EtherWAN

EMC1600 Series
Media Converter and Ethernet Extender Chassis

User's Manual

Preface

This manual describes how to install and use the 16-Bay Media Converter and Ethernet Extender Chassis. This chassis is specifically designed to house and power selected EtherWAN Media Converters and Ethernet Extenders in a 19" rack enclosure.

Compatible media converter models:

EL2321, EL2211, EL2315, EM1100/EM2100, EM1000/EM2000, EM1000S/EM2000S, EM1020, EM120, EL100/EL200 and **EL110/EL210**

Compatible Ethernet extender models:

ED3101 and ED3331 (with operating temperature range from 0°C to 45°C)

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:

https://kb.etherwan.com/index.php?View=entry&EntryID=27

Table of Contents

PREFACE ..... **II**

TABLE OF CONTENTS **2**

PRODUCT OVERVIEW **3**

16-BAY MEDIA CONVERTER CHASSIS 3
PRODUCT FEATURES 4
PACKAGE CONTENTS 4

INSTALLATION **4**

SELECTING A SITE FOR THE EQUIPMENT 4
INSTALL THE CHASSIS 5
INSTALLING MEDIA CONVERTER OR ETHERNET EXTENDER 6
CONNECTING TO POWER 7
RELAY OUTPUT ALARM 6

SPECIFICATIONS **8**

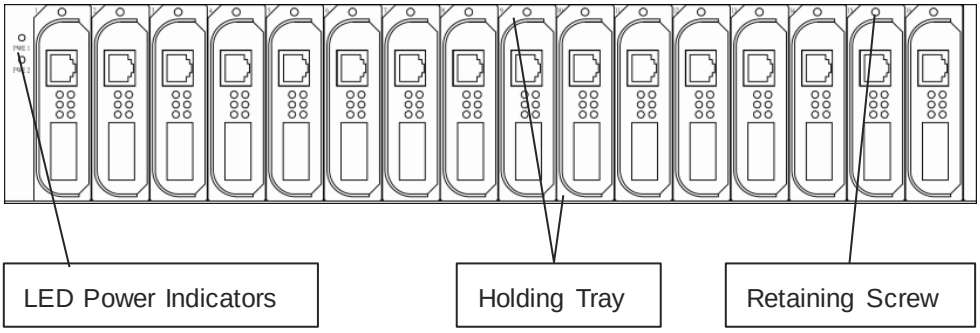
DIMENSIONS **9**

Product Overview

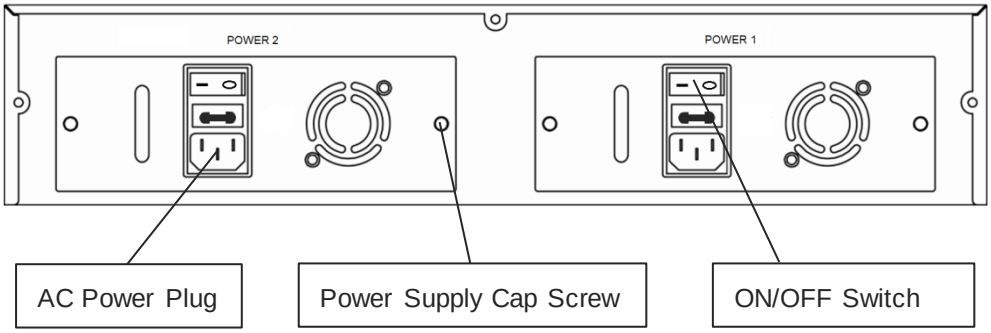
16-Bay Media Converter Chassis

Two LED indicators on the left display the status of the dual power supplies. The EMC1600 comes with options for AC power, DC power, and alarm relay contact.

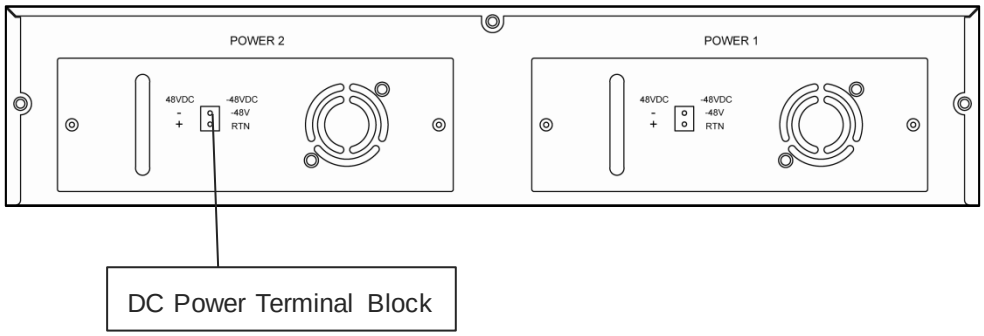
Front Face – All EMC1600 Models



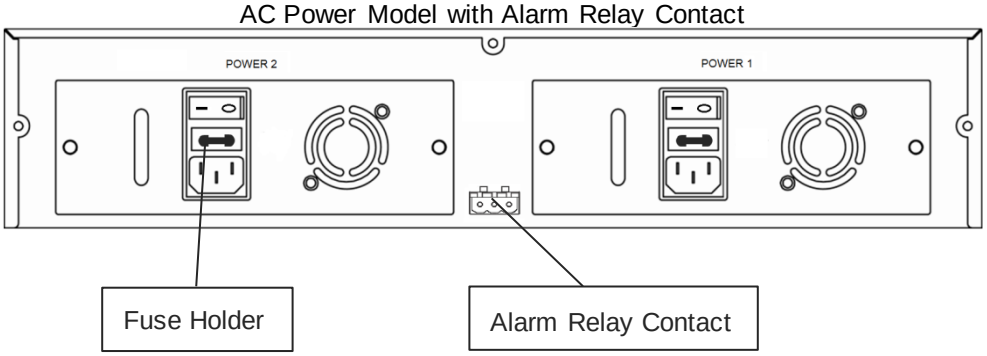
AC Power Model



DC Power Model



AC Power Model with Alarm Relay Contact



Product Features

- **16-BAY RACKMOUNT CHASSIS**
  Powers up 16 media converters with redundant power supply modules
- **HOT-SWAPPABLE**
  The chassis system is capable of hot-swap installations of selected EtherWAN's media converter and Ethernet extender models.
- **UNRIVALED RELIABILITY**
  Each bay is electrically isolated from each other with fused over-current protection.
- **POWER REDUNDANCY & POWER ISOLATION**
  Two high quality internal power supplies provide both power redundancy and load sharing.

Package Contents

Open the carton and unpack the items. Your package should include:

- 16-Bay Media Converter Chassis
- AC power cords (For AC powered models only)
- User's Manual
- Brackets & bracket screws

Please inspect the contents, and report any apparent damage or missing items immediately to your authorized reseller.

Installation

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 (EMC) 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 or the fan exhaust port on the side or rear of the equipment.
- The power outlet should be within 1.8 meters of the equipment.

Install the Chassis

Rack Mounting
Use the rackmount brackets and screws to install the chassis into any EIA 19" standard rack.

Place the brackets on the sides of the chassis so that the screw holes are aligned. Use the bracket screws to securely attach the brackets to the chassis. Apply screws to each side and secure them tightly.

Carefully position the chassis into the rack. Align the brackets to the side holes on the rack and use rack screws to secure the chassis to the rack.

Desktop or any flat surface
The chassis can sit on desktop or any flat surface with adequate space and ventilation. If the chassis is to be mounted or placed on a shelf, make sure the shelf can withstand a minimum weight of 10kg (22lbs).

Connecting to Power

The chassis provides dual power supplies for redundancy and load sharing. However, only one power supply is needed to operate the chassis.

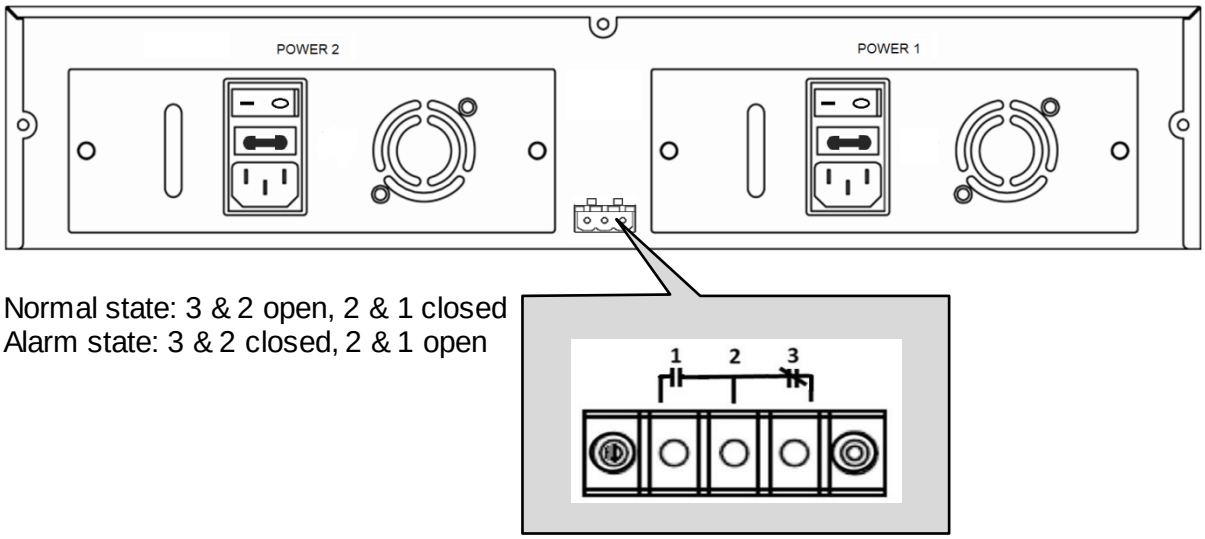
AC Power: Connect the supplied AC power cords to the receptacle on the power supply. Plug the cords in to a standard AC outlet with a voltage range from 100~240VAC.

DC Power: Connect the DC power cords to the terminal blocks on the back of the chassis. Voltage is ± 48VDC. The DC power models do not have an ON/OFF switch. Disconnect the power in order to turn off these models.

Power Consumption
Chassis: 5.4W Max.

Relay Output Alarm

The chassis provides a 3-pin relay dry contact located at the rear panel of the chassis for signaling of a power failure. The relay output can be connected to an alarm signaling device. The relay alarm will be triggered when the system power falls below 10.8VDC. The relay logic will apply for both single and dual power operation. Current is 0.6 Amps at 30VDC.



Normal state: 3 & 2 open, 2 & 1 closed
Alarm state: 3 & 2 closed, 2 & 1 open

Installing Media Converter or Ethernet Extender

Each bay is equipped with a holding tray, secured to the chassis by a retaining screw. To install a media converter or Ethernet extender into a chassis bay:

1) Loosen the retaining screw and pull the holding tray out.
2) Fit the component into the holding tray.
3) Slide the holding tray into the bay.
4) Tighten the retaining screw to secure the holding tray and component in place.

NOTE:

i. The chassis is designed to house only EtherWAN media converters and Ethernet extenders.
ii. Do not insert a media converter or Ethernet extender into the chassis directly without using the supplied holding trays. The holding trays ensure correct placement of components, and provide electrical insulation.

Supported media converter models include EL2321, EL2211, EL2315, EM1100/EM2100, EM1000/EM2000, EM1000S/EM2000S, EM1020, EM120, EL100/EL200 and EL110/EL210 series

For further information, refer to the user's manual for the specific Ethernet extender or media converter being installed.

Removing Media Converter or Ethernet Extender from Chassis

Media converter and Ethernet extender components can be hot-swapped. It is not necessary to power down the chassis when inserting or removing components.

1) Loosen the retaining screw and pull the holding tray and component out.
2) Remove the component from the holding tray.
3) If you are replacing the component, insert the new component into the holding tray, and slide the holding tray into the bay.
4) Tighten the retaining screw to secure the holding tray in place.

Replacing a Power Supply

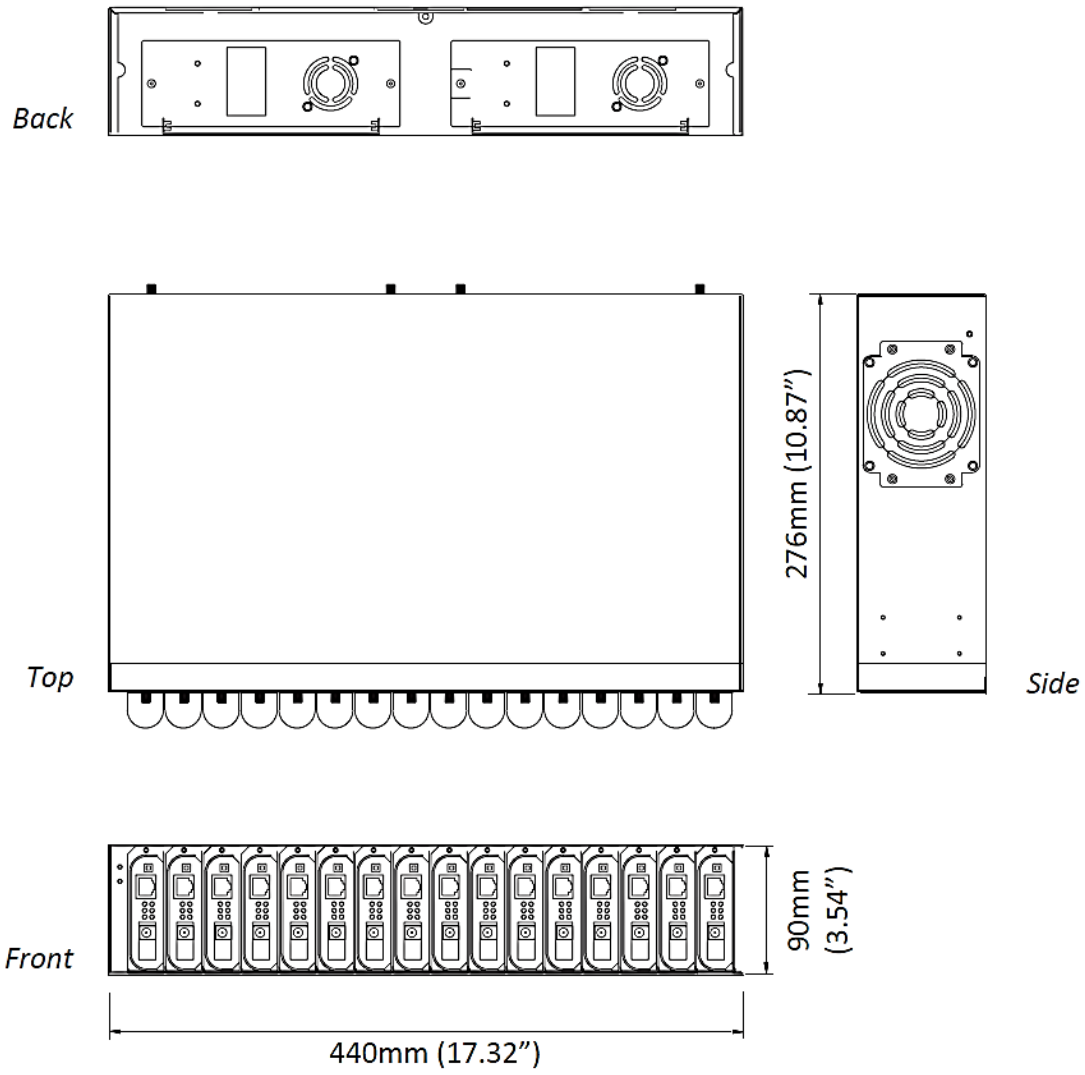
NOTE: The power supply module should be disconnected from the external power source before it is installed into the chassis.

1) Loosen the two cap screws on the sides of the power supply module, and use the handle to slide the module out of the slot.
2) Carefully slide the new power supply module into the slot so that the outer face of the power supply module is flush with the rear face of the chassis.
3) Tighten the two cap screws to secure the power supply module in place.
4) Connect the power supply module to an external power source.

Specifications

Capacity	Sixteen bays for housing up to sixteen media converters
Power	Two power supplies provided, hot-swappable
Cooling	Two power supplies with fans One fan on the left and right side of the chassis
LED Indicators	2 LEDs (1 LED for each power supply status)
Casing material	Aluminum
Dimensions	440 × 276 × 90mm (W x D x H) 17.32” × 10.87” × 3.54” Standard 19” size, 2U
Net Weight	6.8Kg (14.96lbs.)
Power Input	100~240VAC, 50~60Hz 48VDC, -48VDC
Power Consumption	Chassis: 5.4W Max.
Operating Temperature	0 to 45°C (3 to 113°C)
Storage Temperature	-10 to 70°C (14 to 158°F)
Humidity	5% to 95% (non-condensing)
Safety	UL 60950-1
Emissions	CE Mark Class A, FCC Part 15B Class A
RoHS 2.0	Directive 2011/65/EU
WEEE	Directive 2012/19/EU

Dimensional Diagrams



Manufacturers Address

EtherWAN Systems Inc.
8F, No. 4, Alley 235, Baoqiao Road
Xindian District, New Taipei City, 231
Taiwan

www.EtherWAN.com