1 Unpacking

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

- One EX73900X hardened managed switch
- One RJ-45 console cable

If any 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 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

3 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
- For use in Pollution 2 environment.
- Do not block the device ventilation holes.

4 Connect to the Data Ports

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

EX73934X-0VB	12-port 10/100/1000BASE-T(X) + 4-port 1G/10G SFP+
EX73924X-0VB	8-port 10/100/1000BASE-T(X) + 4-port 1G/10G SFP+
EX73922X-0VB	8-port 10/100/1000BASE-T(X) + 2-port 1G/10G SFP+

10/100/1000BASE-TX Ports

To prevent damage to the switch from electrical surges, it is recommended to use STP (Shielded twisted pair) cabling.

1G/10G 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.

5 Connect 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.
- Power rating: 12-48VDC, Max. 2.13A.
- The power input specification complies with the requirements of SELV (Safety Extra Low Voltage), and the power supply should comply with UL 61010-1 and UL 61010-2-201.

Terminal Block

The switch provides two power inputs on a terminal block with nominal power of 24VDC. The terminal block has 5 terminal posts.
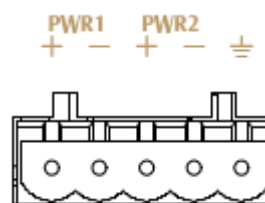

Pin		Description
Power 1	+	12-48VDC
	−	Power Ground
Power 2	+	12-48VDC
	-	Power Ground
⏚		Earth Terminal
Relay Output Rating		0.6A @30VDC

Relay Output Alarm

The switch provides two relay output contacts. Both Relay 1 and Relay 2 signal actions from one of the digital inputs. The relay outputs can be connected to an alarm signaling device. The Current is 0.6A@30VDC at Normal Open or Normal Close.
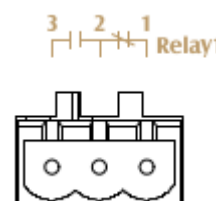
3 Normal Open | 2 Ground | 1 Normal Close

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

Power-Up Sequence

When the switch is powered up:

- All **Link/ACT** LEDs blink momentarily.
- The **Power 1** LED light goes ON.
- LEDs for every port connected to a device will flash, as the switch conducts a brief Power On Self-Test (POST).

6 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
Alarm	Red	Link down or power down
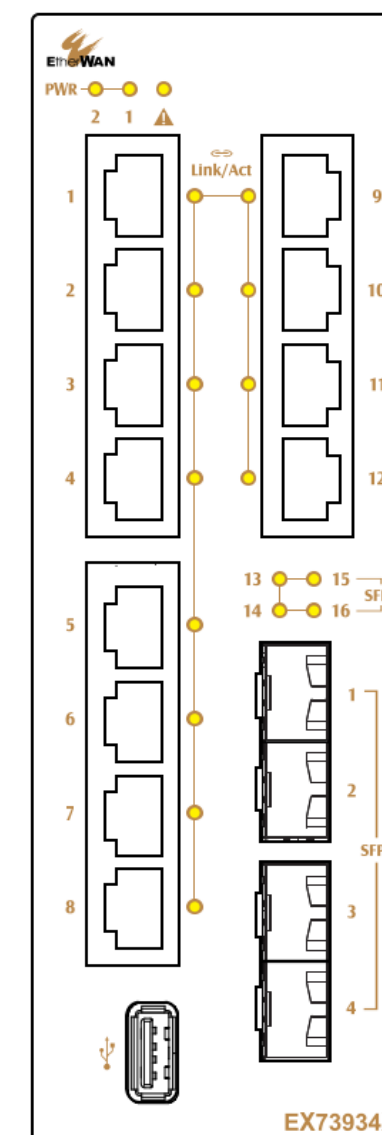
7 Digital IO-Setting

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 top 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.

DI Board Global Setting		
Digital Input/Sensor Monitoring	Enable ▼	Enabled
Monitoring Interval	1~65535	1 seconds
		Update Setting

Source Input	Description	Status		Alert	Min Interval (sec.)
Digital Input 1		Low(0-3V) /High(13-30V)	Low	Enable/High ▼	5
Digital Input 2		Low(0-3V) /High(13-30V)	Low	Enable/High ▼	5
					Update Setting

"Min Interval" range is 0 to 3600.
Set "Min Interval" to 0 to disable traps on the same alert.

Digital Output	Status		Alert
Digital Output 1	Normal(0) /Abnormal(1)	0	Digital input 1 ▼
Digital Output 2	Normal(0) /Abnormal(1)	0	Digital input 2 ▼
			Update Setting

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.
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.

8 Console Configuration

Connect to the switch console by connecting the RJ-45 console 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.

When logging into the GUI or the CLI for the first time, the switch will prompt you to change the default password to a new one. The new password must meet the following complexity requirements:

Minimum 8 characters and maximum 35 characters in password length without leading or trailing blanks.
The password must contain characters from the following categories:
1. Uppercase English letters, (A to Z)
2. Lowercase English letters, (a to z)
3. Numbers, (0 to 9)
4. Non-alphanumeric characters (e.g. @, #, $), but not including (", ?, !)

9 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.

10 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.

11 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.
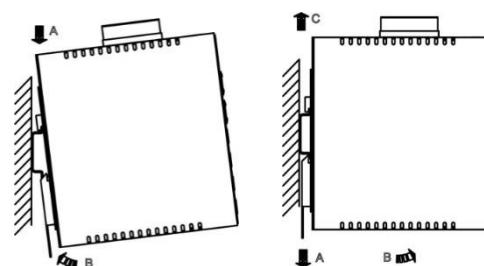
The device can get hot to the touch after running at full load for some time. Please use caution when handling the device.

L'appareil peut devenir chaud au toucher après avoir fonctionné à pleine charge pendant un certain temps. Soyez prudent lors de la manipulation de l'appareil.

Power wiring information:

Use cable type - AWG (American Wire Gauge) 18-22 and corresponding pin type cable terminals.

Use torque value of 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.

Informations de câblage d'alimentation:

Utilisez le type de câble - AWG (American Wire Gauge) 18-22. valeur de couple de 5 lb-in.

Le calibre du fil d'alimentation utilisé doit être d'au moins 105°C.
DESTINÉ À ÊTRE UTILISÉ AVEC DES CONDUCTEURS EN CUIVRE SEULEMENT.

Si la méthode d'utilisation de l'équipement diffère de celle décrite par le fabricant, la protection assurée par l'équipement risque d'être altérée.

Contactez-nous pour l'entretien ou la reparation.

Label clean up:

- 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 an industrial control panel or an enclosure.
- SFP module specification requirement: Class 1 laser product. Complies with CDRH 21CFR 1040.10 and 1040.11. Rated 3.3 or 5 VDC.
- The installation safety of any system incorporating the equipment is the responsibility of the assembler of the system.

Manufacturer information:

EtherWAN Systems, Inc.

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

The full product manual can be downloaded from: www.etherwan.com