# **FlexPoint**

### FlexPoint™1000FF

#### Single-mode to Multimode Fiber Converters for Gigabit Ethernet

The FlexPoint 1000FF is a protocol-independent fiber converter that provides reliable and cost-effective extension of network distances by connecting multimode fiber networks or devices over single-mode fiber cabling.

No manual configuration is required with the plug-and-play FlexPoint 1000FF. Connect the fiber cables to the appropriate interface and the installation is complete.

The fiber port operates at 850nm, 1310nm or 1550nm and features SC connectors. Multimode fiber models support distances of up to 550m, and single-mode fiber models support distances of up to 80km.

Descriptions of the LED indicators are provided on the label for easy in-the-field installation and maintenance. The LEDs report the availability of power and the detection of devices attached to the fiber ports.

FlexPoint modules can be mounted utilizing optional wall-mounting hardware or with DIN-rail mounting brackets. They can also be rack-mounted in a 5-Module shelf or in a high-density 14-Module, power-redundant Powered Chassis.

FlexPoint modules installed in the 5-Module shelf or used as standalone devices can be powered by an external AC to DC power adapter, or through the 5VDC chassis connector. Standalone modules can also be powered by attaching an external DC power supply (18-60VDC). When used in the 14-Module power-redundant Powered Chassis with any combination of AC and DC power supplies, the installed modules are powered via the 5VDC chassis connector.



The wide variety of FlexPoint mounting and power options provide flexible upgrade paths as network requirements change and grow.

Simple, dependable and flexible. For over a decade, FlexPoint media converters have been providing reliable fiber connectivity in Enterprise and mission-critical networks around the world.



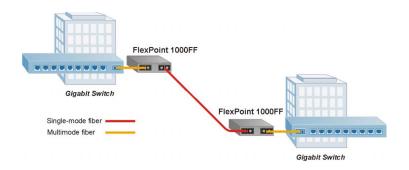
- The FlexPoint 1000FF is a single-mode to multimode protocol-independent fiber converter
- Plug-and-play installation requires no manual configuration
- Supports auto-negotiation of duplex mode
- Extends network distances up to 80km
- Supports most network interfaces with a wide variety of cable and connector types
- Labeled status LEDs for quick and easy installation
- Wall-mount or rack-mount on a 5-Module shelf or in a 14-Module power-redundant FlexPoint Powered Chassis
- Completely software independent with no installation of drivers required
- Peace-of-mind reliability backed by a lifetime warranty and free 24/7 technical support

## **SPECIFICATIONS**

Model Type		1000FF					
-,-	1000FF						
Protocols	IEEE 802.3, 1000BASE-LX/SX						
Fiber Cables	Multimode: 50/125, 62.5/125, 100/140μm Single-mode: 9/125μm						
Fiber Connectors	SC						
LED Displays	Power, Fiber Link/Activity						
Dimensions	W: 3.0" x D: 4.0" x H: 1.0"						
Weight	6 oz. (without power adapter)						
Compliance	UL, CE, FCC Class A						
		Barrel Connector	Molex Connector				
Power Requirements	NominalVoltage: Voltage Range: Power Nominal: Maximum Power:	Connector 9VDC 6.0 to 15.0VDC 0.2A @ 9VDC	Connector 5VDC 4.75 to 5.25VDC 0.5A @ 5VDC				
	Voltage Range: Power Nominal:	Connector 9VDC 6.0 to 15.0VDC 0.2A @ 9VDC	Connector 5VDC 4.75 to 5.25VDC 0.5A @ 5VDC				
Requirements	Voltage Range: Power Nominal: Maximum Power:	9VDC 6.0 to 15.0VDC 0.2A @ 9VDC 1A @ 9VDC	Connector 5VDC 4.75 to 5.25VDC 0.5A @ 5VDC 0.75A @ 5VDC				
Requirements  Temperature	Voltage Range: Power Nominal: Maximum Power:	Onnector 9VDC 6.0 to 15.0VDC 0.2A @ 9VDC 1A @ 9VDC 0 to 50°C	Connector 5VDC 4.75 to 5.25VDC 0.5A @ 5VDC 0.75A @ 5VDC				

# APPLICATION EXAMPLE

The FlexPoint 1000FF fiber converter can extend the network across single-mode fiber with distances up to 80km. In this application, two Gigabit Ethernet switches are connected utilizing a pair of FlexPoint 1000FF fiber converters, which are connected to the switches via a multimode fiber uplink.





## ORDERING INFORMATION

Port	Fiber Type	Distance	Connector SC	Wavelength [nm]	Min. Tx Power (dBm)	Max. Tx Power (dBm)	Min. Rx Sensitivity (dBm)	Max. Rx Sensitivity (dBm)	Link Budget (dBm)
Port 1	MM	220 / 550m <sup>1</sup>	4432-x	850	-10	-4	-17	-3	7
Port 2	MM	220 / 550m <sup>1</sup>		850	-10	-4	-17	-3	7
Port 1	MM	220 / 550m <sup>1</sup>	4433-X	850	-10	-4	-17	-3	7
Port 2	SM	12km		1310	-9.5	-3	-19.5	-3	10
Port 1	MM	220 / 550m <sup>1</sup>	4440-x	850	-10	-4	-17	-3	7
Port 2	SM	34km		1310	-5	0	-23	-3*	18
Port 1	SM	12km	4434-x	1310	-9.5	-3	-19.5	-3	10
Port 2	SM	12km		1310	-9.5	-3	-19.5	-3	10
Port 1	MM	220 / 550m <sup>1</sup>	4437-x	850	-10	-4	-17	-3	7
Port 2	SM	80km		1550	-5	0	-23	-3*	18
Port 1	SM	12km	4441-x	1310	-9.5	-3	-19.5	-3	10
Port 2	SM	34km		1310	-5	0	-23	-3*	18

**Power Adapter Kits (-x):** -0 = No power adapter included, -1 = 110-120 VAC/60 Hz (US plug), -2 = 100-240 VAC/50-60 Hz (IEC plug, no power cord) For other power and fiber configurations, contact the factory.

\*When using these models in pairs, a minimum attenuation of 3dB is required.

<sup>1</sup>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.

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