

SIGNAMAX **CONNECTIVITY SYSTEMS**

Signamax™ Connectivity Systems
Dual Rate SFP
Converter Series

U S E R ' S G U I D E

Signamax™ Connectivity Systems

Dual Rate SFP 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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Preface

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

10/100/1000BaseTX to 100Base and 1000Base dual rate SFP fiber interface with Link Fault Signaling function

The Signamax™ Dual Rate SFP Media Converter fully complies with IEEE802.3 10BaseT, IEEE802.3u 100BaseTX/FX, 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

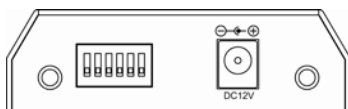
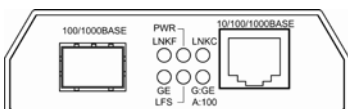
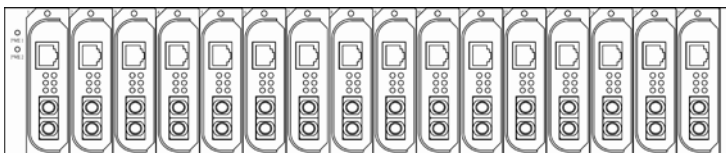
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Introduction

The Dual Rate SFP Media Converter provides one channel for media conversion between 10/100/1000BaseTX to 100Base and 1000Base dual rate SFP fiber interface 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



<NOTE> The chassis is to be ordered separately.

Product Features

- Complies with IEEE802.3 10BaseT, IEEE802.3u 100BaseTX/FX, IEEE802.3ab 1000BaseT, and IEEE802.3z 1000BaseSX/LX.
- Supports IEEE802.3x Flow control: Flow control for Full-duplex and Back pressure for Half-duplex.
- SFP fiber interface supports 100Base and 1000Base dual rate fiber transmission.
- DIP switch configuration for “Link Fault Signaling”.
- Gigabit transmission supports 9K Bytes jumbo frame.
- 1000Mbps-Auto/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 LFS	Enable LFS
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	SFP at 100Mbps	SFP at 1000Mbps
6	Function reserved	Function reserved

<Note> LFS: Link Fault Signaling function. Power must be off/on after re-setting LFS 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.

Signamax™ Dual Rate SFP Media Converter

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

One-Channel Media Converter

Ports

This converter provides one TX port and one 100Base and 1000Base dual rate SFP socket. For the 100Base and 1000Base dual rate SFP socket, 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.

Front Panel & LEDs



LED Indicators

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

LEDs	State	Indication
PWR	Steady	Power on PWR stands for POWER
	Off	Power off
LFS	Steady	LFS function enabled
	Off	LFS function disabled
LNKC	Steady	Copper port: A valid network connection established LNKC stands for LINK/Copper
	Off	No connection
G:GE A:100	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
GE	Steady	Force fiber port to 1000Base
	Off	Force fiber port to 100Base

Installation

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

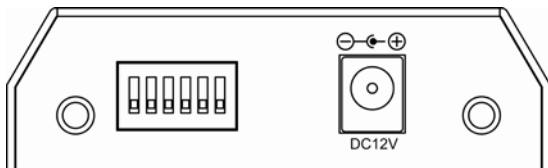
Selecting a Site for the Equipment

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 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.
- Connect the supplied AC to DC power adaptor to the receptacle on the rear panel of the converter, and then attach the plug into a standard AC outlet with a voltage range from 100 to 240VAC.



Installing in a Chassis

The Converter can be fit into any of the expansion slots on a special designed chassis.

- First, install the converter onto a carrier supplied with the chassis:
 Step 1- Unscrew the carrier from the desired expansion slot on the chassis.
 Step 2- 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 screws onto the carrier.

<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 10BaseT IEEE802.3u 100BaseTX/FX IEEE802.3ab 1000BaseT IEEE802.3z 1000BaseSX/LX
Fixed Ports	1 10/100/1000BaseTX port 1 100Base and 1000Base dual rate SFP fiber interface
Speed 10BaseT 100BaseTX/FX 1000BaseT 1000BaseSX/LX	10/20Mbps for half/full-duplex 100/200Mbps for half/full-duplex 2000Mbps for full-duplex 2000Mbps for full-duplex
Forwarding rate	14,880pps for 10Mbps 148,810pps for 100Mbps 1,488,100pps for 1000Mbps
LED Indicators	PWR, LFS, LNK, Copper Port Speed, LNK, SFP Port Speed
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 12VDC, 0.23A
Power Consumption	2.76W Max.
Operating Temperature	32°F ~ 122°F (0°C ~ 50°C)
Storage Temperature	14°F ~ 158°F (-10°C ~ 70°C)
Humidity	5 ~ 95%, non-condensing
Emissions	FCC part 15 Class A, CE Mark Class A