OC-3/STM-1e coax to OC-3/STM-1 fiber.

- Mini-BNC connectors with standard BNC adapters
- SFP transceivers for standard and CWDM wavelengths
- Multimode, single-mode and single-fiber

Model #	Description
8899S-0*	OC3/STM1 Chassis Plug-In Module

* Order SFP separately. See SFP ordering information on pages 50 and 51.

The *iConverter* xFF and STM1 media converters are available as chassis managed plug-in modules or compact, unmanaged standalone units. To order an unmanaged standalone unit, add a suffix to the model number as follows:

D = Wall-Mount with External US AC Power Supply
E = Wall-Mount with External Universal AC Power Supply
F = Wall-Mount with DC Terminal Power

For wide temperature (-40 to 60°C), add a "W" to the end of the model number.

Contact Omnitron for extended temperature (-40 to +75°C) models.

iConverter CWDM Multiplexer/Demultiplexer Modules

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.

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. 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 with up to 120 ports in a 2U chassis
- 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
- Manageable via SNMPv1/2c/3 or TELNET
- One (1) Year Warranty and Free 24/7 Technical Support

For CWDM Transponder modules, see the *iConverter* XG (page 14) and the *iConverter* xFF (page 35).

iConverter CWDM/X

CWDM Multiplexer Modules for Duplex Fiber

The passive *iConverter* CWDM/X modules are available in 4 and 8-Channel (wavelength) models, supporting a variety of wavelength combinations and port configurations.

The CWDM/X features an optional Expansion Port that enables cascading two MUX/DEMUX modules, doubling the channel capacity on the common dual fiber link. For example, two 4-Channel modules can be cascaded to create a 8-Channel fiber common link.

The CWDM/X also features an optional 1310nm Pass Band Port that allocates 1260nm to 13160nm for a standard 1310nm network (such as SDH or SONET). CWDM channels in the range of 1470nm to 1610nm can be overlaid on the same fiber pair as the existing 1310nm network with no changes to the legacy equipment.

Module Type	Model Number	Channel Port ITU Center Wavelength (nm)	# of Chassis Slots	1310 Pass Band Port[1]	Expansion Port[2]
CWDM/X 4-Channel	8860-0	1471, 1491, 1591, 1611	1	No	No
	8860-1	1471, 1491, 1591, 1611	1	Yes	No
	8860-2	1471, 1491, 1591, 1611	1	Yes	Yes
	8860-3	1471, 1491, 1591, 1611	1	No	Yes
	8861-0	1511, 1531, 1551, 1571	1	No	No
	8861-1	1511, 1531, 1551, 1571	1	Yes	No
CWDM/X 8-Channel	8862-0	1271, 1291, 1311, 1331, 1351, 1371, 1431, 1451	1	No	No
	8863-0	1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611	1	No	No
	8863-1	1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611	2	Yes	No

[1] 1310 Pass Band port supports 1310 +/- 50nm. Use with legacy 1310 device.
[2] EXP port supports 1511nm to 1571nm. Use with 8861-0 or legacy 1550 device.

Contact Omnitron for customized CWDM models.

iConverter CWDM/AD

CWDM Add/Drop Multiplexer Modules for Duplex Fiber

iConverter CWDM/AD modules are Optical Add/Drop Multiplexers (OADM) that add (multiplex) and drop (demultiplex) selected channels on one or both directions of a duplex CWDM fiber link. *iConverter* CWDM/AD modules enable adding new access points anywhere on a CWDM network, without impacting the remaining channels traversing the network.

1-Channel CWDM/AD (ITU Center wavelength in nm)

Channel Port - Model # 8867-xx (xx= two digit number below)					
27 = 1271	33 = 1331	39 = 1391	45 = 1451	51 = 1511	57 = 1571
29 = 1291	35 = 1351	41 = 1411	47 = 1471	53 = 1531	59 = 1591
31 = 1311	37 = 1371	43 = 1431	49 = 1491	55 = 1551	61 = 1611

2-Channel CWDM/AD (lower band - ITU Center wavelength in nm)

Channel Port 1	Model # 8868-xx (xx= two digit number below)								
	1291	1311	1331	1351	1371	1391	1411	1431	1451
1271	01	02	03	04	05	06	07	08	09
1291	-	12	13	14	15	16	17	18	19
1311	-	-	23	24	25	26	27	28	29
1331	-	-	-	34	35	36	37	38	39
1351	-	-	-	-	45	46	47	48	49
1371	-	-	-	-	-	56	57	58	59
1391	-	-	-	-	-	-	67	68	69
1411	-	-	-	-	-	-	-	78	79
1431	-	-	-	-	-	-	-	-	89

2-Channel CWDM/AD (upper band ITU Center wavelength in nm)

Channel Port 1	Model # 8869-xx (xx= two digit number below)						
	1491	1511	1531	1551	1571	1591	1611
1471	01	02	03	04	05	06	07
1491	-	12	13	14	15	16	17
1511	-	-	23	24	25	26	27
1531	-	-	-	34	35	36	37
1551	-	-	-	-	45	46	47
1571	-	-	-	-	-	56	57
1591	-	-	-	-	-	-	67

NOTE: When using with 1310nm legacy SDH/SONET, wavelengths between 1260nm to 1360nm should not be used.

Contact Omnitron for custom CWDM modules.

iConverter Band-Splitter and 1310 Pass Band OADM

The *iConverter* Band Splitter module combines and separates the upper CWDM Channels (1470nm to 1610nm) and the lower CWDM Channels (1270nm to 1450nm).

The *iConverter* 1310 Pass Band OADM adds and drops the 1310 Pass Band (1260nm to 1360nm) on both directions of the CWDM fiber link.

Model Number	Module Type
8865-0	CWDM Band Splitter
8867-1	1310 Pass Band OADM

iConverter Single-Fiber CWDM/X

Single-Fiber *iConverter* CWDM/X modules are available in 2 and 4-Channel models.

Model Type	Model Number	Channel Port ITU Center Wavelength Tx/Rx (nm)
2-Channels	8870-0	1471/1491, 1511/1531
	8871-0	1491/1471, 1531/1511
	8872-0	1551/1571, 1591/1611
	8873-0	1571/1551, 1611/1591
4-Channels	8874-0	1271/1291, 1311/1331, 1351/1371, 1431/1451
	8875-0	1291/1271, 1331/1311, 1371/1351, 1451/1431
	8876-0	1471/1491, 1511/1531, 1551/1571, 1591/1611
	8877-0	1491/1471, 1531/1511, 1571/1551, 1611/1591

Single-fiber CWDM/X models must be used in pairs.

iConverter Single-Fiber CWDM/AD

iConverter 1-Channel Single-Fiber CWDM/AD modules add and drop one channel on one or both directions of a CWDM single-fiber link.

1-Channel CWDM/AD (ITU Center Wavelength in nm)

Channel Port Wavelength Pairing - Model # 8878-xx		
27 = 1271/1291	39 = 1391/1411	51 = 1511/1531
31 = 1311/1331	43 = 1431/1451	55 = 1551/1571
35 = 1351/1371	47 = 1471/1491	59 = 1591/1611

Contact Omnitron for custom CWDM modules.

miConverter Miniature Media Converters

The miniature (less than 5 ounces) *miConverter* copper UTP to fiber media converters provide cost-effective fiber connectivity to a desktop computer or a portable laptop. A special USB power adapter cable allows the *miConverter* to be powered by a computer USB port. Models with external AC power supplies in US and International versions are also available.

miConverter GX/T and *miConverter* Gx

UTP to Fiber Gigabit Media Converters

The *miConverter* GX/T converts 10/100/1000BASE-T UTP copper to 1000BASE-X fiber and supports jumbo frames up to 10,240 bytes. It features fixed fiber connectors or SFP transceivers for standard and CWDM wavelengths. Both the fiber and UTP ports support auto-negotiation, Pause and link fault modes that can be configured with DIP-switches.

The *miConverter* Gx converts 1000BASE-T UTP copper to 1000BASE-X fiber. It features a UTP port that auto-detects the duplex and Pause modes which can be configured with DIP-switches, and features advanced fault detection modes for link failure notification.

- Powered from an AC/DC power adapter or a USB port
- Auto or manual UTP configuration
- Advanced fault detection modes
- The *miConverter* GX/T supports 10,240 byte jumbo frames and features fixed fiber connectors or SFPs

Fiber	Distance	Wavelength (nm)	*miConverter* Gx		*miConverter* GX/T	
			ST	SC	ST	SC
SFP	-	-	-		1239-0-x**	
MM	220m/550m	850	1200-0-x	1202-0-x	1220-0-x	1222-0-x
SM	12km	1310	1201-1-x	1203-1-x	1221-1-x	1223-1-x
SM	34km	1310	-	1203-2-x	-	1223-2-x
SM	80km	1550	-	1203-3-x	-	1223-3-x
SM	110km	1550	-	1203-4-x	-	1223-4-x
SM	140km	1550	-	1203-5-x	-	1223-5-x
SM-SF	20km	1310/1550	-	1210-1-x*	-	1230-1-x*
SM-SF	20km	1550/1310	-	1211-1-x*	-	1231-1-x*
SM-SF	40km	1310/1550	-	1210-2-x*	-	1230-2-x*
SM-SF	40km	1550/1310	-	1211-2-x*	-	1231-2-x*

*Single-fiber converters must be used in pairs.
** Order the required SFPs separately. See SFP ordering information on pages 50 and 51.
To order a power supply, add a suffix to the model number as shown on page 41.

miConverter 10/100 and 10/100 Plus

10/100 UTP to Fast Ethernet Fiber Media Converters

The miniature *miConverter* 10/100 is a rate-switching copper UTP to fiber media converter. The *miConverter* 10/100 provides plug-and-play set up with a UTP port that auto-detects the speed, duplex mode and crossover function of the connected device.

In addition to the features listed above, the *miConverter* 10/100 Plus features DIP-switches for manual UTP port configuration and advanced link fault detection modes.

- Supports 10BASE-T, 100BASE-TX and 100BASE-FX
- Multimode (MM), single-mode (SM) and single-fiber (SF)
- Powered from an AC/DC power adapter or a USB port
- The *miConverter* 10/100 Plus features manual UTP configuration and advanced fault detection modes

Fiber	Distance	Wavelength (nm)	*miConverter* 10/100		*miConverter* 10/100 Plus	
			ST	SC	ST	SC
MM	5km	1310	1100-0-x	1102-0-x	1120-0-x	1122-0-x
SM	30km	1310	1101-1-x	1103-1-x	1121-1-x	1123-1-x
SM	60km	1310	1101-2-x	1103-2-x	1121-2-x	1123-2-x
SM	120km	1550	-	1103-3-x	-	1123-3-x
SM-SF	20km	1310/1550	-	1110-1-x*	-	1130-1-x*
SM-SF	20km	1550/1310	-	1111-1-x*	-	1131-1-x*
SM-SF	40km	1310/1310	-	1110-2-x*	-	1130-2-x*
SM-SF	40km	1550/1310	-	1111-2-x*	-	1131-2-x*

*Single-fiber converters must be used in pairs.

To order a power supply, add a suffix to the model number (replace "x") as follows:
-1 External US AC Power Adapter
-2 External Universal Power Adapter
-3 External European Power Adapter
-4 External UK AC Power Adapter
-5 External Australian AC Power Adapter
-6 USB Power Adapter Cable
-8 External Japan/US AC Power Adapter
-9 2-pin 5-12VDC terminal connector (Available only with GX/T)

Wall mount brackets model number 1091-0.

Example: 1100-0-1 = *miConverter* 10/100 MM/DF/5km/1310/ST with External US AC Power Adapter.

Contact Omnitron for other fiber options and wide temperature (-40 to +60°C) models.

FlexPoint™ self-contained media converter modules provide unmanaged copper-to-fiber and fiber-to-fiber media conversion. Network administrators can mix and match FlexPoint modules in a chassis for fiber access in a variety of network configurations.

FlexPoint 14-Module Power-Redundant Chassis

Available in 110/230VAC or 48VDC, the Powered Chassis holds 14 individually secured and hot-swappable FlexPoint converters. Two redundant hot-swappable power supplies ensure continuous and reliable network operation.

FlexPoint 5-Module Rack-Mounting Shelf

The rack-mounting shelf provides a flexible, low-cost solution for up to five individually-powered FlexPoint converter modules.

FlexPoint Wall-Mount and DIN-rail kits

Wall and DIN-rail mounting kits are available for FlexPoint modules and FlexPoint modules with DC adapters.

FlexPoint DC Adapter

The FlexPoint DC Adapter allows a FlexPoint media converter to be powered from an 18 to 60VDC power source.

Description	14-Module	5-Module	1-Module
1 Power Supply/AC	4396	-	-
1 Power Supply/DC	4386	-	-
2 Power Supplies/AC	4395	-	-
Spare Power Supply/AC	4399	-	-
2 Power Supplies/DC	4385	-	-
Spare Power Supply/DC	4389	-	-
FlexPoint Rack Mounting Shelf	-	4392	-
FlexPoint DC Adapter (18 to 60VDC)	-	-	4384
Wall Mount Kit (Stand Alone AC)	-	-	4380
Wall Mount Kit (for DC Adapter)	-	-	4381
DIN Rail Mounting Bracket	-	-	8250-0

FlexPoint GX/T

10/100/1000 Mbps UTP to Gigabit Fiber Media Converters

The FlexPoint GX/T is a 10/100/1000BASE-T UTP copper to 1000BASE-X modular fiber media converter that supports jumbo frames up to 10,240 bytes. The GX/T supports both 100BASE-FX and 1000BASE-X SFP transceivers for interoperability with Fast Ethernet and Gigabit fiber equipment.

- Conforms to 10BASE-T, 100BASE-TX, 1000BASE-T, 100BASE-FX[1] and 1000BASE-X specifications
- Supports jumbo frames up to 10,240 bytes
- Supports dual and single-fiber 100BASE-FX or 1000BASE-X SFP transceivers for standard or CWDM wavelengths
- Multimode (MM) and single-mode (SM) fiber with ST and SC connectors and single-fiber (SF) with SC connectors
- Both the fiber and UTP ports support auto-negotiation
- Auto or manually configured Pause function for flow control
- Loopback mode supports end-to-end testing
- User-selectable Link Modes with Remote Fault Indicators signal loss of link for Far-End Fault and Link Fault conditions
- Diagnostic and DIP-switch configurations are displayed with status LEDs for quick and easy installation

Fiber	Distance	Wavelength (nm)	Connector Type		
			ST	SC	SFP
-	-	-	-	-	4719-x**
MM	220/550m	850	4706-x	4700-x	-
SM	12km	1310	4707-x	4701-x	-
SM	34km	1310	-	4702-x	-
SM	80km	1550	-	4703-x	-
SM	110km	1550	-	4704-x	-
SM	140km	1550	-	4705-x	-
SM-SF	20km	1310/1550	-	4710-x*	-
SM-SF	20km	1550/1310	-	4711-x*	-
SM-SF	40km	1310/1550	-	4712-x*	-
SM-SF	40km	1550/1310	-	4713-x*	-

[1]100BASE-FX is supported on SFP models only.
* Single-fiber converters must be used in pairs.
** Order the required SFPs separately. See SFP ordering information on pages 50 and 51.

POWER OPTIONS (-x)
-0   No Power Supply
-1   110V (US Standard)
-2   110V/230V Auto-sensing (Universal)

Contact Omnitron for other fiber options and wide temperature (-40 to +60°C) models.

FlexPoint Gx and 100Fx/Tx

1000Mbps Ethernet UTP to Fiber Media Converters

Fast Ethernet UTP to Fiber Media Converters

The FlexPoint Gx UTP copper to fiber media converters provide transparent integration between 1000BASE-X Gigabit fiber and 1000BASE-T Gigabit UTP devices. The Gx supports jumbo packets and transparently passes VLAN frames.

The FlexPoint 100Fx/Tx converts 100BASE-TX UTP copper to Fast Ethernet fiber and supports Half or Full-Duplex auto-negotiation with manual override. The 100Fx/Tx supports jumbo packets, transparently passes VLAN frames, and features a UTP crossover switch.

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
FlexPoint Gx						
MM	220m/550m	850	4376-x	4370-x	4670-x	4672-x
SM	12km	1310	4377-x	4371-x	4671-x	4673-x
SM	34km	1310	-	4372-x	-	4674-x
SM	80km	1550	-	4373-x	-	4675-x
SM	110km	1550	-	4374-x	-	4676-x
SM	140km	1550	-	4375-x	-	4677-x
FlexPoint 100Fx/Tx						
MM	5km	1310	4332-x	4330-x	4336-x	-
SM	30km	1310	4333-x	4331-x	4337-x	-
SM	60km	1310	4335-x	4334-x	-	-
SM	85km	1550	-	4350-x	-	-
SM	120km	1550	-	4351-x	-	-

POWER OPTIONS (-x)
-0   No Power Supply
-1   110V (US Standard)
-2   110V/230V Auto-sensing (Universal)

Contact Omnitron for other fiber options and wide temperature (-40 to +60°C) models.

FlexPoint 10/100

10/100 UTP to Fast Ethernet Fiber Media Converters

The FlexPoint 10/100 media converters allow connection between any Half and Full-Duplex, copper-based Ethernet devices operating at either 10 or 100Mbps via Fast Ethernet fiber.

• UTP 10/100 and Full/Half-Duplex auto-sensing with manual override controls

• UTP crossover switch

• The fiber port supports 100Mbps Full/Half-Duplex, multimode or single-mode fiber, SC, ST or MT-RJ connectors

• The fiber port supports distances up to 120km

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	LC
MM	5km	1310	4342-x	4340-x	4346-x	4355-1x
SM	30km	1310	4343-x	4341-x	4348-x	4355-2x
SM	60km	1310	4345-x	4344-x	-	4355-3x
SM	120km	1550	-	4349-x	-	4355-4x
SM/SF	20km	1310/1550	-	4357-1x*	-	-
SM/SF	20km	1550/1310	-	4357-2x*	-	-

* Single-fiber converters must be used in pairs.

POWER OPTIONS (-x)
-0   No Power Supply
-1   110V (US Standard)
-2   110V/230V Auto-sensing (Universal)

Contact Omnitron for other fiber options and wide temperature (-40 to +60°C) models.

FlexPoint 10FL/T, 10FL/2, 10T/2 & 10AUI/T

Ethernet Media Converters

The FlexPoint 10Mbps converters provide media conversion between fiber (multimode or single-mode) and UTP or coax.

- The FlexPoint 10FL/T connects 10BASE-FL fiber and 10BASE-T UTP copper. It features a UTP crossover switch and supports distances up to 120km

- The FlexPoint 10FL/2 connects 10BASE-FL fiber and 10BASE-2 coax with a coax termination switch

- The FlexPoint 10T/2 connects 10BASE-2 coax and 10BASE-T UTP copper, and features a UTP crossover switch and a coax termination switch

- The FlexPoint 10AUI/T connects AUI and 10BASE-T UTP copper

Fiber	Distance	Wavelength (nm)	Connector Type			
			ST	SC	MT-RJ	Coax
FlexPoint 10FL/T						
MM	2km	850	4300-x	4303-x	-	-
MM	5km	1310	4302-x	-	4305-x	-
SM	30km	1310	4301-x	-	4308-x	-
SM	60km	1310	4304-x	-	-	-
SM	85km	1550	-	4306-x	-	-
SM	120km	1550	-	4307-x	-	-
FlexPoint 10FL/2						
MM	2km	850	4310-x	-	-	-
MM	5km	1310	4312-x	-	-	-
SM	30km	1310	4311-x	-	-	-
FlexPoint 10T/2						
UTP/Coax 100m/185m		-	-	-	-	4320-x
FlexPoint 10AUI/T (AUI Connector)						
UTP/AUI 100m/50m		-	4321-x			

POWER OPTIONS (-x)
-0 No Power Supply
-1 110V (US Standard)
-2 110V/230V Auto-sensing (Universal)

Contact Omnitron for other fiber options and wide temperature (-40 to +60°C) models.

FlexPoint 100FF, 1000FF, OC3FF, OC12FF

Single-mode to Multimode Fiber Converters

The FlexPoint fiber to fiber converters convert between single-mode and multimode fiber. They support 10, 100 and Gigabit Ethernet, OC-3/STM-1, OC-12/STM-4, SONET, Token Ring, FDDI and Fibre Channel.

- The FlexPoint 100FF supports Ethernet, Fast Ethernet, Token Ring and FDDI, and is available with ST and SC connectors

- The FlexPoint 1000FF supports Gigabit Ethernet and Fibre Channel, and is available with SC connectors

- The FlexPoint OC3FF supports OC-3/STM-1 and is available with ST and SC connectors

- The FlexPoint OC12FF supports OC-12/STM-4 and is available with SC connectors

Fiber Port 1/Port 2	Distance Port 1/Port2	Wavelength (nm) Port 1/Port2	Connector Type	
			ST	SC
FlexPoint 100FF				
MM/MM	5km/5km	1310/1310	4420-x	4421-x
MM/MM	2km/5km	850/1310	4418-x	4419-x
MM/SM	5km/30km	1310/1310	4410-x	4411-x
MM/SM	5km/60km	1310/1310	4412-x	4413-x
MM/SM	2km/30km	850/1310	4414-x	4415-x
MM/SM	2km/60km	850/1310	4416-x	4417-x
FlexPoint 1000FF				
MM/SM	220-550m/12km	850/1310	-	4433-x
MM/SM	220-550m/34km	850/1310	-	4440-x
MM/SM	220-550m/80km	850/1550	-	4437-x
SM/SM	12km/34km	1310/1310	-	4441-x
FlexPoint OC3FF				
MM/SM	5km/30km	1310/1310	4450-x	4451-x
MM/SM	5km/60km	1310/1310	4452-x	4453-x
MM/SM	2km/30km	850/1310	4454-x	4455-x
MM/SM	2km/60km	850/1310	4456-x	4457-x
FlexPoint OC12FF				
MM/SM	550m/12km	1310/1310	-	4461-x
MM/SM	550m/34km	1310/1310	-	4463-x
MM/SM	550m/80km	1310/1550	-	4469-x

POWER OPTIONS (-x)
-0 No Power Supply
-1 110V (US Standard)
-2 110V/230V Auto-sensing (Universal)

Contact Omnitron for other fiber options and wide temperature (-40 to +60°C) models.

FlexPoint T1/E1

T1/E1 Copper to Fiber Media Converter

The T1/E1 extends twisted pair and coax distances over fiber. It supports ANSI, AT&T, ITU and ETSI standards, and AMI, B8ZS and HDB3 line codes. The T1/E1 features a crossover switch, fiber loopback and relay contacts for connection to alarm equipment.

Fiber	Distance	Wavelength (nm)	Connector Type	
			ST	SC
FlexPoint T1/E1 Copper RJ-45/RJ-48 to Fiber				
MM	5km	1310	4472-x	4470-x
SM	30km	1310	4473-x	4471-x
SM	60km	1310	-	4474-x
FlexPoint T1/E1 Copper Coax + RJ-45/RJ-48 to Fiber				
MM	5km	1310	4492-x	4490-x
SM	30km	1310	4493-x	4491-x
SM	60km	1310	-	4494-x

FlexPoint 232

RS-232 to Fiber Media Converter

The FlexPoint 232 is a serial RS-232 to fiber converter with support for five control signals that enables flexible RS-232 network connectivity for a variety of serial applications.

Fiber	Distance	Wavelength (nm)	Connector Type		
			ST	SC	MT-RJ
MM	2.5km	850	4481-x	4480-x	-
MM	5km	1310	4483-x	4482-x	4487-x
SM	30km	1310	4485-x	4484-x	4488-x
SM	60km	1310	-	4486-x	-

POWER OPTIONS (-x)
-0 No Power Supply
-1 110V (US Standard)
-2 110V/230V Auto-sensing (Universal)

Contact Omnitron for other fiber options and wide temperature (-40 to +60°C) models.

OmniConverter GPoE/S

Multi-port Gigabit Media Converter with PoE/PSE

The *OmniConverter* GPoE/S is a multi-port media converter that provides 10/100/1000BASE-T UTP to 100BASE-FX or 1000BASE-X fiber and supports Power-over-Ethernet (PoE). A variety of port configurations are available, including single or dual UTP or SFP ports.

The *OmniConverter* GPoE/S supports both the IEEE 802.3af Power-over-Ethernet (PoE) and IEEE 802.3at (PoE+) standards. Classified as Power Sourcing Equipment (PSE), the GPoE/S can provide power to one or two Powered Devices (PDs) using standard UTP cables that carry the Ethernet data.

The GPoE/S can be used to power a variety of PDs such as IP phones, wireless access points and network cameras.

The GPoE/S standard models (802.3af) provide up to 15.4W of power per port. The high power GPoE/S models support the new IEEE 802.3at (PoE+) standard and provide up to 25.5W per port.

- Supports IEEE 802.3af PoE and IEEE 802.3at PoE+
- Supports legacy non-IEEE compatible powered devices
- Models available with redundant SFP port option

Fiber	Distance	Wavelength (nm)	Connector Type					
			ST		SC		100/1000 SFP	
			PoE	PoE+	PoE	PoE+	PoE	PoE+
MM	220/550m	850	9400-0	9420-0	9402-0	9422-0		
SM	12km	1310	9401-0	9421-1	9403-1	9423-1		
SM	34km	1310	-	-	9403-2	9423-2		
SM	80km	1550	-	-	9403-3	9423-3		
SM	110km	1550	-	-	9403-4	9423-4		
SM	140km	1550	-	-	9403-5	9423-5		
SM-SF	20km	13/15	-	-	9410-1*	9430-1*		
SM-SF	20km	15/13	-	-	9411-1*	9431-1*		
SM-SF	40km	13/15	-	-	9410-2*	9430-2*		
SM-SF	40km	15/13	-	-	9411-2*	9431-2*		
100/1000 SFP							9419-0**	9439-0**
100/1000 SFP (x2)							9419-1**	9439-1**

*Single-fiber converters must be used in pairs.
** Order the required SFPs separately. See SFP ordering information on pages 50 and 51

To order number of UTP ports, add a number below to the model number - 94xx-x-**Y**z
1 - One (1) UTP Port
2 - Two (2) UTP Ports

To order an external power supply, add a number below to the model number - 94xx-x-y**Z**
1 - External PS, 100-240VAC, with US Power Cord
2 - External PS, 100-240VAC, with no Power Cord
9 - No external PS, direct 48VDC input, with 3 pos. terminal block

To order wide operating temperature range (-40 to 60°C) add a "W" to the end of the model number - 94xx-x-yz**W**. Contact Omnitron for other fiber options and extended operating temperature range (-40 to 75°C) models.

Small Form Pluggable Transceivers

Omnitron SFPs are interchangeable compact fiber transceivers that enable connectivity to a wide variety of fiber optic cables and wavelengths, including single-fiber, single-mode, multimode and Coarse Wave Division Multiplexing (CWDM).

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.

- For use with *iConverter*, *miConverter,* FlexPoint, *OmniConverter*, and third party equipment that supports SFPs
- LC Connectors
- Hot-pluggable with durable metal enclosure

SFPs for Fast Ethernet, SONET OC-3, SDH STM-1, T1/E1, T3/E3 and X21					
Fiber Type	Distance	Model #	Tx	Rx	
MM/DF	5km	7006-0	1310	1310	
SM/DF	30km	7007-1	1310	1310	
SM/DF	60km	7007-2	1310	1310	
SM/DF	120km	7007-3	1550	1550	
SM/SF	30km	7014-1	1310	1550	
SM/SF	30km	7015-1	1550	1310	
SM/SF	50km	7014-2	1310	1550	
SM/SF	50km	7015-2	1550	1310	

SFPs for Gigabit Ethernet, SONET OC-12 and SDH STM-4				
Fiber Type	Distance	Model #	Tx	Rx
MM/DF	220/550m	7206-0	850	850
SM/DF	12km	7207-1	1310	1310
SM/DF	34km	7207-2	1310	1310
SM/DF	80km	7207-3	1550	1550
SM/DF	110km	7207-4	1550	1550
SM/DF	140km	7207-5	1550	1550
SM/SF	20km	7214-1	1310	1550
SM/SF	20km	7215-1	1550	1310
SM/SF	40km	7214-2	1310	1550
SM/SF	40km	7215-2	1550	1310
SM/SF	60km	7214-3	1310	1550
SM/SF	60km	7215-3	1550	1310
SM/SF	20km	7216-1	1310	1490
SM/SF	20km	7217-1	1490	1310

10 Gigabit SFP+ (Ethernet, Fibre Channel, SONET) with Digital Diagnostics				
Fiber	Distance	Model #	Description	Wavelength
MM	300m*	7406-0	10GBASE-SR SFP+	850
SM	10km	7407-1	10GBASE-LR SFP+	1310
10 Gigabit XFP (Ethernet, Fibre Channel, SONET) with XFI-side Digital Diagnostics				
MM	300m*	7426-0	10GBASE-SR XFP	850
SM	10km	7427-1	10GBASE-LR XFP	1310
SM	40km	7427-2	10GBASE-ER XFP	1550
SM	80km	7427-3	10GBASE-ZR XFP	1550
10 Gigabit Copper XFP				
N/A	15m	7499-CX4	10GBASE-CX4 XFP	N/A

* Distance obtained with OM3 multimode cable

Gigabit Ethernet SFP Copper Transceivers		
RJ-45 Connector	Data Rate	Distance
7299-RJ	1000 Mbps	100m (UTP)
7299-RJ-GI*	10/100/1000 Mbps	100m (UTP)

CWDM SFPs for Fast Ethernet, SONET OC-3, SDH STM-1, T1/E1, T3/E3 and X21							
Wavelength	Latch	60km	80km	100km	120km	140km	150km
1271	-	7127-1	7127-2	7127-3	-	-	-
1291	-	7129-1	7129-2	7129-3			
1311	-	7131-1	7131-2	7131-3	-	-	-
1331	-	7133-1	7133-2	7133-3	-	-	-
1351	-	7135-1	7135-2	7135-3	-	-	-
1371	-	7137-1	7137-2	7137-3	-	-	-
1391	-	7139-1**	7139-2**	7139-3**	-	-	-
1411	-	7141-1	7141-2	7141-3	-	-	-
1431	-	7143-1	7143-2	7143-3	-	-	-
1451	-	7145-1	7145-2	7145-3	-	-	-
1471	Gray	-	-	-	7147-4	7147-5	7147-6
1491	Violet	-	-	-	7149-4	7149-5	7149-6
1511	Blue	-	-	-	7151-4	7151-5	7151-6
1531	Green	-	-	-	7153-4	7153-5	7153-6
1551	Yellow	-	-	-	7155-4	7155-5	7155-6
1571	Orange	-	-	-	7157-4	7157-5	7157-6
1591	Red	-	-	-	7159-4	7159-5	7159-6
1611	Brown	-	-	-	7161-4	7161-5	7161-6

CWDM SFPs for Gigabit Ethernet, SONET OC-12 and SDH STM-4					
Wavelength	Latch	40km	50km	70km	100km	130km
1271	-	7327-1	7327-2	7327-3	-	-
1291	-	7329-1	7329-2	7329-3	-	-
1311	-	7331-1	7331-2	7331-3	-	-
1331	-	7333-1	7333-2	7333-3	-	-
1351	-	7335-1	7335-2	7335-3	-	-
1371	-	7337-1	7337-2	7337-3	-	-
1391	-	7339-1**	7339-2**	7339-3**	-	-
1411	-	7341-1	7341-2	7341-3	-	-
1431	-	7343-1	7343-2	7343-3	-	-
1451	-	7345-1	7345-2	7345-3	-	-
1471	Gray	-	-	7347-3	7347-4	7347-5
1491	Violet	-	-	7349-3	7349-4	7349-5
1511	Blue	-	-	7351-3	7351-4	7351-5
1531	Green	-	-	7353-3	7353-4	7353-5
1551	Yellow	-	-	7355-3	7355-4	7355-5
1571	Orange	-	-	7357-3	7357-4	7357-5
1591	Red	-	-	7359-3	7359-4	7359-5
1611	Brown	-	-	7361-3	7361-4	7361-5

* Compatible only with *iConverter* GX/TM2 and GM3 NIDs.
** Not suitable for use with G.652 fiber (water peak).

See Omnitron website for complete listing of SFPs. Contact Omnitron for other SFP options and extended temperature (-40 to +75°C) models.