EX9543/GE Gigabit Ethernet 1000Mbps Media Converter
1000Base-T(RJ-45) to 1000Base-X(SC)
User's Manual (620–0381–000)

1. Overview

IEEE802.3z/AB 1000Mbps Gigabit Ethernet supports two types of media for network connection such as 1000Base-T and 1000Base-SX/LX. EX9543/GE media converter is designed to connect two types of segments to operate smoothly. The converter can be used as a standalone unit or as a slide-in module to the 19" converter rack(up to 10 units) for use at a central wiring closet.

2. Model Description

Model	Fiber Connector Type	
TP↔SC MM	SC multi mode	850nm
TP↔SC SM	SC single mode	1310nm

The 1000Mbps Fiber Transceivers:	
SC multi-mode	**Default**
SC.S10Km single-mode	*Optional

*: SC single-mode S10Km model is option

**: VF-45, MT-RJ models are available on request

3. Checklist

Before you start installing the Converter, verify that the package contains the following:

— The TP-Fiber Converter
— AC-DC Power Adapter
— This User's Manual

Please notify your sales representative immediately if any of the aforementioned items is missing or damaged.

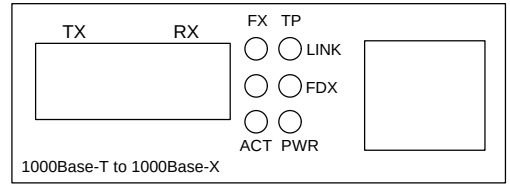


Fig. 1 1000Mbps TP-to-Fiber Converter Front Panel

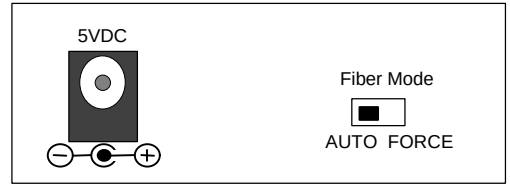


Fig. 2 1000Mbps TP- to- Fiber Converter Rear Panel

4. LED Description

LED	Color	Function
FX LINK	Green	Lit when fiber connection is good
FX FDX	Green	Lit when fiber full-duplex is active
TP LINK	Green	Lit when TP connection is good
TP FDX	Green	Lit when TP full-duplex is active
ACT	Green	Lit when any traffic is present
PWR	Green	Lit when +5V power is coming up

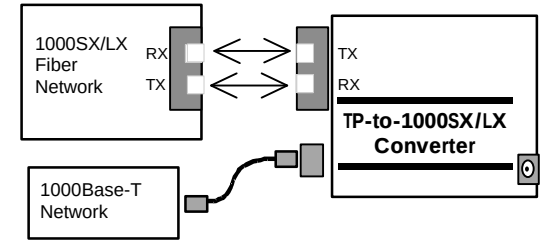


Fig. 3 Basic Network Connection

5. Installing the Converter

Note: The Media Converter is hot-swappable.
Wear a grounding device for electrostatic discharge.

For as a standalone unit:

⇒ Verify the AC-DC adapter conforms to your country AC power requirement and insert the power plug

For as a slide-in unit:

⇒ Verify the media converter is the right model and conforms to the chassis slot. The Media Converter and Rack are built to match in dimensions, DC jack, DC receptacle and power safety

⇒ Locate +5VDC power jack on converter back, carefully slide in and plug to 19" rack +5VDC power receptacle

Fiber Port	Attach the fiber cable. The Tx, Rx fiber cable must be paired at both ends
	Default: AUTO. The "Fiber Mode" must be set to **"FORCE"** when you intend to connect **a pair of 9543/GE, or 9543/GE to 9543/GM** via fiber optic cable at both ends of a fiber connection.
TP Port	Attach TP Cat. 5 cable to TP port
	The 1000 TP port is transmit/receive wires auto-link (e.g. either MDI-X or MDI-II). It will auto-cross-connect transmit/receive wires to a switch or to a workstation.

6. Connecting to Gigabit Device

Converter TP Port	1000FDX with NWay
Converter Fiber Port	AUTO(Default): 1000FDX with NWay FORCE: 1000FDX

7. Cable Connection Parameter

- **TP Cable Limitations:** Cat. 5 and up to 100m
- **Fiber Cable Limitations:**

	Multi-Mode Fiber 62.5/125μm		Multi-Mode Fiber 50/125μm	
	Bandwidth MHz-Km	Distance	Bandwidth MHz-Km	Distance
1000SX 850nm	160	220m	400	500m
	200	275m	500	550m
1000LX 1310nm	Single-Mode Fiber 9/125μm is up to 10Km SC, MT-RJ single-mode are option			

850nm, 1310nm is the wavelength of fiber transceiver

8. DC Jack and AC-DC Power Adapter

The DC jack's central post is 2.5mm wide, it conforms to the DC receptacle (2.5mm) on the 19-inch Converter Rack slot.

DC Jack : 2.5mm
DC Input : +5V
(Converter DC Current Consumption: 2A when operation at full load)

Fig. 4 DC+5V Input Jack and Dimension

Keep the AC-DC adapter as spare parts when Media Converter is installed in a 19-inch Media Converter Rack.

9. TP-Fiber Technical Specifications

- **Standards :** IEEE802.3z/AB 1000Base-T, 1000Base-SX/LX
- **Models : EX9543/GE**

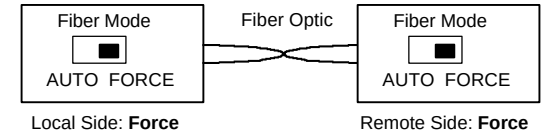
Model	Fiber Connector Type	
TP↔SC MM	SC multi mode	850nm
TP↔SC SM	SC single mode	1310nm

- **UTP Cable :** Cat. 5 cable and up to 100m
  Fiber Cable:
  SX: 50/125, 62.5/125, or 100/140*m*m multi-mode
  LX: 9/125*m*m single-mode
- **LED Indicators :**
  PWR, ACT
  FX LINK, FDX, TP LINK, FDX
- **Data Transfer Rate:**
  2000Mbps/full-duplex
- **TP :** 1000FDX with NWay auto-negotiation
  Fiber : 1000FDX at AUTO or FORCE mode
- **Power Requirement :** 2A@+5VDC
- **Ambient Temperature :** 0° to 50°C
- **Humidity :** 5% to 90%
- **Dimensions :** 26.2(H) × 70.3(W) × 94(D) mm

Note: For connecting this device to Router, Bridge, or Switch, please refer to the corresponding device's Technical Manual.

Warning:

— The "Fiber Mode" must be set to "**FORCE**" when you intend to connect **a pair of EX9543/GE, or EX9543/GM to EX9543/GE** via fiber optic cable at both ends of a fiber connection. It does not work if "Fiber Mode" is set to "AUTO" in this connection.



— For **other/different model converter fiber connection**, both local and remote fiber mode must be set to an identical mode **("AUTO or FORCE")** according to their operation/configuration**.** Refer to the corresponding device/converter's Technical Manual for proper setting.

— This converter operates at 1000FDX only. "AUTO/FORCE" mode is used for Gigabit Ethernet NWay protocol and multi venders compatibility.