

PoE PSE Media Converters

Convert fiber optic media
to copper twisted pair
and power PoE devices.





LPM600A: front view



LPM600A: rear view

Rear-panel DIP switches enable you to configure the converter quickly so you're up and running in a matter of minutes. Simply ensure that connected nodes are set to operate in flow control mode identical to that of the media converter. No further intervention is required.

And though it's designed to work as a PoE PD, the PoE converter doesn't have to be used this way. It also works as a pure converter. It's even ideal for temporary setups where you need to convert copper twisted-pair interfaces to fiber media, and vice versa.

Technically Speaking

Power over Ethernet (PoE) provides a way for network devices to be powered by their data cables rather than by separate power cords. The IEEE 802.3af PoE standard calls for 48 volts of AC power over any grade of UTP wire, including Category 3, 5, 5e, and 6. The specification covers power sourcing equipment (PSE) and powered devices (PDs). The PSE puts power onto the UTP cable, and the PD picks it off.

How does PoE work? Very simply, Ethernet cable consists of four twisted pairs of cable: two pairs for data transmission and two "free" pairs that can be used for other purposes. 802.3af PoE uses either the spare pairs or the data pairs to transmit power. It adds DC power to the wires using signal transformers and picks off power at the far end the same way.

Although sending power over the data pairs rather than the spare pairs would seem to be counterintuitive, data and power transmissions don't interfere with each other because they're at opposite ends of the frequency spectrum. Specifically, electricity has a low frequency of 60 Hz or less, and data transmissions have frequencies that can range from 10 million to 100 million Hz.

The 802.3af standard calls for the maximum power available to any powered device to be 12.95 watts with a voltage range of 36 VDC to 57 VDC. This is more than enough to power typical PoE devices, such as wireless access points.

TECH SPECS

- Certification** — FCC Part 15, Class A
- Flow Control** — 802.3x for full duplex, backpressure for half-duplex
- Forwarding Rate** — 100 Mbps: 148,800 pps; 10 Mbps: 14,880 pps
- PoE PSE Power Feeding** — Endpoint via twisted-pair Pins 1, 2, 3, 6
- Standards** — IEEE 802.3u 10/100ASE-TX, 100BASE-FX, IEEE 802.3af Power over Ethernet
- CE Approval** — Yes
- Connectors** — Copper side: (1) RJ-45 (10BASE-T/100BASE-TX); Fiber side: (1) pair of SC or ST®
- Indicators** — LEDs: (1) PWR (+5-V power; PoE feeding power is active); (1) PoE PSE-TP (disrupted PoE feed power); (1) TP LNK/ACT (good twisted-pair link/twisted-pair data is present); (1) 100 (twisted-pair speed is 100 Mbps); (1) FX LNK/ACT (good fiber link/fiber data is present); (1) FDIX/COL (duplex mode/collision is present); (1) 4W (PD is Class 1 type); (1) 7W (PD is Class 2 type); (1) 15.4W (PD is Class 0 or 3)
- Operating Environment** — Temperature: 32 to 122°F (0 to 50°C); Humidity: 5 to 90%, noncondensing
- Power** — Input: 100–240 VAC, 50–60 Hz, autosensing; Consumption: 24 watts
- Size** — 1.6"H x 6.25"W x 5.25"D (4.1 x 15.9 x 13.3 cm)

Item	Code
PoE PSE Media Converters, 10BASE-T/100BASE-TX to 100BASE-FX	
Multimode	SC LPM600A ST LPM601A
Single-Mode	SC LPM602A

For copper-side links, you may need...

GigaBase® CAT5e 350-MHz Patch Cable, 4-Pair, Straight-Pinned, PVC, Blue with Snagless Boots, 10-ft. (3-m)

EVNSL81-0010

For help ordering compatible PoE equipment (including PoE hubs, PoE PD media converters, and PoE compatible access points and other end devices), contact our FREE Tech Support.