# *OmniConverter* GPoE+/M

**Managed 10/100/1000 Power Source Equipment (PSE) PoE/PoE+ Ethernet Fiber Switch**

The OmniConverter GPoE+/M is a managed Ethernet switch that features one or two 1000BASE-X Gigabit fiber ports and four or eight 10/100/1000BASE-T RJ-45 Power Sourcing Power-over-Ethernet (PoE and PoE+) ports. The OmniConverter switch enables network distance extension with fiber cabling and provides full PoE+ power simultaneously to all RJ-45 ports.

The GPoE+/M functions can be configured using easily accessible DIP-switches or using Web, Telnet or Serial Console management interfaces. The IP-based web and Telnet management can be accessed through any of the Ethernet RJ-45 or fiber ports and facilitates the configuration and real-time operation monitoring of each port.

The OmniConverter GPoE+/M is a Layer 2 Ethernet switch that can be configured in Directed Switch mode. As a Layer 2 Ethernet switch, frames are forwarded to any port based on their MAC address. In Directed Switch mode, multicast traffic (such as video) is directed only to the appropriate fiber port, preventing the flooding of copper ports.

Models with two fiber ports support Dual Device Mode that enables the GPoE+/M to operate as two independent and isolated switches. Models with two fiber ports also support redundant fiber uplinks for critical applications that require protection and sub-50ms restoration in the event of a fiber failure. The second fiber port may also be used to daisy-chain multiple OmniConverter PoE fiber switches, or it may be used as another switch port.

The OmniConverter GPoE+/M is available with fixed ST, SC, and LC connectors or Small Form Pluggable (SFP) transceivers. Fiber ports support multimode or single-mode and dual fiber or single-fiber with distances up to 140 km. SFPs support a variety of distances in standard and CWDM wavelengths.

The GPoE+/M automatically negotiates and delivers the power level required by its Powered Device (PD) partner. When negotiating to PoE (IEEE 802.3af) it delivers up to 15.4 Watts per RJ-45 port. When negotiating to PoE+ (IEEE 802.3at) it delivers up to 30 Watts per RJ-45 port. To support power for non-standard powered devices, each port can be configured to be forced to deliver up to the 30 Watts of power.

The GPoE+/M features a remote PoE power reset function that can be configured with a DIP-switch or via management.

SFPs not included

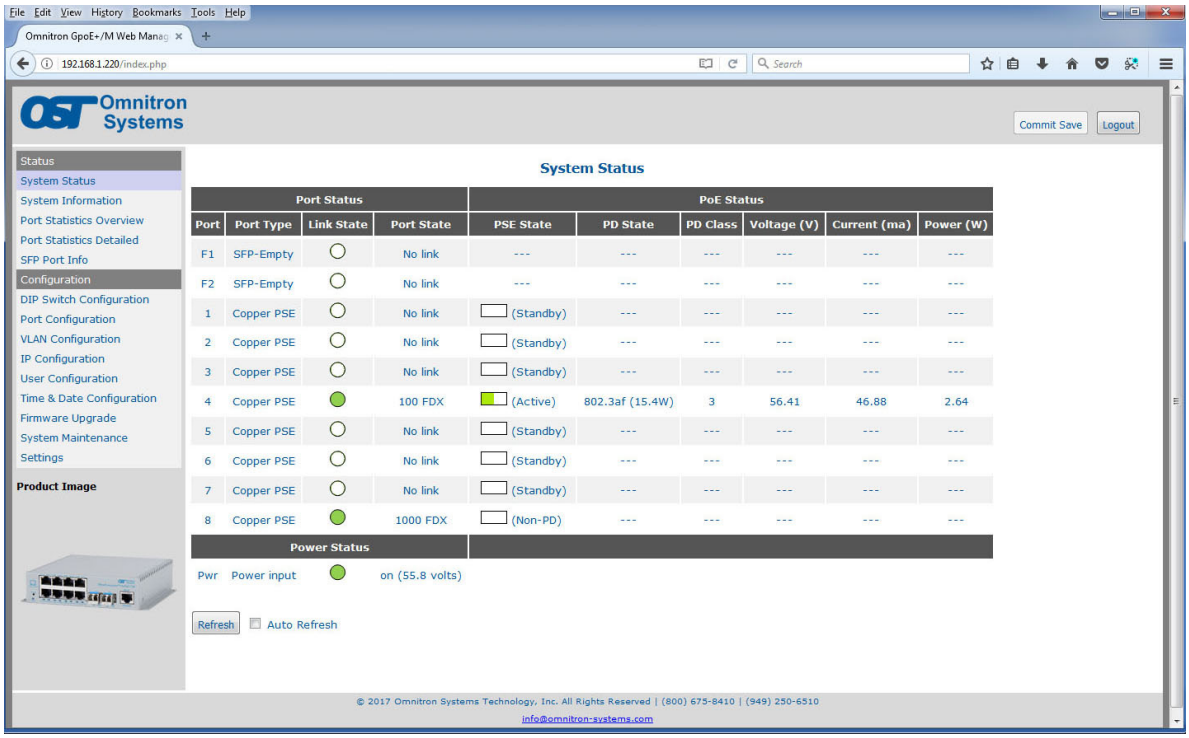
## KEY FEATURES

- Managed Ethernet Power Sourcing Equipment (PSE) PoE/PoE+ fiber switch
- Multiple port configurations:
  - 1 Fiber + 4 RJ-45
  - 2 Fiber + 4 RJ-45
  - 1 Fiber + 8 RJ-45
  - 2 Fiber + 8 RJ-45
- Management via Web, Telnet and serial interfaces
- Provides full PoE/PoE+ power simultaneously to all Ethernet RJ-45 ports
- Configurable PoE Power Reset
- Supports ST, SC and LC fiber ports or SFP transceivers
- Fiber redundancy on models with two fiber ports
- Dual Device mode for operating as two separate switches
- Directed Switch mode to prevent port flooding
- Supports jumbo frames up to 10,240 bytes
- Available with AC to DC power adapter
- DIN-rail mountable
- Commercial (0 to 50ºC) operating temperature range
- Free 24/7/365 Technical Support

The PoE power reset feature allows all PDs or individual PDs to be power-cycled and reset remotely to save time and expense by eliminating the need to dispatch manpower to remote network sites.

The compact OmniConverter Ethernet switches can be wall mounted or DIN-rail mounted using an optional mounting clip. They are available with external 100 to 240V AC power adapters.

# MANAGEMENT




The IP-based web management provides easy access to all the features of the GPoE+/M using any standard web browser.

IP-based web management provides remote management of the GPoE+/M compact PoE fiber switches, and provides the ability to remotely monitor status and configure hardware/software parameters.

The management software provides intuitive and easy-to-navigate menu options for Status and Configuration screens.

**Status**

- System Status
- System Information
- Port Statistics Overview
- Port Statistic Detailed
- SFP Port Information statistics

**Configuration**

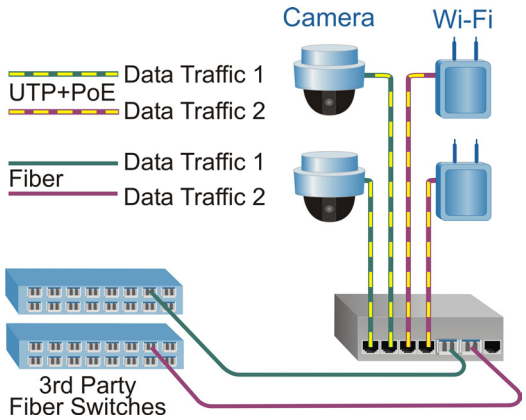
- DIP-switch Configuration
- Port Configuration
- VLAN Configuration
- IP Configuration
- User Configuration
- Time & Date Configuration
- Firmware Update
- System Maintenance

# APPLICATIONS

### Dual Device Mode

For secure applications requiring two separate network domains over fiber runs to the same location and independent connectivity to the Powered Devices, the GPoE+/M can be configured in Dual Device Mode.

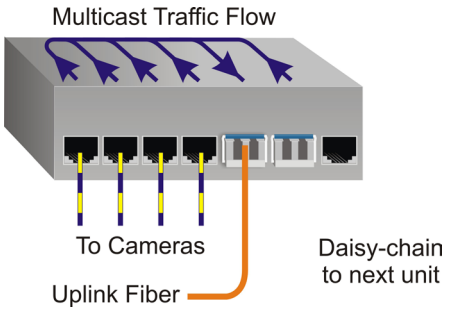
The GPoE+/M provides separate and independent data traffic paths between the two fiber links and four or eight RJ-45 ports. In the example below, the green lines represents one independent domain and the purple lines represent the other independent domain.




### Directed Switch Mode

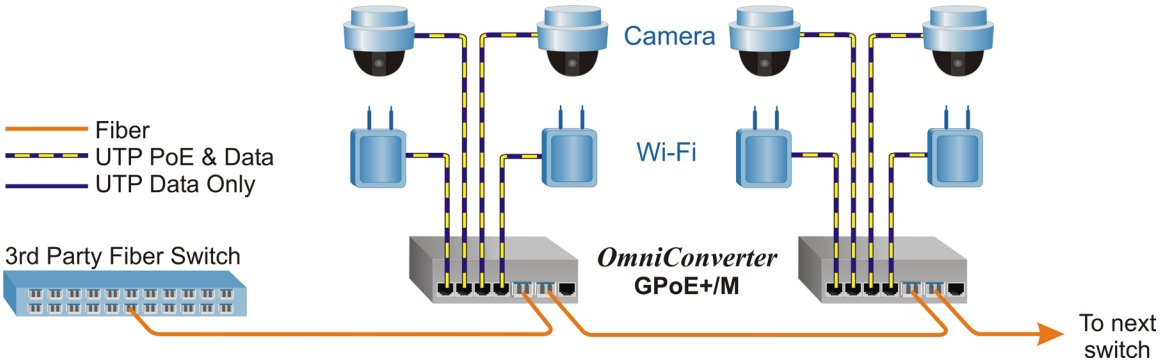
In some networks, video cameras broadcast a single multicast video stream to the entire network, and the video stream is received by all of the destinations. This multicast video can cause port flooding on other network devices (including other cameras, printers and workstations). To avoid this, multicast traffic is routed only to ports where the destination devices are connected.

The GPoE+/M can be configured to operate in Directed Switch Mode, which directs video traffic only to the uplink fiber port, as shown in the diagram below, preventing the multicast video traffic from flooding other network ports.




### Daisy Chain Application

In this application example, OmniConverter GPoE+/M PoE fiber switches are deployed along a fiber daisy chain. Gigabit fiber is distributed from a fiber switch at a network hub location to OmniConverter GPoE+/M PoE fiber switches with dual fiber ports that enable a fiber daisy chain with multiple locations. Each OmniConverter GPoE+/M provides fiber data connectivity and PoE+ power for IP cameras and Wi-Fi access points at each location.



# SPECIFICATIONS

| | | |
|---|---|---|
| **Description** | **OmniConverter GPoE+/M**<br>10/100/1000BASE-T to 1000BASE-X<br>Managed Ethernet Switch with PoE+ | |
| **Standard Compliances** | IEEE 802.3, IEEE 802.3af (15.40 watts max),<br>IEEE 802.3at (30 watts max) | |
| **Regulatory Compliances*** | UL, CE, FCC Class A | |
| **Environmental** | REACH, RoHS2 and WEEE | |
| **PoE Modes** | IEEE Alternate A (Alt A) | |
| **Management** | Web, Telnet, Serial Console | |
| **Frame Size** | Up to 10,240 bytes | |
| **Port Types** | Copper:<br>Fiber:<br>Serial: | 10/100/1000BASE-T (RJ-45)<br>1000BASE-X (ST, SC, LC, SFP)<br>RJ-45 |
| **Cable Types** | Copper:<br>Fiber:<br><br>Serial: | EIA/TIA 568A/B, Cat 5 UTP and higher<br>Multimode: 50/125, 62.5/125µm<br>Single-mode: 9/125µm<br>Category 3 and higher |
| **AC Power Requirements** | AC Adapter:<br>(4 RJ-45 Ports) | 100 - 240VAC/50 - 60Hz<br>1.24A @ 120VAC (typical) |
| | AC Adapter:<br>(8 RJ-45 Ports) | 100 - 240VAC/50 - 60Hz<br>2.4A @ 120VAC (typical) |
| **Dimensions** | W: 6.28” x D: 5.2” x H: 1.5”<br>L: 159.5 mm x B: 132.1 mm x H: 38.1 mm | |
| **Weight** | 4 RJ-45 Ports:<br>8 RJ-45 Ports: | 1.4 lb.; 650 grams<br>1.5 lb.; 700 grams |
| **Operating Temperature** | 0 to 50°C (-20°C AC cold start)<br>(For -40 to +75°C, consult Omnitron) | |
| **Humidity** | 5 to 95% (non-condensing) | |
| **Altitude** | -100m to 4,000m (operational) | |
| **MTBF (hours)** | 4 RJ-45 Ports:<br>8 RJ-45 Ports: | AC Adapter: TBD<br>AC Adapter: TBD |
| **Warranty** | 5 year product warranty with 24/7/365 free Technical Support<br>2 year AC power adapter warranty | |

* Pending

# ORDERING INFORMATION

## *OmniConverter* GPoE+/M 4 Port - IEEE 802.3at PoE+

9 5 x x - x - x x - x

| | |
|---|---|
| **1** | External AC/DC Adapter, 100 - 240 VAC, with US Power Cord Included |
| **2** | External AC/DC Adapter, 100 - 240 VAC, No Power Cord |
| **8** | External AC/DC Adapter, 100 - 240 VAC, with Japanese Power Cord Included |

| Fiber Type | Distance | Connector Type | | | | Tx Lambda (nm) | Rx Lambda (nm) | Min. Tx Power (dBm) | Max. Tx Power (dBm) | Min. Rx Power (dBm) | Max. Rx Power (dBm) | Min Attenuation (dB) | Link Budget (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ST | SC | LC | SFP | | | | | | | | |
| MM/DF | 220/550m[1] | 9520-0-14 | 9522-0-14 | 9526-0-14 | - | 850 | 850 | -10 | -4 | -17 | -3 | - | 7 |
| MM/DF (x2) | 220/550m[1] | - | - | 9526-0-24 | - | 850 | 850 | -10 | -4 | -17 | -3 | - | 7 |
| MM/DF | 2km | - | 9522-6-14 | - | - | 1310 | 1310 | -9.5 | -3 | -19.5 | -3 | - | 10 |
| SM/DF | 12km | 9521-1-14 | 9523-1-14 | 9527-1-14 | - | 1310 | 1310 | -9.5 | -3 | -19.5 | -3 | - | 10 |
| SM/DF (x2) | 12km | - | - | 9527-1-24 | - | 1310 | 1310 | -9.5 | -3 | -19.5 | -3 | - | 10 |
| SM/DF | 34km | - | 9523-2-14 | - | - | 1310 | 1310 | -5 | 0 | -23 | -3 | 3 | 18 |
| SM/DF | 80km | - | 9523-3-14 | - | - | 1550 | 1550 | -5 | 0 | -23 | -3 | 3 | 18 |
| SM/DF | 110km | - | 9523-4-14 | - | - | 1550 | 1550 | 0 | 5 | -24 | -3 | 8 | 24 |
| SM/DF | 140km | - | 9523-5-14 | - | - | 1550 | 1550 | 2 | 5 | -28 | -8 | 13 | 30 |
| MM/SF | 220/550m[1] | - | 9530-0-14 | - | - | 1310 | 1550 | -9 | -3 | -18 | -3 | - | 9 |
| MM/SF | 220/550m[1] | - | 9531-0-14 | - | - | 1550 | 1310 | -9 | -3 | -18 | -3 | - | 9 |
| SM/SF | 20km | - | 9530-1-14 | - | - | 1310 | 1550 | -9.5 | -3 | -20 | -3 | - | 10.5 |
| SM/SF | 20km | - | 9531-1-14 | - | - | 1550 | 1310 | -9.5 | -3 | -20 | -3 | - | 10.5 |
| SM/SF | 40km | - | 9530-2-14 | - | - | 1310 | 1550 | -3 | 0 | -20 | -3 | 3 | 17 |
| SM/SF | 40km | - | 9531-2-14 | - | - | 1550 | 1310 | -3 | 0 | -20 | -3 | 3 | 17 |
| SFP (x1) | - | - | - | - | 9539-0-14 | | | | | | | | |
| SFP (x2) | - | - | - | - | 9539-0-24 | | | | | | | | |

[1] 62.5/125µm, 100/140µm multimode fiber up to 220m. 50/125µm multimode fiber up to 550m. Refer to the fiber cable manufacturer for multimode distance specifications.

# ORDERING INFORMATION

## *OmniConverter* GPoE+/M 8 Port - IEEE 802.3at PoE+

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| | |
|---|---|
| **1** | External AC/DC Adapter, 100 - 240 VAC, with US Power Cord Included |
| **2** | External AC/DC Adapter, 100 - 240 VAC, No Power Cord |
| **8** | External AC/DC Adapter, 100 - 240 VAC, with Japanese Power Cord Included |

| Fiber Type | Distance | Connector Type | | | | Tx Lambda (nm) | Rx Lambda (nm) | Min. Tx Power (dBm) | Max. Tx Power (dBm) | Min. Rx Power (dBm) | Max. Rx Power (dBm) | Min Attenuation (dB) | Link Budget (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ST | SC | LC | SFP | | | | | | | | |
| MM/DF | 220/550m[1] | 9520-0-18 | 9522-0-18 | 9526-0-18 | - | 850 | 850 | -10 | -4 | -17 | -3 | - | 7 |
| MM/DF (x2) | 220/550m[1] | - | - | 9526-0-28 | - | 850 | 850 | -10 | -4 | -17 | -3 | - | 7 |
| MM/DF | 2km | - | 9522-6-18 | - | - | 1310 | 1310 | -9.5 | -3 | -19.5 | -3 | - | 10 |
| SM/DF | 12km | 9521-1-18 | 9523-1-18 | 9527-1-18 | - | 1310 | 1310 | -9.5 | -3 | -19.5 | -3 | - | 10 |
| SM/DF (x2) | 12km | - | - | 9527-1-28 | - | 1310 | 1310 | -9.5 | -3 | -19.5 | -3 | - | 10 |
| SM/DF | 34km | - | 9523-2-18 | - | - | 1310 | 1310 | -5 | 0 | -23 | -3 | 3 | 18 |
| SM/DF | 80km | - | 9523-3-18 | - | - | 1550 | 1550 | -5 | 0 | -23 | -3 | 3 | 18 |
| SM/DF | 110km | - | 9523-4-18 | - | - | 1550 | 1550 | 0 | 5 | -24 | -3 | 8 | 24 |
| SM/DF | 140km | - | 9523-5-18 | - | - | 1550 | 1550 | 2 | 5 | -28 | -8 | 13 | 30 |
| MM/SF | 220/550m[1] | - | 9530-0-18 | - | - | 1310 | 1550 | -9 | -3 | -18 | -3 | - | 9 |
| MM/SF | 220/550m[1] | - | 9531-0-18 | - | - | 1550 | 1310 | -9 | -3 | -18 | -3 | - | 9 |
| SM/SF | 20km | - | 9530-1-18 | - | - | 1310 | 1550 | -9.5 | -3 | -20 | -3 | - | 10.5 |
| SM/SF | 20km | - | 9531-1-18 | - | - | 1550 | 1310 | -9.5 | -3 | -20 | -3 | - | 10.5 |
| SM/SF | 40km | - | 950-2-18 | - | - | 1310 | 1550 | -3 | 0 | -20 | -3 | 3 | 17 |
| SM/SF | 40km | - | 9531-2-18 | - | - | 1550 | 1310 | -3 | 0 | -20 | -3 | 3 | 17 |
| SFP (x1) | - | - | - | - | 9539-0-18 | | | | | | | | |
| SFP (x2) | - | - | - | - | 9539-0-28 | | | | | | | | |

[1] 62.5/125µm, 100/140µm multimode fiber up to 220m. 50/125µm multimode fiber up to 550m. Refer to the fiber cable manufacturer for multimode distance specifications.