



## Installation Guide

### 1 Unpacking

Unpack the items. Your package should include:  
One EX78000 Series hardened managed switch  
One CD containing this user's guide  
If items are missing or damaged, notify your EtherWAN representative. If possible, save the carton and packing material in case you need to ship or store the switch in the future.

### 2 Equipment Needed

Category 5 or better cable for RJ-45 ports  
Appropriate fiber cables for fiber ports  
Appropriate SFP cable for SFP ports  
Personal computer with a DB-9 straight cable

### 3 Select a Location

Installation: Wall-mount, wall (in an enclosure or industrial panel).

Identify a power source within 6 feet (1.8 meters).

Choose a dry area with ambient temperature between -40 and 75°C (-40 and 167°F).

Be sure there is adequate airflow.

### 4 Connect to the Data Ports

Depending on the model, your switch can have the following ports:

4 or 8 10/100BASE-TX Power over Ethernet (PoE) ports

0, 2, or 4 100BASE-FX ports

2 Gigabit ports

#### 10/100BASE-TX (PoE) and 10/100/1000BASE-TX Ports

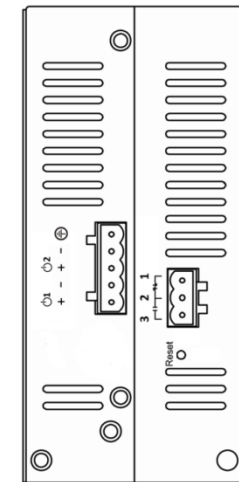
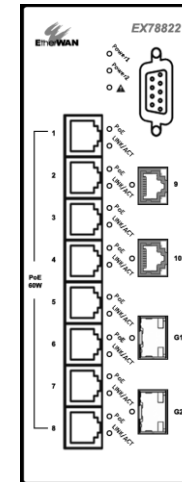
Ports that support Power over Ethernet provide power to networked devices such as IP Phones, Wireless LAN Access Points, and IP security cameras with a power budget of 240 watts maximum.

#### 2 100/1000BASE SFP Slots

SFP transceivers can be installed directly into SFP slots. Ensure that the same type of transceiver is used at both ends of the link and that the correct type of fiber cable is used.

#### 100BASE-FX Fiber Ports

Some models are equipped with fiber optic ports accepting SC & ST connectors instead of SFP slots. Select an appropriate cable type according to your distance and transmission rate needs.



### 5 Apply Power

The switch has a 52-57VDC terminal block for power input. Only one power input is required to operate the switch. However, redundant power supply functionality is supported.

IEEE802.3at: up to 30W/port, 52-57VDC

60 Watts/port, 52-57VDC

52VDC: 4.85A

57VDC: 4.45A

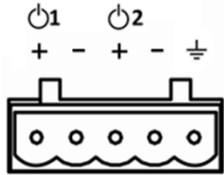
**Note:** Only use qualified power supply, either SELV or double insulated per UL 60950 or UL 61010-1 or UL 61010-2-201 standards.


Device power consumption: 10.4W Max. (Without PoE)

PoE power budget: 240W Max.

## Terminal Block

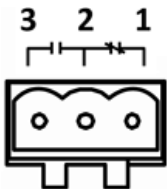
The switch provides two power inputs on a 52-57VDC terminal block. Only one power input is required to operate the switch. The terminal block has 5 terminal posts.



Pin	Description	
Power 1	+	52-57VDC
	-	Power Ground
Power 2	+	52-57VDC
	-	Power Ground
		Earth Terminal
Relay Output Rating	0.5A @ 48VDC	

## Relay Output Alarm

The switch provides relay output contacts for signaling of a user-defined power or port failure. The relay output can be connected to an alarm signaling device. Current is 0.5A at 48VDC.



3 Normal Open | 2 Ground | 1 Normal close

## Power-Up Sequence

When you apply power:

All **Link/ACT** LEDs blink momentarily.

The **Power 1** LED goes ON.

LEDs for every port connected to a device flash, as the switch conducts a Power On Self-Test.

## 6 Console Configuration

Connect to the switch console by connecting a DB-9 cable to the console port of the switch and to the serial port of a computer running a terminal emulation application (such as Hyperterminal or Putty).

Configuration settings of the terminal-emulator:  
Baud rate: 115,200bps, Data bits: 8, Parity: none, Stop bit: 1, Flow control: none.

The default login name is “root,” no password.

## 7 Web Configuration

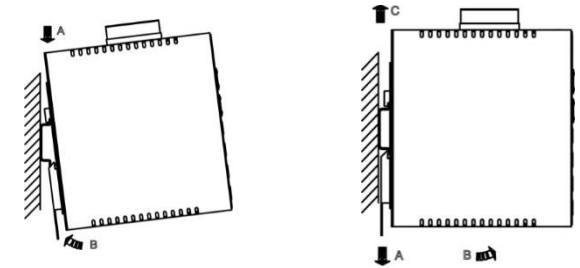
Log in to the switch by launching a web browser and entering 192.168.1.10 in the address bar. Enter the default login ID: root (no password) and click “Login.” The system information screen will display as shown below.

## 8 Other information

DIN-Rail assembly, startup, and dismantling  
**Assembly:** Place the Switch on the DIN rail from above using the slot. Push the front of the Switch toward the mounting surface until it audibly snaps into place.


**Startup:** Connect the supply voltage to start the switch via the terminal block.

**Dismantling:** Pull out the lower edge and then remove the Switch from the DIN rail.



## Power wiring information:

Use cable type - AWG (American Wire Gauge) 18-24 and the corresponding pin type cable terminals. Tighten terminal screws with a torque value of 1.7 lb-in. Do not use excessive force when fixing wiring.

 The rating of the power wire used must be at least 105°C.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

The Ethernet switch should be mounted in an industrial control panel with ambient temperature not exceeding 75 degrees C.

Manufacturer information:

**ETHERWAN SYSTEMS, INC.**

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