FlexPoint GX/T
10/100/1000 Copper to 100/1000X Fiber Ethernet Media Converter

The FlexPoint GX/T is a 10/100/1000BASE-T copper to 1000BASE-X fiber media converter that supports jumbo frames up to 10,240 bytes. The GX/T features Small Form Pluggable (SFP) transceivers that support both 100BASE-FX and 1000BASE-X for interoperability with Gigabit and Fast Ethernet fiber equipment. SFP transceivers enable adaptability to different fiber types, speed and distances, and support Coarse Wave Division Multiplexing (CWDM) wavelengths.

The FlexPoint GX/T fixed fiber models support 1000BASE-X over multimode and single-mode dual fiber with ST, SC and LC connectors; and single-mode single-fiber with SC connectors.

Both the fiber port and the RJ-45 port support auto-negotiation to achieve the best possible mode of operation (speed, duplex mode and Pause mode) between the devices. The auto-negotiation feature can be disabled on both ports (for manual configuration) using DIP-switches on the product. This is useful in a situation where the GX/T is connected to a non-negotiating device and the configuration parameters must be set manually.

Network flow control is managed by the Pause function (configured via auto-negotiation or manually) that prevents network congestion on both the RJ-45 and fiber ports. When Pause is enabled and the device is experiencing network congestion, it will send out a Pause signal to its link partner, instructing it to slow down data transmission.

 A variety of testing and fault detection tools are provided for easy installation and troubleshooting. The GX/T supports Port Loop-Back, IEEE defined Far-End-Fault and Link Fault bit as Remote Fault indicators. The GX/T generates a remote fault indicator when it detects link fault conditions, and reports detection of these signals by displaying status on the LED. Through user DIP-switch configuration, the detection of these indicators or link modes can also be propagated to the other port on the GX/T as a means of notifying connected end-devices of the link fault.

Diagnostic status LED indicators assist in network installation and maintenance. The LEDs report the availability of power, port activity and link status and duplex mode.

The GX/T supports a wide input voltage range of 5 to 32VDC for flexibility to power the device from a variety of sources.

GX/T modules can be standalone or surface-mounted utilizing optional wall-mounting hardware or DIN-rail mounting brackets. They can also be rack-mounted in a 5-Module shelf or in a high-density 14-Module, power-redundant chassis.

KEY FEATURES

- The FlexPoint GX/T is a 10/100/1000 copper to 100/1000* modular fiber media converter

- Conforms to 10BASE-T, 100BASE-TX, 1000BASE-T, 100BASE-FX* and 1000BASE-X specifications

- Fiber port supports multimode and single-mode fiber with ST, SC and LC connectors and single-fiber with SC connectors

- Supports dual fiber and single-fiber 100BASE-FX or 1000BASE-X SFP transceivers for standard or CWDM wavelengths

- Both the fiber and RJ-45 ports support auto-negotiation

- Provides Remote Fault Indicators due to signal loss of link for Far-End Fault and Link Fault conditions

- RJ-45 port supports 10/100/1000Mbps, Half/Full-Duplex, configurable Pause function for flow control and MDI/MDIX auto-crossover

- Supports jumbo frames up to 10,240 bytes

- Loopback mode supports end-to-end testing

- User-selectable Link Modes for quick fault detection

- Diagnostic and DIP-switch configurations are displayed with status LEDs for quick and easy installation

- Tabletop, wall-mounted, rack-mounted in a 5-Module shelf or in a 14-Module power-redundant chassis options

- Commercial (0 to 50°C) and wide (-40 to 60°C) temperature ranges

- Lifetime Warranty and free 24/7 Technical Support
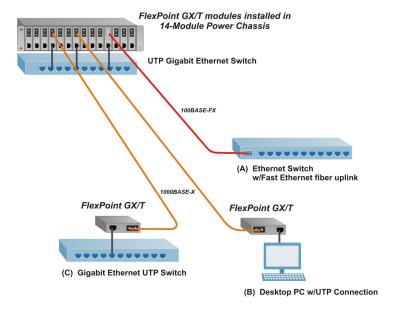
* 100BASE-FX is supported on SFP models only

Omnitron Systems

SPECIFICATIONS

Description	FlexPoint GX/T	
	10/1001000BASE-T Copper to 100BASE-FX/1000BASE-X Fiber Media Converter	
Standard Compliances	IEEE 802.3	
Regulatory Compliances	UL, CE, FCC Class A, RoHS2 (6/6), WEEE, REACH	
Frame Size	Up to 10,240 bytes	
Port Types	Copper:	10/100/1000BASE-T (RJ-45)
	Fiber:	100BASE-FX (SFP)
		1000BASE-X (ST, SC, LC, SFP)
Cable Types	Copper:	EIA/TIA 568A/B, Cat 5 UTP and higher
	Fiber:	Multimode: 50/125µm, 62.5/125µm
		Single-mode: 9/125µm
AC Power Requirements	AC Adapter (-1):	100 - 120VAC/60Hz 0.03A @ 120VAC (typical)
	AC Adapter (-2):	100 - 240VAC/50 - 60Hz 0.03A @ 120VAC (typical)

DC Power Requirements		Barrel Connector	Molex Connector
	Voltage Range:	5.0 to 32VDC	4.75 to 5.25VDC
	Nominal Voltage:	9VDC	5VDC
	Nominal Power:	0.3A @ 9VDC	0.5A @ 5VDC
	Maximum Power:	1A @ 9VDC	0.75A @ 5VDC

Dimensions	W: 3.0" x D: 4.0" x H: 1.0"	
	L: 76.2 mm x B: 101.6 mm x H: 25.4 mm	
Weight	Without AC Adapter:	6 oz. (170.1 grams)
Temperature	Commercial:	0 to 50°C
	Wide::	-40 to 60°C
	Storage:	-40 to 80°C
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4,000m	
MTBF (hrs)	Without AC Adapter (-0):	900,000
	With AC Adapter (-1):	250,000
	With AC Adapter (-2):	100,000
Warranty	Lifetime warranty with 24/7/365 free Technical Support	

FC (UL) CE

APPLICATION EXAMPLE

In this enterprise application example, FlexPoint GX/T media converters are used to connect to multiple generations of networking components across a campus. A legacy 100 Mbps fiber switch (A) is directly connected to a UTP Gigabit switch using a FlexPoint GX/T with a 100 Mbps SFP transceiver installed. A fiber-to-desktop application (B) uses a FlexPoint GX/T at both ends to provide 10/100/1000 copper to fiber conversion. The FlexPoint GX/T also connects a UTP Gigabit Ethernet switch (C) via fiber back to the main distribution center. In all cases, multimode, single-mode, or single-mode single-fiber can be used.

FlexPoint GX/T modules installed in 14-Module Power Chassis

UTP Gigabit Ethernet Switch

100BASE-FX

(A) Ethernet Switch w/Fast Ethernet fiber uplink

1000BASE-X

FlexPoint GX/T

FlexPoint GX/T

(C) Gigabit Ethernet UTP Switch

(B) Desktop PC w/UTP Connection

OST Omnitron Systems

Fiber Type	Distance	Connector Type				Tx Lambda (nm)	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)
		ST	SC	LC	SFP								
-	-	-	-	-	4719-x	-	-	-	-	-	-	-	-
MM	220 / 550m[1]	4706-x	4700-x	4714-x	-	850	850	-10	-4	-17	-3	-	7
SM	12km	4707-x	4701-x	4715-x	-	1310	1310	-9.5	-3	-19.5	-3	-	10
SM	34km	-	4702-x	4716-x	-	1310	1310	-5	0	-23	-3	3	18
SM	80km	-	4703-x	4717-x	-	1550	1550	-5	0	-23	-3	3	18
SM	110km	-	4704-x		-	1550	1550	0	5	-24	-3	8	24
SM	140km	-	4705-x		-	1550	1550	2	5	-28	-8	13	30
SM-SF[2]	20km	-	4710-x		-	1310	1550	-9.5	-3	-20	-3	-	10.5
SM-SF[2]	20km	-	4711-x		-	1550	1310	-9.5	-3	-20	-3	-	10.5
SM-SF[2]	40km	-	4712-x		-	1310	1550	-3	0	-20	-3	3	17
SM-SF[2]	40km	-	4713-x		-	1550	1310	-3	0	-20	-3	3	17

AC Adapter Kits (-x): -0 = No AC adapter included, **-1** = 110-120 VAC/60 Hz (US plug), **-2** = 100-240 VAC/50-60 Hz (IEC plug, no power cord).

For wide temperature (-40 to 60°C), add a "W" to the end of the model number.

Contact Omnitron for other fiber options, operational temperature ranges and RoHS (5/6) compliant models.

[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] Single-Fiber converters must be used in pairs. The Tx wavelength on one end has to match the Rx wavelength on the other.

Order the appropriate SFPs separately. *Visit the Omnitron Optical Transceivers web page*.

Accessories	
Model Number	**Description**
8250-0	DIN-Rail Mounting Bracket
4380	Wall-Mount Bracket

Omnitron Systems