FCC Statement

The FCC (Federal Communications Commission) restricts the amount of radio frequency emission and radiation coming from computer equipment. The equipment introduced in this manual has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user is required to correct the interference at his/her own expense.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.

Trademarks

Product names mentioned in this manual may be trademarks or registered trademarks of those products.

All trademarks or brand names mentioned are properties of their respective companies.

Preface

This manual describes how to install and use the Gigabit Ethernet Media Converter. The Converter introduced here provides one channel media conversion solution:

10/100/1000Base-TX ↔ 1000Base-SX/LX
1000Base-SX/LX ↔ 100Base-FX

The Gigabit Ethernet Media Converter fully complies with IEEE802.3 10Base-T, IEEE802.3u 100Base-TX/FX, IEEE802.3ab 1000Base-T, and IEEE802.3z 1000Base-SX/LX Ethernet standards.

In this manual, you will find:

- Product overview
- Features on the media converter
- Illustrative LED functions
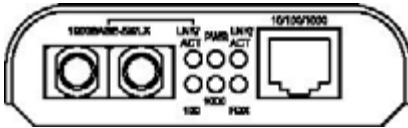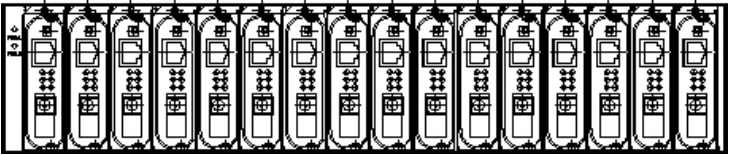- Installation instructions
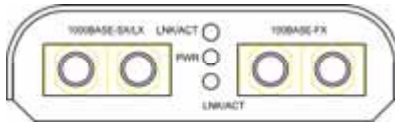- Specifications

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Introduction

The Gigabit Ethernet Media Converter provides one channel for media conversion between 1) 10/100/1000Base-TX and 1000Base-SX/LX or 2) 1000Base-SX/LX and 100Base-FX. It can be used as a stand-alone device or with a standard 19" chassis as shown below.

Product Overview

10/100/1000Base-TX↔1000Base-SX/LX Media Converter

1000Base-SX/LX↔100Base-FX Media Converter

<NOTE>   The chassis is to be ordered separately.

Product Features

- One-channel media conversion between:
    - 10/100/1000Base-TX and 1000Base-SX/LX
    - 1000Base-SX/LX and 100Base-FX
- TX port support speed and duplex mode auto-negotiation and auto-MDIX
- Gigabit Ethernet Fiber media support auto-negotiation and allow either:
    - Multi-mode fiber or Single-mode fiber that using SC connector
- Fast Ethernet Fiber media allow either:
    - Multi-mode fiber that using SC, ST, VF-45, MT-RJ, or LC connector
    - Single-mode fiber that using SC connector
- Store-and-forward mechanism
- Non-blocking full wire-speed forwarding rate
- Back-pressure & IEEE802.3x compliant flow control
- Support 4096 MAC Addresses and 2M bits Memory Buffer
- Front panel status LEDs
- Used as a stand-alone device or with a chassis
- Hot-swappable when used with a chassis
- External AC to DC power adapter
- Wall-mountable

Packing List

When you unpack this product package, you will find the items listed below. Please inspect the contents, and report any apparent damage or missing items immediately to your authorized reseller.

- The Media Converter
- User's Manual
- AC to DC Power Adaptor
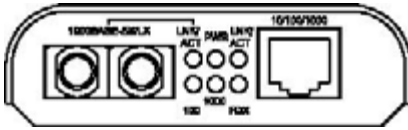
One-Channel Media Converter

Physical Ports

This converter provides one TX port and one FX port. For the FX port, it provides options of either multi-mode or single-mode fiber accommodating SC connector. For the TX port, it uses RJ-45 connector and supports auto-MDIX for uplink purpose.
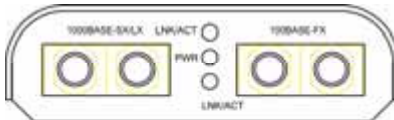
Port Status LEDs

The LED indicators give you instant feedback on status of the converter:

10/100/1000Base-TX↔1000Base-SX/LX Media Converter

LEDs	State	Indication
PWR	Steady	Power feeding in
	Off	No power
LNK/ACT (TX)	Steady	A valid network connection established. LNK stands for LINK.
	Flashing	Transmitting and receiving data. ACT stands for ACTIVITY.
	Off	Neither connection nor activity existing.
LNK/ACT (SX/LX)	Steady	A valid network connection established. LNK stands for LINK.
	Flashing	Transmitting and receiving data. ACT stands for ACTIVITY.
	Off	Neither connection nor activity existing.
FDX	Steady	Connection in full duplex mode. FDX stands for FULL DUPLEX.
	Flashing	Collision occurred.
	Off	Connection in half duplex mode
1000	Steady	Connection at 1000Mbps speed.
100	Steady	Connection at 100Mbps speed.
1000, 100	Off	Connection at 10Mbps speed.

1000Base-SX/LX↔100Base-FX Media Converter

LEDs	State	Indication
PWR	Steady	Power feeding in
	Off	No power
LNK/ACT	Steady	A valid network connection established. LNK stands for LINK.
	Flashing	Transmitting and receiving data. ACT stands for ACTIVITY.
	Off	Neither connection nor activity existing.

Installation

This chapter gives step-by-step installation instructions for the Converter.

Selecting a Site for the Equipment

As with any electric device, you should place the equipment where it will not be subjected to extreme temperatures, humidity, or electromagnetic interference. Specifically, the site you select should meet the following requirements:
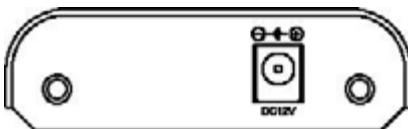
- The ambient temperature should be between 32 and 113 degrees Fahrenheit (0 to 45 degrees Celsius).
- The relative humidity should be less than 95 percent, non-condensing.
- Surrounding electrical devices should not exceed the electromagnetic field (RFC) standards for IEC 801-3, Level 2 (3V/M) field strength.
- Make sure that the equipment receives adequate ventilation. Do not block the ventilation holes on each side of the equipment.
- The power outlet should be within 1.8 meters of the product.

Connecting to Power

This Converter is a plug-and-play device.

Step 1: Connect the supplied AC to DC power adapter to the receptacle at the back of the converter.

Step 2: Attach the plug into a standard AC outlet.

Installing in a Chassis

The Converter is designed to fit into any of the expansion slots on a rackmount chassis.

Step 1:   Unscrew the carrier from the desired expansion slot on the chassis.
Step 2:   Fit the converter onto the carrier.
Step 3:   When the converter is completely seated onto the carrier, insert the carrier to the guide rails of the expansion slot.
Step 4:   Carefully slide in the carrier until it is fully and firmly fit the chassis.
Step 5:   Fasten the carrier to the chassis by the screws.

<NOTE>   Never insert any converter into the chassis directly without using the supplied carriers. The carriers allow secure and consistent placement of the converters into the chassis' backplane without causing any damage.

Specifications

Applicable Standards	IEEE 802.3 10Base-T
	IEEE 802.3u 100Base-TX/FX
	IEEE 802.3ab 1000Base-T
	IEEE 802.3z 1000Base-SX/LX
Fixed Ports	One 10/100/1000Base-TX port and one 1000Base-SX/LX port
	One 1000Base-SX/LX port and one 100Base-FX port
Speed	10/20Mbps for half/full-duplex
	100/200Mbps for half/full-duplex
	2000Mbps for full-duplex
Forwarding rate	14,880pps for 10Mbps
	148,810pps for 100Mbps
	1,488,100pps for 1000Mbps
LED Indicators	PWR; LNK/ACT (TX); LNK/ACT (SX/LX); FDX; 100; 1000
	PWR; LNK/ACT (1000Base-SX/LX); LNK/ACT (100Base-FX)
Dimensions	80.3mm (W) × 109.2mm (D) × 23.8mm (H)
	(3.16" (W) x 4.3" (D) x 0.94" (H))
Weight	150g (0.33lb.)
Power	External power adaptor
	0.35A @ 12VDC
Power Consumption	4.25W Max.
Operating Temperature	0 ~ 45 (32 ~ 113)
Storage Temperature	-10 ~ 70 (14 ~ 158)
Humidity	5 ~ 95%, non-condensing
Emissions	FCC Part 15 Class A, CE Mark Class A