

OmniConverter® 10GPoE+/Sx

Unmanaged 6 and 10 Port PoE/PoE+ 10Gigabit Ethernet Switch

The OmniConverter 10GPoE+/Sx is a compact unmanaged PoE and PoE+ Ethernet switch that feature two 1/10G uplink ports and four or eight 10/100/1000 PoE/PoE+ RJ-45 copper user ports.

The OmniConverter 10GPoE+/Sx is a Layer 2 Ethernet switch that forwards frames to any port based on their MAC address.

All models support Directed Switch mode, which directs multicast traffic (such as video) only to the appropriate uplink port, preventing multicast traffic from flooding other network ports.

The switches support daisy-chain configurations and redundant uplinks for critical applications that require protection and sub 50ms restoration in the event of an uplink failure.

The switches support Dual Device mode that enables the 10GPoE+/Sx to operate as two independent and isolated Ethernet switches. In Dual Device mode, the 10GPoE+/Sx provides separate and independent data traffic paths between each uplink port and a group of user ports.

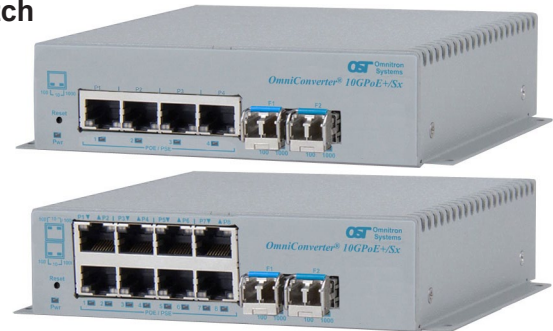
The 10GPoE+/Sx modes of operation can be configured using easily accessible DIP-switches. Each DIP-switch function is labeled on the side of the OmniConverter for ease of identification and use.

The OmniConverter switches are available with Small Form Pluggable (SFP) transceiver receptacle ports. The SFP ports support 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard, CWDM and DWDM wavelengths.

The 10GPoE+/Sx automatically negotiate and deliver the power level required by a Powered Device (PD) partner. The 10GPoE+/Sx can deliver up to 30 Watts of power per user port.

The switches features a PoE power reset function that enables the attached PD device, such as a camera or access point, to be re-initialized remotely, eliminating the need for costly truck rolls to remote PD sites. When a problem with a PD is detected, the fiber port on the module can be disconnected, triggering the PoE power reset function.

All models can be wall mounted, rack mounted using a shelf or DIN-rail mounted using DIN-rail mounting clips. They are available with an external 100 to 240V AC power adapter or with a DC terminal connector.



SFPs not included

KEY FEATURES

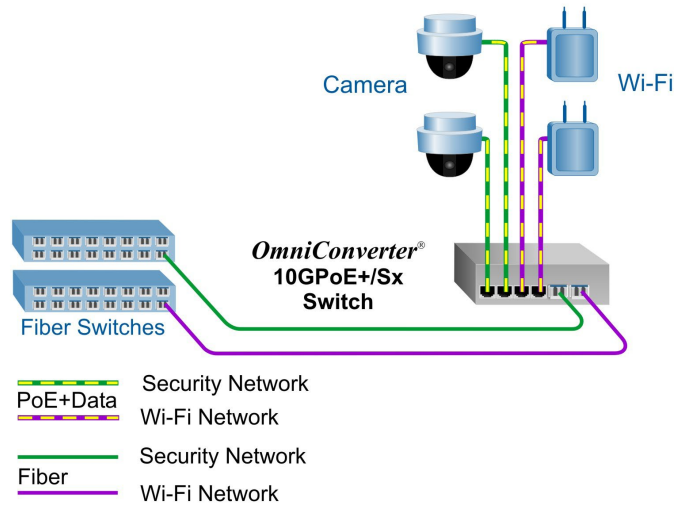
- Unmanaged 6 and 10 port PoE/PoE+ 1/10G Ethernet switch
- Dual Device mode for operating as two separate switches
- Directed Switch mode prevents flooding of multicast video traffic
- Configurable PoE Power Reset
- Uplink redundancy
- DC models provide full PoE power simultaneously to all RJ-45 user ports
- Two 1/10G SFP/SFP+ transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Support speeds of 10M, 100M, 1G and 10Gbps copper SFP/SFP+ transceivers
- Four or eight 10/100/1000 copper PoE/PoE+ user ports
- AC to DC Power Adapter or 2-Pin DC terminal
- Wall, Rack and DIN-rail mountable
- Fan-less design for long life
- Commercial (0° to 50°C), wide (-40° to 60°C) and extended (-40° to 75°C) operating temperature ranges
- TAA, BAA and NDAA compliant, and Made in the USA
- Free 24/7/365 Technical Support

APPLICATIONS

Dual Device Mode Application

This Dual Device feature is extremely useful when two isolated networks domains share a single network distribution location.

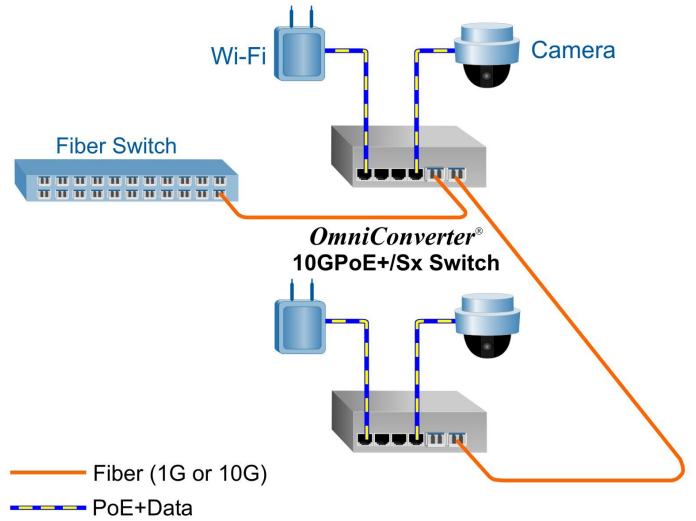
The example below depicts a scenario where a surveillance security (green) network and a Wi-Fi (purple) network are sharing a single hub distribution location. Using the two uplinks and the Dual Switch mode facilitates using a single PoE switch driving both the Cameras and the Wi-Fi Access Points while maintaining isolation between the networks.



Daisy Chain Application

This example demonstrates the daisy chain capabilities of the OmniConverter PoE switches. In this application each OmniConverter switch connects to its neighboring switch via its uplink ports. The daisy chain can continue to additional switches using this method of connectivity.

Each OmniConverter switch provides connectivity to high speed fiber links, and power to IP cameras and Wi-Fi access points at each location along the daisy chain.



Power / Voltage Requirements and Specifications per IEEE		
Description	IEEE 802.3af PoE	IEEE 802.3at PoE+
Power Supply Voltage Range	46.0 to 57.0 VDC	51.0 to 57.0 VDC
Voltage Range at PSE port Output	44.0 to 56.0 VDC	50.0 to 56.0 VDC
Maximum Power from PoE/PSE port	15.4 watts	30 watts
Minimum Voltage at PoE/PD port input (at 100 meters using Cat5 Cable)	37.0 VDC	42.5 VDC
Minimum Power at PoE/PD port (at 100 meters using Cat5 Cable)	12.95 watts	25.5 watts

SPECIFICATIONS

Description	OmniConverter® 10GPoE+/Sx 10/100/1000BASE-T with 1/10G Uplink Ports Unmanaged PoE+ 10Gigabit Ethernet Switch	
Standard Compliances	IEEE 802.3, IEEE 802.3af (15.40 watts), IEEE 802.3at (30 watts)	
Regulatory Compliances (*Pending)	<p>Safety*: UL 62368-1, UL 60950-1, IEC 62368-1, IEC 60950-1, EN 62368-1, EN 60950-1, CAN/CSA C22.2 No. 62368-1-14, CAN/CSA C22.2 No. 60950-1, CE Mark, UKCA</p> <p>EMC: EN 55032/24 CE Emissions/Immunity, IEC 61000-6-4 Industrial Emissions, IEC 61000-6-2 Industrial Immunity</p> <p>EMI: CISPR 32, FCC 47 Part 15 Subpart B Class A</p> <p>EMS: IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV (DC models), IEC 61000-4-4 EFT: Power: 1 kV; Signal: 1 kV (AC models), IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV (DC models), IEC 61000-4-5 Surge: Power: 1 kV Line/Line; 2 kV Line/Gnd; Signal: 2 kV (AC models), IEC 61000-4-6 CS: Signal: 10 V, IEC 61000-4-8 (Magnetic Field) 30A/m, IEC 61000-4-11 (Voltage Dips, interrupts)</p> <p>IP Rating: IP20 Protection ACT: TAA, BAA, NDAA</p>	
Environmental	REACH, RoHS and WEEE	
PoE Modes	IEEE Alternate A (Alt A)	
Frame Size	Up to 10,240 bytes	
Port Types	Copper: 10/100/1000BASE-T (RJ-45) SFP/SFP+: 10GBASE-X Fiber Transceivers 10GBASE-T Copper Transceivers 1000BASE-X Fiber Transceivers 1000BASE-T Copper Transceivers 10/100/1000BASE-T SGMII Copper Transceivers	
Cable Types	Copper: EIA/TIA 568A/B, Cat 5 UTP and higher Fiber: Multimode: 50/125, 62.5/125µm Single-mode: 9/125µm	
AC Power Requirements (Models with AC/DC Adapters)	100 - 240VAC/50 - 60Hz 3.5A max at 115VAC 2.5A max at 230VAC Supplied adapter provides 250W	
DC Power Requirements (Models with DC Terminals)	4 RJ-45 Ports: +46 to +57VDC; 2.33A @ 56VDC 2 Pin Terminal (isolated)	8 RJ-45 Ports: +46 to +57VDC; 4.49A @ 56VDC 2 Pin Terminal (isolated)
Dimensions (W x D x H)	6.28" x 5.2" x 1.5" (159.5 mm x 132.1 mm x 38.1 mm)	
Weight	4 RJ-45 Ports: Module Only: 1.5 lbs. (677 grams) Module with AC/DC Adapter: 3.6 lbs. (1645 grams)	8 RJ-45 Ports: Module Only: 1.7 lbs. (755 grams) Module with AC/DC Adapter: 3.8 lbs. (1723 grams)
Operating Temperature (See Temperature Derating Table)	Commercial: 0 to 50°C Wide: -40 to 60°C (-20°C AC cold start) Extended: -40 to 75°C - not available for models with AC/DC power adapter Storage: -40 to 80°C	
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4,000m (operational)	
MTBF (hours)	Module Only: 287,000 AC/DC Adapter: 100,000	
Warranty	5 year product warranty with 24/7/365 free Technical Support, 2 year AC power adapter warranty	

ORDERING INFORMATION

Step 1: Choose the Base Part Number (xxxx-x-xx-pt)

Model Number	Description
9581-0-24-pt	OmniConverter 10GPoE+/Sx 2 x SFP/SFP+ uplink port and 4 x RJ-45 PoE/PoE+ user ports
9581-0-28-pt	OmniConverter 10GPoE+/Sx 2 x SFP/SFP+ uplink port and 8 x RJ-45 PoE/PoE+ user ports
Contact Omnitron for other fiber options. Order the appropriate SFPs separately. Visit the Omnitron Optical Transceivers web page.	

Step 2: Choose the Power Option (xxxx-x-xx-pt)

1 = External AC/DC Adapter, 100 - 240 VAC included, with US Power Cord
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord
8 = External AC/DC Adapter, 100 - 240 VAC included, PS JET/PSE Certified, with Japanese Power Cord
9 = Direct DC 2 pin terminal connector, no AC/DC power adapter

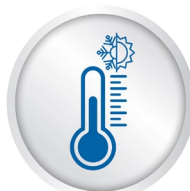
Step 3: Choose the Operating Temperature Range Option (xxxx-x-xx-pt)

<leave blank> = Commercial temperature (0 to 50°C)
W = Wide temperature (-40 to 60°C)
Z = Extended temperature (-40 to 75°C) - not available for models with AC/DC Power Adapters

AC/DC Adapter Temperature Derating - Total Available Wattage to RJ-45 Ports					
Model	RJ-45 Ports	Watts Required	40°C	50°C	60°C
10GPoE+/Sx	4	120 watts	Full Power	Full Power	115 watts
	8	240 watts	Full Power	175 watts	115 watts
The AC/DC Adapter Temperature derating table is not applicable to models with DC Terminal (see Ordering table for Direct DC power option 9). The DC Terminal models will provide full PoE power over the operating temperature range of the module as long as the DC input voltage meets the requirements stated in the specification tables.					

ACCESSORIES

Accessories			
Model Number	Description	Model Number	Description
8251-0	DIN-Rail Mounting Clip	8260-0	19" rack mount shelf



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