Securing Power Investment with Midspan to Midspan Power Redundancy

Overview

Power over Ethernet (PoE) has become an industry standard for delivering safe and reliable power to IP terminals. Though we see tremendous reliability improvement using PoE rather than AC power, there will still always be marginal room for equipment error. For deployments where power failure isn't an option, Microsemi has developed a power redundancy mode for all high power rack mountable PoE midspans. This mode enables internal power supply backup for two Midspans connected to each other providing seamless failover between two Midspans. If one of the two Midspans' internal power supplies fails, failure is detected automatically and working power supply provides power to Midspan. Both Midspans are ensured continuous uptime and all active ports continue to operate without any effect on connected powered devices.

Implementing Midspans to Midspan Redundancy

Power redundancy mode is available in the following midspans:

- PD-5524G/ACDC/M
- PD-9006G/ACDC/M
- PD-9012G/ACDC/M
- PD-9024G/ACDC/M/F
- PD-9506G/ACDC/M
- PD-9512G/ACDC/M
- PD-9524G/ACDC/M

To use midspan's for power redundancy, only units that share the same power supply should be used with each other as shown in Table 1. When connecting power redundancy connectors, make sure AC power in both Midspans is disconnected from AC mains.

450W Power Supply	1000W Power Supply
PD-5524G/ACDC/M	PD-9024G/ACDC/M/F
PD-9006G/ACDC/M	PD-9512G/ACDC/M
PD-9012G/ACDC/M	PD-9524G/ACDC/M
PD-9506G/ACDC/M	

Table 1: Midspans Connected for Power Redundancy

Power backup and power redundancy connectors are located on the back side of the midspan. PD-90xxG power backup and power redundancy have two connectors, refer Figure 1):

- Power Backup and Power Redundancy Control Signal connector, RPS COM D-Sub: 15 pins, 3 rows female connector.
- DC Voltage Terminal Block Connector has two positive (+) terminals and two negative (-) terminals.
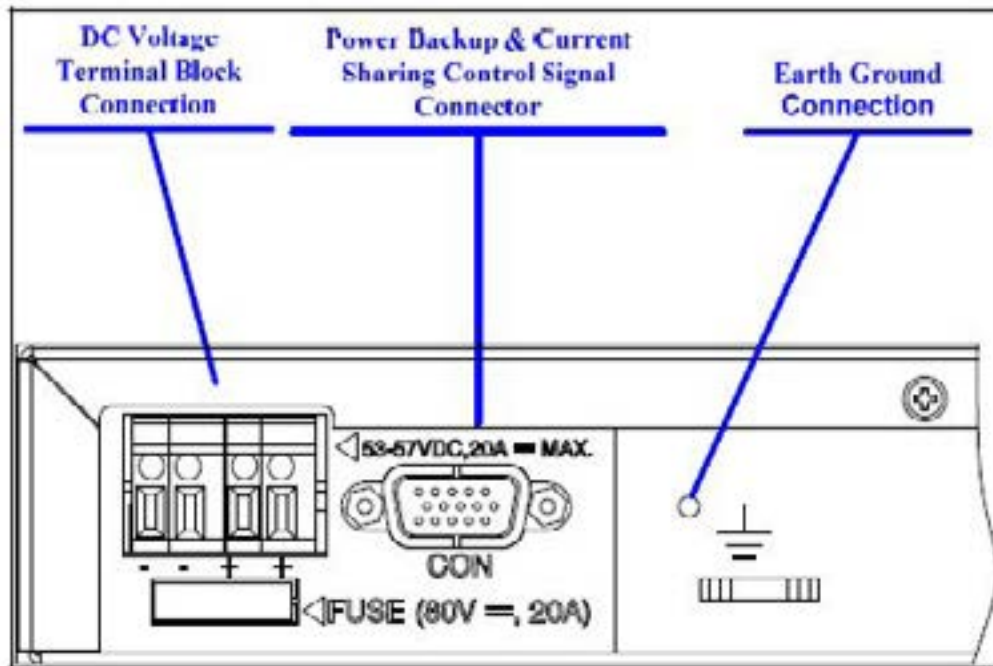
Figure 1. PD-90xxG Power Backup and Power Redundancy Connectors

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

The following steps are used to connect the connectors:

1. Verify Midspans are mounted securely on rack.
2. Verify Midspans are not connected to AC mains.
3. Connect DC cable; two red wires (+), two black wires(-), and one yellow/green wire, as shown in Figure 2.
4. Connect RPS COM cable.
5. Connect Midspans to AC outlet.
6. Verify Power Indicator LED is ON (Green LED).
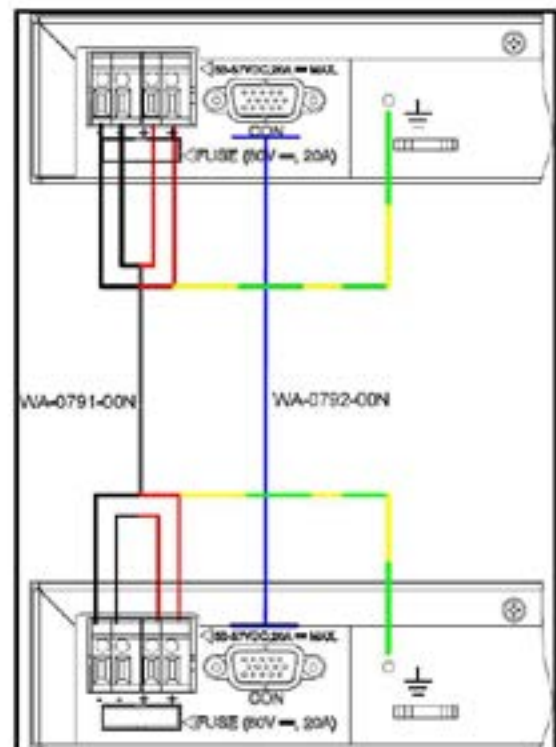
Figure 2. How to Connect the Connectors

Note: When connecting a midspan to midspan or to an RPS unit - Connect the earth ground cable between both units Earth Ground connection.

Note: If Power Indicator LED is not lit, refer to the product user guide.

PowerView Pro SNMPv3 Web Based Power Management

Along with power monitoring, remote reboots, power scheduling and more, Microsemi's PowerView Pro web based power management tool is featured in all of Microsemi's PoE midspans supporting midspan to midspan redundancy.

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