



EL100 / EL200 Series

10/100BASE-TX to 100BASE-FX Media Converter

10/100BASE-TX to 100BASE-BX WDM Media Converter

User's Guide

All Rights Reserved

Dissemination or reproduction of this document, or its contents, is not authorized except where expressly permitted. Violators are liable for damages. All rights reserved, for the purposes of patent application or trademark registration.

Disclaimer of Liability

The information contained in this document is subject to change without notice. EtherWAN is not liable for any errors or omissions contained herein or for resulting damage in connection with the information provided in this manual.

Warranty

For details on the EtherWAN warranty replacement policy, please visit our web site at:

www.etherwan.com

Products Supported by this Manual:

EL100, EL200

Preface

Audience

This guide is designed for the person who installs, configures, deploys, and maintains the Ethernet network. This document assumes the reader has moderate hardware, computer, and Internet skills.





Document Revision Level

This section provides a history of the revision changes to this document.

Revision	Document Version	Date	Description
A	Version 1	02/04/2021	First version in this format

Safety and Warnings

This guide uses the following symbols to draw your attention to certain information.

Symbol	Meaning	Description
	Note	Notes emphasize or supplement important points of the main text.
	Tip	Tips provide helpful information, guidelines, or suggestions for performing tasks more effectively.
	Warning	Warnings indicate that failure to take a specified action could result in damage to the device, or could result in serious bodily injury.
	Electric Shock Hazard	This symbol warns users of electric shock hazard. Failure to take appropriate precautions such as not opening or touching hazardous areas of the equipment could result in injury or death.

Contents

Preface	iii
Safety and Warnings	iii
Contents	iv
Introduction	5
Unpacking	6
Select Installation Location	6
Connect Power.....	8
Ports and Port Settings.....	8
LED Indicators.....	9
DIP Switches.....	10
Link Fault Pass Through (LFPT).....	10
CLASS 1 LASER PRODUCT.....	10
Specifications	11
Manufacturer’s Information	12

EL100 / EL200 Media Converter

10/100BASE-TX to 100BASE-FX Media Converter

10/100BASE-TX to 100BASE-BX WDM Media Converter

The EL100 / EL200 Series provide media conversion between 10/100BASE-T(X) and 100BASE-FX Fiber. Easy plug-and-play design facilitates network infrastructure construction. Through DIP switch selection, Link-Fault-Pass-Through (LFPT) function can be activated or disabled.

The EL100 series is designed for SC or ST fiber connection applications, while the EL200 series is designed for WDM fiber connection. These commercial grade media converters support the EtherWAN EMC1600 chassis system for easy group installation.

Unpacking

Open the carton and unpack the items. Your package should include an EL100 or EL200 media converter, and this Quick Install Guide. If items are missing or damaged, notify your EtherWAN representative.

Select Installation Location

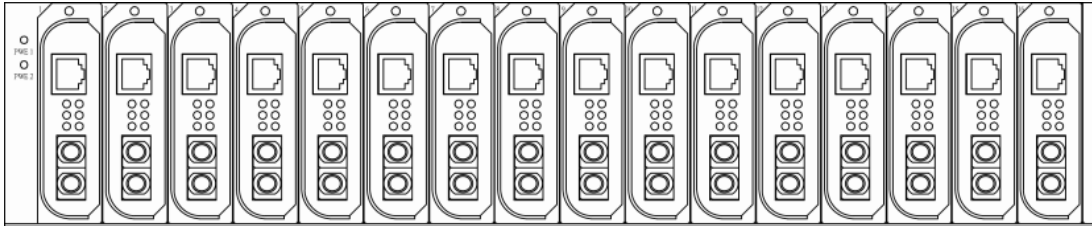
Place the equipment where it will not be subjected to extreme temperatures, humidity, or electromagnetic interference. Specifically, the site you select should meet the following requirements:

- 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.

Chassis Installation

The converter can be installed into any of the expansion slots in a compatible chassis.

- Install the converter onto a carrier supplied with the chassis.
- Unscrew the carrier from the desired expansion slot on the chassis.
- Fit the converter onto the carrier, and insert the carrier to the guide rails of the expansion slot.
- Tighten the retaining screws to fix the carrier in the chassis.



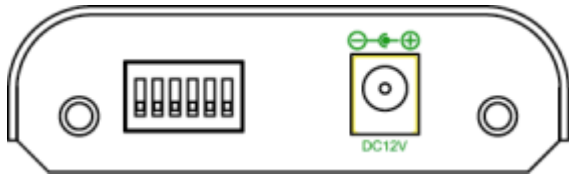
NOTE: Never insert any converter into the chassis directly without using the supplied carriers.

The carriers allow secure and consistent placement of the converters into the chassis' backplane without causing any damage.

Connect 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.

If installing into a chassis, then no additional power connection is required.



Ports and Port Settings

The EL100 provides one TX port and one FX/BX port. For the FX/BX port, it provides options of: Multi-mode fiber using SC, ST, VF-45, MT-RJ or LC connector or Single-mode fiber using SC or ST connector.

The TX port uses RJ-45 connector and auto senses the speed of 10/100Mbps.

The EL200 provides a WDM-A/B fiber port.

Port settings are made by means of a DIP (Dual Inline Package) switch at the rear panel of the module.

LED Indicators

LED	State	Indication
PWR	Steady	Power on
	Off	Power off
100 (Mbps)	Steady	Connection at 100Mbps
	Off	Connection at 10Mbps
LNK/ACT	Steady	Valid network connection established
	Flashing	Transmitting or receiving data
	Off	Neither valid network connection established nor transmitting/receiving data
FDX/COL	Steady	Connection in full-duplex mode
	Flashing	Collision occurred
	Off	Connection in half-duplex mode

DIP Switches

There are six pins on the DIP switch for port settings. Refer to the table below for more details.

DIP Switch No.	Down	Up
1	Enable LFPT (link-fault-pass-through)	Disable LFPT (link-fault-pass-through)
2	Enable auto negotiation for TX port	Enable forced mode for TX port
3	TX port forced to 100Mbps	TX port forced to 10Mbps
4	TX port forced to full duplex mode	TX port forced to half duplex mode
5	FX port forced to full duplex mode	FX port forced to half duplex mode
6	Store-and-forward mode	Converter mode

The default settings for all six dip switches are “Down”.

Disconnect the converter from the power source before changing any of the DIP switch settings.

NOTE: In order for converter mode to work, both TX and FX must be set to the same speed. Otherwise, the device will automatically switch to store-and-forward mode.

Link Fault Pass Through (LFPT)

LFPT (Link Fault Pass Through) is a feature that will pass a link fault through the device at each segment. If either of the copper TX links fail, the media converter will pass the fail state on throughout the link, taking down the middle fiber as well as the copper link on the opposite end. This prevents the connected switches from sending packets that would end up lost. LFPT is designed for use with media converters arranged in pairs, and both devices must support LFPT.

CLASS 1 LASER PRODUCT

Each laser product complies with US FDA regulations of 21 CFR 1040.10 and 1040.11 or complies with those regulations except for deviations pursuant to Laser Notice No. 56 dated May 8, 2019.

Specifications

Applicable standards	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX & 100Base-FX
Fixed ports	EL100 : 1 TX port, 1 FX port EL200 : 1 TX port, 1 BX port
10Base-T speed	10/20Mbps for half/full-duplex
100Base-TX speed	100/200Mbps for half/full-duplex
100Base-FX/BX speed	200Mbps for full-duplex
Switching Method	Store-and-Forward mode or converter mode
Forwarding rate	14,880/148,810pps for 10/100Mbps
LED Indicators	Per Unit- (2 LEDs): Power; 100(Mbps)
	Per Port- (2 LEDs): LNK/ACT; FDX/COL
Dimensions	80.3 × 109.2 × 23.8mm (W x D x H) (3.16" × 4.30" × 0.94")
Weight	150g (0.33lb.)
Power	External power adaptor 0.16A @ 12VDC
Power Consumption	1.92W Max.
Operating Temperature	0 ~ 45°C (32 ~ 113°F)
Storage Temperature	-10 ~ 70°C (14 ~ 158°F)
Humidity	5 ~ 95%, non-condensing
Safety	UL/CUL/CB 62368-1 Ed.2
Emissions	CE/FCC/VCCI

Manufacturer's Information

EtherWAN System, Inc.

www.etherwan.com

USA Office

2301 E. Winston Road

Anaheim, CA 92806

TEL: +1-714-779-3800

Email: info@etherwan.com

Pacific Rim Office

33F, No. 93, Sec. 1, Xintai 5th Rd., Xizhi Dist.

New Taipei City, 221 Taiwan

TEL: +886 -2- 6629-8986

Email: info@etherwan.com.tw

EtherWAN has made a good faith effort to ensure the accuracy of the information in this document and disclaims the implied warranties of merchantability and fitness for a particular purpose, and makes no express warranties, except as may be stated in its written agreement with and for its customers.

EtherWAN shall not be held liable to anyone for any indirect, special or consequential damages due to omissions or errors. The information and specifications in this document are subject to change without notice.

Copyright 2021. All Rights Reserved.

All trademarks and registered trademarks are the property of their respective owners

EL100 / 200 Media Converter

February 2, 2021