OmniConverter® 10GPoEBT/Sx

Unmanaged 6 Port 60/100W IEEE 802.3bt 10Gigabit Ethernet Switches

The OmniConverter 10GPoEBT/Sx are unmanaged Ethernet switch that features two 1/10G uplink ports and four 10/100/1000 RJ-45 IEEE 802.3bt 60W or 100W PoE user ports.

The OmniConverter PoE switches are Layer 2 Ethernet switches that forward 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 10GPoEBT/Sx to operate as two independent and isolated Ethernet switches.

The 10GPoEBT/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 switches automatically negotiate and deliver the power level required by a Powered Device (PD) partner. Depending on the model of the OmniConverter PoE switch, the switch can deliver up to 60 or 100 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

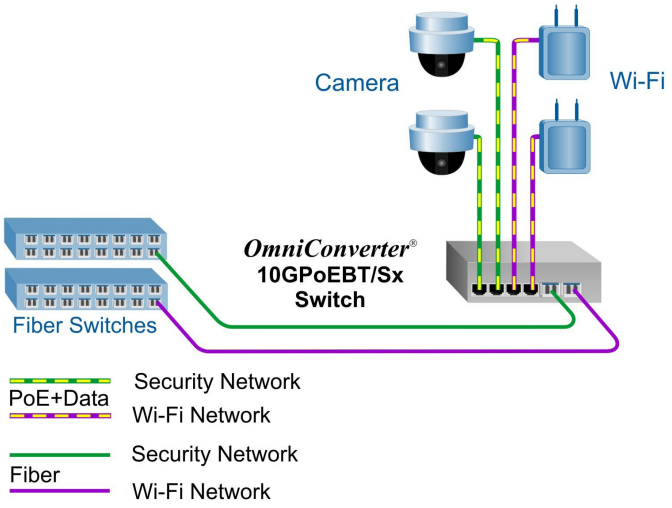
- Unmanaged IEEE 802.3bt compliant 6 Port 1/10G 60W and 100W PoE Ethernet Switches
- Dual Device mode for operating as two separate switches
- Directed Switch mode prevents flooding of multicast video traffic
- Configurable PoE Power Reset
- Uplink redundancy
- DC models provide full PoE power simultaneously 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 10/100/1000 copper 60W or 100W 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 (0º to 50ºC), wide (-40º to 60ºC) and extended (-40º to 75ºC) 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.

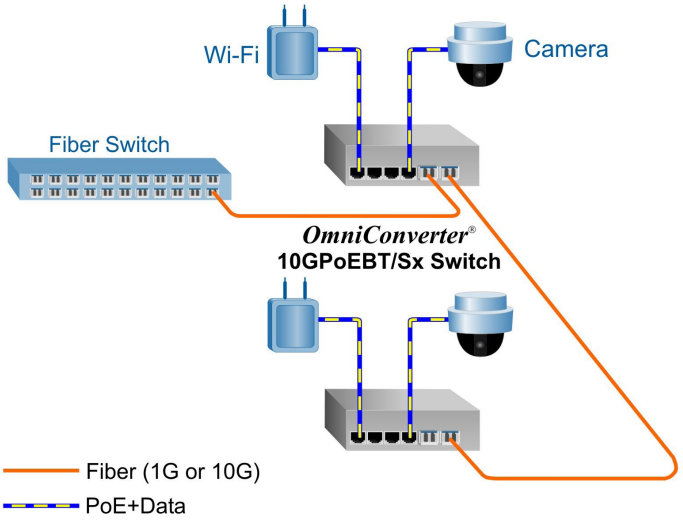
The example below depicts a scenario where a surveillance security (green) network and a Wi-Fi (purple) network are sharing a single hub distribution location. Using the two uplinks and the Dual Switch mode facilitates using a single PoE switch driving both the Cameras and the Wi-Fi Access Points while 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 the high speed fiber links, and 802.3bt 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+**	**IEEE 802.3.bt PoE (60W Type 3)**	**IEEE 802.3bt PoE (100W Type 4)**
Power Supply Voltage Range	46.0 to 57.0 VDC	51.0 to 57.0 VDC	51.0 to 57.0 VDC	53.0 to 57.0 VDC
Voltage Range at PSE port Output	44.0 to 56.0 VDC	50.0 to 56.0 VDC	50.0 to 56.0 VDC	52.0 to 56.0 VDC
Maximum Power from PoE/PSE port	15.4 watts	30 watts	60 watts	100 watts
Minimum Voltage at PoE/PD port input (at 100 meters using Cat5 Cable)	37.0 VDC	42.5 VDC	42.5 VDC	41.1 VDC
Minimum Power at PoE/PD port (at 100 meters using Cat5 Cable)	12.95 watts	25.5 watts	51 watts	71 watts

SPECIFICATIONS

Description	**OmniConverter® 10GPoEBT/Sx** 10/100/1000BASE-T with 1/10G Gigabit Fiber Unmanaged 6 Port IEEE 802.3bt 60/100W PoE Ethernet Switch	
Standard Compliances	IEEE 802.3, IEEE 802.3af (15.40 watts max), IEEE 802.3at (30 watts max), IEEE 802.3bt (60 and 100 watts max)	
Regulatory Compliances (*Pending)	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 EMC: EN 55032/24 CE Emissions/Immunity, IEC 61000-6-4 Industrial Emissions, IEC 61000-6-2 Industrial Immunity EMI: CISPR 32, FCC 47 Part 15 Subpart B Class A 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) IP Rating: IP20 Protection ACT: TAA, BAA, NDAA	
Environmental	REACH, RoHS and WEEE	
PoE Modes	IEEE Alternate A (Alt A) and 4-Pair	
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)	60W Models: +46 to +57VDC; 4.47A @ 56VDC 2 Pin Terminal (isolated)	100W Models: +46 to +57VDC; 7.33A @ 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	Module Only: 1.6 lbs. (735 grams) Module with AC/DC Adapter: 3.7 lbs. (1703 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: 285,000 AC/DC Adapter: 100,000	
Warranty	5 year product warranty with 24/7/365 free Technical Support and 2 year AC power adapter warranty	

ORDERING INFORMATION

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

Model Number	Description
3060B-0-24-pt	OmniConverter 10GPoEBT/Sx 2 x SFP/SFP+ uplink port and 4 x RJ-45 IEEE 802.3bt 60W user ports
3062B-0-24-pt	OmniConverter 10GPoEBT/Sx 2 x SFP/SFP+ uplink port and 4 x RJ-45 IEEE 802.3bt 100W 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 (xxxxB-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 (xxxxB-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	Watts Required	40°C	50°C	60°C
10GPoEBT/Sx 60W	240 watts	Full Power	175 watts	115 watts
10GPoEBT/Sx 100W	400 watts	240 watts	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