

OmniConverter GPoE/S and GPoE+/S Gigabit Media Converter with Power over Ethernet (PoE/PoE+)

The *OmniConverter* GPoE/S and GPoE+/S are multi-port media converters that convert 10/100/1000BASE-T UTP to 1000BASE-X or 100BASE-FX fiber and support Power-over-Ethernet (PoE and PoE+). Classified as Power Sourcing Equipment (PSE), they can provide power to one or two Powered Devices (PDs) using standard UTP cables that carry the Ethernet data. The *OmniConverter* functions as a PoE mini-switch, and supports a variety of port configurations are available, including single or dual UTP and SFP ports.

The *OmniConverter* media converters can power PDs such as VoIP phones, wireless access points, network cameras, building access and automation equipment. They are especially useful at powering PDs in hard-to-reach locations with limited access to AC power outlets (ceilings, closets, etc.). The cost of bringing electrical power to each device is eliminated by powering the equipment through the UTP cable.

OmniConverter media converters are available in two power levels. GPoE/S models support PoE (IEEE 802.3af) and provide up to 15.4W of power per UTP port. GPoE+/S models support PoE+ (IEEE 802.3at) and provide up to 25.5W per port for more demanding PDs such as video conferencing equipment, PTZ (pan-tilt-zoom) cameras and 802.11n wireless access points.

Models with two fiber ports 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 for daisy-chaining multiple media converters, or it may be used as another switch port.

Configurable features include link modes which can propagate link faults from fiber to copper and copper to fiber, and a PoE power reset function, in which a loss of fiber Rx link can disable the PSE power output for 2 seconds to allow the remote PD to re-initialize.

OmniConverter media converters support fixed-fiber connectors and Small Form Pluggable (SFP) transceivers, enabling easy adaptability to different fiber types, distances and wavelengths. The products support multimode, single-mode, single-mode single-fiber, in standard and CWDM wavelengths.

The compact standalone *OmniConverter* media converters can be tabletop mounted, wall mounted, or DIN-rail mounted using an optional DIN-rail mounting kit. They can also be mounted on a 1U 19" rack-mount shelf. The products are DC powered and available with an optional external 100 - 240VAC universal power adapter.



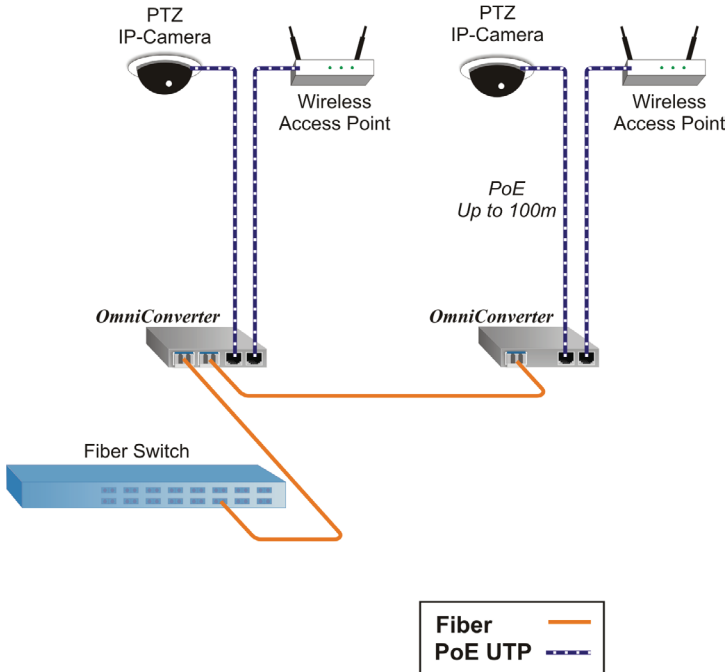
SFPs not included

KEY FEATURES

- Power over Ethernet injector/source
- 10/100/1000 UTP to fiber media converter
- Supports IEEE 802.3af PoE and IEEE 802.3at PoE+ standards on one or two UTP copper ports
- Multiple port configurations:
 - 2 Port Device: 1 Fiber + 1 UTP
 - 3 Port Device: 2 Fiber + 1 UTP
 - 3 Port Device: 1 Fiber + 2 UTP
 - 4 Port Device: 2 Fiber + 2 UTP
- Supports 1000BASE-X fixed-fiber and 1000BASE-X or 100BASE-FX SFP transceivers
- Redundant protected fiber link option (using dual SFP transceivers)
- Compatible with legacy pre-IEEE standard powered devices
- Configurable PoE power reset
- Available in AC and DC models
- Commercial (0° to 50°C), wide (-40° to 60°C) and extended¹ (-40° to 75°C) operating temperature ranges
- Lifetime Warranty and free 24/7 Technical Support

APPLICATIONS

SECURITY AND WIRELESS

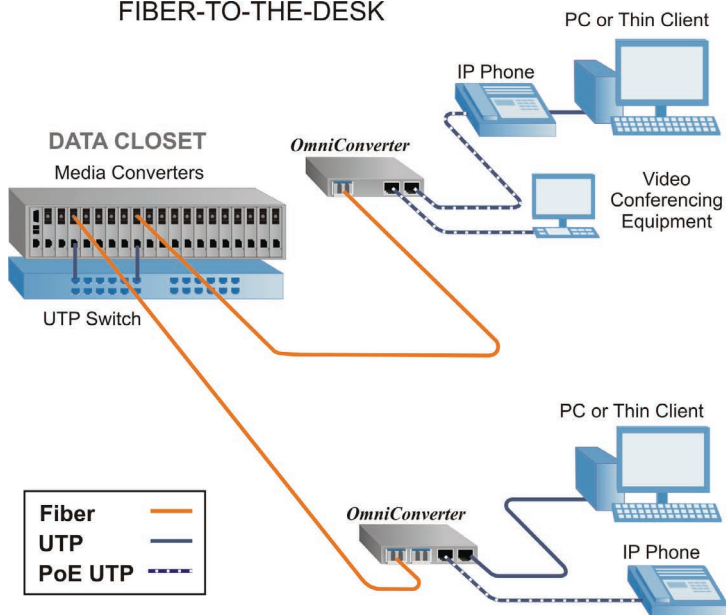


In this application example, IP security cameras and wireless access points (APs) are installed throughout a facility. The cameras and APs can be mounted in ceilings and other hard to reach locations, where AC power is not readily available.

OmniConverter media converters, installed near AC outlets, convert long runs of fiber to 10/100/1000 Ethernet RJ45 interfaces. Unshielded twisted pair (UTP) copper cabling carries data and power (PoE) from the RJ45 ports of the media converters to the cameras and APs mounted in the ceilings.

The *OmniConverter* GPoE+/S can be used with PoE+ devices, such as cameras with heaters/blowers or pan/tilt/zoom motors that require up to 25.5W of power.

FIBER-TO-THE-DESK



In this application example, a fiber-to-the-desk network is deployed to leverage the security and distance benefits of fiber.

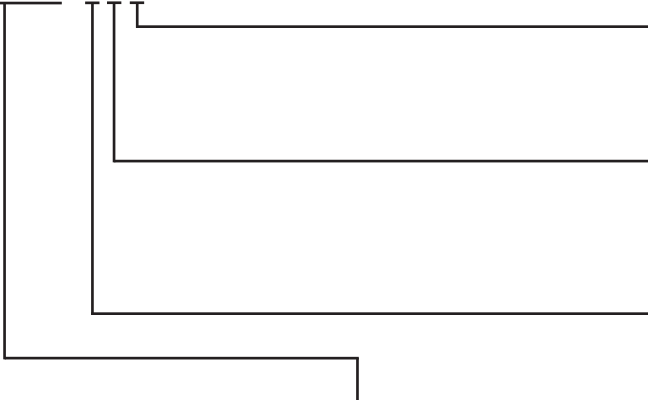
In the main data closet, a high-density chassis of media converters provides the fiber distribution from a 10/100/1000 UTP Ethernet switch. Fiber optic cables run to each office, where they are terminated by *OmniConverter* media converters. The *OmniConverter* media converters provide data and power to desktop items such as IP phones and video conferencing equipment. They detect if the connected device is a PD, and disable PoE power to non-PoE desktop devices, such as PCs and laptops.

SPECIFICATIONS

Model Type	Standard GPoE/S Gigabit media converter	High Power PoE+ GPoE/S Gigabit media converter
Standard (PoE)	IEEE 802.3af	IEEE 802.3at*
Max PoE Power (per UTP port)	15.4W	25.5W
Protocols (Ethernet) Fiber: UTP Copper:	100BASE-FX, 1000BASE-X 10/100/1000BASE-T	100BASE-FX, 1000BASE-X 10/100/1000BASE-T
Copper Connectors	RJ-45	
Fiber Connectors	SFP: LC Dual Fiber: SC, ST Single Fiber: SC	
AC Power Adapter (typical)	100 to 240VAC / 50 to 60Hz 350mA@120VAC	100 to 240VAC / 50 to 60HZ 460mA@120VAC
DC Power requirements (typical)	46-57VDC 800mA	52-57VDC 1.2A
Dimensions	W: 4.5" x D: 6.0" x H 1.0"	
Weight without power supply: with power supply:	1,1 lbs. 1.6 lbs.	1.1 lbs. 2.3 lbs.
Compliance	UL, CE, FCC Class A	UL, CE, FCC Class A
Temperature	Standard Operating: 0 to 50° C Wide Operating: -40 to 60° C Extended Operating: -40 to 75° C Storage: -40 to 80° C	
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4000m	
MTBF (Hours) AC Model DC Model	183,000 474,000	83,000 474,000

ORDERING INFORMATION

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<Blank>	Standard Operating Temperature Range Model 0 to 50°C
W	Wide Operating Temperature Range Model -40° to 60°C
1	External Power Supply, 100-240VAC, with US Power Cord
2	External Power Supply, 100-240VAC, with no Power Cord
8	External Power Supply, 100-240 VAC (JET/PSE), with JPN Power Cord
9	No external Power Supply, direct DC input, with 3 pos. terminal block
1	One (1) UTP Port
2	Two (2) UTP Ports

Type	Distance	Fiber Connector Type (qty)			Tx λ [nm]	Rx λ [nm]	Min. Tx Power [dBm]	Max. Tx Power [dBm]	Min. Rx Power [dBm]	Max. Rx Power [dBm]	Min Attenuation [dB]	Link Budget [dB]
		ST (1)	SC (1)	SFP (1 or 2)								
GPoE/S Media Converter IEEE (802.3af)												
MM	220/550m	9400-0	9402-0	-	850	850	-10	-4	-17	-3	-	7
SM	12km	9401-1	9403-1	-	1310	1310	-9.5	-3	-19.5	-3	-	10
SM	34km	-	9403-2	-	1310	1310	-5	0	-23	-3	3	18
SM	80km	-	9403-3	-	1550	1550	-5	0	-23	-3	3	18
SM	110km	-	9403-4	-	1550	1550	0	5	-24	-3	8	24
SM	140km	-	9403-5	-	1550	1550	2	5	-28	-8	13	30
SM-SF	20km	-	9410-1*	-	1310	1550	-9.5	-3	-20	-3	-	10.5
SM-SF	20km	-	9411-1*	-	1550	1310	-9.5	-3	-20	-3	-	10.5
SM-SF	40km	-	9410-2*	-	1310	1550	-3	0	-20	-3	3	17
SM-SF	40km	-	9411-2*	-	1550	1310	-3	0	-20	-3	3	17
100/1000BASE-X SFP (1)	-	-	-	9419-0	-	-	-	-	-	-	-	-
100/1000BASE-X SFP (2)	-	-	-	9419-1	-	-	-	-	-	-	-	-

GPoE+/S Media Converter (IEEE 802.3at)												
MM	220/550m	9420-0	9422-0	-	850	850	-10	-4	-17	-3	-	7
SM	12km	9421-1	9423-1	-	1310	1310	-9.5	-3	-19.5	-3	-	10
SM	34km	-	9423-2	-	1310	1310	-5	0	-23	-3	3	18
SM	80km	-	9423-3	-	1550	1550	-5	0	-23	-3	3	18
SM	110km	-	9423-4	-	1550	1550	0	5	-24	-3	8	24
SM	140km	-	9423-5	-	1550	1550	2	5	-28	-8	13	30
SM-SF	20km	-	9430-1*	-	1310	1550	-9.5	-3	-20	-3	-	10.5
SM-SF	20km	-	9431-1*	-	1550	1310	-9.5	-3	-20	-3	-	10.5
SM-SF	40km	-	9430-2*	-	1310	1550	-3	0	-20	-3	3	17
SM-SF	40km	-	9431-2*	-	1550	1310	-3	0	-20	-3	3	17
100/1000BASE-X SFP (1)	-	-	-	9439-0	-	-	-	-	-	-	-	-
100/1000BASE-X SFP (2)	-	-	-	9439-1	-	-	-	-	-	-	-	-

* When using single-fiber (SF) media converter models, the Tx wavelength on one end has to match the Rx wavelength on the other.

¹Consult factory for availability of extended temperature models and other fiber options.

Order the appropriate SFPs separately. [Visit the Omnitron Optical Transceivers web page.](#)

For more information on the 19" rack-mount shelf see: [19" Rack Mount web page](#)

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