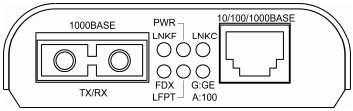
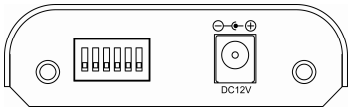
# Quick Start Guide

This quick start guide describes how to install and use the Gigabit Ethernet media converter. The converter introduced here provides one channel media conversion solution.

## Physical Description

### Product Overview




This Gigabit Ethernet media converter is a plug-and-play device. Connect the supplied AC to DC power adaptor to the receptacle on the rear panel of the Gigabit Ethernet media converter, and then attach the plug into a standard AC outlet.

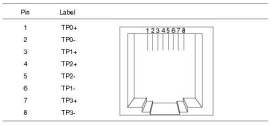
### DIP Switch

| No. | Down | Up | |
|---|---|---|---|
| 1 | Disable LFPT | Enable LFPT | LFPT:<br>Link-Fault-Pass-Through function |
| 2 | Enable Auto-Negotiation for TX port | Enable Force mode for TX port | |
| 3 | TX port Force mode: Full-duplex | TX port Force mode: Half-duplex | |
| 4 | TX port Force mode: 100Mbps | TX port Force mode: 10Mbps | |
| 5 | Function reserved | Function reserved | |
| 6 | Function reserved | Function reserved | |

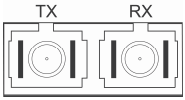
<Note> Power must be off/on after re-setting LFPT function.

### The 10/100/1000Base-TX and 1000Base-SX/LX/BX Connectors

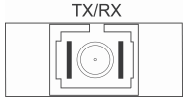
The 10/100/1000Base-TX Connection
The following lists the pinouts of 10/100/1000Base-TX port.



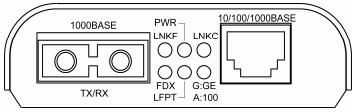

The 1000Base-SX/LX Connection
The Tx (transmit) port of device I is connected to the Rx (receive) port of device II, and the Rx (receive) port of device I to the Tx (transmit) port of device II.



The WDM 1000Base-BX Connection
The fiber port pinouts
Only one optical fiber is required to transmit and receive data.




**The Port Status LEDs**




| LEDs | State | Indication |
|---|---|---|
| PWR | Steady | Power on |
| | Off | Power off |
| LFPT | Steady | LFPT function enabled |
| | Off | LFPT function disabled |
| LNKC | Steady | Copper port: A valid network connection established<br>LNKC stands for LINK/Copper |
| | Off | No connection |
| Copper Port 10/100/1000 (Mbps) | Steady | Green: Connection at the speed of 1000Mbps<br>Amber: Connection at the speed of 100Mbps |
| | Off | Connection at the speed of 10Mbps |
| LNKF | Steady | Fiber port: A valid network connection established<br>LNKF stands for LINK/Fiber |
| | Off | No connection |
| FDX | Steady | Full-duplex mode<br>FDX stands for Full-duplex |
| | Off | Half-duplex mode |

## Functional Description

- Complies with IEEE802.3 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T, and IEEE802.3z 1000Base-SX/LX.
- Supports IEEE802.3x Flow control: Flow control for Full-duplex and Back pressure for Half-duplex.
- DIP switch configuration for “Link-Fault-Pass-Through”.
- Gigabit transmission supports 9K Bytes jumbo frame.
- 1000Mbps-Full-duplex, 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX.
- Full wire-speed forwarding rate.
- Operating voltage and Max. current consumption: 0.23A @ 12VDC. Power consumption: 2.76W Max.
- Power Supply: 12VDC external universal PSU.
- 0℃ to 50℃ (32℉ to 122℉) operating temperature range.
- Aluminum case.
- Supports Wall Mounting installation or use with media converter chassis system.

# 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 to 1000Base-SX/LX/BX with link-fault-pass-through function

The Gigabit Ethernet Media Converter fully complies with IEEE802.3 10Base-T, IEEE802.3u 100Base-TX, 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

# Table of Contents

# Introduction

The Gigabit Ethernet Media Converter provides one channel for media conversion between 10/100/1000Base-TX to 1000Base-SX/LX/BX with link-fault-pass-through function. It can be used as a stand-alone device or with a standard 19" chassis as shown below.

## Product Overview

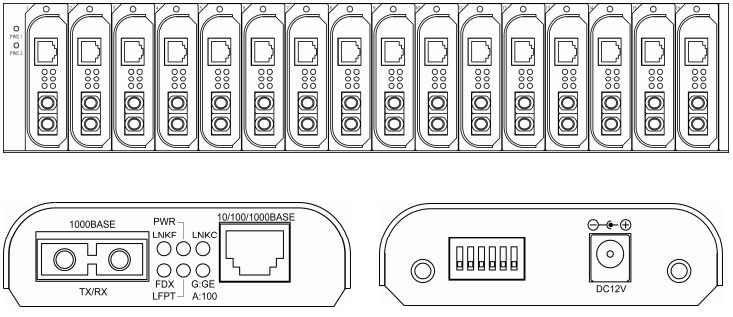



Figure 1:

Gigabit Ethernet Media Converter with link-fault-pass-through function

**<NOTE> The chassis is to be ordered separately.**

## Product Features

- Complies with IEEE802.3 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T, and IEEE802.3z 1000Base-SX/LX.
- Supports IEEE802.3x Flow control: Flow control for Full-duplex and Back pressure for Half-duplex.
- DIP switch configuration for "Link-Fault-Pass-Through".
- Gigabit transmission supports 9K Bytes jumbo frame.
- 1000Mbps-Full-duplex, 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX.
- Full wire-speed forwarding rate.
- Operating voltage and Max. current consumption: 0.23A @ 12VDC. Power consumption: 2.76W Max.
- Power Supply: 12VDC external universal PSU.
- 0℃ to 50℃ (32℉ to 122℉) operating temperature range.
- Aluminum case.
- Supports Wall Mounting installation or use with media converter chassis system.

### DIP Switch

| No. | Down | Up | |
|---|---|---|---|
| 1 | Disable LFPT | Enable LFPT | LFPT: Link-Fault-Pass-Through function |
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| 3 | TX port Force mode: Full-duplex | TX port Force mode: Half-duplex | |
| 4 | TX port Force mode: 100Mbps | TX port Force mode: 10Mbps | |
| 5 | Function reserved | Function reserved | |
| 6 | Function reserved | Function reserved | |

<Note> Power must be off/on after re-setting LFPT function.

## 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

### Gigabit Ethernet Media Converter

This converter provides one TX port and one 1000Base-SX/LX/BX port. For the 1000Base-SX/LX/BX port, it provides options of multi-mode/single-mode or WDM multi-mode/single-mode fiber. 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:

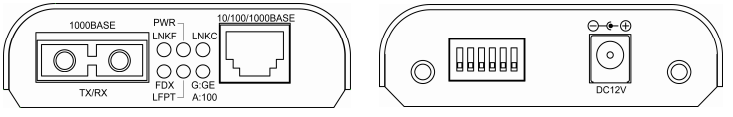


Figure 2:

Gigabit Ethernet Media Converter with link-fault-pass-through function

| LEDs | State | Indication |
|---|---|---|
| PWR | Steady | Power on |
| | Off | Power off |
| LFPT | Steady | LFPT function enabled |
| | Off | LFPT function disabled |
| LNKC | Steady | Copper port: A valid network connection established<br>LNKC stands for LINK/Copper |
| | Off | No connection |
| Copper Port 10/100/1000 (Mbps) | Steady | Green: Connection at the speed of 1000Mbps<br>Amber: Connection at the speed of 100Mbps |
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| LNKF | Steady | Fiber port: A valid network connection established<br>LNKF stands for LINK/Fiber |
| | Off | No connection |
| FDX | Steady | Full-duplex mode<br>FDX stands for Full-duplex |
| | Off | Half-duplex mode |

# 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 122 degrees Fahrenheit (0 to 50 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 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.

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

- Unscrew the carrier from the desired expansion slot on the chassis.
- Fit the converter onto the carrier.
- When the converter is completely seated onto the carrier, insert the carrier to the guide rails of the expansion slot.
- Carefully slide in the carrier until it is fully and firmly fit the chassis.
- 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 | IEEE802.3 10Base-T<br>IEEE802.3u 100Base-TX<br>IEEE802.3ab 1000Base-T<br>IEEE802.3z 1000Base-SX/LX |
| Fixed Ports<br>10/100/1000Base-TX to<br>1000Base-SX/LX/BX: | <br>1 TX port<br>1 FX port |
| Speed<br>10Base-T<br>100Base-TX<br>1000Base-T<br>1000Base-SX/LX/BX | <br>10/20Mbps for half/full-duplex<br>100/200Mbps for half/full-duplex<br>2000Mbps for full-duplex<br>2000Mbps for full-duplex |
| Forwarding rate | 14,880pps for 10Mbps<br>148,810pps for 100Mbps<br>1,488,100pps for 1000Mbps |
| LED Indicators | PWR; LFPT; LNKC; Copper Port Speed; LNKF; FDX |
| Dimensions | 80.3mm (W) × 109.2mm (D) × 23.8mm (H)<br>(3.16" (W) × 4.3" (D) × 0.94" (H)) |
| Weight | 150g (0.33lb.) |
| Power | External power adaptor<br>0.23A @ 12VDC |
| Power Consumption | 2.76W Max. |
| Operating Temperature | 0℃ ~ 50℃ (32℉ ~ 122℉) |
| Storage Temperature | -10℃ ~ 70℃ (14℉ ~ 158℉) |
| Humidity | 5 ~ 95%, non-condensing |
| Emissions | FCC part 15 Class A, CE Mark Class A |