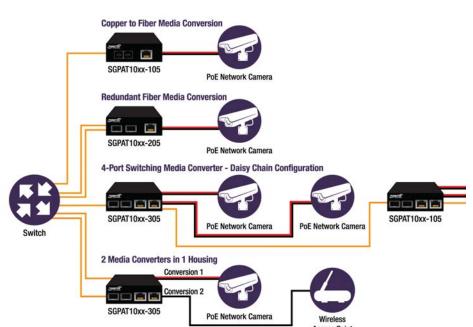# Stand-Alone Gigabit Ethernet PoE+ Media Converter

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	Benefits
IEEE 802.3at PoE+	Complies with both the IEEE 802.3at and af standards for PoE, provides full 30W of power on the copper port
2 ports of PoE+ Power	Provides full 30W of power on both copper ports, at the same time, on the 4 port media converter
Legacy PoE Detection	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
Active Link Pass Though (ALPT)	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 propogated to the end devices.
Auto Power Reset (APR)	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 Switch or Console port configuration	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
Various fiber optic connectors supported	5 versions of the SGPAT10xx-105 converter are available, including support for MM SC, MM LC, and 3 with an open SFP slot
100 / 1000 / SGMII supported SFP port	Various applications and network speeds are supported with the configuration of the SFP port to 100Mpbs, 1000Mbps, or SGMII for copper based SFP modules
Various port count options	Offers flexibility in deployments as a 2-port copper to fiber media converter, a 3-port converter, or a 4-port converter
Redundant Fiber Mode	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
4 port switch or dual converter mode	The 4-port converter functioning as a 4 port switch or as 2 independent media converters in one enclosure
IEEE 802.3az (EEE) Energy Efficient Ethernet support	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

SGPAT Series

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

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

SGPAT1040-305

SGPAT1013-105

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 802.3af PSE-PoE
	IEEE 802.at PSE-PoE+	IEEE 802.3U
	IEEE 802.3ab	IEEE 802.3z
	IEEE 802.3x	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

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