iConverter XG

Industrial 10Gbps Media Converter and Transponder

The iConverter XG is an industrial 10 Gigabit, protocol-transparent media converter with two pluggable transceiver ports. The XG supports the three Rs (regeneration, retiming and reshaping). By taking advantage of the wide variety of 10G pluggable transceivers, the XG can be used as a copper-to-fiber converter, fiber mode converter or WDM transponder.

The iConverter XG supports 100% traffic throughput and has no packet size restrictions. Ultra low packet latency enables high-performance connectivity for data centers and financial networks. The XG is protocol transparent within the range of 9.95Gbps to 10.71Gbps or 9.95Gbps to 11.32Gbps, providing interoperability with 10G Ethernet, 10G SONET/SDH, 10G Fibre Channel and 10G OTN (G.709).

Three interface configurations are available: XFP to XFP, XFP to SFP+, and SFP+ to SFP+. Pluggable XFP and SFP+ transceivers can be used for multimode and single-mode applications, supporting short haul distances, long haul distances and WDM fiber links.

The iConverter XG is available as compact, unmanaged standalone unit, or chassis plug-in modules 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 extended temperature chassis with DC power supplies.

Plug-in modules feature full management capabilities, including status reporting, fault detection, threshold violations, loopback functionality and SNMP trap notification. SNMP traps provide link status availability and transceiver threshold alerts.

The standalone iConverter XG is an unmanaged tabletop or wall-mount unit. The tabletop model can be DIN-rail mounted using an optional DIN-rail mounting kit. Both the tabletop and the wall-mount models are DC powered and are available with an external AC to DC power adapter, or a terminal connector for DC power.

Built-in loopback functions, on-board status LEDs and link fault propagation modes facilitate easy setup and quick troubleshooting. Pluggable transceiver alarm conditions reported through the digital diagnostic monitoring interface are displayed by the on-board status LEDs or management interface on plug-in modules.
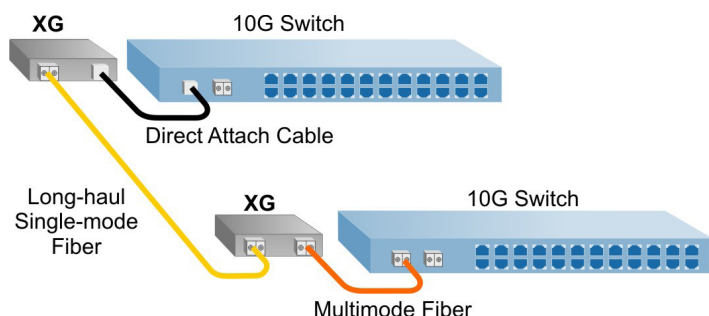

SFP+/XFPs not included

KEY FEATURES

■ Industrial protocol-transparent 10 Gigabit converter/transponder with ultra low latency

■ Extended operating temperature range of -40° to +75°C

■ Compatible with 10G Ethernet, 10G SONET/SDH, 10G Fibre Channel and 10G OTN (G.709)

■ Compliant with MSA SFF-8472 and INF-8077i standards

■ Supports Omnitron and third-party pluggable 10 Gigabit transceivers:

   SFP+ to SFP+, SFP+ to XFP and XFP to XFP

■ Omnitron transceivers support SFP+ and XFP Digital Diagnostic Monitoring Interface (DDMI) bus

■ Multimode to multimode, multimode to single-mode, and single-mode to single-mode conversion

■ Supports WDM XFPs for transponder applications

■ Built-in loopback mode 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

■ 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

■ Lifetime Warranty and free 24/7 Technical Support

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Direct Connect/Fiber Conversion Application

This application shows two 10G switches with SFP+ ports in two different locations. The switches are connected via long-haul, single-mode fiber (>80km) with a pair of iConverter XG 8599-01-AZ (SFP+to XFP) media converters.

In the top location, a low-cost SFP+ Direct Attach Cable is used to connect the 10G switch port to the media converter because the distance is within the 10 meter limit of the Direct Attach Cable. In the bottom location, a pair of multimode SFP+ transceivers provide the connectivity between the media converters and the switches.

Description	*iConverter* XG	
	10Gbps Protocol-Transparent Media Converter/Transponder	
Standard Compliances	IEEE 802.3ae (10G Ethernet), SONET OC-192, SDH STM-64, INCITS T11.2 (10G Fibre Channel), ITU-T G.709 OTN	
Regulatory Compliances	UL, CE, FCC Class A, NEBS 3 Compliant, RoHS2 (6/6), WEEE, REACH, SFF-8077, SFF-8477	
Frame Size	Unlimited	
Port Types	Fiber:	10GBASE-SR (SFP+, XFP) 10GBASE-LR (SFP+, XFP) 10GBASE-ER (SFP+, XFP) 10GBASE-ZX (XFP) 10GBASE-BR (Single-fiber: SFP+, XFP)
Cable Types	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)	XG 8599-00: 1.5A @ 3.3VDC (Max) XG 8599-01: 2.3A @ 3.3VDC (Max) XG 8599-11: 2.5A @ 3.3VDC (Max)
	DC Input: (Terminal Block)	7 - 60VDC, 1.2A @ 9VDC, 0.9A @ 12VDC 2-Pin Terminal (non-isolated)
	DC Input: (AC Adapter)	7 - 60VDC, 1.2A @ 9VDC, 0.9A @ 12VDC 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: 3.1" x D: 4.8" x H: 1.0" L: 78.7 mm x B: 121.9 mm x H: 25.4 mm
	Standalone: (Wall-mount)	W: 3.8" x D: 4.8" x H: 1.0" L: 96.5 mm x B: 121.9 mm x H: 25.4 mm
Weight	Plug-in:	8 oz.; 226.8 grams
	Standalone w/o Adapter:	1.0 lb.; 453.6 grams
	Standalone w Adapter:	1.66 lbs.; 754.6 grams
Temperature	Extended:	-40° to 75°C
	Storage:	-40° to 80°C
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4,000m	
MTBF (hrs)	Plug-in:	770,000
	Standalone w/o Adapter:	918,000
	Standalone w/ US Adapter:	100,000
	Standalone w/ Uni Adapter:	100,000
Warranty	Lifetime warranty with 24/7/365 free Technical Support	

Speed	SFP+ Models: XFP/XFP Model:	9.95Gbps to 10.71Gbps 9.95Gbps to 11.32Gbps
XFP Transceiver	XG supports all XFP transceivers up to 3.5 watts Up to a maximum of 6.0 watts total	

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ORDERING INFORMATION

Port 1	Port 2	Port 1	Port 2	Port 1	Port 2	Module Type
SFP+	SFP+	SFP+	XFP	XFP	XFP	
8599-00-Z		8599-01-Z		8599-11-Z		Plug-in Module
8599-00-AZ		8599-01-AZ		8599-11-AZ		Standalone with External US AC Power Adapter
8599-00-BZ		8599-01-BZ		8599-11-BZ		Standalone with External Universal AC Power Adapter
8599-00-CZ		8599-01-CZ		8599-11-CZ		Standalone with DC Terminal Power
8599-00-DZ		8599-01-DZ		8599-11-DZ		Standalone w/mounting brackets and External US AC Power Adapter
8599-00-EZ		8599-01-EZ		8599-11-EZ		Standalone w/mounting brackets and External Universal AC Power Adapter
8599-00-FZ		8599-01-FZ		8599-11-FZ		Standalone w/mounting brackets and DC Terminal Power
Contact Omnitron for RoHS (5/6) compliant models.						

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

ORDERING GUIDELINES

Typical SFP+/XFP Power Levels

SFP+	XFP	Power Requirements
Power Level 1		up to 1.0 watts
Power Level 2		up to 1.5 watts
	Power Level 1	up to 1.5 watts
	Power Level 2	1.5 to 2.5 watts
	Power Level 3	2.5 to 3.5 watts
	Power Level 4	3.5 to 5.5 watts

The XG supports a combination of transceivers up to a total of 6.0 watts.

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