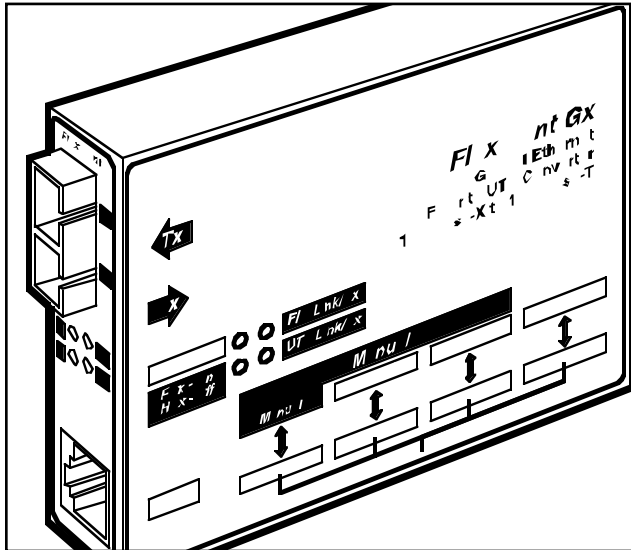


BLACK BOX[®]

NETWORK SERVICES

FLEXPOINT GX GIGABIT MEDIA CONVERTER



Convert Gigabit Ethernet UTP to fibre.

Key Features

- ▶ **Converts UTP to fibre.**
- ▶ **Supports the IEEE 802.3ab 1000BASE-SX/LX and 1000BASE-T standards.**
- ▶ **User-selectable auto-negotiation or manual control, full- or half-duplex, and link propagation or isolation.**
- ▶ **Supports multimode fibre up to 220 m (720 ft.) and single-mode fibre up to 65 km (40 mi.) with SC, MT-RJ, or LC connectors.**
- ▶ **Works with Category 5 or higher UTP wiring.**

Use the FlexPoint Gx Gigabit Media Converter to convert Gigabit Ethernet 1000BASE-T unshielded twisted-pair (UTP) cable to 1000BASE-SX single- or 1000BASE-LX multimode fibre. The Converter complies with the IEEE 802.3ab standard.

The Converter auto-adapts to the full/half-duplex and flow-control services supported by the device connected to its UTP port. User-selectable override options set the desired mode.

The FlexPoint Gx operates in full duplex to provide an effective 2-Gigabit data rate or in half-duplex mode to give you a 1-Gigabit rate. This maximizes the throughput when connecting to high-bandwidth full duplex services such as servers or switches.

Network flow control is supported via an auto-selected or user-selected "Pause" function that assists in relief of network congestion by providing "back pressure" to the sending device.

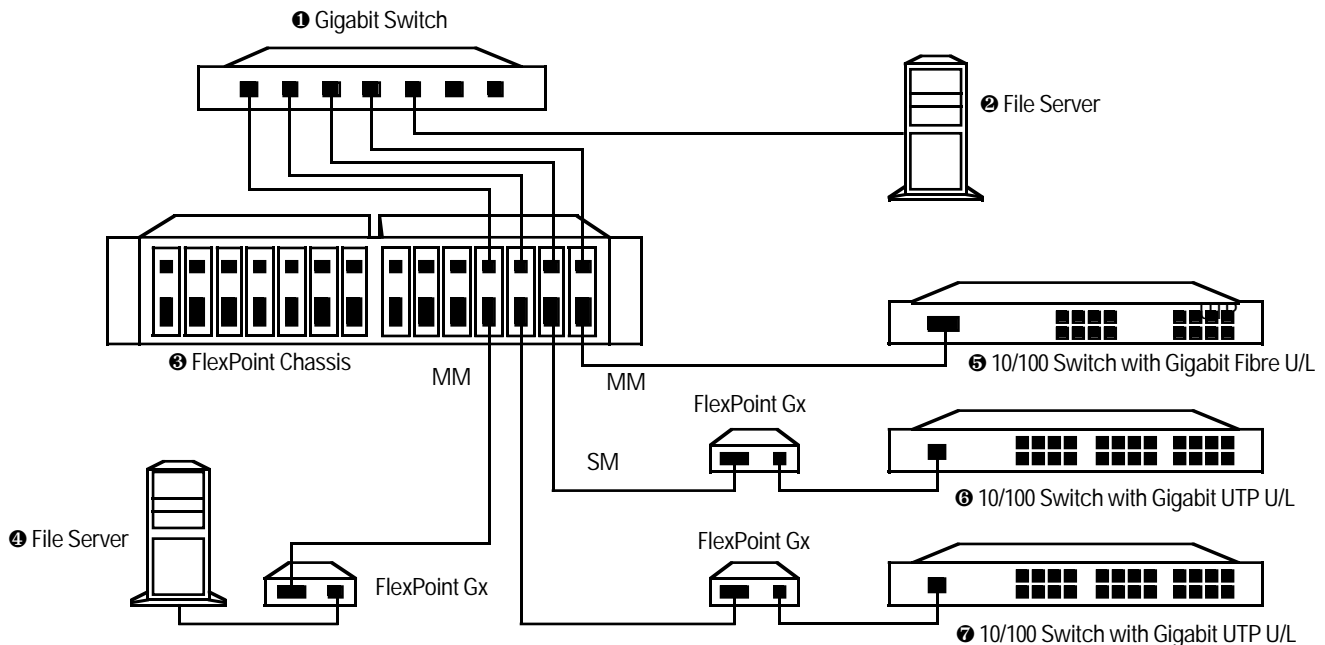
The Converter supports 850 nm (SX), 1300 nm (LX), or 1550 nm fibre and uses SC, MT-RJ, or LC connectors. The Multimode SX supports distances of up to 220 m (720 ft.); the single-mode models support distances of up to 65 km (40 mi.).

User-selectable Link Propagation is available for Spanning-Tree redundant network architectures as well as for connection to SNMP or other network-managed devices that monitor link availability. A user-selectable override is provided to isolate the link detection to a per-segment basis.

The Converter's UTP port uses a modular EIA/TIA 568 RJ-45 connector and supports Category 5 or higher wiring with distances of up to 100 m (328 ft.). Automatic polarity detection and correction assists in network installation and maintenance.

The Converter can be mounted standalone using a wall-mounting kit or rack-mounted using a 5-unit shelf. Power is supplied via a 110- or 220-VAC power adapter. For high-density applications, however, the Converter can be mounted in a 14-unit, dual power-redundant AC powered chassis.

Connect a 1000BASE-T Gigabit switch (❶) to a local file server (❷) using a UTP port. Convert four UTP ports to MM and SM fibre via four converters mounted in a FlexPoint Chassis (❸). One MM link feeds another FlexPoint Gx to a distant server (❹). Another MM link feeds directly into an SX fibre equipped switch (❺) and two more feed into two other UTP equipped switches (❻ and ❼).



Why Buy From Black Box? Exceptional Value. Exceptional Tech Support.

Recognise any of these situations?

- You wait more than 30 minutes to get through to a vendor's tech support.
- The so-called "tech" can't help you or gives you the wrong answer.

- You don't have a purchase order number and the tech refuses to help you.

According to a survey by Data Communications magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10

to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our

Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.

Specifications

Power Chassis:

Indicators: LED: (1) Power

Power: 115 to 230 VAC, 50 to 60 Hz, autosensing dual power supply

Size: 7.6H x 48.3W x 25.4D cm (3"H x 19"W x 10"D)

Weight: 3.2 kg (7 lb.)

Media Converters:

Control: Auto negotiation enable/disable, auto-sensing and switch selectable

Flow Control: Enable/Disable, autosensing and switch selectable

Link Propagation: Propagate/isolate switch selectable

Protocol: IEEE 802.3ab 1000BASE-T and 1000 BASE-X

Operation: Half- or full-duplex, autosensing, switch-selectable

Indicators: LEDs: Power, Fibre Link Activity, UTP Link Activity, Full/Half Duplex

Switches: Auto-Negotiation: Enable/Disable; Duplex Mode: Full-Duplex/Half-Duplex; Pause: Enable/Disable; Link Propagation: Propagate/Isolate

Connectors: Twisted Pair: (1) RJ-45, Category 5 or higher; Fibre: (1) pair of SC, MT-RJ, or LC; Multimode: 0/124 µm; Single-Mode: 62.5/125 µm

UTP Distance: 100 m (328 ft.)

Fibre Distance: See Table 1.

Temperature Tolerance: 0 to 50°C (0 to 122°F)

Humidity: Up to 90% non-condensing

Power: LMC1003A: 110 VAC, 60 Hz; LMC1003AE: 220 VAC, 50 Hz

Size: 2.5H x 7.6W x 10.2D cm (1"H x 3"W x 4"D)

Weight: 0.2 kg (0.4 lb.)

5-Position Rackmounting Kit:

Size: 4.4H: (1U) x 48.3W x 12.7D cm (1.75H x 19"W x 5"D)

Weight: 0.9 kg (2 lb.)

Table 1. Fibre Optic Specifications.

Fibre/ Connector	Wavelength	Minimum TX	Maximum TX	RX Power (dBm)	RX Power (dBm)	Power Budget Sensitivity (dBm)	Distance Maximum (dBm)
MM/SC	850 nm	-10	-4	-17	-3	7	220 m (726 ft.)
SM/SC	1300 nm	-12	-3	-20	-3	8	10 km (6.2 mi.)
SM/SC	1300 nm	-5	0	-20	-3	15	25 km (15.5 mi.)
SM/SC	1550 nm	-3	0	-23	-3	20	65 km (40.4 mi.)
MM/MT-RJ	850 nm	-10	-4	-17	0	7	220 m (722 ft.)
SM/MT-RJ	1300 nm	-10	-5	-20	-8	10	10 km (6.2 mi.)
SM/LC	1300 nm	-11	-3	-20	-3	9	10 km (6.2 mi.)
SM/LC	1300 nm	-5	0	-20	-3	15	25 km (15.5 mi.)
SM/LC	1550 nm	-4	0	-24	-3	20	65 km (40.4 mi.)

Ordering Information

ITEM	CODE
FlexPoint Gx Gigabit Media Converter	
1000BASE-T to 1000BASE-SX MM/SC, 850 nm, 220 m,	
110 VAC.....	LMC1003A
220 VAC.....	LMC1003AE
1000BASE-T to 1000BASE-LX SM/SC, 1300 nm, 10 km	
110 VAC.....	LMC1004A
220 VAC.....	LMC1004AE
1000BASE-T to 1000BASE-LX SM/SC/LH, 1300 nm, 25 km	
110 VAC.....	LMC1005A
220 VAC.....	LMC1005AE
1000BASE-T to 1000BASE-X SM/SC/XLH, 1550 nm, 65 km	
110 VAC.....	LMC1006A
220 VAC.....	LMC1006AE
1000BASE-T to 1000BASE-SX MM/MT-RJ, 850 nm, 220 m	
110 VAC.....	LMC1007A
220 VAC.....	LMC1007AE
1000BASE-T to 1000BASE-LX SM/MT-RJ, 1300 nm, 10 km	
110 VAC.....	LMC1008A
220 VAC.....	LMC1008AE
1000BASE-T to 1000BASE-LX SM/LC, 1300 nm, 10 km	
110 VAC.....	LMC1009A
220 VAC.....	LMC1009AE
1000BASE-T to 1000BASE-LX SM/LC/LH, 1300 nm, 25 km	
110 VAC.....	LMC1010A
220 VAC.....	LMC1010AE
1000BASE-T to 1000BASE-LX SM/LC/LH, 1550 nm, 65 km	
110 VAC.....	LMC1011A
220 VAC.....	LMC1011AE
<i>To wallmount your media converters, order...</i>	
Wallmounting Hardware.....	LMC206-WALL
<i>To rackmount up to five standalone media converters, order...</i>	
5-Position Rackmounting Kit.....	LMC205
<i>Or select a chassis for up to 14 standalone media converters...</i>	
FlexPoint 14-Slot Power Chassis	
Single Power Supply.....	LMC200
Dual Power Supply.....	LMC200-2PS
<i>For extra power in your chassis, order...</i>	
Redundant Power Supply for Power Chassis.....	PSFP200
<i>Remember to order cable...</i>	
Ceramic Terminated Multimode Fibre Optic Cable, SC-SC.....	EFN4025
Single-Mode Duplex Fibre Optic Cable, SC-SC.....	EFN5010
CAT5e Solid-Conductor Backbone Cable, 350-MHz, 4-Pair, 24 AWG, Blue, Straight-Pinned.....	EYN795MS

What the Package Includes

- FlexPoint Gx Gigabit Media Converter
- 110- or 220-VAC power supply
- Users' manual