

Industrial Managed Gigabit Ethernet Switch

EMG8508 / EMG8510 Series
EMG8608 / EMG8610 Series

Hardware Installation Guide


Version 2.1
Updated in Aug. 2024



Package Check List

Inside the package you will find the following items:

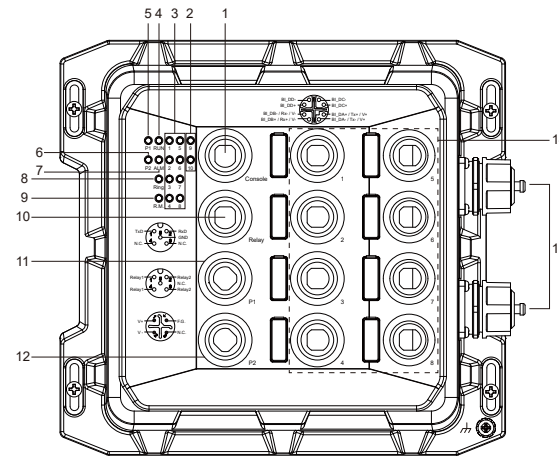
- Industrial Managed Gigabit Ethernet Switch x 1
- Protective caps for all SFP ports (Depend on purchased model)
- Installation Guide with Warranty Card x 1

 Never install or work on electrical or cabling during periods of lightning activity. Never connect or disconnect power when hazardous gases are present.

 Warning: Hot Surface Do Not Touch.  Caution: CLASS 1 LASER PRODUCT. Do not stare into the laser!

Product Layout

EMG8508 / EMG8510 Series
EMG8608 / EMG8610 Series



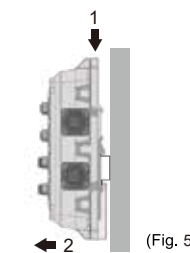
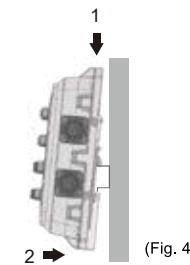
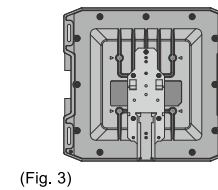
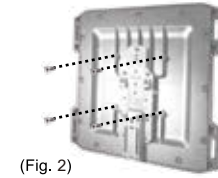
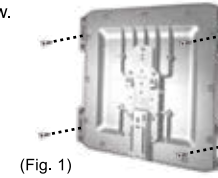
Note: rh is for function ground

- | | |
|--|--|
| 1. M12 A-Coding Console Port | 10. M12 A-Coding Alarm relay or alarm output |
| 2. SFP Ports LEDs (for EMG8510 Series) | 11. M12 S-Coding PWR1 connector |
| 3. M12 X-coding Ethernet ports and/or PoE LEDs | 12. M12 S-Coding PWR2 connector |
| 4. RUN LED | 13. 1000 BASE-X SFP Slots (for EMG8510 Series) |
| 5. PWR1 LED | 14. 10/100/1000 BASE-T(X) M12 X-coding Ethernet ports and/or |
| 6. PWR2 LED | 10/100/1000 BASE-T(X) PoE M12 X-coding Ethernet Ports |
| 7. ALM LED | (EMG8508-4PoE/ EMG8510-4PoE-2SFP, PoE ports at Port 1,2,5,6) |
| 8. Ring LED | |
| 9. Ring Master LED | |

Installation Overview

The device's appearance is as in the figure below.

1. Proceed to place the screws on the back of the device as show in (Fig. 1).
2. If you have the VESA kit, proceed to place the screws on the back of the device as show in (Fig. 2)
3. Although internal grounding has been done inside, in order to ensure overall maximum performance and protect your device, it is still strongly advised to ground the device properly; hazardous ESD can come into contact and damage your equipment. On the power terminal block, there is a terminal for Frame Ground, you can choose whether to connect it to the grounding or you may opt to connect to the grounding screw next to the terminal block (the one chosen should be connected at all times) (Fig. 3)



4. You can then choose whether to plug in the other peripheral ports at this point or do it later depending on the actual location of the device or level of comfort for performing such operation. Remeber to plug in the protective caps for the unused SFP.
5. If you have purchased the DIN-Rail kit, Once the plate has been firmly put in place, proceed to mount the whole device as shown in (Fig. 4). Proceed to (Fig. 5) if you want to remove the device from DIN-Rail.
6. Next we can then proceed to connect the device to the LAN (switch or PC, depending on the case), take care on using the M12 connector; after this we can then proceed to the device's settings

- The housing has a good thermal conductivity material, so the heat can be dissipated to the outside through the housing by conduction-convection .
- This switch's factory IP by default is 10.0.50.1 you can access the device by its Web UI once it is connected to a physical network (or using Management Utility, for more information on Management Utility, please refer to its manual). Please be aware that the PC needed for this procedure needs to be in the same subnet, or you may refer yourself to the device User's Manual.

*Management Utility only support user name, password and IP address change. Detail setting please set on Web UI.

LED Indicators

| Name | Color | Status | Message |
|-------|-------|----------|--|
| P1 | Green | On | Power is supplied from PWR1/PWR2 |
| P2 | | Off | No power input detected from PWR1/PWR2 |
| Alarm | Red | On | Alarm is triggered by user defined events |
| | | Off | Alarm is not triggered by user defined events |
| RUN | Green | Blinking | AP firmware is running normally |
| | | Off | System is not ready or halt |
| LAN | Green | On | Ethernet is linked |
| | | Blinking | Ethernet is active and data is being transmitted |
| | | Off | Ethernet is not linked |
| | Amber | On | Power is being supplied to a Powered Device (PD) |
| | | Off | Power is not supplied to a PD |
| Ring | Green | On | Ring is enabled |
| | | Blinking | Ring is connected successfully |
| | | Off | Ring is disabled |
| R.M | Green | On | The device is a Master of the ERPS or IA-Ring |
| | | Off | The device is a Slave of the ERPS or IA-Ring |
| SFP | Green | On | Port is linked |
| | | Blinking | Data is transmitting on this port |
| | | Off | No data is transmitting |

Field Maintenance and Service

If the device requires servicing of any kind, you may need to disconnect and remove it from its mounting. The initial installation should be done in a way that makes this as convenient as possible.

- Voltage/Power lines should be properly insulated as well as other cables. Be careful when handling the so as to not trip over
- Do not under any circumstance open the device for any reason. Please contact your dealer for any repair needed or follow the instructions on section of your User's Manual.

Power Requirements

- Power input :
 - 12– 57 VDC, 1.1A max, 13.2W max(For Non-PoE Models)
 - 45– 57 VDC, 3.1A max, 139.5W max(For 802.3af Models)
 - 51– 57 VDC, 5.1A max, 260.1W max(For 802.3at Models)
 - 50-145 VDC, 0.27A max, 13.5W max(For High voltage Models)
 - 50-145 VDC, 0.30A max, 15.0W max(For High voltage SFP Models)
- Power input :
 - 12– 57 VDC, 1.1A max, 13.2W max(For Non-PoE Models)
 - 45– 57 VDC, 3.1A max, 139.5W max(For 802.3af Models)
 - 51– 57 VDC, 5.1A max, 260.1W max(For 802.3at Models)
 - 50-145 VDC, 0.27A max, 13.5W max(For High voltage Models)
 - 50-145 VDC, 0.30A max, 15.0W max(For High voltage SFP Models)

- Alarm output : 1A@24A VDC SELV for signal use only
- The Normal Voltage device is open type , designed redundant input and supplied by SELV power source.

The High Voltage device is open type , designed redundant input and supplied by IEC/EN/UL 61010-2-201 certified power supply isolated from MAINS by double insulation.


■ Cable Assembly Requirement : Minimum suitable used at 90°C

■ Cable Assembly Information :

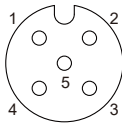
| Company | Cat no Suitable | Cat no Suitable |
|----------------|-----------------|------------------------|
| Phoenixcontact | 1411043 | AWG26 Lan Port-M12-X |
| Phoenixcontact | 1413991 | AWG26 Lan Port-M12-A |
| Phoenixcontact | 1404642 | AWG26 Power Port-M12-S |
| Weidmueller | 2059890050 | SFP Port |

Pin Assignments and Connections

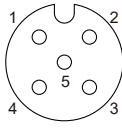
10/100/1000Base-T(X) Ethernet, PoE port Pinouts

| M12 X-coded |  | | | | | | | |
|-----------------|---|--------|--------|--------|--------|--------|--------|--------|
| 1000Base-T | | | | | | | | |
| Pin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Signal | BI_DA+ | BI_DA- | BI_DB+ | BI_DB- | BI_DD+ | BI_DD- | BI_DC- | BI_DC+ |
| 10/100Base-T(x) | | | | | | | | |
| Pin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Signal | Tx+ | Tx- | Rx+ | Rx- | | | | |
| PoE | | | | | | | | |
| Pin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Signal | V+ | V+ | V- | V- | | | | |


RS232 Console port Pinouts

| M12 A-coded |  | | | | |
|---------------|--|-----|----|----|-----|
| RS232-Console | | | | | |
| Pin | 1 | 2 | 3 | 4 | 5 |
| Signal | TXD | RXD | NC | NC | GND |

Relay output port Pinout

| M12 A-coded |  | | | | |
|--------------|---|----------|----------|----------|----|
| Relay output | | | | | |
| Pin | 1 | 2 | 3 | 4 | 5 |
| Signal | Relay1_2 | Relay2_1 | Relay2_2 | Relay1_1 | NC |

Power port Pinouts

| M12 S-coded |  | | | |
|-------------|--|------|----|----|
| Power | | | | |
| Pin | 1 | 2 | 3 | 4 |
| Signal | VIN+ | VIN- | NC | FG |

Compatible with, and recommended to use the following cable models. Please note the corresponding code (X, A, S) of each port and connect accordingly:

| MPM Model name | Specification | Manufacturer |
|----------------|--|-----------------|
| 1424096 | S-code(Female) to free cable End, 4 pin, 1.5M, shielded | Phoenix Contact |
| 1407472 | X-code(Male) to RJ45, 8 pin, 2M, shielded | Phoenix Contact |
| 1669767 | A code(Male) to free cable End, 5 pin, 1.5M, un-shielded | Phoenix Contact |

Attention

- The device needs to be installed in an area of pollution degree 2 or less.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may not be impaired.
- Clean the device with soft cloth with dry.
- The installation that the safety of any system incorporating the equipment is the responsibility of the assembler of the system
- It should be installed suitable Enclosure (at least Type 1 or equal rating)
- Before powering the device, the Functional Ground (Grounding Screw) shall be connected with Y type wiring to the ground and torque with 0.2 Nm.
- Power +/- pins can't cross-connect to equipment that this device connects to.
- Wear on suitable personal safety protection suit (safety working shoes / working gloves).
- It should be installed suitable fiber transceiver (Avago AFCT-57X5 / AFBR-57X5 series family or equal type)

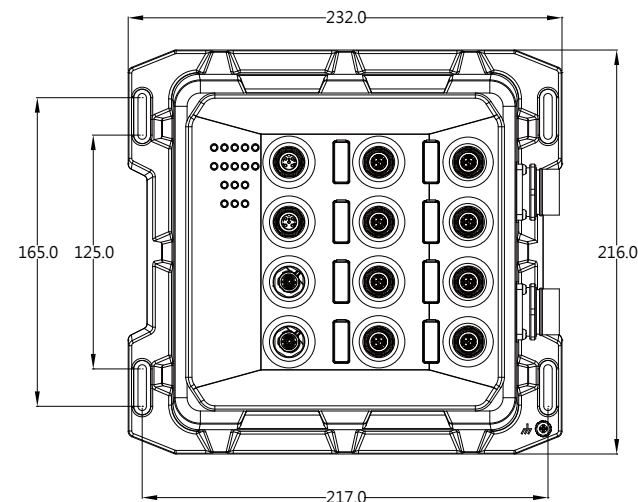
Environmental Limits

- Operating Temperature: -40 to 70° C (-40° F to 167° F)
- Storage Temperature: -40 to 85° C (-40 to 185° F)
- Ambient Relative Humidity: 5 to 95%, 55° C (non-condensing)
- Altitude: up to 2,000 m
- IP67
- Lan and Power Port Cap Information(Indoor use only)

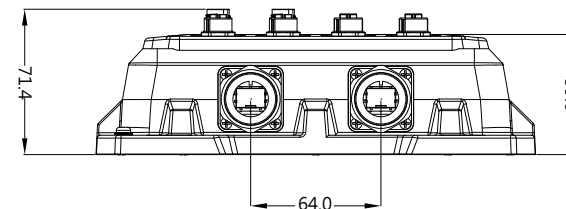
| Company | Cat. No. | Type Torque |
|---------|--------------------------|-----------------------------------|
| ATOP | Phoenixcontact 3990079G | 1560251 Power port Plastic 0.2 Nm |
| ATOP | Phoenixcontact 59908571G | 1430488 Power port Metal 0.2 Nm |
| ATOP | Phoenixcontact 3990078G | 1553129 Lan port Plastic 0.2 Nm |
| ATOP | Phoenixcontact 59908561G | 1503302 Lan port Metal 0.2 Nm |

Mechanical Dimensions (Unit=mm)

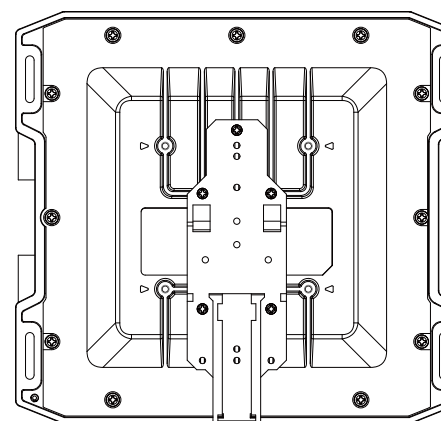
Front View



Side View (for EMG8510 Series)



Bottom View



※ The wall Din rail kit illustrated in this document is for reference only and is not included in the package.

Warranty Policy

Warranty Conditions

Products supplied by ATOP Technologies are covered in this warranty for sub-standard performance or defective workmanship. The warranty is not, however, extended to goods damaged in the following circumstances:

- Excessive forces or impacts
- War or an Act of God: wind storm, fire, flood, electric shock, earthquake
- Use of unqualified power supply, connectors, or unauthorized parts/kits
- Replacement with unauthorized parts

RMA and Shipping Costs Reimbursement

Customers shall always obtain an authorized "RMA" number from ATOP before shipping the goods to be repaired to ATOP. When in normal use, a sold product shall be replaced with a new one within 3 months after purchase. The shipping cost from the customer to ATOP will be reimbursed by ATOP.

After 3 months and still within the warranty period, it is up to ATOP whether to replace the unit with a new one; normally, as long as a product is under warranty, all parts and labor are free of charge to the customers.

After the warranty period, the customer shall cover the cost for parts and labor. Three months after purchase, the shipping cost from the customer to ATOP will not be reimbursed, but the shipping cost from ATOP to the customer will be paid by ATOP.

Limited Liability

ATOP shall not be held responsible for any consequential losses from using ATOP's product.

Warranty Period

| Product Categories | Warranty | Product Categories | Warranty |
|-------------------------|----------|-------------------------|-------------------|
| Ethernet Switches | 5 Years | DIN-Rail Power Supplies | 3 Years |
| Wireless | | 1 Year | |
| Serial Device Servers | | | Power Adaptors |
| Modbus Gateways | | | Antennas |
| Media Converters | | | Other Accessories |
| Embedded Device Servers | | | |

The warranty certification will not be effective until an authorized stamp issued by ATOP's overseas agents.

Purchase Date: / / (yyyy/mm/dd)

Serial Number

ATOP Customer Services and Support

1. Contact your local dealers or ATOP Technical Support Center at the following number: +886-3-550-8137

2. Report any problems via ATOP's website or email
www.atoponline.com ✉ service@atop.com.tw

