

iConverter XGT+ **10GBASE-T Ethernet Media Converter**

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 iConverter XGT+ provides a variety of 10G data center connectivity solutions, including resolving interface disparities between equipment with 10GBASE-T RJ-45 ports and existing rack servers or switches with fiber optic ports. Architecture changes such as migrating from Top of Rack to End of Row can present cabling challenges when extending network distances from racks of servers. 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+ also supports CWDM and DWDM transceivers to convert 10GBASE-T interfaces to WDM wavelengths. This enables connecting equipment with 10GBASE-T interfaces to iConverter CWDM multiplexers that expand fiber capacity and transport multiple 10G data channels across existing fiber links.

The XGT+ supports high-power (power level 4) XFP transceivers and the latest generation of wavelength tunable DWDM XFP transceivers. The wavelength of a tunable transceiver can be programmed and saved, eliminating the need for external programming equipment.

Built-in loopback functions, on-board status LEDs and link fault propagation modes facilitate easy setup and quick troubleshooting.

The iConverter XGT+ is available as a compact, unmanaged standalone unit, or chassis plug-in module that can be managed with a management module installed in the chassis. The hot-swappable, plug-in modules can be mounted in a variety of chassis with AC and DC power supplies.

The standalone iConverter XGT+ has built-in mounting brackets. It is DC powered and available with an external AC to DC power adapter, or a terminal connector for wiring directly to a DC power source.



SFP+/XFPs not included

KEY FEATURES

- 10GBASE-T Ethernet Media Converter
 - Copper to Fiber interfaces:
RJ-45 to XFP or RJ-45 to SFP+
- IEEE 802.3an Compliant
- Supports CWDM, DWDM and tunable DWDM fiber transceivers
- Supports MSA power level 4 XFP transceivers
- Supports up to 100m over CAT-6A and CAT-7
- Short Reach mode (up to 30m) reduces power and cooling requirements per IEEE 802.3az Energy Efficient Ethernet (EEE)
- Built-in loopback for installation verification and troubleshooting
- Link fault detection modes facilitate quick fault detection, isolation and reporting
- LED displays for immediate visual status of each port
- Standalone and high-density chassis plug-in modules
- Omnitron transceivers support XFP and SFP+ digital diagnostics reporting via LEDs or management module
- Management of the plug-in module is available with the addition of a management module to the chassis
- SNMP management via NetOutlook® provides monitoring, configuration and fault notification
- Provides management of wavelength tunable XFP transceivers, compliant with MSA SFF-8477 and INF-8077i
- Lifetime Warranty and free 24/7 Technical Support

MANAGEMENT

The iConverter XGT+ plug-in modules can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the XGT+ 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 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.

MSA compliant pluggable transceivers support digital diagnostic capabilities, providing real time optical diagnostic information including fiber optic TX and RX power, voltage and transceiver temperature conditions on the plug-in module. These parameters can be monitored by the installed Network Management module.

Utilizing management, the programmable DWDM tunable transceivers can be configured and saved through convenient menu selections.

APPLICATION EXAMPLES

Data Center Application

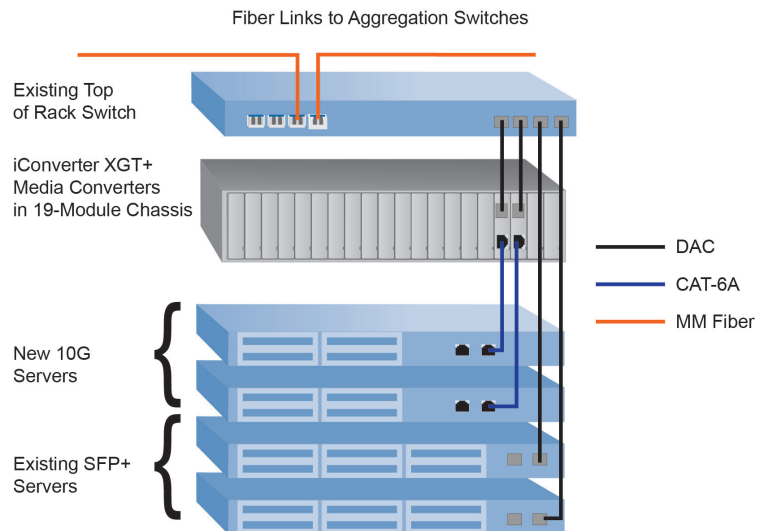
In this application, new 10GBASE-T servers are added to an existing rack of servers with SFP+ interfaces. The servers are connected to a Top of Rack fiber switch with Direct Attach Copper (DAC) cables. The switch is connected to an aggregation switch in the data center with multimode fiber.

New 10GBASE-T servers have been added to the rack. 10GBASE-T servers are used due to their low cost. They have LAN on Motherboard (LoM) technology, so the 10GBASE-T RJ-45 ports are integrated into the server.

iConverter XGT+ plug-in media converters are installed in a high density (2U high), iConverter 19-Module chassis with redundant power supplies. CAT-6A patch cords connect the new servers to the XGT+ media converters, and DAC cables connect the media converters to the fiber switch.

Since the 10GBASE-T servers are connected to the 10GBASE-T media converters over a short cable (less than 30 meters) they can take advantage of the 10GBASE-T Short Reach mode, in which all devices operate with a lower

transmit power. Short reach mode is specified in the IEEE 10GBASE-T standard, and conserves energy and produces less heat.



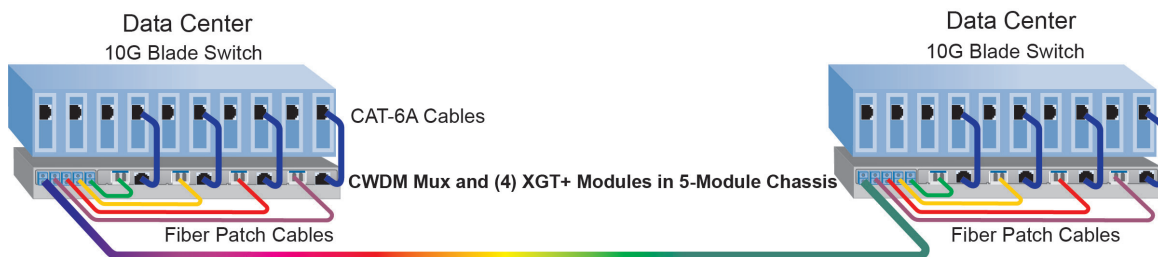
CWDM Data Center Interconnect Application

This application shows two data centers interconnected by four 10G Ethernet connections across a CWDM common fiber link (multi-color line) where fiber availability is limited and CWDM multiplexers are used to increase the fiber capacity.

An iConverter 4-Channel CWDM/X multiplexer module and four iConverter XGT+ plug-in modules are installed in an iConverter 5-Module Chassis at both locations. The iConverter XGT+ modules are used to convert the RJ-45 interfaces on the 10G

Ethernet switch ports to CWDM wavelengths required by the CWDM/X multiplexers.

The SFP+ port of each iConverter XGT+ contains an SFP+ CWDM transceiver that generates a specific CWDM optical wavelength, and is connected to the CWDM/X multiplexer with fiber patch cables (where each colored line represents a different wavelength).



SPECIFICATIONS

Description	iConverter XGT+ 10GBASE-T Ethernet Media Converter	
Standard Compliances	IEEE 802.3, 802.3an, 802.3az	
Regulatory Compliances	UL, CE, FCC Class A, NEBS 3 Compliant, RoHS2, WEEE, REACH, SFF-8077, SFF-8477	
Frame Size	Unlimited	
Port Types	Copper:	10GBASE-T (RJ-45)
	Fiber:	10GBASE-SR (SFP+, XFP) 10GBASE-LR (SFP+, XFP) 10GBASE-ER (SFP+, XFP) 10GBASE-ZX (XFP) 10GBASE-BR (Single-fiber: SFP+, XFP)
Cable Types	Copper:	EIA/TIA 568-B.2-10, Cat 6A UTP and higher
	Fiber:	Multimode: 50/125µm, 62.5/125µm Single-mode: 9/125µm
AC Power Requirements	AC Adapter: (US)	100 - 120VAC/60Hz 0.20A @ 120VAC (max)
	AC Adapter: (Universal)	100 - 240VAC/50 - 60Hz 0.20A @ 120VAC (max)

DC Power Requirements	DC Input: (Backplane)	3.3VDC, 2.8A @ 3.3VDC
	DC Input: (Terminal Block)	10 - 60VDC, 1.3A @ 12VDC max 2-Pin Terminal (non-isolated)
	DC Input: (AC Adapter)	10 - 60VDC, 1.3A @ 12VDC max 2.5mm Barrel Connector
Dimensions	Plug-in:	W: 0.85" x D: 4.5" x H: 2.8" L: 21.6 mm x B: 114.3 mm x H: 71.1 mm
	Standalone:	W: 3.8" x D: 4.8" x H: 1.8" L: 96.5 mm x B: 121.9 mm x H: 45.7 mm
Weight	Plug-in:	8 oz.; 226.8 grams
	Standalone w/o Adapter:	1.0 lb.; 453.6 grams
	Standalone w Adapter:	1.5 lbs.; 680.4 grams
Temperature	Commercial:	0 to 50°C
	Storage:	-40 to 80°C
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4,000m	
MTBF (hrs)	Plug-in:	400,000
	Standalone w/o Adapter:	230,000
	Standalone w/ US Adapter:	70,000
	Standalone w/ Uni Adapter:	70,000
Warranty	Lifetime warranty with 24/7/365 free Technical Support	

The XGT+ plug-in modules require specific chassis and installation configurations. Please contact Omnitron for more information.

ORDERING INFORMATION

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<Blank>	Plug-in Module
D	Standalone w/mounting brackets and External US AC/DC Adapter
E	Standalone w/mounting brackets and External Universal AC/DC Adapter
F	Standalone w/mounting brackets and DC Terminal Power

Port Configuration		Model Number
Port 1	Port 2	
SFP+	RJ-45	8589N-0
XFP	RJ-45	8589N-1

Refer to XG+ application note on installation requirements
Order the appropriate SFP+/XFPs separately.
For standard wavelengths: [See Optical Transceiver Data Sheet](#)
For CWDM wavelengths: [See CWDM Optical Transceiver Data Sheet](#)
Please contact Omnitron for other configurations.

Accessories	
Model Number	Description
7499-DC-1	10Gigabit SFP+ Direct Attach Cable (Twinax), 1m
7499-DC-3	10Gigabit SFP+ Direct Attach Cable (Twinax), 3m

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