iConverter® OC12FF

OC-12/STM-4 Fiber-to-Fiber Managed Converter/Transponder

The iConverter OC12FF is a OC-12/STM-4 fiber-to-fiber converter/transponder available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter OC12FF provides a cost-effective solution to extend fiber network distances with multimode to single-mode, dual fiber to single-fiber, and wavelength (1310 to 1550) conversion.

iConverter OC12FF models support multimode and single-mode dual fiber; and single-mode single-fiber with SC connectors. The single-mode fiber port supports distances up to 80km and the multimode fiber port supports distances up to 550m.

The iConverter OC12FF features user-selectable Link Propagate and Remote Fault Detection modes to facilitate quick fault detection, isolation and reporting.

iConverter OC12FF media converters are available as compact, unmanaged standalone units, or chassis plug-in modules that can be managed with a Management Module (NMM2) or Network Interface Device (NID) installed in the chassis. The management module provides access to all the advanced features on the module.

The management software can override the physical DIP-switch settings such as link modes. Some of the real-time OC12FF parameters that can be monitored include power, link, data activity status, module type and model, hardware and software revisions, serial numbers and a user-defined identifier.

The OC12FF standalone models are available with an external AC to DC power adapter or with a 2-pin terminal connector for direct connection to DC power. The standalone module can be DIN-Rail mounted using the optional DIN-Rail mounting clips (8251-0).

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

The iConverter Multi-Service Platform consists of Network Interface Devices, T1/E1 multiplexers, CWDM/DWDM multiplexers and managed media converters that combine to deliver Carrier Ethernet and TDM services over fiber or CWDM/DWDM wavelengths. This flexible architecture supports a wide variety of configurations for scalable and reliable fiber connectivity in Service Provider and Enterprise networks.

KEY FEATURES

- Fiber-to-fiber converter/transponder supporting:
  - Multimode dual fiber to single-mode dual fiber
  - Multimode dual fiber to single-mode single-fiber
  - Single-mode dual fiber to single-mode single-fiber
  - Wavelength conversion
- Support for OC12 over ATM or SONET
- Supports multimode and single-mode dual fiber; and single-mode single-fiber with SC connectors
- 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
- Plug-in modules are hot-swappable in 19-Module, 5-Module, 2-Module or 1-Module chassis
- 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 port and module status information, remote parameter configuration and trap notification
- Commercial (0 to 50°C) and wide (-40 to 60°C) temperature ranges
- TAA, BAA and NDAA compliant, and Made in the USA
- Lifetime Warranty and free 24/7 Technical Support

SPECIFICATIONS

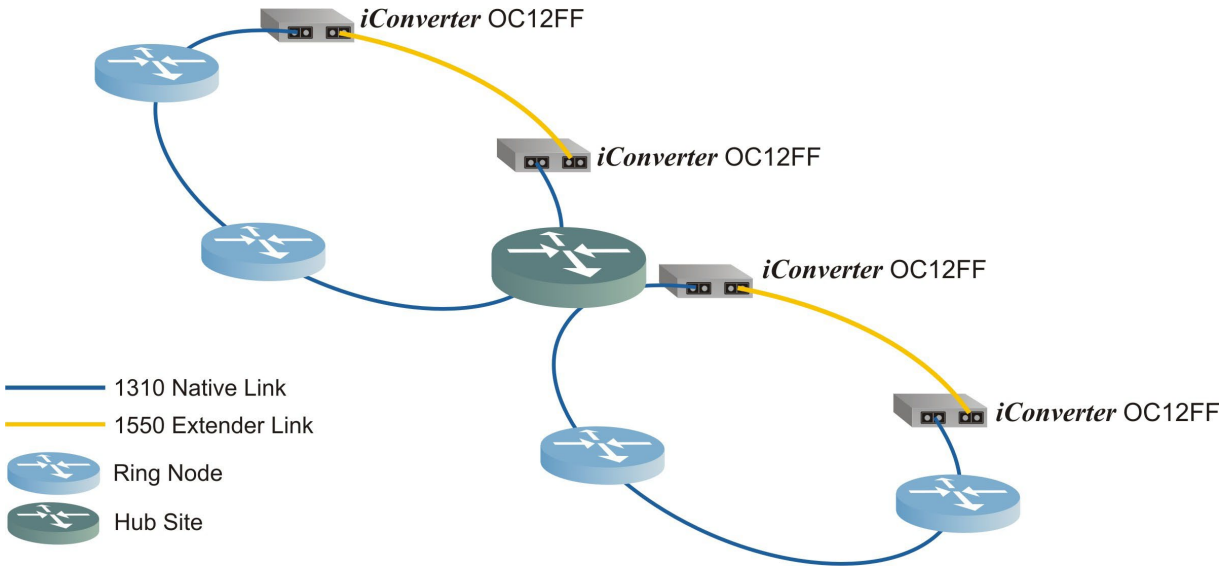
Description	***iConverter* OC12FF** Fiber-to-Fiber Managed Converter/Transponder	
Standard Compliances	SONET OC-12, SDH STM-4	
Regulatory Compliances	Safety: EMI; ACT:	UL, cUL, CE, UKCA FCC Class A TAA, BAA, NDAA
Environmental	RoHS, WEEE, REACH	
Frame Size	Unlimited	
Port Types	Fiber:	SONET OC-12 (Dual Fiber SC, Single-fiber SC)
Cable Types	Fiber:	Multimode: 50/125µm, 62.5/125µm Single-mode: 9/125µm
AC Power Requirements	AC Adapter: (US)	100 - 240VAC/50 - 60Hz 0.05A @ 120VAC
	AC Adapter: (Universal)	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	Commercial: Wide: Storage:	0 to 50°C -40 to 60°C -40 to 80°C
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:	1,100,000 1,100,000 250,000 100,000
Warranty	Lifetime warranty with 24/7/365 free Technical Support	

APPLICATION

When fiber rings must extend beyond the standard 1310nm wavelength capability, a longer wavelength with increased optical power can extend SONET ring distances.

The iConverter OC12FF fiber-to-fiber media converter is an inexpensive and reliable solution, especially when compared to upgrading SONET node equipment. The OC12FF provides wavelength conversion from 1310nm to 1550nm, and amplifies the optical power to span the distance in longer ring segments.



ORDERING INFORMATION

Step 1: Choose a Base Part Number (xxxx-x-pt)

Port	Fiber Type	Distance	Connector Type	Tx / Rx Lambda (nm)	Min. Tx Power (dBm)	Max. Tx Power (dBm)	Min. Rx Power (dBm)	Max. Rx Power (dBm)	Min. Attenuation (dB)	Link Budget (dB)
			SC							
Port 1	MM/DF	550m	8681-1-pt	1310 / 1310	-20	-14	-26	-14	-	6
Port 2	SM/DF	12km		1310 / 1310	-9.5	-3	-19.5	-3	-	10
Port 1	MM/DF	550m	8681-2-pt	1310 / 1310	-20	-14	-26	-14	-	6
Port 2	SM/DF	34km		1310 / 1310	-5	0	-23	-3	3	18
Port 1	MM/DF	550m	8681-3-pt	1310 / 1310	-20	-14	-26	-14	-	6
Port 2	SM/DF	80km		1550 / 1550	-5	0	-23	-3	3	18
Port 1	MM/DF	550m	8690-1-pt	1310 / 1310	-20	-14	-26	-14	-	6
Port 2	SM/SF[1]	20km		1310 / 1550	-9.5	-3	-20	-3	-	10.5
Port 1	MM/DF	550m	8691-1-pt	1310 / 1310	-20	-14	-26	-14	-	6
Port 2	SM/SF[1]	20km		1550 / 1310	-9.5	-3	-20	-3	-	10.5
Port 1	SM/DF	12km	8692-1-pt	1310 / 1310	-9.5	-3	-19.5	-3	-	10
Port 2	SM/SF[1]	20km		1310 / 1550	-9.5	-3	-20	-3	-	10.5
Port 1	SM/DF	12km	8693-1-pt	1310 / 1310	-9.5	-3	-19.5	-3	-	10
Port 2	SM/SF[1]	20km		1550 / 1310	-9.5	-3	-20	-3	-	10.5

[1] When using single-fiber (SF) media converter models, the Tx wavelength on one end has to match the Rx wavelength on the other.

MM = Multimode, SM = Single-mode, DF = Dual Fiber, SF = Single-fiber

Contact Omnitron for other configurations, extended temperature (-40 to 75°C) and RoHS (5/6) compliant models.
For chassis options, see iConverter Chassis and Mounting Options web page.

Step 2: Choose a Power Option (xxxx-x-pt)

<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

Step 3: Choose an Operating Temperature Range (xxxx-x-pt)

<leave blank> = Commercial temperature (0 to 50°C)
W = Wide temperature (-40 to 60°C)

ACCESSORIES

Model Number	Description
8251-0	DIN Rail Mounting Clip for standalone models with integrated mounting brackets (power options -D, -E, -F)
8260-0	1U Rack Mount Shelf for standalone models (up to 4 modules)