

# Stand-Alone Gigabit Ethernet PoE+ Media Converter



## Applications

- Single copper to fiber conversion at the network edge while also providing PoE+ to Network Cameras, Wireless Access Points, or to IP Phones
- 3-port version provides an instant fail-over, redundant fiber media conversion to the network edge
- 4-port version provides full 30W of power on each of the twisted pair ports, allowing 2 PoE+ devices to be connected over one fiber link
- 4-port version supports fiber daisy chain configurations to reach remote areas of your facility while deploying PoE+ devices
- Conserve space in high density deployments when 4 port version is configured as two individual media converters in one unit

## Features

IEEE 802.3at PoE+

2 ports of PoE+ Power

Legacy PoE Detection

Active Link Pass Through (ALPT)

Auto Power Reset (APR)

Dip Switch or Console port configuration

Various fiber optic connectors supported

100 / 1000 / SGMII supported SFP port

Various port count options

Redundant Fiber Mode

4 port switch or dual converter mode

IEEE 802.3az (EEE) Energy Efficient Ethernet support

## Benefits

Complies with both the IEEE 802.3at and af standards for PoE, provides full 30W of power on the copper port

Provides full 30W of power on both copper ports, at the same time, on the 4 port media converter

Can be enabled individually on each copper port so the converter now searches for pre-standard PoE devices that don't meet an IEEE standard

Allows the converter to display individual port status LEDs during the installation process, then automatically enters LPT mode. If link failures are detected, they will be propagated to the end devices.

During a LPT event, the APR feature will reset the power to the end PD, ensuring it is ready to go when the LPT event is corrected, without requiring any user intervention

Dip switches are used to configure SFP Mode, ALPT status, Redundant Fiber Mode, Revertive Mode, and 2 Converter Mode. The console port offers the same capabilities along with Energy Efficient Ethernet, Flow Control, Status Report, PSE Legacy, Auto-negotiation Advertisement, and Reset to Factory Defaults

5 versions of the SGPAT10xx-105 converter are available, including support for MM SC, MM LC, and 3 with an open SFP slot

Various applications and network speeds are supported with the configuration of the SFP port to 100Mbps, 1000Mbps, or SGMII for copper based SFP modules

Offers flexibility in deployments as a 2-port copper to fiber media converter, a 3-port converter, or a 4-port converter

The 3-port media converter can function as a 3 port switch with 2 fiber ports and 1 copper port, or as a 2-port media converter with redundant fiber up-links

The 4-port converter functioning as a 4 port switch or as 2 independent media converters in one enclosure

EEE is a power saving function which will greatly reduce power consumption during long periods of time when signals are idle, such as when security camera may not be needed

## Stand-alone Fast & Gigabit Ethernet PoE / PoE+ Media Converter

### 10/100/1000Base-T PoE+ PSE to 1000Base-X



The SGPAT Series is a 10/100/1000Base-T to 100/1000Base-SX/LX Gigabit Ethernet Media Converter, that easily and affordably facilitates the connection between different types of network cabling, while also injecting PoE power through the copper RJ-45 port.

Being a Power Sourcing Equipment (PSE) device, the SGPAT media converter combines data received over a fiber optic link with 56VDC input power to provide power and data to a Powered Device (PD) over twisted pair cabling while complying with the IEEE 802.3af PoE and IEEE 802.3at PoE+ standard.

The converter is available in 2-port, 3-port, and 4-port versions and includes PD signature sensing and power monitoring features. Other features include over-current protection, under-current protection, and fault protection input. Active Link Pass Through (ALPT) is supported, which is an automatically activated version of Link Pass Through (LPT) that allows the converter to detect the loss of Receive (Rx) signals on either fiber or copper port and propagate the failure to the end devices, preventing the media converter from isolating those link failures. During a Link Pass Through event, the Auto Power Reset feature will re-set the power to the end PD device, ensuring it is ready to go when the LPT event is corrected.

### Features

- Wall mount, DIN Rail, or table top
- External AC/DC power supply included
- 2-port 10/100/1000 copper to fiber media conversion with IEEE 802.3at PoE+ on the copper port
- Supports full 30 Watts of power to each twisted pair port
- Various fiber versions available supporting fixed SC, LC, and open SFP
- 3-port version offers (1) RJ-45 PoE+ port and (2) open SFP slots, device can be configured as a 3-port switch or as a 2-port media converter with redundant fiber links
- With redundant fiber enabled, supports a 50ms fail-over time
- 4-port version offers (2) RJ-45 PoE+ ports and (2) open SFP slots, device can be configured as a 4-port switch (with or without redundant fiber) or as two independent PoE+ media converters in one housing
- SFP slots can support 100Base-FX, 1000Base-X, or SGMII based (MSA compliant) SFP modules
- Supports Auto-Negotiation, Auto-MDI/MDIX, Active Link Pass Through (ALPT), and Remote Fault Detection
- Jumbo frame support
- LEDs indicators for power status; per port link, duplex, and activity status; and PoE status
- Legacy PoE status

### Specifications

Standards	IEEE 802.3-2012 IEEE 802.at PSE-PoE+ IEEE 802.3ab IEEE 802.3x	IEEE 802.3af PSE-PoE IEEE 802.3U IEEE 802.3z IEEE 802.3az
Switch Features	Max Packet Size: 10,000 bytes Max MAC Addresses: 8k Shared buffer memory: 1Mbit	
Dip Switches	See user manual for complete dip switch functionality	
Status LEDs	PWR: Power being applied to converter PoE+: PoE+ Status TP – Left LED per Port: Copper Port Link Status TP – Right LED per port: Copper Port Speed Status Fiber L/A – per port: Fiber Port Link Status (See user manual for complete LED Descriptors)	
Dimensions	Width: 3.25" [82 mm] Depth: 4.8" [122 mm] Height: 1" [25 mm]	
Power Source	External AC/DC 56VDC power adapter	
Power Consumption	56VDC, 1.17A, 65.5 Watts (assumes both PoE ports are delivering the full 30 Watts)	
Environment	Operating: 0°C to +45°C Storage: -40°C to 85°C Humidity: 5% to 95% (non-condensing) Altitude: 0 – 10,000 ft. (with de-rating)	
Weight	2 lbs. [0.9 kg]	
MTBF	Without power supply: 163000 Hrs. (MIL-HDBK 217F) 450000 Hrs. (Bellcore)  With power supply: 42000 Hrs. (MIL-HDBK 217F) 115000 Hrs. (Bellcore)	
Certifications	EN55022 Class A, EN55024, CE Mark, Power Supply is UL listed	
Warranty	Lifetime	

### Ordering Information

- SGPAT1013-105**  
10/100/1000Base-T PoE+ (RJ-45) [100 m/328 ft.] to 1000Base-SX 850nm multimode (SC) [62.5/125um: 220m / 722 ft.] [50/125um: 550m / 1804 ft.] Link Budget: 8.5dB
- SGPAT1039-105**  
10/100/1000Base-T PoE+ (RJ-45) [100 m/328 ft.] to 1000Base-SX 850nm multimode (LC) [62.5/125um: 220m / 722 ft.] [50/125um: 550m / 1804 ft.] Link Budget: 8.0dB
- SGPAT1040-105**  
10/100/1000Base-T PoE+ (RJ-45) [100 m/328 ft.] to 100/1000Base-X Open SFP Slot
- SGPAT1040-205**  
(1) 10/100/1000Base-T PoE+ (RJ-45) [100 m/328 ft.] to (2) 100/1000Base-X Open SFP Slot
- SGPAT1040-305**  
(2) 10/100/1000Base-T PoE+ (RJ-45) [100 m/328 ft.] to (2) 100/1000Base-X Open SFP Slot
- Optional Accessories (sold separately)**
- SFP Modules**
- Cable-CCC-06**  
Cisco DB9 to RJ-45 Console Cable, Blue 6 ft.
- Mounting Options (sold separately)**
- WMBL**  
Wall Mount Bracket 4" [102 mm]
- WMBD**  
DIN Rail Bracket 5" [127 mm]
- RMS19-SA4-02**  
4-Slot Media Converter Shelf

Media Converters

### Features Continued

- Twisted pair ports support IEEE 802.3az Energy Efficient Ethernet for power saving
- Dip switch control of basic feature configuration
- RJ-45 serial port for Command Line Interface (CLI) of advanced port configuration (115200 baud)

#### Power Supply Included

To order the corresponding country specific power supply, add the extension from the list below to the end of the SKU; Ex: SGPAT1013-105-NA

#### -NA = Country Code

- NA = North America
- LA = Latin America
- EU = Europe
- UK = United Kingdom
- SA = South Africa
- JP = Japan
- OZ = Australia
- BR = Brazil