

Introduction






IGPS-1080A is unmanaged PoE Ethernet switch with P.S.E. function. **IGPS-1080A** supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. **IGPS-1080A** switch has 8X10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. The wide operating temperature range from -40°C to 75°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for PoE Ethernet application.

Features

- > Provide 8x10/100/1000Base-T(X) PoE (P.S.E.) ports
- > Support P.S.E. based on IEEE 802.3at standard up to 30 Watts per port
- > Supports jumbo frame up to 9720 Bytes
- > Support auto-negotiation and auto-MDI/MDI-X
- > Support full/half-duplex transmission
- > Support store and forward transmission
- > Support flow control
- > Slim type rigid IP-30 housing design
- > DIN-Rail and wall mounting enabled

Package Contents


The device is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.




| Contents | Pictures | Number |
|----------------------|---|--------|
| IGPS-1080A |  | X 1 |
| DIN-rail Kit |  | X 1 |
| Wall-mount Kit |  | X 2 |
| QIG |  | X 1 |
| 6-pin terminal block |  | X 1 |

Preparation

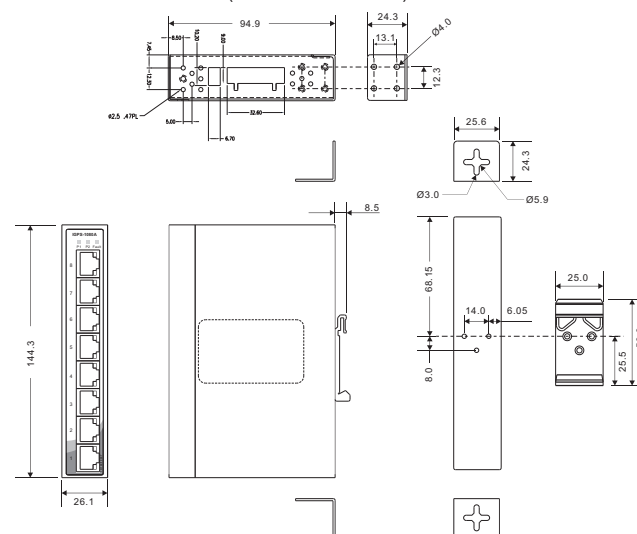
Before you begin installing the switch, make sure you have all of the package contents available and a PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools.

Safety & Warnings

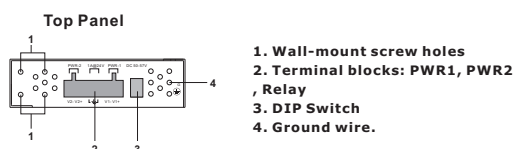
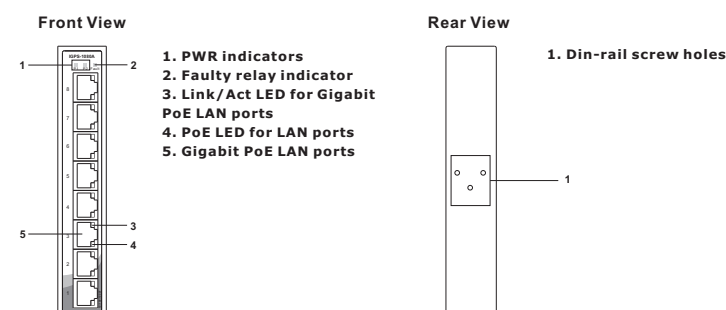
-  **Elevated Operating Ambient:** If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient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

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

Dimension Unit =mm (Tolerance ±0.5mm)



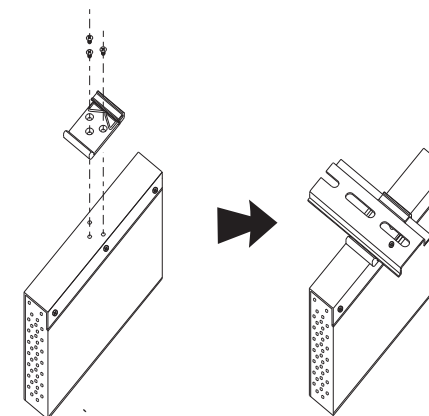
Panel Layouts



Installation

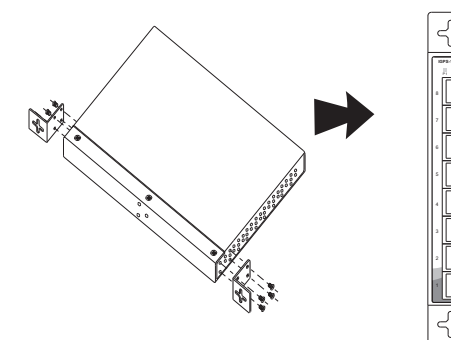
DIN-rail Installation

- Step 1:** Slant the switch and screw the Din-rail kit onto the back of the switch, right in the middle of the back panel.
- Step 2:** Slide the switch onto a DIN-rail from the Din-rail kit and make sure the switch clicks into the rail firmly.



Wall-mounting

- Step 1:** Screw the wall-mount kit onto the rear panel of the switch. A total of six screws are required, as shown below.
- Step 2:** Use the switch, with wall mount plates attached, as a guide to mark the correct locations of the four screws.
- Step 3:** Insert a screw head through the large parts of the keyhole-shaped apertures, and then slide the switch downwards. Tighten the screws for added stability.



Network Connection

The switch provides standard Ethernet ports. According to the link type, the switch uses CAT 3,4,5e UTP cables to connect to any other network devices (PCs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications:

| Cable | Type | Max. Length | Connector |
|------------|------------------------------|--------------------|-----------|
| 10BASE-T | Cat. 3, 4, 5 100-ohm | UTP 100 m (328 ft) | RJ-45 |
| 100BASE-TX | Cat. 5 100-ohm UTP | UTP 100 m (328 ft) | RJ-45 |
| 1000BASE-T | Cat. 5 / Cat. 5e 100-ohm UTP | UTP 100 m (328 ft) | RJ-45 |

For pin assignments for different types of cables, please refer to the following tables.

| 10/100Base-T(X) P.S.E. RJ-45 port | | 1000Base-T P.S.E. RJ-45 port | |
|-----------------------------------|----------------------------|------------------------------|-------------------------------|
| Pin No. | Description | Pin No. | Description |
| #1 | TD+ with PoE Power Input + | #1 | BI_DA+ with PoE Power Input + |
| #2 | TD- with PoE Power Input + | #2 | BI_DA- with PoE Power Input + |
| #3 | RD+ with PoE Power Input - | #3 | BI_DB+ with PoE Power Input - |
| #4 | N.C. | #4 | BI_DC+ |
| #5 | N.C. | #5 | BI_DC- |
| #6 | RD- with PoE Power Input - | #6 | BI_DB- with PoE Power Input - |
| #7 | N.C. | #7 | BI_DD+ |
| #8 | N.C. | #8 | BI_DD- |

Note: "+" and "-" signs represent the polarity of the wires that make up each wire pair.

DIP Switch Setting

| DIP-1 | DIP-2 | Description |
|-------|-------|---|
| OFF | OFF | Power failure relay alarm disabled |
| OFF | ON | PWR-1 failure, relay alarm enabled |
| ON | OFF | PWR-2 failure, relay alarm enabled |
| ON | ON | PWR-1 or PWR-2 failure, relay alarm enabled |

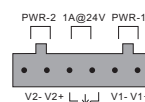
Wiring

Power inputs

The switch supports dual redundant power supplies, Power Supply 1 (PWR1) and Power Supply 2 (PWR2). The connections for PWR1, PWR2 and the RELAY are located on the terminal block.

STEP 1: Insert the negative/positive wires into the V-/V+ terminals, respectively.

STEP 2: To keep the DC wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.



Relay contact

The two sets of relay contacts of the 6-pin terminal block connector are used to detect user-configured events. The two wires attached to the fault contacts form a close circuit when a user-configured event is triggered. If a user-configured event does not occur, the fault circuit remains opened.

Grounding

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screws to the grounding surface prior to connecting devices.

Configurations

After installing the switch, the green power LED should turn on. Please refer to the following table for LED indication.

| LED | Color | Status | Description |
|---|-------|--------|---|
| P1 | Green | On | DC power 1 activated |
| P2 | Green | On | DC power 2 activated |
| Fault | Amber | On | Faulty relay (power failure or port disconnected) |
| 10/100/1000Base-T(X) Gigabit PoE Ethernet ports | | | |
| LNK/ACT | Green | On | Port link at 1000Mbps |
| | Amber | On | Port link at 10/100Mbps |
| PoE | Green | On | Power supplied over Ethernet |

Specifications

| ORing Switch Model | IGPS-1080A |
|--|---|
| Physical Ports | |
| 10/100/1000Base-T(X) P.S.E. Port in RJ45 Auto MDI/MDIX | 8 |
| Technology | |
| Ethernet Standards | IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3ab for 1000Base-T IEEE 802.3x for Flow control IEEE 802.3at PoE specification (up to 30 Watts per port for P.S.E.) |
| MAC Table | 4K MAC addresses |
| Processing | Store-and-Forward |
| Packet buffer size | 192K Bytes |
| Switch Latency | <7us |
| Switching Bandwidth | 16Gbps |
| Jumbo Frame | Up to 9KBytes |
| LED Indicators | |
| Power indicator | Green: Power LED x2 |
| Fault indicator | Amber: Indicate PWR1 or PWR2 failure |
| 10/100/1000Base-T(X) RJ45 port Indicator and PoE indicator | Upper for Lick/Act indicator, Green for 1G, Amber for 10/100Mbps Lower for PoE indicator, Green for PoE power injected. |
| DIP-Switch | |
| DIP-Switch 1 | Power-2 failed warning : (ON) enable, (OFF) disable |
| DIP-Switch 2 | Power-1 failed warning : (ON) enable, (OFF) disable |
| Fault contact | |
| Relay | Relay output to carry capacity of 1A at 24 VDC |
| Power | |
| Redundant Input power | Dual DC inputs 50-57VDC on 6-pin terminal block |
| PoE output power | 180 Watts |
| Power consumption(Typ.) | 6 Watts (PoE output not included) |
| Overload current protection | Present |
| Reverse polarity protection | Present |
| Physical Characteristic | |
| Enclosure | IP-30 Metal |
| Dimension (W x D x H) | 26.1(W)x94.9(D)x144.3(H) mm (1.03x3.74x5.68inch.) |
| Weight (g) | 442 g |
| Environmental | |
| Storage Temperature | -40 to 85°C (-40 to 185°F) |
| Operating Temperature | -40 to 75°C (-40 to 167°F) |
| Operating Humidity | 5% to 95% Non-condensing |
| Regulatory Approvals | |
| EMC | CE EMC (EN 55024, EN 55032), FCC Part 15 B |
| EMI | EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B class A |
| EMS | EN 55024 (IEC/EN 61000-4-2(ESD), IEC/EN 61000-4-3 (RS), IEC/EN 61000-4-4(EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8(PFMF), IEC/EN 61000-4-11(DIP)) |
| Shock | IEC 60068-2-27 |
| Free Fall | IEC 60068-2-31 |
| Vibration | IEC 60068-2-6 |
| Safety | EN 60950-1 |
| MTBF | 665276hrs |
| Warranty | 5 years |

Note: HW version 5.0

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