

# **SIGNAMAX** **CONNECTIVITY SYSTEMS**

**Signamax™ Connectivity Systems**  
**Gigabit Ethernet**  
**Converter Series**

**U S E R ' S   G U I D E**

**Signamax™ Connectivity Systems**

**Gigabit Ethernet  
Converter Series**

**User's Guide**

### FCC Warning

This equipment 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 this user's guide, 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 will be required to correct the interference at his own expense.

### CE Mark Warning

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

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- Ethernet is a trademark of Xerox Corporation.
- Microsoft Windows is a trademark of Microsoft Corporation.
- Signamax™ is a trademark of Advanced Electronic Support Products, Inc.

## Preface

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

10/100/1000BaseT/TX to 1000BaseSX/LX/BX with Link Fault Signaling function

The Signamax™ Gigabit Ethernet Media Converter fully complies with IEEE802.3 10BaseT, IEEE802.3u 100BaseTX, IEEE802.3ab 1000BaseT, and IEEE802.3z 1000BaseSX/LX Ethernet standards.

In this manual, you will find:

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

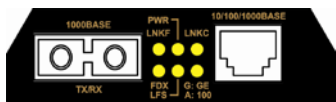
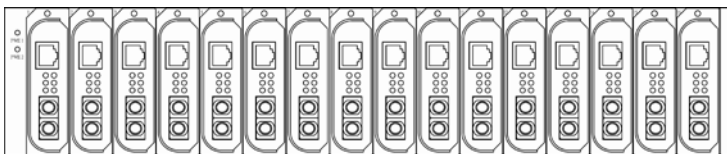
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## Introduction

The Gigabit Ethernet Media Converter provides one channel for media conversion between 10/100/1000BaseT/TX to 1000BaseSX/LX/BX with Link Fault Signaling function. It can be used as a stand-alone device or with a standard 19" chassis as shown below.

## Product Overview



Gigabit Ethernet Media Converter with Link Fault Signaling function

<Note> The chassis is to be ordered separately.

## Product Features

- Complies with IEEE802.3 10BaseT, IEEE802.3u 100BaseTX, IEEE802.3ab 1000BaseT, and IEEE802.3z 1000BaseSX/LX.
- Supports IEEE802.3x Flow control: Flow control for Full-duplex and Back pressure for Half-duplex.
- DIP Switch configuration for "Link Fault Signaling".
- 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.
- 32°F to 122°F (0°C to 50°C) operating temperature range.
- Aluminum case.
- Supports Wall Mounting installation or use with media converter chassis system.

## DIP Switch

No.	Down	Up
1	Disable Link Fault Signaling	Enable Link Fault Signaling
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 cycled off/on after resetting the Link Fault Signaling 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 our authorized reseller.

- The Media Converter
- User's Manual
- AC to DC Power Adapter

## One-Channel Media Converter

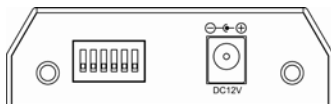
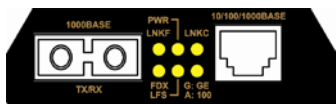
### Physical Ports

#### Gigabit Ethernet Media Converter

This converter provides one TX port and one 1000BaseSX/LX/BX port. For the 1000BaseSX/LX/BX port, it provides options of multimode/singlemode or WDM multimode/singlemode 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:



Gigabit Ethernet Media Converter with Link Fault Signaling function

LEDs	State	Indication
PWR	Steady	Power on
	Off	Power off
LFS	Steady	LFS function enabled LFS stands for Link Fault Signaling
	Off	LFS function disabled
LNKC	Steady	Copper port: A valid network connection established LNKC stands for LINK/Copper
	Off	No connection
Copper Port 10/100/1000 (Mbps)	Steady	Green: Connection at the speed of 1000Mbps Amber: Connection at the speed of 100Mbps
	Off	Connection at the speed of 10Mbps
LNKF	Steady	Fiber port: A valid network connection established LNKF stands for LINK/Fiber
	Off	No connection
FDX	Steady	Full-duplex mode 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 (RF) 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	IEEE 802.3 10BaseT IEEE 802.3u 100BaseTX IEEE 802.3ab 1000BaseT IEEE 802.3z 1000BaseSX/LX
Fixed Ports 10/100/1000BaseT/TX to 1000BaseSX/LX/BX:	1 TX port 1 FX port
Speed 10BaseT 100BaseTX 1000BaseT/SX/LX/BX	10/20Mbps for half/full-duplex 100/200Mbps for half/full-duplex 2000Mbps for full-duplex
Forwarding Rate 10BaseT 100BaseTX 1000BaseT/SX/LX/BX	14,880pps for 10Mbps 148,810pps for 100Mbps 1,488,100pps for 1000Mbps
LED Indicators	PWR; LFS; LNK; Copper Port Speed; LNK; FDX
Dimensions	3.16" (W) x 4.3" (D) x 0.94" (H) (80.3mm (W) x 109.2mm (D) x 23.8mm (H))
Weight	0.33lb. (150g)
Power	External power adaptor 0.23A @ 12VDC
Power Consumption	2.76W Max.
Operating Temperature	32°F to 122°F (0°C to 50°C)
Storage Temperature	14°F to 158°F (-10°C to 70°C)
Humidity	5%-95% non-condensing
Emissions	FCC part 15 Class A, CE Mark Class A

## Contact Information

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