# PoE Systems

Single and Multiport PoE Midspans
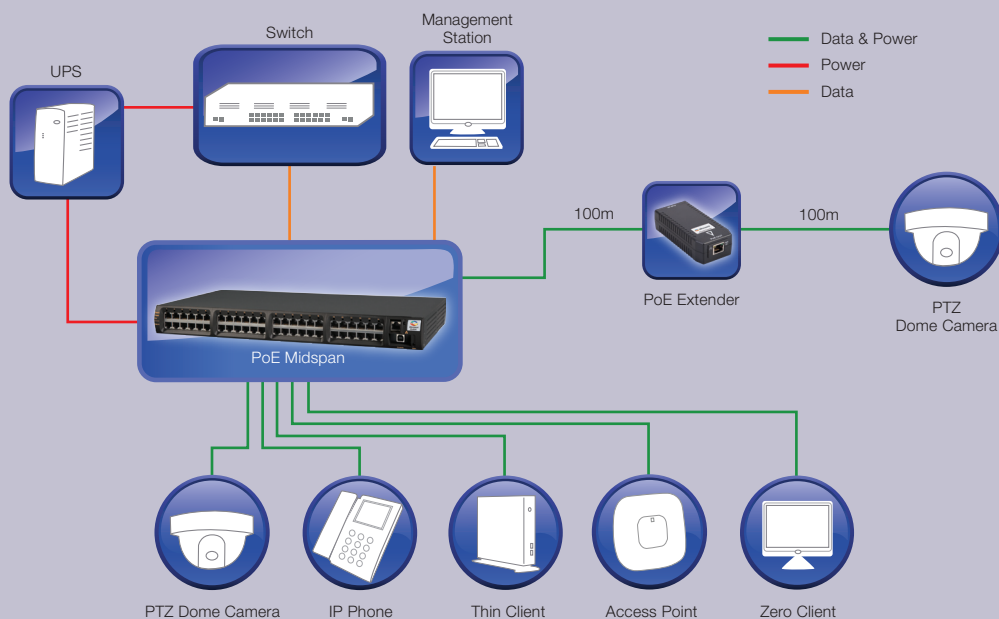
High Power PoE+ Systems

PoE Systems for Outdoor Deployments

Cloud-based Power Management Software

Splitters & Extenders

**Microsemi**®

Power Matters.™

# How will you



Switch

Management Station

UPS

Data & Power
Power
Data

100m

PoE Extender

100m

PTZ Dome Camera

PoE Midspan

PTZ Dome Camera     IP Phone     Thin Client     Access Point     Zero Client

**Vision:** To be the premiere intelligent network power solutions provider

# power that?

## Microsemi PoE Systems

**Best of Breed PoE Solutions for Network PoE Upgrades**

Microsemi PoE systems enable delivery of up to 72 watts of reliable, scalable Power over Ethernet (PoE) to IP phones, IP cameras, WLAN access points, Zero Clients and other Ethernet devices over standard Cat5 or better Ethernet cable. All Microsemi systems support 10/100/1000 data rates and are available in 1, 4, 6, 12 and 24 port increments, bringing flexibility and longevity to network upgrades. New to Microsemi's PoE lineup is a catalog of outdoor IP66 rated PoE midspans, hubs and switches, enabling new power and data solutions for environmentally challenging deployments.

As well as being innovators of PoE systems, Microsemi is a market leader in PoE technology and is a major contributor to IEEE 802.3af, 802.3at and HDBaseT standards.

**Mission:** **We are committed to empowering our partners success by providing innovative industry leading power solutions**

# Single and Multiport Midspans

### PD-3501G Midspan

This single port midspan offers a solution for security network and other low port density IP Terminal installations.

- Provides 15.4W
- IEEE802.3af compliant

### PD-3504G Midspan

This 4 port midspan offers a solution for IP telephones, wireless LAN access points, security network cameras and IP terminals.

- 4 ports
- Provides 15.4W per port
- IEEE802.3af compliant

### PD-9001GR Midspan

This 30W single port midspan provides a high-power solution for remote powering of current and emerging high power applications.

- Provides 30W
- IEEE802.3at compliant

### PD-5501G

This DC powered single port midspan provides a high-power solution for remote powering while dissipating 50% less power.

- Provides 30W per port
- 12-24VDC
- IEEE802.3at compliant

### PD-9004G Midspan

This 4 port midspan offers a 30W solution for powering IP cameras, WLAN APs, and other edge devices in SMB deployments.

- IEEE802.3at compliant
- Provides 30W per port
- 3 units can fit in 1U 19" rack

## PD-9501G Midspan

This 60W single port, high power midspan enables remote powering of current and emerging high power applications.

- Provides 60W
- IEEE802.3at compliant
- AC and DC models available
- Energy efficient PoE (EEPoE) dissipates 50% less power when powering 25.5W devices

## PD-6500G Midspan Family

This remote management enabled midspan family provides 15.4w of PoE to IP terminals, leaving network infrastructure completely unaltered.

- 6/12/24 ports
- Remote power management
- Provides 15.4W per port
- IEEE802.3af compliant

## PD-5524G Midspan

This high power, remote management enabled EEPoE midspan is designed specifically to cut power dissipation over cables by 50% while powering end devices that require up to 30W.

- 24 ports
- Provides 30W per port
- EEPoE technology – reduces power loss over cables by 50%
- Midspan-midspan mutual backup
- Remote power management
- High power over 4-pairs
- IEEE 802.3at compliant

## PD-9000G Midspan Family

This high power, remote management enabled midspan family is designed specifically to power IP terminals requiring up to 36W.

- 6/12/24 ports
- Provides 36W per port
- IEEE802.3at compliant
- Midspan-midspan mutual backup
- Remote power management

## PD-9500G Midspan Family

This high power, remote management enabled EEPoE midspan family is designed specifically to power IP terminals requiring up to 72W.

- 6/12/24 ports
- Remote power management
- EEPoE technology – reduces power loss over cables by 50%
- High power over 4-pairs
- IEEE802.3at compliant
- Midspan-midspan mutual backup

# Microsemi's First Outdoor IP66 Rated PoE Switch
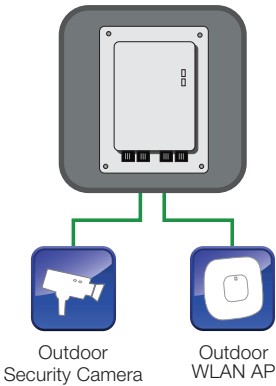
## PDS-102GO

The PDS-102GO is an outdoor PoE switch, enabling the connection of two powered devices to the network such as outdoor WLAN access points, outdoor IP Cameras and outdoor P2P radios. The switch is IP66 rated, offers lightning protection and can be installed in outdoor environments. Deployment is simple and straight forward - there is no need to open the unit during installation.

The PDS-102GO delivers PoE up to 30W per device. In addition, it enables remote monitoring and control of the devices' status, including remote reset, while extending the reach between the switch and powered devices by an additional 100m, to a maximum of 200 meters - a major benefit in many applications.

## Management Capabilities

| | |
|---|---|
| **System Network Management Capabilities** | Web Interface – used to view unit PoE & Network status, unit configuration and view unit production information. |
| | SNMP v2/v3 – Monitor unit over the network (MIB-II RFC1213), monitor / configure unit PoE capabilities (RFC3621). |
| | Telnet – used to view unit PoE & Network status, unit configuration and production information. Software update, Enable/Disable PoE functionality, ping remote Network device for connectivity test. |
| | SNMP Traps – used to report various PoE events as PoE PD insertion/removal. |
| | SysLog – used to report PoE events, Invalid remote user access, initial DHCPv4/v6 address, etc. |
| **Ethernet Switch Network Capabilities** | 10M/100M/1000Mbit Half Duplex / Full Duplex Ethernet speed. |
| | 8K internal MAC address lookup engine. |
| | Auto MDIX |
| | Jumbo frames |
| **PoE Capabilities** | IEEE 802.3at – delivers up to 30 Watts per port – View and status. |
| | PoE Enable/Disable – Enable/ Disable PoE ports Power output (Ethernet data is always enabled). |
| | Weekly Schedule – Automatic activation/deactivation of PoE ports based on time of day. |
| | Remote device reset – Turning temporary device power off and back on resets attached PD device. |
| **Configuration Options** | Web based: Via a WEB browser |
| | SNMPv1/2c/3: Via an SNMP management application on a remote computer |
| | Telnet: Via a Telnet application on a remote computer |
| **Security and User Authentication** | Web, Telnet, SNMPv2, SNMPv3 |

# Midspans for Outdoor Installations



Outdoor
Security Camera

Outdoor
WLAN AP

## PD-9002GHO

The PD-9002GHO offers plug and play installation for outdoor Ethernet based devices and is particularly well suited to power IP camera's and WLAN APs together, where the camera is passing up to 1G data wirelessly through the WLAN AP.

• 2 ports PoE passive HUB
• 802.3at rated (30W/port)
• IP 66 rated for outdoor deployment
• -40 degrees to 131 F (-40ºC to +55ºC) operating ambient temperature

## PD-9001GO and PD-9501GO



• PD-9001GO: 30W
  PD-9501GO: 60W
• Outdoor midspan for outdoor devices
• Outdoor rated: IP66
• Extended temperature range
  PD-9001G: -40ºC, +65ºC
  PD-9501G: -40ºC, +50ºC
• Fully IEEE802.3at standard compliant

• Plug 'n Play installation (installer does not have to open unit)
• Supports both 802.3af and 802.3at powered devices
• Includes critical surge protection
• AC power input

## PD-9001G-40/SP



• Indoor midspan for outdoor devices
• Up to 40W of power on 2-pairs
• IEEE 802.3at compliant with 2-event classification
• IEEE 802.3af backward compatible

• Surge protection according to GR 1089
• Safe and reliable power to WLAN access points
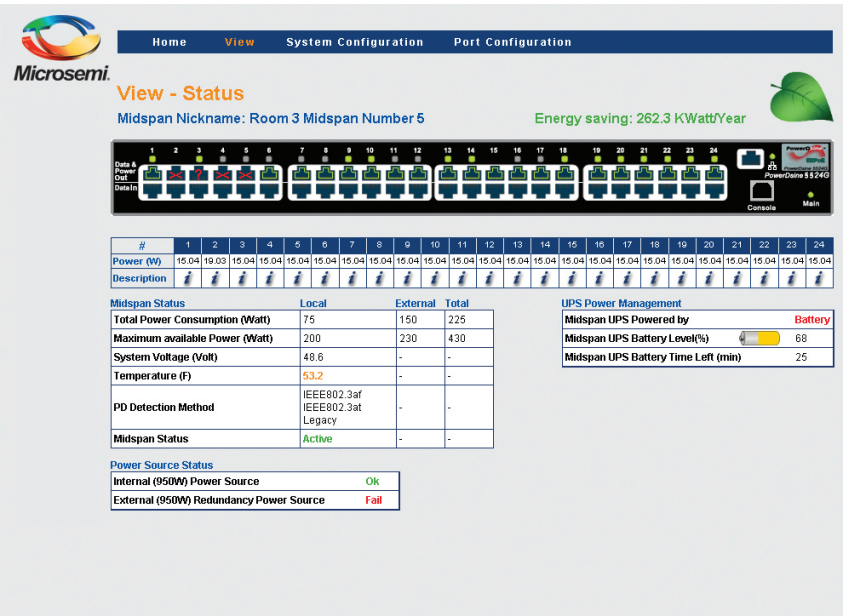• Compact design with 1U height
• AC power input

## PD-OUT/SP11 Lightning Surge Protector



• Outdoor PoE surge protection
• IP66 rated
• Outdoor rated: IP66
• Suitable for Ethernet

• Supports data rates up to 1 Gpbs
• All eight lines protected

# PowerView Pro Management

**Highly secure cloud-based and network management platform**



- • SNMPv3 and web-based management
- • Supports both IPv4 and IPv6 addressing
- • Comes standard in the PD-6500G, PD-9000G, and PD-9500G families and PD-5524G*
- • Monitors battery life in UPS and manages flow to critical and non-critical devices

- • Monitors statistics, usage, and availability
- • Allows devices to be remotely rebooted
- • On/off scheduling allows power saving in periods of non-use as well as remote reboot capabilities to increase network efficiency and uptime

   * Multiport devices only

# Accessories

| Family | Product Number | Description |
|---|---|---|
| **PoE Tester** | **PD-AFAT-Tester** | The Power over Ethernet (PoE) Tester, connected to an RJ-45 outlet, tests the cabling infrastructure for the presence of power, either IEEE802.3af or IEEE802.3at (2-pairs 30W or 4-pairs 60W).<br><br>The PoE Tester also identifies the existence and type of Power Sourcing Equipment (either End-span* or Midspan) in your network. |
| **802.3af Active Splitter** | **PD-AS-601/5** | Power conversion from 48V to 5V output, 2 x DC jacks: round 3.4x1.35mm and 5.5x2.5mm |
| **802.3at Active Splitter** | **PD-AS-701/12** | Power conversion from 48V to 12V output, 2 pairs, for use with PD-9000G family |
| | **PD-AS-701/24** | Power conversion from 48V to 24V output, 2 pairs, for use with PD-9000G family |
| | **PD-AS-951/12-24** | Power conversion from 48V to 12V or 24V DC output (user selectable), 4 pairs, for use with PD-9500G family |
| | **PD-AS-951/18** | Power conversion from 48V to 18V DC output, 4 pairs for use with PD-9500G family |
| **PoE Extender** | **PD-PoE Extender** | 1-port, extends PoE range by additional 100m, 802.af/802.at output power. Combine with PD-3504G or PD-9004G to effectively power edge-based Ethernet devices. |

# Typical Power Consumption of Common Applications

| Power Consumption | Applications | Microsemi PoE Solution |
|---|---|---|
| **3-5W** | IP phones | PD-3500G family<br>PD-6500G family |
| **5-12.95W** | Wireless access points<br>IP cameras | PD-3500G family<br>PD-5524G<br>PD-6500G family |
| **12.95-20W** | 802.11n High Power APs<br>Biometric access control | PD-9000G family<br>PD-5524G |
| **20-25.5W** | 802.11ac access points<br>PTZ IP cameras<br>Zero clients<br>RFID readers<br>Video IP phones<br>802.16 base stations<br>Industrial sensors | PD-9000G family<br>PD-5524G |
| **25.5-40W** | 802.11ac access points<br>Zero clients<br>Video IP phones<br>Workgroup switches<br>Point of sales<br>Information kiosks | PD-9001G-40/SP<br>PD-9000G family<br>PD-5524G |
| **40-60W** | Outdoor PTZ Cameras<br>Ultraportable laptops<br>Notebook laptops<br>Zero clients<br>Point of sales<br>Information kiosks | PD-9500G family |

# Selection Guide

## Indoor PoE Midspan

| Watts per Port | Product Number | Number of Ports | Remotely Managed | Gigabit | Input | Warranty | Other |
|---|---|---|---|---|---|---|---|
| 15.4W | PD-3501G/AC | 1 | | x | AC | 1-year | |
| 15.4W | PD-3504G/AC | 4 | | x | AC | 1-year | |
| 15.4W | PD-6506G/AC/M | 6 | | x | AC | Limited lifetime | |
| 15.4W | PD-6512GAC/M | 12 | x | x | AC | Limited lifetime | |
| 15.4W | PD-6524G/AC/M/F | 24 | x | x | AC | Limited lifetime | 400W total power |
| 30W | PD-5501G/12-24VDC | 1 | | x | DC | 1-year | |
| 30W | PD-5524G/ACDC/M | 24 | x | x | AC & DC | Limited lifetime | 450W total power |
| 30W | PD-9001GR/AC | 1 | | x | AC | 1-year | |
| 30W | PD-9004G/AC | 4 | | x | AC | 1-year | |
| 36W | PD-9006G/ACDC/M | 6 | x | x | AC & DC | Limited lifetime | |
| 36W | PD-9012G/ACDC/M | 12 | x | x | AC & DC | Limited lifetime | |
| 36W | PD-9024G/ACDC/M/F | 24 | x | x | AC | Limited lifetime | 1000W total power |
| 60W | PD-9501G/AC | 1 | | x | AC | 1-year | |
| 60W | PD-9501G/24VDC | 1 | | x | DC | 1-year | |
| 60W | PD-9501G/48VDC | 1 | | x | DC | 1-year | |
| 72W | PD-9506G/ACDC/M | 6 | x | x | AC & DC | Limited lifetime | |
| 72W | PD-9512G/ACDC/M | 12 | x | x | AC & DC | Limited lifetime | |
| 72W | PD-9524G/ACDC/M | 24 | x | x | AC & DC | Limited lifetime | |
| 36W | PD-9024G/ACDC/M | 24 | X | X | AC & DC | Limited lifetime | 450W total power |
| 36W | PD-9024G/DC/M | 24 | X | X | DC | Limited lifetime | |
| 36W | PD-9024G/AC/F | 24 | | X | AC | Limited lifetime | 1000W total power |
| 36W | PD-9024G/ACDC/M/F | 24 | X | X | AC & DC | Limited lifetime | 1000W total power |
| 72W | PD-9501G/AC | 1 | | X | AC | 1-year | |
| 72W | PD-9506G/ACDC/M | 6 | X | X | AC & DC | Limited lifetime | |
| 72W | PD-9512G/ACDC/M | 12 | X | X | AC & DC | Limited Lifetime | |

## PoE Systems for Outdoor Installations

| Watts per Port | Product Number | Number of Ports | Remotely Managed | Gigabit | Input | Warranty | Other |
|---|---|---|---|---|---|---|---|
| 30W | PD-9001GO/AC | 1 | | x | AC | 1-year | Outdoor deployment |
| 40W | PD-9001G-40/SP/AC | 1 | | x | AC | 1-year | Indoor deployment |
| 60W | PD-9501GO/AC | 1 | | x | DC | 1-year | Outdoor deployment |
| 60W | PD-9501GO/12-24VDC | 1 | | x | DC | 1-year | Outdoor deployment |
| 60W | PD-9501GO/48VDC | 1 | | x | DC | 1-year | Outdoor deployment |
| 30W | PD-9002GHO/AC | 2 | | x | AC | 1-year | PoE hub - outdoor deployment |

## PoE Switches for Outdoor Installations

| Watts per Port | Product Number | Number of Ports | Remotely Managed | Gigabit | Input | Warranty | Other |
|---|---|---|---|---|---|---|---|
| 30W | PDS-102GO/AC/M | 1 data input, 2 PoE output | x | x | AC | 1-year | |

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