



PowerDsine PD90XXG & PD95XX Series

PD-9006G, PD-9012G & PD-9024G

PD-9506G & PD-9512G

PD-RPS-450 & PD-RPS-1000



User Guide



Note:

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Note:

The information in this guide refers to both the PD-90XX and PD-95XX series Power over Ethernet Midspans unless otherwise stated.

Note that the Midspan is designed for indoor use **only**.

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1 Front Material

1.1 Model Numbers Definition:

- **PD-90xxG/ACDC/M/F**: 2 Pairs AC and DC Input Family
- **PD-90xxG/DC/M**: 2 Pairs DC Input Family
- **PD-95xxG/ACDC/M**: 4 Pairs AC and DC Input Family

Where:

- **xx**: Represents the number of ports (6, 12 or 24)
- **AC**: Indicates that the Midspan has AC input
- **DC**: Indicates that the Midspan has DC input and current sharing & power backup features between two Midspans.
- **M**: Indicates that the Midspan includes the PowerView Pro (refer to Section 6).
- **F**: Indicates Midspan's enabled full power on all ports.
- **PD-RPS-AAAA**: Redundant Power Supply

Where **AAAA** represents the available power in Watts.

1.2 Electrical Compatibility Approvals

Both PowerDsine 90XXG and 95XXG series complies with the following standards:

- FCC Part 15, Class B, with FTP cabling; Class A with UTP cabling
- EN 55022 (CISPR 22), Class B with FTP cabling; Class A with UTP cabling
- EN 55024 (CISPR 24)
- Canadian ICES-003, Class B

1.3 Safety Standard Approvals

The PowerDsine meets the following safety standards:

- UL/cUL per CSA/UL 60950-1
- GS mark per IEC60950-1



1.4 CE Marking

The CE marking on this product indicates that this product complies with 89/336/EEC (EMC Directive) and 73/23/EEC (Low Voltage Directive).



2 Safety Information

Read the following safety information before using your Power over Ethernet Midspan unit.

2.1 General Guidelines

You must read the following safety information before carrying out any installation, removal or any maintenance procedure on the Power over Ethernet Midspan. Warnings contain directions that must be followed for personal and product safety. Follow all directions carefully.

2.2 Warnings

- Read the Installation Instructions in Section 4 before connecting the Power over Ethernet Midspan to its power source.
- Read the instructions in Section 04 before connecting the Midspan-to-Midspan power backup.
- The Midspan must use a grounded power cord, as defined in Section 2.3.
- This product relies on the building installation for short-circuit (overcurrent) protection. Only use a fuse or circuit breaker no higher than 15 A for 120 VAC, (U.S.) 10 A for 230 VAC (international).
- Do not work on the system, connect, or disconnect cables during periods of lightning.
- 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 Power over Ethernet Midspan to this outlet.
- For shelf-mounted equipment, verify that the surface is stable and strong enough to support the equipment. Do not stack more than **four** Power over Ethernet Midspans units.
- Final disposal of this product should be handled according to all local laws and regulations.
- The Power over Ethernet Midspan "Data" and "Data + Power" ports are shielded RJ-45 data sockets. They cannot be used as Plain



Old Telephone Service (POTS) telephone sockets. Connect RJ-45 data connectors to these sockets only.

- Associated Ethernet wiring shall be limited to [blue](#) inside of the building.

2.3 Power Cord

In the event that the power cord is replaced, the replacement must meet local requirements.

- To ensure a reliable connection to an AC mains supply, the equipment provides an appliance IEC60320 inlet used to connect a detachable power supply cord.
- The power socket outlet must be located near the Midspan and be easily accessible. *The only way to remove power from the unit is by disconnecting the power cord from the outlet*
- This unit operates under SELV (Safety Extra Low Voltage) conditions according to EN60950-1/IEC60950-1. The conditions are maintained only if the equipment to which it is connected also operates under SELV conditions.

2.4 Power Cord Specifications by Country

U.S.A. and Canada

- The cord must be UL-approved or CSA certified.
- The minimum specification for the flexible cord is:
 - No. 18 AWG
 - Type SV or SJ
 - Three-conductor
- The cord set must have a rated current capacity of at least 13 A for 9024G/ACDC/M/F, PD-9024G/AC/F and 10 A for PD-9024G/ACDC/M, PD-9024G/AC, PD-9012G/ACDC/M, PD-9012G/AC, PD-9006G/ACDC/M, PD-9006G/AC.
- The attachment plug must be an earth-grounding type with a NEMA 5-15P (15 A, 125 V) or NEMA 6-15P (15 A, 250 V) configuration.

Denmark

The supply plug must comply with Section 107-2-D1, Standard DK2-1a or DK2-5a.



Switzerland	The supply plug must comply with SEV/ASE 1011.
France and Peru	This unit cannot be powered from IT supplies. If your supplies are an IT type, this unit must be powered by 230V (2P+T), via an isolation transformer with a 1:1 ratio and with the secondary connection point labeled Neutral, connected directly to ground.
U.K	The Power over Ethernet Midspan is covered by General Approval, NS/G/12345/J/100003, for indirect connection to a public telecommunications system.



3 About the Power over Ethernet Midspan

PowerDsine's family of Power over Ethernet Midspans, Series 90XXG and 95XX inject power over data-carrying Ethernet cabling. The PD9006G/9012G/9024G Midspans support 6, 12 and 24 ports respectively, in a 10/100/1000BaseTx Ethernet network, over TIA/EIA-568 Category 5/5e/6 cabling. The 9000G family can provide up to 30 W (or 36 W in extra power mode) according to the new PoE standard IEEE802.3at. The DC power is fed over the spare pairs wires within a cable (4/5 and 7/8) to terminal units.

PowerDsine's family of Power over Ethernet Midspans, Series 9500G, injects power over data-carrying Ethernet cabling. The PD-9506G/9512G/ Midspans, support 6 and 12 ports respectively, in a 10/100/1000BaseTx Ethernet network, over TIA/EIA-568 Category 5/5e/6 cabling.

The 9500G family can provide up to 60 W (or 72 W in extra power mode) according to the new PoE standard IEEE802.3at. The 9500G series implements two 802.3at systems in parallel, each delivering 30 W over 2-pairs. The DC power is fed over both spare and data pairs wires within a cable (1/2, 3/6, 4/5 and 7/8) to terminal units.

The RPS family can provide backup or additional power to PD-90xxG and PD-95xxG products.

The Power over Ethernet Midspan normally powers devices that are Power over Ethernet enabled or are equipped to receive power over Ethernet. These devices are called Powered Devices (PDs). Powering devices that cannot receive power over Ethernet may require an external power adapter. Contact PowerDsine for such an adapter.

The Power over Ethernet Midspan main features include:

- Safe and reliable power over an existing Ethernet infrastructure
- Reduces the need for AC outlets, local UPS and AC/DC adapters near PDs
- Remote management using Web control and/or SNMPv3



- Highest level of network security
- Safe solution that protects network infrastructure
- Standards compliant: IEEE 802.3af and 802.3at

3.1 10/100/1000BASE-TX Ports Definition

The following sections detail the 9000G ports and their functions.

3.1.1 Data Input Ports

The Midspan has 6, 12 or 24 (PD9000G only) x 10/100/1000Base-T Data In ports, located on the PoE front panel (Figure 3-1), configured in a non-crossover manner (straight-wired).

These ports are designed to carry Ethernet data only (Tx/Rx) over:

- Standard 4-wire pairs (pins 1/2, 3/6, 4/5 and 7/8) (1000Base-T)
- 2-wire pairs (pins 1/2 and 3/6) (10/100Base-T).

3.1.2 Data and Power Output Ports

The Midspan has 6, 12 and 24 (PD9000G only) x 10/100/1000Base-T **Data & Power Out** ports, located on the front panel (see Figure 3-1). These ports are configured in a non-crossover manner (straight-wired) and are designed to carry Ethernet data over:

- Standard 4-wire pairs (pins 1/2, 3/6, 4/5 and 7/8) (1000Base-T)
- 2-wire pairs (pins 1/2 and 3/6) (10/100Base-T)
- PD-90xxG series carry DC power over 2-wire pairs (pins 4/5 and 7/8)
- PD-95xxG series carry DC power over 4-wire pairs (pins 4/5, 7/8 and pins 1/2, 3/6)

The Power over Ethernet Midspan is not a repeater. As such, the maximum distance from the Ethernet switch must not exceed 100 meters (328 ft). As specified in the IEEE 802.3 AT standard, the Power over Ethernet Midspan is guaranteed to work only up to this distance.

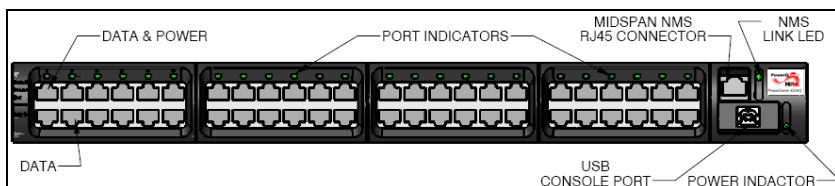


Figure 3-1: Power over Ethernet Midspan, Front View (PD-9024G)

3.2 Indicators

A set of indicators displays the status of the Power over Ethernet Midspan and its ports. Refer to Table 3-1, Table 3-2 and Table 3-3 for details about the status information during operation.

3.2.1 Power Indicator LED

The Power Indicator LED on the front panel displays the Power over Ethernet Midspan power status. When this LED is illuminated in green, the Midspan is receiving AC power. Refer to Table 3-1 for additional information.

3.2.2 Port Indications

The following sections detail the PD-900XXG and PD-95XXG port indicators.

3.2.1.1 PD-90xxG Midspan Series

One uni-color indicator (green), per port, displays the port status:

- Green indicates that the terminal unit (PD) has been identified as "Power over Ethernet Enabled", is active and is receiving power.
- Blinking green indicates that the port does not supply power and is inactive.

3.2.1.2 PD-95xxG Midspan Series:

Bi-color indicator (green and yellow), per port, displays the port status:

- Green indicates that the terminal unit (PD) has been identified as "Power over Ethernet Enabled", is active and is receiving power over 4-wire pairs.



- Yellow indicates that the terminal unit (PD) has been identified as "Power over Ethernet Enabled", is active and is receiving power over 2-wire pairs.
- Blinking green indicates that the port does not supply power and is inactive.

Refer to Table 3-2 for additional information.

Note Due to the standard detection process performed on each PoE port, power is not delivered (LED is off) to a PD. PDs that are not PoE-enabled devices are not affected by this connection

Table 3-1: Power Status Indications

Indicator	Color	Main Power Status	Remarks
Power Indicator	Off	Power supply unit is unplugged	
	Green	Power input active	Power supply voltage is within limits
	Green light blinks once every second (only if power backup is connected)	Midspan power supply failure (disconnected or out of voltage range)	The unit receives backup power and continues to function normally. Maintenance measures should be taken whenever possible.

Table 3-2: Port Status Indications PD-90xx Series

Port LED Color	Port Load Conditions	Port Voltage
Off	Inactive load or unplugged port	Power to the port is disconnected. No DC voltage present on port output lines.
Green	Active load is plugged in and complies with normal load conditions.	Continuous nominal DC voltage is present on the spare pairs
Green blinks once per	Overload or short	Power to the port is disconnected



second	circuit	No DC voltage is present on port output lines.
Green blinks once per 0.5 second	Valid load Total aggregated power exceeds pre-defined power budget	Power to the port is not connected No DC voltage is present on port output lines

Table 3-3: Port Status Indications PD-95xx Series

Port LED Color	Port Load Conditions	Port Voltage
Off	Inactive load or unplugged port	Power to the port is disconnected. No DC voltage present on port output lines.
Green	Active load is plugged in and complies with normal load conditions.	Continuous nominal DC voltage is present according to 4-Pairs / 2-Pairs configuration.
Yellow	Active load is plugged in and complies with normal load conditions.	Continuous nominal DC voltage is present on 2-wire pairs when port is configured to 4-Pairs.
Green blinks once per second	Overload or short circuit	Power to the port is disconnected. No DC voltage is present on port output lines.
Green blinks once per 0.5 second	Valid load Total aggregated power exceeds pre-defined power budget	Power to the port is not connected. No DC voltage is present on port output lines

3.3 Connectors

On the Midspan's front panel is a Console port. Using a standard USB cable, the user can connect a terminal to this port and load software.

Note: USB connection requires 'CP210x Driver.exe' installation. The driver is provided on the supplied CD.

The console port is set to 38,400-baud for managed units and 19,200-baud for unmanaged units, 8 data bits, no parity and 1 stop bit.

Figure 3-2 displays the pin connections for this connector.

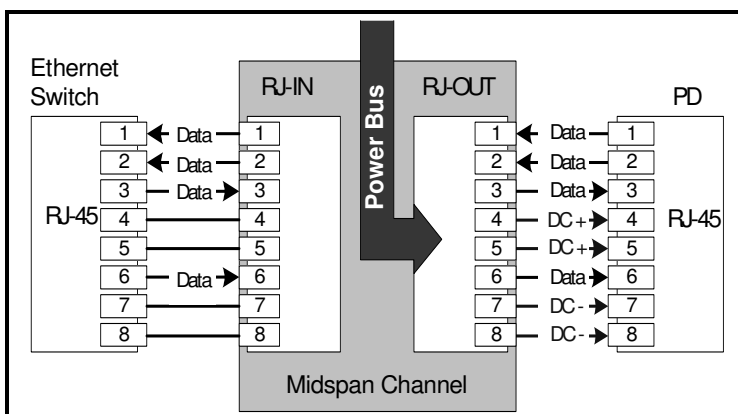


Figure 3-2: Connecting to the Midspan

Each data port is configured, as shown in Figure 3-2, as data “Pass-Through” ports for all data pins (pins 1, 2, 3, 6, 4, 5, 7 and 8). Ensure that Category 5 or higher cabling is used.

Note that for Managed units, the serial communication rate must be set to a baud rate of 38400. For units without management capabilities, the serial communication rate must be set to a baud rate of 19200.

4 Power over Ethernet Midspan Installation

The following sections describe how to install the Power over Ethernet Midspan.

4.1 Background Information

As shown in Figure 4-1, the Midspan is connected in series to an Ethernet switch/hub. The data outputs from the switch are connected to the Midspan. The Midspan delivers power over the spare twisted pairs (pins 7/8 and pins 4/5) in PD-90xxG series and over 4-wire twisted pairs (pins 7/8, 4/5 and pins 1/2, 3/6) in PD-95xxG series of the Category 5 cabling, without degrading the data quality. Most installations require the Midspan to be rack-mounted.

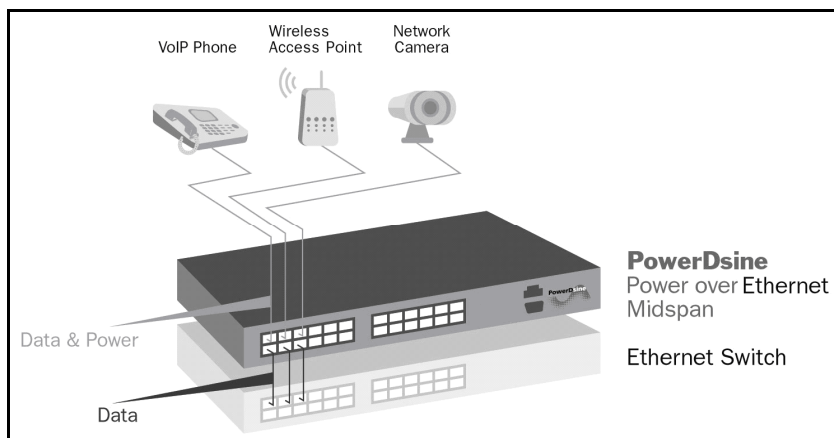


Figure 4-1: Typical Installation



4.2 Verifying Kit Contents

Unpack the kit and verify that the following items are included:

- The Power over Ethernet Midspan
- Mounting brackets (for 19-inch racks) and plastic cover
- Screws for assembling mounting brackets
- Self-adhesive rubber feet
- User Guide
- Power cord

Before proceeding, record the unit's serial number in the rectangle below for future reference. The serial number is found on the information label at the rear of the Power over Ethernet Midspan.

Serial Number

4.3 Rack Mounting Brackets

The Midspan comes with 19-inch mounting brackets and screws. To install the Midspan into a 19-inch rack

1. Remove the self-adhesive rubber feet from the bottom surface.
2. Install the brackets using two screws per side.

Note: Rack-mounting screws are not provided.

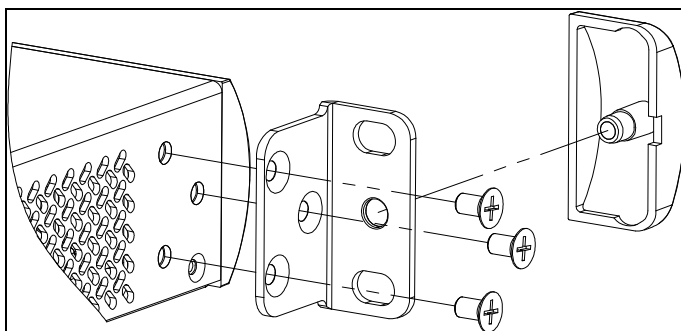


Figure 4-2: Installing Mounting Brackets

4.4 Installation Factors

- **Elevated Operating Ambient Temperature:** If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than the room ambient temperature. Therefore, install the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (T_{mra}).
- **Reduced Air Flow:** Install the equipment in a rack in a manner that does not compromise the amount of airflow required for safe operation of the equipment.
- **Mechanical Loading:** When mounting the equipment in the rack, ensure that the mechanical loading is even.
- **Circuit Overloading:** Take into consideration the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings must be given when addressing this concern.
- **Reliable Grounding (Earthing):** Maintain reliable earthing of rack mounted equipment. In particular, pay attention to supply connections other than direct connections to the branch circuit (for example, the use of power strips).



4.5 Connecting Ethernet Cables

The ports on the Midspan's front panel are configured as "Pass Through" ports for eight (1, 2, 3, 6, 4, 5, 7, 8) conductors of the RJ-45 connectors. Use Category 5 cabling when making the connections.

1. Connect cables from the Ethernet Switch to the Data In ports (lower row on the front panel).
2. Connect the cables from the IEEE 802.3at or IEEE 802.3af ready terminals (PDs) to the corresponding **Data & Power Out** ports (upper row on the front panel).

4.6 Connecting Power Cables

When using an AC source to power the Midspan, plug in the provided power cord at the rear AC connector.

4.7 Powering Up the Unit

The Power over Ethernet Midspan has no on/off switch. To apply power to the Midspan or remove power from the Midspan, insert or remove the power cable from the receptacle (AC) on the rear panel of the unit.

With power applied, the Midspan:

- Powers-up.
- Internal fan operates.
- The device runs its Power-On Self-Test (POST), which takes less than 10 seconds. During the POST, all ports are disabled and the indicators illuminate in the following sequence:
 - Port indicators and Main indicators illuminate green.
 - Main indicator remains lit green; port indicators are off.

The ports are now ready (enabled) for normal operation.

If the LEDs are not lit, refer to Troubleshooting, page 20.



5 Troubleshooting

The following sections describe the troubleshooting procedures to be used if you encounter any problems with your unit.

5.1 Preliminary Steps

If you have a problem, verify that:

- Power is applied to the Midspan.
- A crossover-type Ethernet cable has not been used.
- The Ethernet cable from the network is connected to the Data port.
- The Ethernet cable to the PD is connected to the Data & Power port.
- Cable pairs are attached to their corresponding ports.



5.2 Troubleshooting Steps

This section provides a symptom and resolution sequence to assist in the troubleshooting of minor operating problems. If the steps given do not solve your problem, do not hesitate to call your local dealer for further assistance. Refer to Table 5-1.

Table 5-1: Troubleshooting Steps

Symptom	Corrective Steps
<i>Midspan does not power up</i>	<ol style="list-style-type: none">1. Establish that the power cord is viable.2. Verify that the voltage at the power inlet is between 100 and 240 VAC.3. Remove and re-apply power to the device and check the indicators during power up sequence.
<i>A port indicator is not lit and the corresponding PD does not operate.</i>	<ol style="list-style-type: none">1. Verify that the port is enabled (the Midspan did not detect a PD).2. Verify that the PD is designed for Power over Ethernet 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 viable splitter.5. Verify that the PD is connected to the Data & Power output port.6. Try to reconnect the same PD to a different port on the same or into another Midspan. If it works, there is probably a faulty output port or RJ-45 connection.7. Verify that port shutdown command was not issued via the Web management.

Table 5-1: Troubleshooting Steps

Symptom	Corrective Steps
<i>The end device operates, but there is no data link.</i>	<ol style="list-style-type: none"> 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 viable splitter. 3. Verify that for this link, you are using a standard UTP/FTP Category 5 straight (non-crossover) cabling, with all four pairs and that the link is 100 meters or less. 4. Try to re-connect the same PD to a different port on the same Midspan or to a different unit: if it works, there is probably a faulty port or faulty RJ-45 connection.

6 Specifications

The following sections detail the units' specifications.

6.1 Physical Specifications

Dimensions (H x W x D) :	44 x 435 x 271 mm (1.75" x 17.2" x 10.7")
Weight	
P/N	
PD-9024G/ACDC/M/F PD-9024G/AC/F PD-9512G/ACDC/M PD-9512G/AC PD-RPS-1000	4.8 Kg (10.6 lb)
PD-9024G/ACDC/M PD-9024G/AC PD-9012G/ACDC/M PD-9012G/AC PD-9006G/ACDC/M PD-9506G/ACDC/M PD-9506G/AC PD-RPS-450	4.4 Kg (9.7 lb)
PD-9006G/AC	4.3 Kg (9.5 lb)
PD-90xxG/DC/M	2.7 Kg (6 lb)

6.2 Environmental Specifications

Operating Temperature	0° to +40° C (32 to 104° F)
Storage Temperature	-20 to +70° C (-4 to 158° F)
Humidity	10 to 90% (non-condensing)



6.3 Electrical Specifications

Parameter	PD-9024G/ACDC/M/F, PD-9024G/AC/F, PD- 9512G/ACDC/M, PD-9512G/AC & PD-RPS-1000
AC Input Voltage	100 to 240 VAC at 50/60 Hz
Input Current @ 100 VAC	12 A max.
Input Current @ 240 VAC	6 A max.
Nominal Output Voltage	50 to 57 VDC
Total Output Power	864 W max
Maximum Output Power, per Port	PD-90XX series: 36 W PD-95XX series 72 W

Parameter	PD-9024G/ACDC/M, PD-9024G/AC, PD-9012G/ACDC/M, PD-9012G/AC, PD-9506G/ACDC/M, PD-9506G/AC & PD-RPS-450
AC Input Voltage	100 to 240 VAC at 50/60 Hz
Input Current @ 100 VAC	5.5 A max
Input Current @ 240 VAC	2.75 A max
Nominal Output Voltage	50 to 57 VDC
Total Output Power	430 W max
Maximum Output Power, per Port	PD-90XX series: 36 W PD-95XX series 72 W



Parameter	PD-9006G/AC
AC Input Voltage	100 to 240 VAC at 50/60 Hz
Input Current @ 100 VAC	4 A max.
Input Current @ 240 VAC	2 A max.
Total Output Power	200 W max.
Maximum Output Power, per Port	36 W
Nominal Output Voltage	50 to 57 VDC

Parameter	PD-9024G/ACDC/M/F, PD-9024G/ACDC/M, PD-9012G/ACDC/M, PD-9006G/ACDC/M, PD-9506G/ACDC/M, PD-9512G/ACDC/M, PD-RPS-450 & PD-RPS-1000
DC Input Rated Voltage	53 -57 VDC
Input DC Maximum Current	20 A

Parameter	PD-9006G/DC/M, PD-9012G/DC/M, PD-9024G/DC/M,
DC Input Rated Voltage	46 -57 VDC
Input DC Maximum Current	20 A
Maximum Output Power, per Port	36 W
Nominal Output Voltage	44 to 57 VDC

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7 PowerDsine's PowerView Pro

PowerDsine PowerView Pro is a secure remote management system offering real time monitoring and control, with graphical representation, status indicators, and alarms. PowerView Pro manages Midspans via an Internet browser interface or via a Network Management System (NMS). One of the most important features is the remote power enable/disable functionality on each of the Midspan ports, supporting “hard resets” of remote terminals such as WLAN Access Points and VoIP Phones. PowerView Pro enables monitoring and controlling at network and Element levels, as shown in Figure 7-1. For further details, refer to PowerDsine's PowerView Web Manager User Guide.

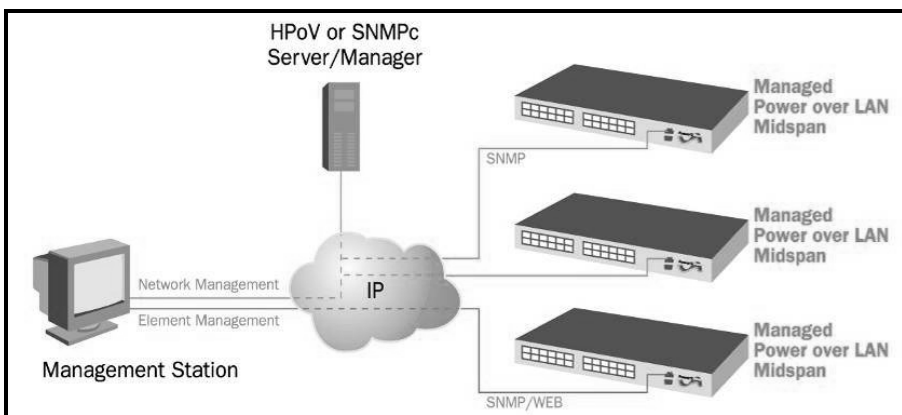


Figure 7-1: Management Deployment

The PowerView Pro provides a number of unique features for Midspan management:

- Remote Web Management of PoE for monitoring and configuration
- Configuration using graphical representations of remote devices
- Real time monitoring and configuration with visual status indicators and alarms
- Multi-manager capabilities



-
- Event and performance data recording
 - Runs on a PC platform with Windows graphic user interface (GUI)



8 Power Backup and Power Redundancy Connection

The 9000G has two options for ensuring continuous power supply:

- Power redundancy
- Power backup

8.1 Power Redundancy

PowerDsine's power redundancy mode is available in the 9000G Midspan series. This mode enables internal power supply backup for two Midspans connected to each other. This mode provides seamless failover between two Midspans. If one of the two Midspans' internal power supplies fails, the failure is detected automatically and the working power supply provides power to the Midspan. Both Midspans are ensured continuous uptime and all active ports continue to operate without any effect on the powered devices connected.

Power redundancy mode is available in the following midspans:

- PD-9024G/ACDC/M/F
- PD-9024G/ACDC/M
- PD-9012G/ACDC/M
- PD-9006G/ACDC/M
- PD-9512G/ACDC/M
- PD-9506G/ACDC/M

Note: When using the power redundancy option, connect together only those units having the same power supply.

- 1 Kw power supply units
 - PD-9024G/ACDC/M/F
 - PD-9512G/ACDC/M
- 450 W power supply units
 - PD-9024G/ACDC/M
 - PD-9012G/ACDC/M



- PD-9006ACDC/M
- PD-9506G/ACDC/M

WARNING:

When connecting the power redundancy connectors, make sure that the AC power in **both** Midspans is disconnected from AC mains!

8.2 Power Backup

In cases where one of the Midspans' power supply fails, the unit maintains full functionality by using an optional backup power supply.

Midspan Unit	Redundant Power Supply
PD-9024G/ACDC/M/F	PD-RPS-1000
PD-9024G/ACDC/M PD-9012G/ACDC/M PD-9006G/ACDC/M	PD-RPS-450

8.3 Connectors

The power backup and power redundancy connectors are located on the rear side of the Midspan.

PD-90xxG power backup and power redundancy have two connectors (see Figure 8-1 Error! Reference source not found.):

- Power Backup and Power Redundancy Control Signal connector
RPS COM D-Sub: 15 pins, 3 rows female connector.
- The DC Voltage Terminal Block Connector has two positive (+) terminals and two negative (-) terminals.

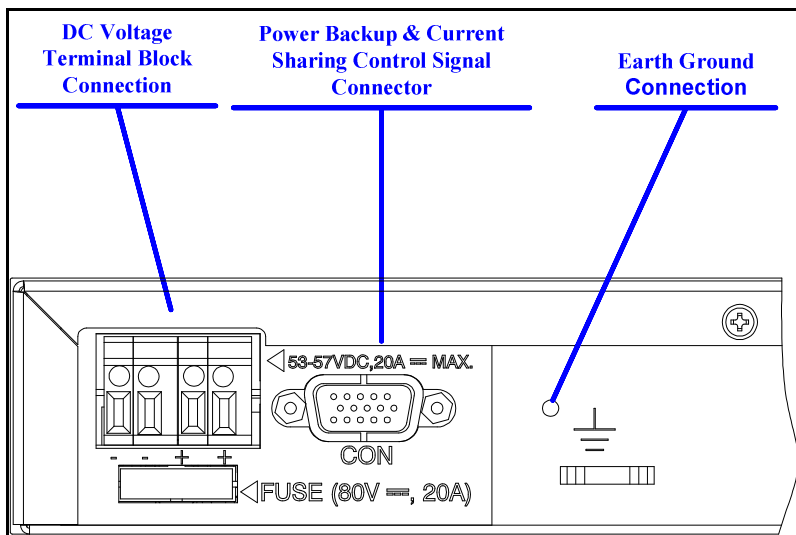


Figure 8-1: PD-90xxG Rear Panel connectors

8.4 Connecting the Backup and Redundancy Connectors

WARNING:

Before connecting a Midspan to another Midspan, disconnect both Midspans from the AC main.

Implement Power Backup and Power Redundancy modes by using the PD- RPS-Cables Cable kit which includes the DC Cable and RPS COM.

To connect the connectors:

1. Verify that the Midspans are mounted securely to the rack.
2. Verify that the Midspans are not connected to AC mains.
3. Connect the DC cable – two red wires (+) , two black (-) wires and one yellow/green wire as shown in Figure 8-2.
4. Connect the RPS COM cable.
5. Connect the Midspans to the AC outlet.

6. Verify that Power Indicator LED is ON (Green LED).

Note:

If the Power Indicator LED is not lit, refer to Troubleshooting, page 20.

Note:

RPS functionality can be monitored via NMS as described in Section 7.3

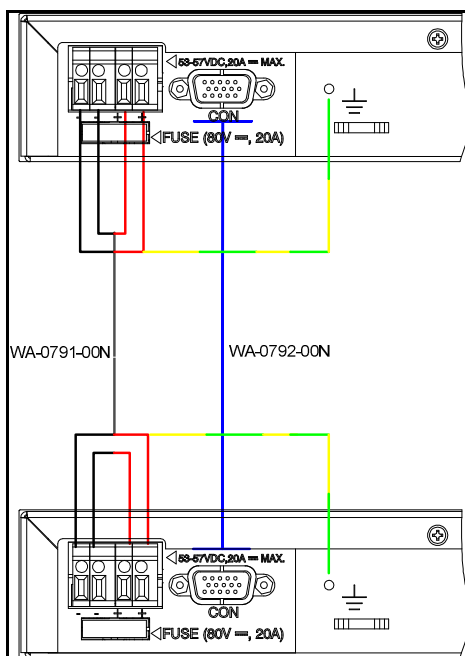


Figure 8-2: PD-90xxG Rear Panel connections

8.5 Power Backup & Power Redundancy Indications

For NMS configuration refer to the PowerView Pro User Guide, Catalog Number 056-0051-06. During Power Backup and Power Redundancy, the NMS View-Status window displays the 'Power Source Status' field.

The 'Power Source Status' field shows both internal and external power supply status (green indication for 'OK' and red indication for 'Fail').

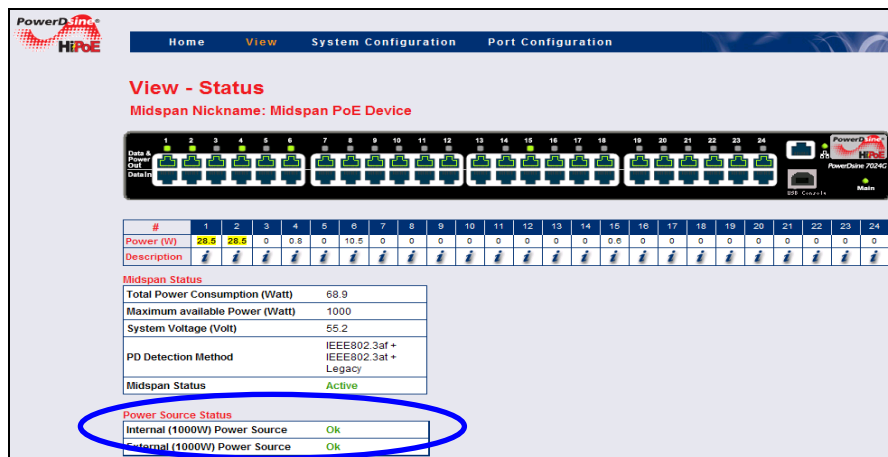


Figure 8-3: PD-90xxG View status in NMS

Note:

The Midspan provides another power fail indication via the Midspan's Power Indicator LED; whenever the unit's internal power supply fails, the Power Indicator LED blinks once per second (Green LED).

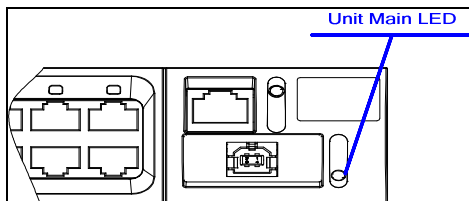


Figure 8-4: PD-90xxG Front Panel LED Indication



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