EtherWAN EX78900E Series Hardened Managed Ethernet Switch Installation Guide

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Contents

Unpacking

Unpack the items. Your package should include:

- One EX78900E hardened managed switch

- One RJ-45 console cable If items are missing or damaged, notify your EtherWAN representative. Keep the carton and packing material. The full product manual can be downloaded from:

  https://www.etherwan.com

What Else You Need

- Appropriate cables for data ports. To prevent damage to the switch from electrical surges, it is recommended to use STP (Shielded twisted pair) cabling.
- Personal computer or laptop
- Appropriate SFP modules for SFP ports

Select a Location

- Installations: DIN-Rail mount.
- Select a power source within 6 feet (1.8 meters).
- Choose a dry area with ambient temperature between -40 and 75ºC (40 and 167ºF).
- For use at altitudes up to 2000 meters, indoor use only.
- Humidity range (Operational): 5% to 95%, non-condensation

Connect to the Data Ports

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

EX78922E-0VB	8-port 10/100/1000BASE-T (4 x 30W, 4 x 60W PoE) 2-port 100/1000M SFP
EX78924E-0VB	8-port 10/100/1000BASE-T (4 x 30W, 4 x 60W PoE) 4-port 100/1000M SFP
EX78934E-0VB	12-port 10/100/1000BASE-T (8 x 30W, 4 x 60W) PoE 4-port 100/1000M SFP

10/100/1000BASE-TX (PoE) 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.

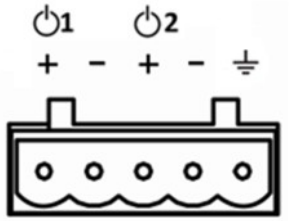
100/1000M SFP Ports
SFP transceivers can be installed directly into SFP slots. Ensure that the same type of transceiver is used at both ends of the link and that the correct type of fiber cable is used.

Apply Power

- The switch has two pairs of power inputs.

- Only one power input is required to operate the switch. However, redundant power supply functionality is supported.
- 52V/4.97A 57V/4.54A
- **Note:** Use qualified power supply by SELV or double insulation of UL60950 or UL61010-1 or UL61010-2-201 standards.

Terminal Block
The switch provides two power inputs on a 52-57VDC terminal block. 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 two relay output contacts. Relay 1 is for signaling of a user-defined power, port, or ring failure. Relay 2 signals actions from one of the digital inputs. The relay outputs can be connected to an alarm signaling device. The Current is **0.5A@48VDC** at Normal Open or Normal Close.

3 Normal Open | 2 Ground | 1 Normal close

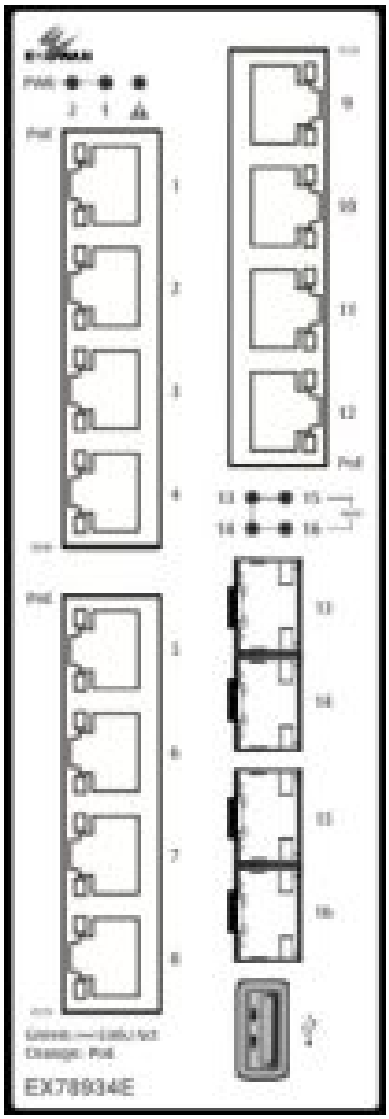
Relay Status		
	Normally closed	Normally Open
No Power	Closed	Open
Normal	Open	Closed
Abnormal	Closed	Open

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 brief Power On Self-Test (POST).

Front Panel LEDs

LED	Color	Status
Power 1 & 2	Green	On: Power on Off: Power off
Link/Act	Green	On: Network connection established Flashing: Port sending or receiving data
PoE	Amber	On: Powered device is connected Off: Powered device is disconnected
Alarm	Red	Link down or power down



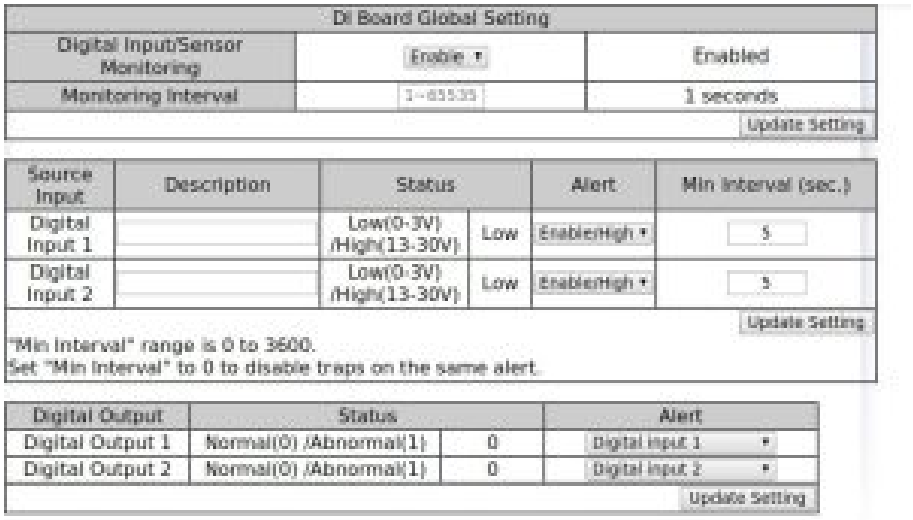
Digital IO-Setting

Connecting the Digital Inputs
The pin definitions for the digital input module are shown below. Each digital input consists of two contacts on the 5-pin connector located on the back panel of the switch. The inputs can be wired as either dry or wet contacts.

Dry Contacts:
[DI1-/GND] [DI2-/GND]
Logic level 1: Close to GND(10mA)
Logic level 0: Open

Wet Contacts:
[DI1+/DI1-] [DI2+/DI2-]
Logic level 1 (High): 13~30 Volts (3.2mA)
Logic level 0 (Low): 0~3 Volts

Configuring Digital Input Alarms Using the Web Interface
Located under the Diagnostics group, the Digital IO-Setting page allows for quick configuration and enabling of digital input and environmental alarms.



To enable digital input alarms globally:

1. Choose Enable from the drop down menu in the Set State field.
2. Click on the Update Setting button to the right of the field.

To enable specific digital input alarms:

1. Enter a name or description of the alarm in the Description field. This will display in any emails sent if the alarm is triggered.
2. In the Alert field, choose Enable/High from the drop-down menu if you want the alarm to trigger in an occurrence of high voltage (wet contact), or Open state (dry contact). Choose Enable/Low if you want the alarm to trigger in an occurrence of low voltage (wet contact), or Closed to ground state (dry contact).
3. To set alarms for temperature and humidity, enter the threshold value in the field provided, and select Enable from the drop down menu at the right.
4. Click on the Update Setting button at the bottom right to put the new settings into effect. Then navigate to the Email configuration page.

Console Configuration

Connect to the switch console by connecting the DB-9 cable to the console port of the switch and to the serial port of the computer running a terminal emulation application (such as HyperTerminal or Putty). Configuration settings of the terminal-emulation program: Baud rate: 115,200bps, Data bits: 8, Parity: none, Stop bit: 1, Flow control: none. The default login name is “root,” no password.

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.

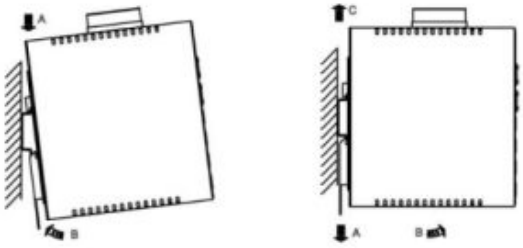
USB Port

The switch is equipped with one USB port (Type A connector) for configuration file and syslog backup. The USB port can be used to save the configuration and Syslog to a (FAT32) USB storage device. Plug the device into the USB port, and use the “Save Configuration” command in the web interface, or “copy running-config startupconfig” in the CLI. Use the “Export Logs to USB” command in the web interface, or “export logs” in the CLI.

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 up the Switch via the terminal block.
- **Dismantling:** Pull out the lower edge and then remove the Switch from the DIN rail.



Note: The Switch can be extremely hot after running in full load for a while. Please use protective gloves when dismantling and adjusting the Switch.

Power wiring information:
Use cable type – AWG (American Wire Gauge) 18-22 and corresponding pin type cable terminals.
Using torque value 5 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. For repair or maintenance needs, contact EtherWAN directly.

- Label clean up:
  Indoor use and pollution degree II, it must be wiped with a dry cloth to clean up the labelling.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- The product is open type, intended to be installed in and industrial control panel or an enclosure.

Manufacturer information:

ETHERWAN SYSTEMS, INC.
33F, No. 93, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City, 221 Taiwan

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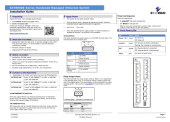
Documents / Resources

	EtherWAN EX78900E Series Hardened Managed Ethernet Switch [pdf] Installation Guide EX78900E Series, Hardened Managed Ethernet Switch, EX78900E Series Hardened Managed Ethernet Switch, Ethernet Switch, EX78900E