1 Unpacking

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

- EX77900 hardened managed Ethernet switch
- 2 Mounting brackets
- 12 Mounting screws
- 1 Console cable
- 2 Power cables (if no terminal block)

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

- Category 5e or better cable for RJ-45 ports
- Appropriate fiber cables for fiber ports
- Appropriate SFP cable and modules for SFP ports
- Personal computer with a DB-9 male interface (if switch is to be managed through console port)

3 Select a Location

- Installation: Rack-mount. Use the enclosed screws and brackets to mount the switch in an open or enclosed 19" rack.
- Identify a power source within 6 feet (1.8 meters).
- Choose a dry area with ambient temperature between -40 and 75ºC (-
- 40 and 167ºF).
- Keep away from heat sources, sunlight, warm air exhausts, hot-air vents, and heaters.
- Be sure there is adequate airflow.

4 Connect to the Data Ports

The EX77900 has the following ports:

- 24 10/100/1000 Mbps copper ports
- 8 SFP slots shared with ports 17 – 24 supporting 100Mbps or 1Gbps
- 4 SFP+ slots, supporting 10Gbps or 1Gbps

10/100/1000BASE-TX Ports

Ports 1 to 16 are gigabit copper ports and can be connected to routers, other switches, or end devices. Use category 5e or higher UTP/STP cable.

1 Gbps Combo/SFP Ports

Ports 17 – 24 are combo ports, and have two physical interfaces for each port. These ports can be used as either 10/100/1000BASE-TX on the left section or 1000BASE-FX on the right section. These ports operate in "either/or" fashion, i.e., connecting to fiber port 17 will render copper port 17 inoperable.

SFP+ Slots

SFP transceivers can be installed directly into right-side ports 17 – 24 and SFP ports 1 – 4. 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.
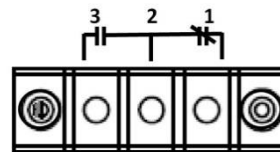
5 Connect Power

Terminal Block

If your EX77900 comes with power cables, connect the cables into the power modules at the back of the switch. If your switch comes with a terminal block (no cable), then connect the switch to a suitable power supply using 12 to 24 AWG wire.

Redundant power supply is supported. However, only one power input is required to operate the switch.

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.

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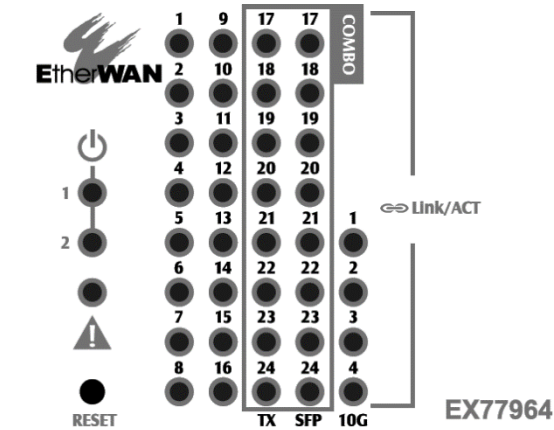Alarm state: 3 & 2 closed, 2 & 1 open

Power-Up Sequence

When the switch is powered up:

- All **Link/ACT** LEDs blink momentarily.
- The **Power 1, 2** LEDs light up and stay lit.
- 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 Panel Layout

Green LED ON = network connection established

FLASHING = Port sending or receiving data

7 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.

8 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."

9 Copy Configuration to USB

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.
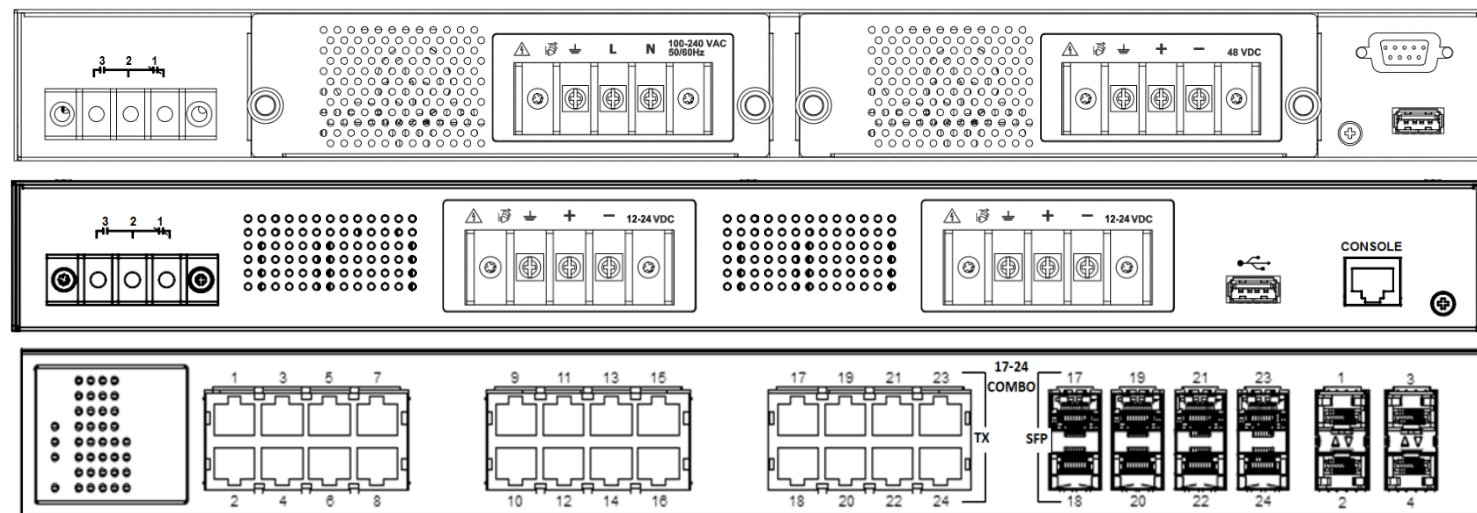
10 Other Information

The power cord must be connected to a properly earth grounded outlet.

Rack Mount Instructions - The following or similar rack-mount instructions are included with the installation instructions:

(A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

C) Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

D) Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

E) Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.

This equipment is intended to be used in a restricted access location and be used by a qualified person.

Caution:

This equipment shall be used with all power supplies connected simultaneously.

Hazardous voltages may occur within this unit when connected to all power supplies. Prevent access to hazardous voltages by disconnecting this equipment from all power supplies.

This equipment must be connected to Protective earthing (PE) to AC mains ground. The protective earthing conductor shall be minimum 18 AWG and having green-and-yellow insulation. The thread diameter of screw type terminal shall be minimum 3.5mm.
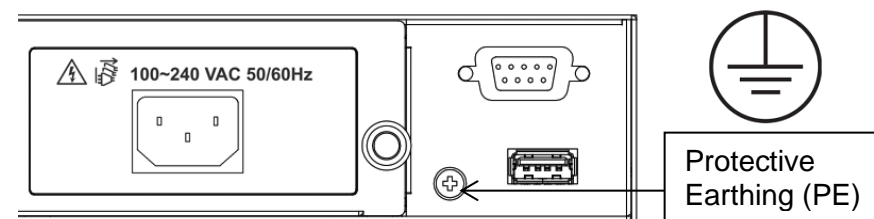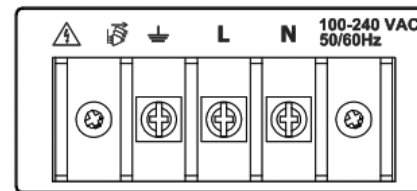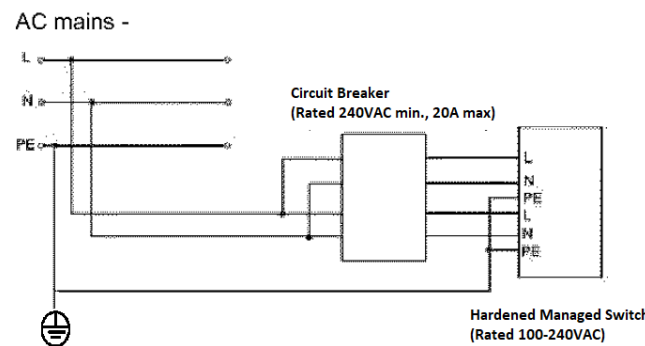

Protective Earthing (PE)

This equipment is not suitable for use in locations where children are likely to be present.

The power cord shall be IEC 60227 certified, rated 0.75 mm2 x 3C or UL recognized minimum 18AWG

Mains circuit connection:

DC mains -
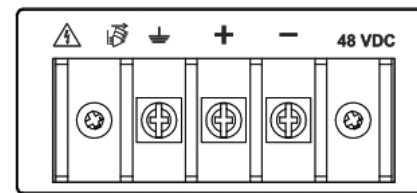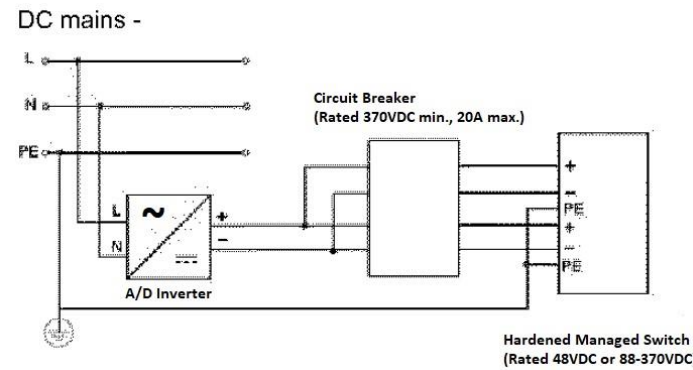
DC Terminal Block

AC mains -

AC Terminal Block

All power connection wiring by a qualified electrician in accordance with National Electrical Code, ANSI/NFPA 70 and Canadian Electrical Code, Part I, CSA C22.1. An IEC certified or UL listed single-phase type circuit-breaker, rated maximum 20A, shall be installed between mains circuit and equipment.

Thumbscrews should be tightened with a tool after both initial installation subsequent access to the panel.

Caution:

This equipment has a connection between the earthed conductor of the DC supply circuit and the earthing conductor. All of the following installation conditions must be met.

- This equipment shall be connected directly to the DC supply system earthing electrode conductor or to a bonding jumper from an earthing terminal bar or bus to which the DC supply system earthing electrode is connected.
- This equipment shall be located in the same immediate area (such as adjacent cabinets) as any other equipment that has a connection between the earthed conductor of the same DC supply circuit and the earthing conductor, and also the point of earthing of the DC system. The DC system shall not be earthed elsewhere.
- The DC supply source is to be located within the same premises as this equipment.
- There shall be no switching or disconnecting devices in the earthed circuit conductor between the DC source and the point of connection on the earthing electrode conductor.

Note: This equipment must use UL recognized Laser Class 1 optical transceiver.

This equipment is intended to be used in a restricted access location and be used by a qualified person.

This equipment is not suitable for use in locations where children are likely to be present.

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