iConverter® 1000FF

Gigabit Fiber-to-Fiber Managed Converter/Transponder

The iConverter 1000FF is a Gigabit Ethernet fiber-to-fiber converter/transponder available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter 1000FF provides a cost-effective solution to extend fiber network distances with multimode to single-mode, dual fiber to single-fiber, and wavelength (850/1310, 850/1550 and 1310/1550) conversion.

The 1000FF support a constant data rate signal between 500Mbps to 1250Mbps allowing the converter to be used in Ethernet networks as well as other fiber-to-fiber protocol applications. Both ports operate at the same date rate.

iConverter 1000FF models support multimode and single-mode dual fiber; and single-mode single-fiber with SC connectors.

The 1000FF features user-selectable Link Propagate and Remote Fault Detection modes to facilitate quick fault detection, isolation, and reporting.

iConverter 1000FF 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 1000FF 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 1000FF 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 19 or 5-Module iConverter 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
- Conforms to IEEE 802.3 and 1000BASE-X specifications
- Module supports a constant rate signal from 500Mbps to 1250Mbps
- 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 is available with the addition of a management module to the chassis
- SNMP management via NetOutlook® provides real-time port and module status information, 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

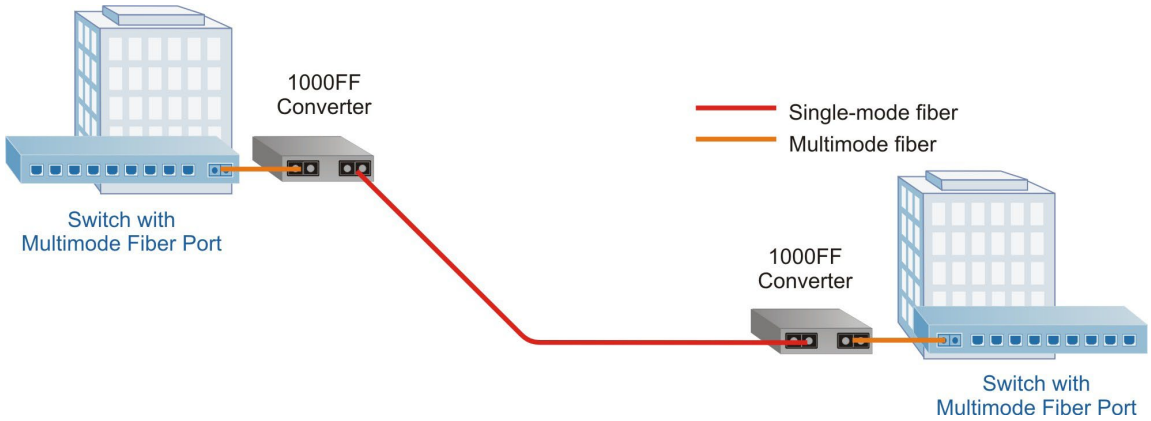
SPECIFICATIONS

Description	***iConverter* 1000FF** Gigabit Fiber-to-Fiber Managed Converter/Transponder	
Standard Compliances	IEEE 802.3	
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:	1000BASE-SX (SC) 1000BASE-LX (SC) 1000BASE-ZX (SC) 1000BASE-BX (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

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.



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)

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	220 / 550m[1]	8642-1-pt	850 / 850	-10	-4	-17	-3	-	7
Port 2	SM/DF	12km		1310 / 1310	-9.5	-3	-19.5	-3	-	10
Port 1	MM/DF	220 / 550m[1]	8642-2-pt	850 / 850	-10	-4	-17	-3	-	7
Port 2	SM/DF	34km		1310 / 1310	-5	0	-23	-3	3	18
Port 1	MM/DF	220 / 550m[1]	8642-3-pt	850 / 850	-10	-4	-17	-3	-	7
Port 2	SM/DF	80km		1550 / 1550	-5	0	-23	-3	3	18
Port 1	SM/DF	12km	8643-2-pt	1310 / 1310	-9.5	-3	-19.5	-3	-	10
Port 2	SM/DF	34km		1310 / 1310	-5	0	-23	-3	3	18
Port 1	SM/DF	12km	8643-3-pt	1310 / 1310	-9.5	-3	-19.5	-3	-	10
Port 2	SM/DF	80km		1550 / 1550	-5	0	-23	-3	3	18
Port 1	MM/DF	220 / 550m[1]	8650-1-pt	850 / 850	-10	-4	-17	-3	-	7
Port 2	SM/SF[2]	20km		1310 / 1550	-9.5	-3	-20	-3	-	10.5
Port 1	MM/DF	220 / 550m[1]	8651-1-pt	850 / 850	-10	-4	-17	-3	-	7
Port 2	SM/SF[2]	20km		1550 / 1310	-9.5	-3	-20	-3	-	10.5
Port 1	SM/DF	12km	8652-1-pt	1310 / 1310	-9.5	-3	-19.5	-3	-	10
Port 2	SM/SF[2]	20km		1310 / 1550	-9.5	-3	-20	-3	-	10.5
Port 1	SM/DF	12km	8653-1-pt	1310 / 1310	-9.5	-3	-19.5	-3	-	10
Port 2	SM/SF[2]	20km		1550 / 1310	-9.5	-3	-20	-3	-	10.5
Port 1	SM/DF	12km	8652-2-pt	1310 / 1310	-9.5	-3	-19.5	-3	-	10
Port 2	SM/SF[2]	40km		1310 / 1550	-3	0	-20	-3	3	17
Port 1	SM/DF	12km	8653-2-pt	1310 / 1310	-9.5	-3	-19.5	-3	-	10
Port 2	SM/SF[2]	40km		1550 / 1310	-3	0	-20	-3	3	17

[1] 62.5/125µm, 100/140µm multimode fiber up to 220m. 50/125µm multimode fiber up to 550m. Refer to the fiber cable manufacturer for multimode distance specifications.
[2] 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)