EG99000 Series Layer 3 Hardened Managed Ethernet Switch

Installation Guide

EtherWAN

1 Unpacking

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

- EG99000 Ethernet switch
- Mounting brackets
- 12 Mounting screws
- 1 Console cable
- Power cables (if no terminal block)
- Quick install guide

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.

The full product manual can be downloaded from:

https://www.etherwan.com/support/product/EG99000-series

2 What Else You Need
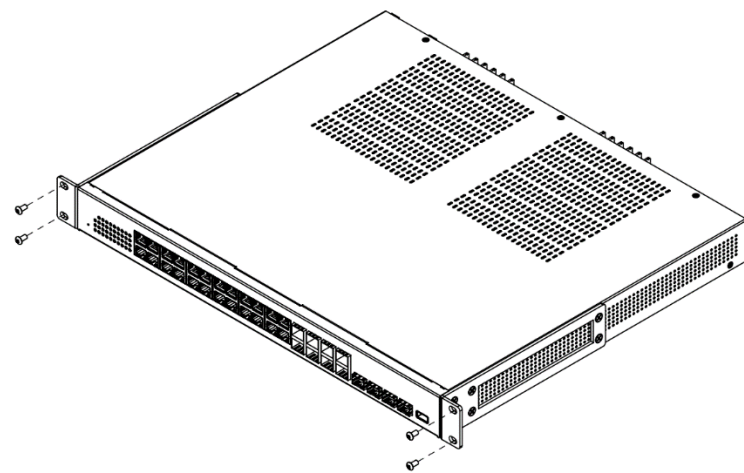
Category 5e or better cable for RJ-45 ports

Appropriate fiber cables for fiber ports

Appropriate SPF cable and modules for SPF 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.

Connect 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 EG99000 has the following ports:

- 24 x 10/100/1000 Mbps copper ports
- 8 x Gigabit combo ports (RJ-45 & SPF)
- 4 x 1/10G SPF+ slots
- 1 x RJ-45 Management port
- 1 x USB port

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 5 or higher STP cable.

1 Gbps Combo/SPF 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.

SPF+ Slots

SPF transceivers can be installed directly into right-side ports 17 – 24 and SPF+ 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

If your EG99000 comes with AC power cables, connect the cables into the power modules at the back of the switch. If your switch comes with a DC or AC terminal block (no cable), then connect the switch to a suitable power supply using 12 to 18 AWG wire. Redundant power supply is supported. However, only one power input is required to operate the switch. Input voltage is 48 VDC or 100 – 240 VAC, depending on model. See section 11 for more power-related safety information.

Relay Output Alarm

The switch provides one dry contact for signaling of a user-defined power or port failure. The alarm relay default is "open" and forms a closed circuit when the event occurs. The relay output can be connected to an alarm signaling device, and supports both normal open and normal closed. Relay output current is 30VDC / 0.6A.

Power-Up Sequence
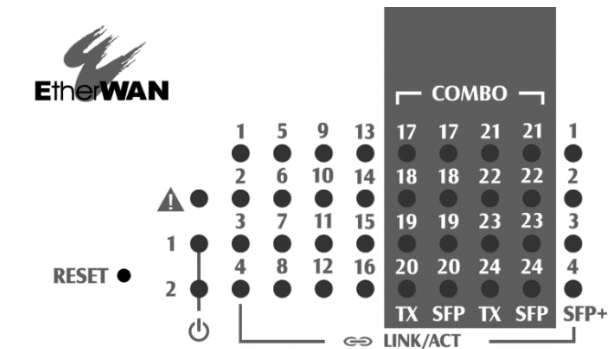
When the switch is powered up:

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

Connect to the switch using either one of the RJ45 ports on the front, or the dedicated Management port on the rear of the device.
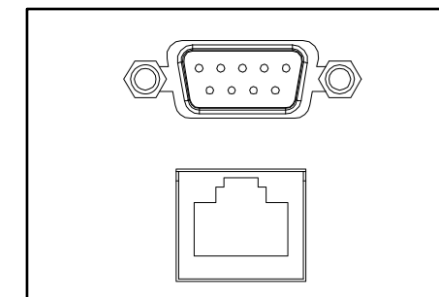
Log in to the switch by launching a web browser and entering 192.168.1.10 (front panel ports) 192.162.2.10 (Management port in rear) in the address bar. Enter the default login ID: root (no password) and click "Login."

9 Digital IO-Connection

(Not available on all models)

The switch is equipped with two digital inputs (wet contact), located on the terminal block next to the relay outputs. Both inputs have the same ground, but are electrically isolated from the switch electronics.

Input level "0": -30 to +3V
Input level "1":+13 to +30V

Using the web interface, the digital input can be configured to create an event when input voltage changes from high to low, or low to high. Event actions can be set to System log, SMTP, or SNMP Trap.
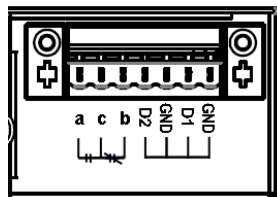
10 Copy Configuration to USB

The USB port can be used to save the running switch configuration 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 startup-config" in the CLI.

11 Other Electrical and Safety Information

(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).

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

C) 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.

D) 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).

Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

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.

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

Les matériels sont destinés à être installés dans des EMPLACEMENTS À ACCÈS RESTREINT.

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.

The ground wire should be installed first (earlier than live and neutral ires) and then removed. The grounding wire should be longer than live and neutral wires.

When wiring the switch to power, unscrew the two retaining screws that hold the protective cover in place. The metal protective cover should be reattached after the wiring is completed to avoid the danger of electric shock.
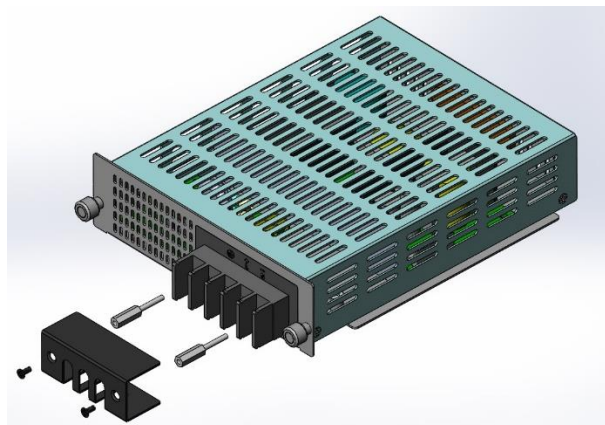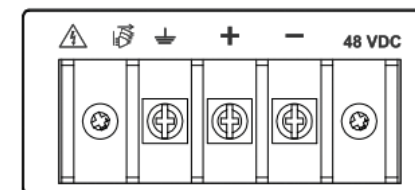

When stripping the cable sheath for connection to the terminal block, leave only 10mm of wires exposed for the connection.
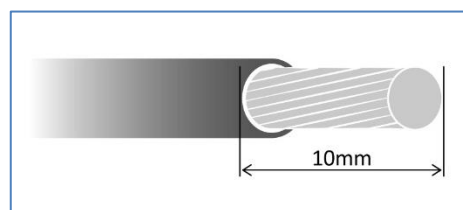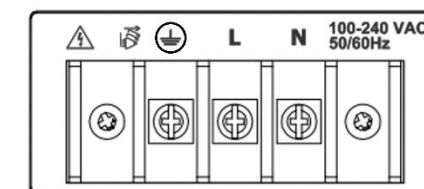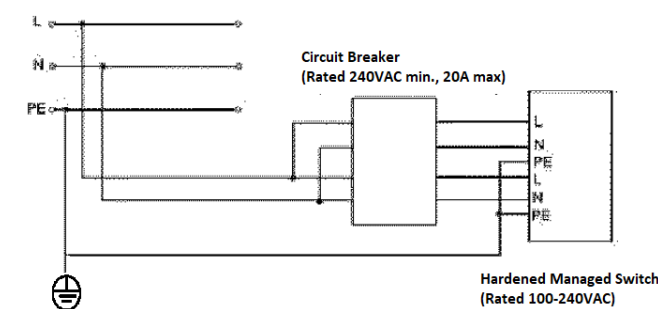

The power cord shall be IEC 60227 certified, rated 0.75 mm2 x 3C or UL recognized minimum 18AWG.

Terminal Block:

This product is intended to be supplied by certified DC power source and rated output rating: 48 VDC, 1 A minimum.

AC Terminal Block

AC power rating current is 0.6A.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.

Note:

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