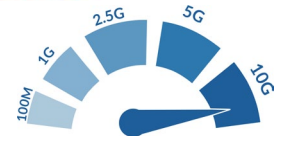


### OmniConverter® 10GMGPoE+/Sx and 10GMGPoEBT/Sx Unmanaged Multi-Gigabit/Multi-Rate 100M, 1G, 2.5G, 5G, 10G PoE Ethernet Switch



The OmniConverter 10GMGPoE+/Sx and 10GMGPoEBT/Sx are unmanaged multi-gigabit Ethernet switches featuring one 1/10G SFP/SFP+ or multi-gigabit/multi-rate RJ-45 uplink port with two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Power-over-Ethernet downlink/access ports. They support PoE, PoE+ and PoEBT up to 100 watts depending on the model.

The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps. The 10GMGPoE+/Sx supports IEEE 802.3at (15 and 30W) and the 10GMGPoEBT/Sx supports IEEE 802.3bt (60 and 100W) per user port depending on the model.

The OmniConverter switches feature a Small Form Pluggable (SFP) transceiver receptacle port supporting a variety of copper and fiber transceivers. It supports 10/100/1000BASE-T, 1000BASE-T, 2.5GBASE-T, 5GBASE-T and 10GBASE-T copper transceivers and 1G and 10G multimode or single-mode fiber, dual or single-fiber transceivers in standard, CWDM and DWDM wavelengths.

The OmniConverter switches support frame sizes up to 10,240 bytes.

The OmniConverter PoE switches are well suited for the power and bandwidth demands imposed by IP cameras, access points and small cell devices on the market today. OmniConverter 10G switches provide high-speed network distance extension with fiber optic cabling, and function as PoE injectors.

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.

Configurable features include a PoE power reset function that enables a PD device to be re-initialized remotely, eliminating the need for costly truck rolls to remote PD sites. When a problem with a PD is identified, the fiber port on a managed switch can be shut down or disconnected, triggering the PoE power reset function on the OmniConverter. The PoE power to the PD is disabled for 5 seconds when a loss of receive fiber link is detected by the OmniConverter.

The compact standalone OmniConverter switches can be tabletop mounted, wall mounted, or DIN-rail mounted using an optional DIN-rail mounting clip (8251-0). They can also be mounted on a 1U 19" rack-mount shelf. They are available with DC input power via terminal connector or an external 100 to 240VAC power adapter.



SFPs not included

### KEY FEATURES

- Unmanaged 10G multi-gigabit/multi-rate PoE Ethernet Switch
- One SFP/SFP+ transceiver uplink port or multi-gigabit/multi-rate copper port
- SFP/SFP+ uplink port supports copper and fiber transceivers
- Multi-gigabit/multi-rate ports supports speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps
- Two multi-gigabit/multi-rate RJ-45 PoE and two 10/100/1000 RJ-45 PoE downlink/access ports
- Models support IEEE 802.3af, IEEE 802.3at and IEEE 802.3bt (60W and 100W)
- Supports jumbo frames up to 10,240 bytes
- Configurable PoE Power Reset
- Directed Switch mode AKA Camera mode to prevent port flooding
- AC to DC Power Adapter or 2-Pin DC terminal
- Wall, Rack and DIN-rail mountable
- 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

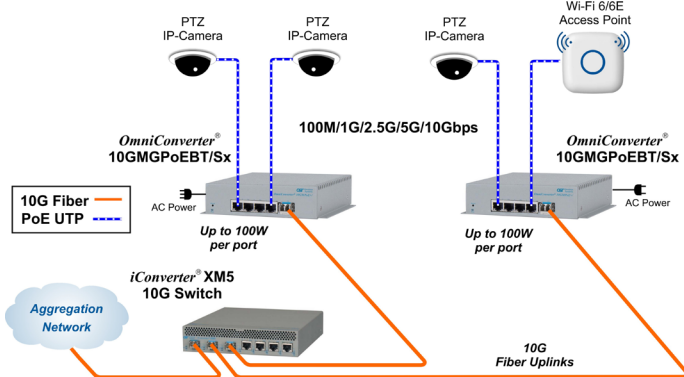
## Security and Wireless

In this application example, outdoor IP surveillance cameras and Wi-Fi 6/6E Access Points are installed throughout a large facility. An iConverter<sup>®</sup> XM5 aggregation fiber switch is used to distribute a fiber link from a control room to OmniConverter switches with fiber SFP ports.

The OmniConverter 10GMGPoEBT/Sx provide up to 100W of Power-over-Ethernet (PoE) to an IP camera and Wireless Access Point at each location, each of which can be located up to 100 meters from the switches.

When less power is required the OmniConverter 10GMGPoE+/Sx can be used to deliver 30 watt of power per port.

The camera and access point have full bandwidth capability utilizing the 10G fiber uplink port on each 10GMGPoEBT/Sx switch.

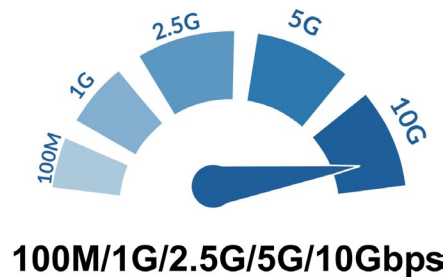
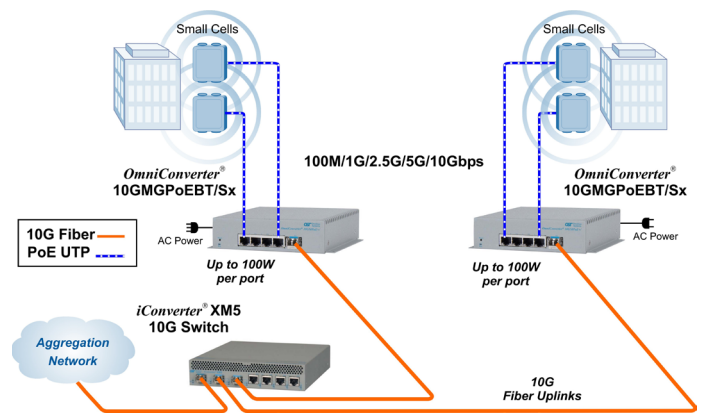


## Small Cell

Small cell devices are increasing their demand on both power and bandwidth requirements. Speeds of 10Gbps and 100W is common with today's small cell devices.

In this application example, high-speed small cell devices requiring up to 10Gbps bandwidth are deployed inside several buildings. An iConverter<sup>®</sup> XM5 aggregation fiber switch is used to distribute a fiber link to each OmniConverter switch.

The OmniConverter 10GMGPoEBT/Sx switches provide up to 100 watts and speeds up to 10Gbps on the RJ-45 user ports.



## Power / Voltage Requirements and Specifications per IEEE

Description	IEEE 802.3af 15W PoE	IEEE 802.3at 30W PoE+	IEEE 802.3bt 60W PoE (Type 3)	IEEE 802.3bt 100W PoE (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*	37.0 VDC	42.5 VDC	42.5 VDC	41.1 VDC
Minimum Power at PoE/PD port*	12.95 watts	25.5 watts	51 watts	71 watts
* at 100 meters using Cat5				

# SPECIFICATIONS

Description	OmniConverter® 10GMGPoE+/Sx Unmanaged IEEE 802.3at 10Gigabit Multi-Gigabit/Multi-Rate Ethernet Switch	OmniConverter® 10GMGPoEBT/Sx Unmanaged IEEE 802.3bt 10Gigabit Multi-Gigabit/Multi-Rate Ethernet Switch		
Standard Compliances	IEEE 802.3, 802.3bz, IEEE 802.3af (15.4 watts max) IEEE 802.3at (30 watts max)	IEEE 802.3, 802.3bz, IEEE 802.3af (15.4 watts max), IEEE 802.3at (30 watts max) IEEE 802.3bt (60 watts or 100 watts max)		
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	<p>Copper: 100/1000BASE-T, 2.5GBASE-T/5GBASE-T/10GBASE-T (RJ-45) 10/100/1000BASE-T (RJ-45)</p> <p>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 100/1000/2.5G/5G/10GBASE-T Multi-rate Copper Transceivers</p>			
Cable Types	<p>Copper: Twisted-pair cable up to 100 meters 10BASE-T: 4-pair UTP Cat 3, 4, 5, 5e, 6, 6A 100BASE-TX: 4-pair UTP Cat 5, 5e, 6, 6A 1G/2.5G: 4-pair UTP Cat 5e, 6, 6A, 7 5G: 4-pair UTP Cat 6, 6A, 7 10G: 4-pair UTP Cat 6A, 7</p> <p>Fiber: Multimode: 50/125, 62.5/125µm Single-mode: 9/125µm</p>			
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	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)	+46 to +57VDC; 2.34A @ 56VDC 2 Pin Terminal (isolated)	<table border="0"> <tr> <td>60 watt Models: +46 to +57VDC; 4.49A @ 56VDC 2 Pin Terminal (isolated)</td> <td>100 watt Models: +46 to +57VDC; 7.38A @ 56VDC 2 Pin Terminal (isolated)</td> </tr> </table>	60 watt Models: +46 to +57VDC; 4.49A @ 56VDC 2 Pin Terminal (isolated)	100 watt Models: +46 to +57VDC; 7.38A @ 56VDC 2 Pin Terminal (isolated)
60 watt Models: +46 to +57VDC; 4.49A @ 56VDC 2 Pin Terminal (isolated)	100 watt Models: +46 to +57VDC; 7.38A @ 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: 1.5 lbs. (680 grams) Module with AC/DC Adapter: 3.6 lbs. (1.63 kg)	Module Only: 1.6 lbs. (726 grams) Module with AC/DC Adapter: 3.7 lbs. (1.68 kg)		
Operating Temperature (See Temperature Derating Table)	<p>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</p>			
Humidity	5 to 95% (non-condensing)			
Altitude	-100m to 4,000m (operational)			
MTBF (hours)	Module Only: 247,000 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 (xxxx-x-xx-pt)

OmniConverter 10MGMPoE+/Sx Models	
Model Number	Description
9651-0-14-pt	10MGMPoE+/Sx - 1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 30W per port + 2 x 10/100/1000 RJ-45 30W per port,
9651-1-14-pt	10MGMPoE+/Sx - 1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 30W per port + 2 x 10/100/1000 RJ-45 30W per port
Contact Omnitron for other fiber options. Order the appropriate SFPs separately. <a href="#">Visit the Omnitron Optical Transceivers web page.</a>	

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

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

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

<b>&lt;leave blank&gt;</b> = Commercial temperature (0 to 50°C)
<b>W</b> = Wide temperature (-40 to 60°C)
<b>Z</b> = Extended temperature (-40 to 75°C) - not available for models with AC/DC power adapter

AC/DC Adapter Temperature Derating - Total Available Wattage to RJ-45 Ports				
Model	Watts Required	Watts Available @ 40°C	Watts Available @ 50°C	Watts Available @ 60°C
10MGMPoE+/Sx	120 watts	Full Power	Full Power	110 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 (up to 2 switches)

# ORDERING INFORMATION

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

OmniConverter 10GMGPoEBT/Sx Models	
Model Number	Description
9652-0-14-pt	10GMGPoEBT/Sx - 1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 60W per port + 2 x 10/100/1000 RJ-45 60W per port,
9652-1-14-pt	10GMGPoEBT/Sx - 1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 60W per port + 2 x 10/100/1000 RJ-45 60W per port
9653-0-14-pt	10GMGPoEBT/Sx - 1 x SFP+ + 2 x 100/1G/2.5G/5G/10G RJ-45 100W per port + 2 x 10/100/1000 RJ-45 100W per port,
9653-1-14-pt	10GMGPoEBT/Sx - 1 x 100/1G/2.5G/5G/10G RJ-45 + 2 x 100/1G/2.5G/5G/10G RJ-45 100W per port + 2 x 10/100/1000 RJ-45 100W per port

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)

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

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<b>Z</b> = Extended temperature (-40 to 75°C) - <b>not available for models with AC/DC power adapter</b>

AC/DC Adapter Temperature Derating - Total Available Wattage to RJ-45 Ports				
Model	Watts Required	Watts Available @ 40°C	Watts Available @ 50°C	Watts Available @ 60°C
10GMGPoEBT/Sx 60W	240 watts	235 watts	170 watts	110 watts
10GMGPoEBT/Sx 100W	400 watts	235 watts	170 watts	110 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 (up to 2 switches)

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