

Safety Information

Important Safety Information



- Installation and removal of the PoE Midspan must be carried out by qualified personnel only.
- The external power supply for the equipment shall be a Listed, Direct Plug In power unit, marked Class 2, or Listed ITE Power Supply, marked LPS, which has suitably rated output voltage, and current.
- AC Power inlet Set:
 - The power connector supplied with the PoE Midspan has 2 terminals (See Figure 2) – **The polarity of the input connection is not important.**
 - The power inlet cables must be rated for minimum current capacity of 6 Amperes (Stranded Tinned Copper 12 AWG for each terminal or 2X16 AWG for each terminal).
 - Before connecting power inlet cables to the connector terminals verify that the power source is turned off.
 - After insertion of cable inlet to the connector terminals tightly fasten all 4 connector screws (See Figure 2).
 - This clause is optional:
Only for improved EMI performance, connect chassis ground connection to "Earth/Ground" connection at the working area.



: There is no safety hazard when the chassis ground connection is not connected to the "Earth/Ground".



: The PoE injector "DATA IN" and "DATA & POWER OUT" ports are shielded RJ45 data sockets. They cannot be used as Plain Old Telephone Service (POTS) sockets. Only RJ45 data connectors may be connected to these sockets.

The 24VAC power source must be near the PoE Midspan and easily accessible. You can remove AC power from the PoE Midspan by disconnecting the 24VAC power inlet from either the 24VAC power source or the PoE Midspan power connector.

The PoE Midspan "DATA IN" and "DATA & POWER OUT" interfaces are qualified as SELV (Safety Extra-Low Voltage) circuits according to IEC 60950-1. These interfaces can only be connected to SELV interfaces on other equipment.

WARNINGS!

- Read the installation instructions before connecting the PoE Midspan to its power source.
- Follow basic electricity safety measures whenever connecting the PoE Midspan to its power source.
- A voltage mismatch can cause equipment damage and may pose a fire hazard. If the voltage indicated on the label is different from the power outlet voltage, do not connect the PoE Midspan to this power outlet.
- Take extra attention when connecting the power inlet terminals, so they will not touch chassis ground.**

Mounting Instructions

Perform the following instructions:

- Install two screws in the wall or shelf as shown in Figure 1.

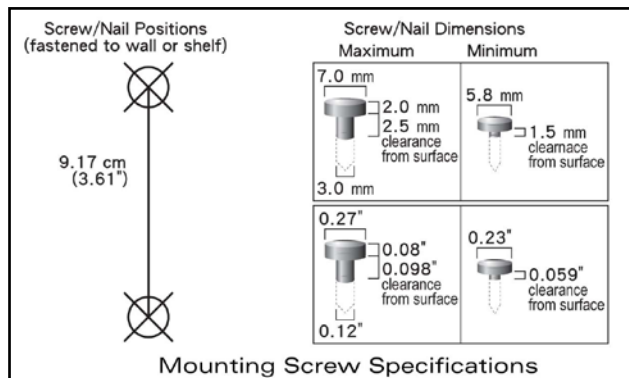


Figure 1: PoE Midspan mounting instructions

- Align the PD-9501G/24AC mounting slots to capture the surface screws



Recycling and Disposal

Disposal instructions for old products. The WEEE (Waste Electrical and Electronic Equipment) national environmental initiatives has been put in place to ensure that products are recycled using best available treatment, recovery and recycling techniques to ensure human health and high environmental protection. Your product is designed and manufactured with high quality materials and components, which can be recycled and reused. Do not dispose of your old product in your general household waste bin. Inform yourself about the local separate collection system for electrical and electronic products marked by this symbol:



Use one of the following disposal options :

- Dispose of the complete product (including its cables, plugs and accessories) in the designated WEEE collection facilities.
- If you purchase a replacement product, hand your complete old product back to the retailer. He should accept it as required by the national WEEE legislation.

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Ordering information:

- Product Name: **Microsemi 9501G/24AC**
- Part Number: **PD-9501G/24AC**
- Description: **1-Port 802.3at 4-Pairs Gigabit PoE Midspan**

Document P/N PD9501G24AC_UG-EN Rev. B00



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Microsemi 9501G/24AC

User Guide

1-Port 802.3at 4-Pairs Gigabit PoE Midspan, 24VAC input.

Notice

It is Microsemi's policy to improve its products as new technology, components, software, and firmware become available. Microsemi, therefore, reserves the right to change specifications without prior notice.

Technical Support

If you encounter problems when installing or using this product, please consult the Microsemi website at: <http://www.microsemi.com>

For technical support, call: +972-9-775-5123
In the USA: 1-877-480-2323
Email: sales.support@microsemi.com

Functions and Features

The High-Power Gigabit single port PoE (Power over Ethernet) PD-9501G/24AC Midspan injects power over data-carrying Ethernet cabling. It maintains the IEEE802.3at draft 3.2 and IEEE802.3af standard, while doubling the output power (60W). These power levels allow usage by a new range of Ethernet-based applications such as Video Phones, 802.11n Access Points, WiMAX Transmitters, PTZ Cameras & more. The PD-9501G/24AC "DATA & POWER OUT" port is designed to carry Gigabit Ethernet data & power over a standard CAT5e cable, delivered through all 4-pairs (Alt A: pins 1,2 (-) & 3,6 (+), Alt B: 4,5 (+) and 7,8 (-)).

EMC Compliance:

- FCC Part 15 class B
- EN55022 class B
- EN55024

Safety compliance:

- UL60950-1
- GS mark

Preliminary Steps

- Ensure 24VAC power is applied to the PoE Midspan, using cables of 12 AWG for each terminal or 2X16 AWG for each terminal (rated for 6 Amperes), with an appropriate separate ground connection (when needed).
- Ensure output Ethernet cable is connected to the "DATA & POWER OUT" port.
- Verify that power ready Ethernet compatible device is connected.

WARNING

Do not use cross over cable between the PoE Midspan output port and the load device

Installation

The PoE Midspan may be located on a desktop or wall/bench mounted using the rear side mounting holes.

- Associated Ethernet wiring shall be limited to inside of the building
- The power inlet cable and chassis connection cable is not supplied with the product



: Before mounting the PoE Midspan to a fixed location:

- Do not to cover PoE Midspan or block the airflow to the PoE with any foreign objects. Keep the PoE Midspan away from excessive heat and humidity and free from vibration and dust.
- Ensure that the cable length from Ethernet network source to the terminal does not exceed 100 meters (333 Feet). The PoE is not a repeater and does not amplify the Ethernet data signal.
- Use a splitter if desired; ensure that the splitter is connected close to the terminal and **not** on the Midspan!
- No "on-off" switch exists; simply plug the PoE Midspan into a 24VAC power source.

Installing the Unit

- Verify the 24VAC power source is turned off.
- If the supplemental earth ground is replaced, apply 5Lb/In torque. (Optional)
- Tighten the 2 connector screws (See Figure 2).
- Connect the PoE Midspan Input connector to cables of Stranded Tinned Copper, 12 AWG for each terminal or 2X16 AWG for each terminal (rated for 6 Amperes) and tighten the 2 Cable inlet screws (See Figure 2).



: The polarity of the input connection is not important.

- Connect the "DATA IN" jack (input) to the remote Ethernet network switch's Patch panel and the "DATA & POWER OUT" jack (output) to the terminal (See Figure 3).
- Turn on the 24VAC power source and verify appropriate leds indication.

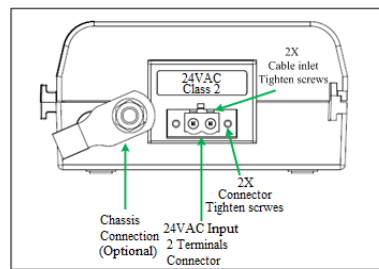


Figure 2: PoE Midspan Power Connector

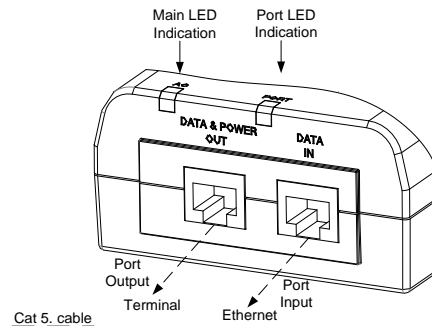


Figure 3: PoE Midspan Ports

Indicators

Main LED	Behavior
OFF	Power OFF indication
Green on	Power ON indication (power is active)
Port LED	Behavior
OFF	No detection or disconnected, no load is connected.
Green on	Power supplied over data and spare pairs
Blinking green at 1Hz rate	Port was powered at four pairs, then port was overloaded / shorted

Specifications

Environmental Specifications

Mode	Temperature	Humidity
Operating	-10 to 40°C 14 to 104°F	10 to 90% (no condensation allowed)
Storage	-20 to 70°C -4 to 158°F	10 to 90% (no condensation allowed)

Electrical Specifications

Input Voltage	22 – 28VAC (50-60Hz)
Input Current	6 ampere (max)
Available Output Power (max.)	60 Watts
Nominal Output Voltage	53.5 to 55.5VDC

Ethernet Interface

Input (DATA IN): Ethernet 10/100/1000Base-T	RJ45 female socket
Output (DATA & POWER OUT): Ethernet 10/100/1000Base-T, plus 55VDC	RJ45 female socket, with DC voltage on wire pairs 1-2, 3-6, 4-5 & 7-8.

Troubleshooting

Symptom	Corrective Steps
PoE Midspan does not power up	<ol style="list-style-type: none"> 1. Ensure that the installation was according to "Installing the Unit" section in this user guide. 2. Ensure that the power source voltage is between 22-28VAC and can carry out 80W. 3. Remove and re-apply power to the PoE Midspan, and Verify that the main led indicator on the front panel is continuously lit.
The Powered Device (PD) does not operate	<ol style="list-style-type: none"> 1. Verify that the PD is designed for PoE operation according to IEEE802.3af/at standard. 2. Verify that you are using a standard straight-wired four Pairs cable (UTP/FTP Category 5/5e/6). 3. Verify that the PD is connected to the PoE Midspan "DATA & POWER OUT" port. 4. If an external power splitter is in use, replace it with a known-good splitter. 5. Remove and re-apply power to the PoE Midspan, and check the led indicators during power up sequence.
The end device operates, but there is no data link	<ol style="list-style-type: none"> 1. Verify that the port led indicator on the front panel is continuously lit. 2. Verify that you are using a standard straight-wired four Pairs cable (UTP/FTP Category 5/5e/6). 3. Verify that the Ethernet cable length is less than 100 meters from Ethernet source to load/remote terminal. 4. Ensure that the input Ethernet cable is connected to the PoE Midspan "DATA IN" port. 5. If an external power splitter is in use, replace it with a known-good splitter.