iConverter® xFF

Industrial SFP to SFP Protocol-Transparent Fiber Converter

SFPs not included

The iConverter xFF is an industrial protocol-transparent media converter and transponder that is available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter xFF provides reliable and cost-effective conversion between different wavelengths, multimode and single-mode, and dual and single-fiber.

The iConverter xFF operates as a protocol and rate-transparent device, supporting Small Form Pluggable (SFP) transceivers with data rates from 1Mbps to 8.50Gbps. The xFF supports a variety of network protocols, including Ethernet, Fast Ethernet, Gigabit Ethernet, SONET (OC-3/12/48), SDH (STM-1/4/16), 1x/2x/4x/8x Fibre Channel and Common Public Radio Interface (CPRI).

The iConverter xFF supports multimode and single-mode dual fiber; and single-mode single-fiber SFP transceivers. SFPs allow adaptability to different fiber types, distances and wavelengths, providing maximum flexibility across a variety of network architectures and topologies. The xFF media converter can utilize a variety of SFPs for different wavelengths and distances, reducing costs and simplifying inventories.

SFP transceivers enable the xFF to operate as a Coarse Wave Division Multiplexing (CWDM) or Dense Wave Division Multiplexing (DWDM) transponder, which converts an optical signal from legacy fiber equipment to a specific CWDM/DWDM wavelength. Wave division technology increases the bandwidth capacity of the fiber infrastructure by overlaying multiple signals, each using a different wavelength, over an existing fiber link.

There is no configuration required with the plug-and-play iConverter xFF. Connect the fiber cables to the appropriate interface and the installation is complete.

The xFF features user-selectable Link Propagate and Remote Fault Detection modes to facilitate quick fault detection, isolation and reporting.

The hot-swappable, plug-in module can be mounted in a 19 or 5-Module chassis with redundant DC power supplies. It can also be mounted in a 2-Module DC powered chassis, or in a 1-Module chassis with DC power input.

The standalone iConverter xFF is an unmanaged wall-mount unit. 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.

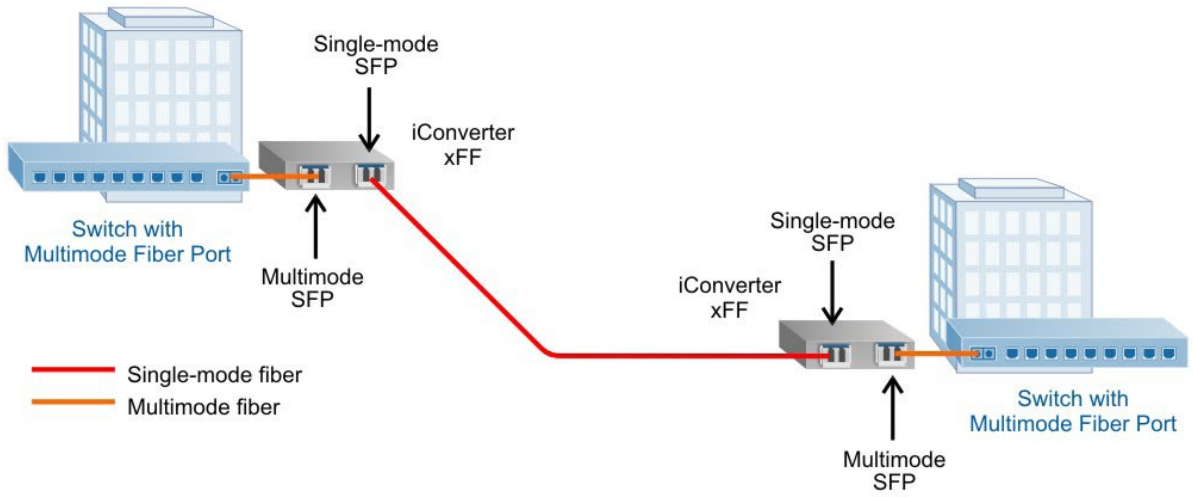
KEY FEATURES

- Industrial SFP to SFP protocol-transparent fiber converter
- Industrial operating temperature range (-40 to 75°C)
- Supports Ethernet, Fast Ethernet and Gigabit Ethernet
- Supports SONET (OC-3/12/48) and SDH (STM-1/4/16)
- Supports 1x/2x/4x/8x Fibre Channel
- Supports Common Public Radio Interface (CPRI) line rates up to 6.144Gbps
- Compatible with T1/E1, DS3/T3/E3, serial multiplexers and media converters from Omnitron
- Supports SFP Digital Diagnostic Monitoring Interface (DDMI) bus
- Provides multimode to single-mode and dual to single-fiber media conversion
- Provides wavelength conversion for CWDM/DWDM applications
- User-selectable link fault detection modes facilitate quick fault detection, isolation and reporting
- Automatic Link Recovery
- 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 real-time module status information and trap notification of plug-in module
- TAA, BAA and NDAA compliant, and Made in the USA
- Lifetime Warranty and free 24/7 Technical Support

APPLICATIONS

Multimode to Single-mode Conversion

Networks often require conversion from multimode to single-mode fiber, which supports longer distances. In this application, two Ethernet switches equipped with multimode fiber ports are connected utilizing a pair of fiber-to-fiber converters which convert the multimode fiber to single-mode and enable network connectivity across the distance between the switches.



CWDM Transponder

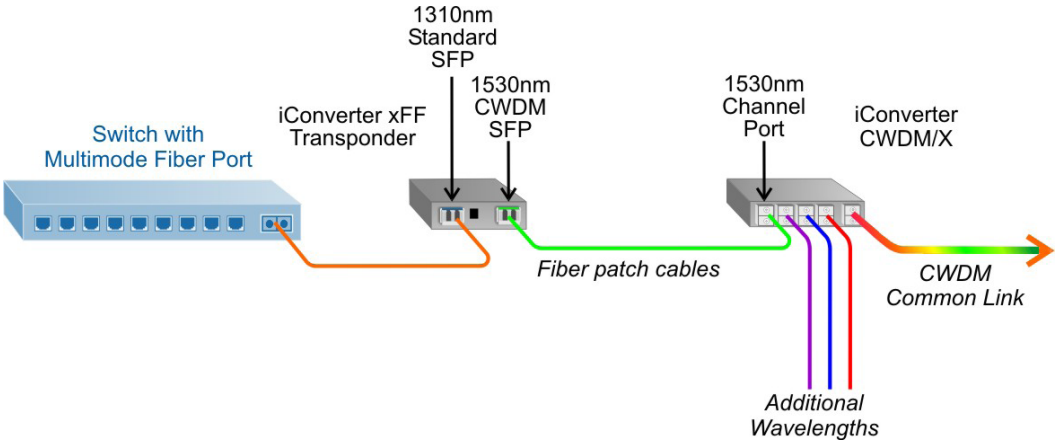
Fiber optic communications equipment with fixed fiber interfaces (ST, SC or LC connectors) operating over legacy wavelengths (850nm, 1310nm, 1550nm) must be converted to CWDM wavelengths using a media converter configured as a transponder.

The iConverter xFF is SFP to SFP protocol-transparent fiber converter and transponder, designed to provide conversion between different wavelengths, multimode and single-mode, dual fiber and single-fiber.

In this example, an Ethernet switch with a fixed fiber uplink port needs to be connected to an iConverter CWDM/M Multiplexer. An iConverter xFF transponder module is used to converter the fixed fiber wavelength from the Ethernet switch to a specific CWDM wavelength required by the CWDM/M Multiplexer.

Two SFP transceivers are required in this application. The left side of the transponder uses a 1310nm standard SFP transceiver, while the right side of the transponder uses a 1530nm CWDM SFP transceiver. The CWDM SFP installed in the transponder is connected to a channel port on the iConverter CWDM/X Multiplexer.

The iConverter xFF converts the legacy 1310nm wavelength to CWDM 1530nm wavelength allowing the Ethernet switch to be connected to the Multiplexer.



SPECIFICATIONS

Description	*iConverter* **xFF** SFP to SFP Protocol-Transparent Fiber Converter	
Standard Compliances	Protocol Transparent up to 8.50Gbps: Ethernet (100BASE-X, 1000BASE-X) SONET (OC-3, OC-12, OC-48), SDH (STM-1, STM-4, STM-16) Fibre Channel (1x, 2x, 4x, 8x), CPRI line rates (up to 6.144Gbps)	
Compatible Applications	T1/E1, DS3/T3/E3, RS232, RS422, RS485, X.21	
Regulatory Compliances	Safety: EMI: ACT:	UL, cUL, CE, UKCA FCC Class A TAA, BAA,NDAA
Frame Size	Unlimited	
Port Types	Fiber:	Protocol Transparent (SFP)
Cable Types	Fiber:	Multimode: 50/125µm, 62.5/125µm Single-mode: 9/125µm
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4,000m	
MTBF (hrs)	Plug-in: Standalone w/o Adapter: Standalone w/ US Adapter: Standalone w/ Uni Adapter:	1,300,000 1,200,000 250,000 100,000
Warranty	Lifetime warranty with 24/7/365 free Technical Support	

AC Power Requirements	AC Adapter:	100 - 240VAC/50 - 60Hz 0.05A @ 120VAC
DC Power Requirements	DC Input: (Backplane)	3.3VDC, 0.5A @ 3.3VDC
	DC Input: (Terminal Block)	5 - 32VDC, 0.3A @ 9VDC (1.0A max) 2-Pin Terminal (non-isolated)
	DC Input: (AC Adapter)	5 - 32VDC, 0.3A @ 9VDC (1.0A max) 2.5mm Barrel Connector
Dimensions (W x D x H)	Plug-in: Standalone:	0.85" x 4.5" x 2.8" 21.6 mm x 114.3 mm x 71.1 mm 3.8" x 4.8" x 1.0" 96.5 mm x 121.9 mm x 25.4 mm
Weight	Plug-in: Standalone w/o Adapter: Standalone w Adapter:	8 oz.; 226.8 grams 1.0 lb.; 453.6 grams 1.5 lbs.; 680.4 grams
Temperature	Industrial: Storage:	-40 to 75°C -40 to 80°C

ORDERING INFORMATION

Step 1: Choose a Base Part Number (8699-0-pZ)

Model Number	Description
8699-0-pZ	SFP to SFP Protocol-Transparent Fiber Converter

Step 2: Choose a Power Option (8699-0-pZ)

<leave blank> = Plug-in module
D = Barrel Connector and AC/DC Power Adapter 100-240VAC, 50-60Hz, with US power cord, with integrated mounting brackets
E = Barrel Connector and Universal AC/DC Adapter, 100 - 240 VAC, 50-60Hz, No Power Cord, with integrated mounting brackets
F = Direct DC input, 2 pin terminal connector, no AC/DC power adapter, with integrated mounting brackets
J = Barrel Connector and JPN PSE AC/DC Adapter, 100 - 240 VAC, 50-60Hz, No Power Cord, with integrated mounting brackets

Step 3: Choose an Operating Temperature Range (8699-0-pZ)

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

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