Safety Information

Important Safety Information

♦ Installation and removal of the PoE Midspan must be carried out by qualified personnel only.

⚠ AC Power Cord Set:

- The power cord must have regulatory agency approval for the specific country in which it is used (i.e., UL, CSA, VDE, etc.).
- The power cord must be a three-conductor type (two current carrying conductors; one ground conductor) terminated on one end by an IEC 60320 appliance coupler (for connection to the PoE Midspan), and on the other end by a plug containing a ground (earthing) contact.
- The power cord must be rated for a minimum of 250Vac RMS operation, with a minimum rated current capacity of 5 amps (or a minimum wire gauge of 18 AWG ($0.75mm^2$).

📝 : PoE Midspans installed in Australia require power cords with a minimum wire gauge of 16 AWG (1.0 mm^2).

📝 : 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) telephone sockets. Only RJ45 data connectors may be connected to these sockets.

The AC wall socket-outlet must be near the PoE Midspan and easily accessible. You can remove AC power from the PoE Midspan by disconnecting the AC power cord from either the wall socket-outlet or the PoE Midspan appliance coupler.

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.
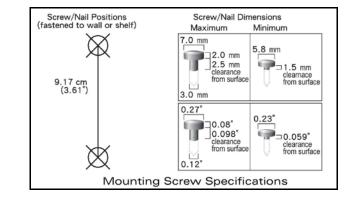
WARNINGS!

- 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.

Mounting Instructions

Perform the following instructions:

1. Install two screws in the wall or shelf as shown below:

Mounting Screw Specifications

2. Align the PD-9501G 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 :
1. Dispose of the complete product (including its cables, plugs and accessories) in the designated WEEE collection facilities.
2. 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.

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

Document P/N PD9501G-AC-B_UG Rev.B00

Microsemi 9501G User Guide

1-Port 802.3at 4-Pairs Gigabit PoE Midspan

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 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 Data & Power Output 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 (-)).

PD-9501G EMC Compliance:
- FCC Part 15 class B
- EN55022 class B
- EN55024
- VCCI

PD-9501G Safety Compliance:
- UL/cUL per EN60950-1
- GS mark

Preliminary Steps
- Ensure that AC power is applied to the PoE Midspan, using an operational AC cable with an appropriate ground connection.
- Ensure that 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.

: 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 an AC power source.
- A splitter may be used if desired; ensure that the splitter is connected close to the terminal and **not** on the Midspan!

Installing the Unit
- Connect the PoE Midspan to an AC outlet (100-240VAC), using a standard power cord
- 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.
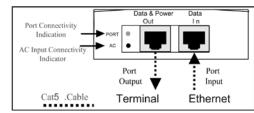

Figure 1: connecting the PoE Midspan

Indicators

Main LED	Off	Green
Green	Power off indication	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	Over current or short circuit condition at one or both pairs - data or/and spare, (PD or cable fault)

Specifications

Environmental Specifications

Mode	Temperature	Humidity
Operating	0 to 40°C 32 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	100-240VAC (50-60Hz)
Input Current (110 - 220VAC)	1.35 ampere (max)
Available Output Power (max.)	60 Watts
Nominal Output Voltage	54 to 57VDC

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
PD-9501G Midspan does not power up	1. Verify that a known-good power cord is used. 2. Verify that the voltage at the power inlet is between 100 and 240VAC. 3. Remove and re-apply power to the device and check the indicators during power up sequence.
A port indicator is not lit and the PD does not operate	1. The Midspan did not detect a PD and therefore the port is not enabled. 2. Verify that the PD is designed for PoE operation. 3. Verify that you are using a standard Category 5/5e/6, straight-wired cable, with four pairs. 4. If an external power splitter is in use, replace it with a known-good splitter. 5. Ensure input Ethernet cable is connected to the Data In port. 6. Verify that the PD is connected to the Data & Power port. 7. Try to reconnect the same PD into a different Midspan. If it works, there is probably a faulty port or RJ45 connection. 8. Verify that there is no short over any of the twisted pair cables or over the RJ45 connectors.
The end device operates, but there is no data link	1. Verify that the port indicator on the front panel is continuously lit. 2. If an external power splitter is in use, replace it with a known-good splitter. 3. Verify that for this link, you are using standard UTP/FTP Category 5 straight (non-crossover) cabling, with all four pairs. 4. Verify that the Ethernet cable length is less than 100 meters from the Ethernet source to the load/remote terminal. 5. Try to reconnect the same PD into a different Midspan. If it works, there is probably a faulty port or RJ45 connection.