Datasheet: PC200x PoE Series

Allied Telesis™

PC200x PoE Series

PoE Media Converters

Powering Remote Devices

Allied Telesis PC200x PoE Series switches are the ideal solution for powering remote devices such as IP phones, video cameras, wireless access points, etc., which are more than 100m from a Power over Ethernet switch.

The Allied Telesis PC2002POE features an SFP port and a 10/100/1000T twisted-pair port. The SFP port will accept either a 100MB or 1000MB SFP (fiber). Allied Telesis offers a wide variety of SFPs featuring multimode, single mode and BiDi optics.

The 232/PoE features a 100FX fiber port and a 10/100TX twisted-pair port. The fiber-optic port features an SC connector capable of operating at a distance of up to two kilometers (6,561 feet) over multi-mode fiber. The twisted-pair port has an RJ- 45 connector with a maximum operating distance of 100 meters (328 feet). In addition to transmitting data, the twisted-pair port also injects power down the cable, allowing a remote Power over Ethernet Powered Device to operate without the need of any additional power source. All Power over Ethernet Powered Devices (IEEE 802.3af compliant) are supported, as the PC200x PoE Series can deliver a full 15.4W of power to the remote device.

VLAN Support

Many backbone switch products support the industry-standard IEEE 802.1Q specification for Virtual LANs (VLANs) that sends extra-long data packets on the network. PC200x PoE Series switches are fully compatible with these long packets, enabling them to be used in modern networks. Switches not supporting this feature will discard these extra-long packets, making them unsuitable for modern networks.

Small and Flexible

The small size and internal power supply of the PC200x PoE Series allows them to be used almost anywhere. The units can be DIN rail mounted, desktop mounted or wall-mounted.

MissingLink™ and Smart MissingLink™ (SML)

The MissingLink feature allows the ports on the media converter to pass the Link status of their connections to each other. When the media converter detects a problem with a port—such as the loss of connection to a node—it
shuts down the connection to the other port, thereby notifying the node that the connection has been lost. The Smart MissingLink (SML) feature monitors network connections and provides notification when network segments fail, allowing network managers to quickly identify the source and location of failed segments and minimize downtime.

Key Features

- Convert speed as well as media type
- IEEE 802.3af Power over Ethernet compliant
- Supplies up to 15.4W of PoE power
- Support 100 and 1000Mbps fiber SFP modules
- Auto MDI/MDI-X
- MissingLink (ML)
- Smart MissingLink (SML)
- Supports jumbo frames, up to 9K bytes (PC2002)
- Supports 1532 bytes frame (PC232)
- Support for multi-mode fiber
- Supports half- and full-duplex operation
- 1K MAC address tables
- Store-and-forward switching mode
- Transparent to IEEE 802.1Q packets
- Standalone, wall or DIN rail mountable
- Internal AC power supply
- AC power cord retaining clip

Specifications

10/100/1000T Twisted Pair Port LEDs

The LEDs for the 10/100/1000T twisted pair port are described below.

LED	COLOR	DESCRIPTION
Link	Green	The port has established a link to a network device
	Blinking Green	The media converter is operating in the Smart MissingLink mode and there is no connection on the port on the SFP module
	Off	The port has not established a link to a network device
Act	Blinking Green	The port is transmitting and/or receiving network packets
	Off	The port is not transmitting and/or receiving network packets
10 100	10 - Green	The port is operating at 10Mbps
	100-Off	
	10-Off	The port is operating at 100Mbps
	100-Green	
	10-Green	The port is operating at 1Gbps
	100-Green	
PoE	Green	The twisted pair port is connected to a powered device and is providing power to the device
	Off	The twisted pair port is not supplying power to the network device connected to the port
ANeg	Green	The port is using auto-negotiation to control its speed and duplex mode
	Off	The speed and duplex mode on the port are set to manual

SFP Module Slot LEDs

Operational Characteristics

(Each port can be configured via the following switches)

DIP SWITCH	PORT	FUNCTION	POSITION	DESCRIPTION
1	Twisted pair port	Auto-negotiation	Off	Auto-negotiation is disabled on the twisted pair port
			On	Auto-negotiation is activated on the port
2	Twisted pair port	Speed (Mbps)	10	The speed of the twisted pair port is set to 10Mbps
			100	The speed of the port is set to 100Mbps
3	Twisted pair port	Duplex mode Half	Half	The duplex mode of the twisted pair port is set to half-duplex mode
			Full	The duplex mode of the port is set to full-duplex mode
4	SFP module (PC2002)	Module type	100FX	The SFP module is 100FX
			1000FX	The SFP module is 1000FX

Operational Characteristics

MAC address table	1k addresses
Forwarding / filtering rate	1,488,00pps for 1Gbps
	148,880pps for 100Mbps
	14,880pps for 10Mbps
Latency	14.31sec (64 byte packet, 100Mbps full- duplex)
Maximum packet	9000 bytes size

Optical Characterisitcs

Wavelength	1310 nm

LED	COLOR	DESCRIPTION
Link	Green	The port on the SFP transceiver has established a link to a network device
	Blinking Green	The media converter is operating in the Smart MissingLink mode and there is no connection on the twisted pair port
	Off	The port has not established a link with a network device
Act	Blibking Green	The port is transmitting and/or receiving network packets
	Off	The port is not transmitting and/or receiving network packets
100 (PC2002)	Green	The port is operating at 100Mbps
1000 (PC2002)	Green	The port is operating at 1Gbps

Fiber cable	50/125um or 62.5/125um multi- mode fiber
SFP	See specific SFP datasheet

Output Power (dBm)

Minimum	–22.5
Typical	–20.3
Maximum	–14

Receive Power (dBm)

Minimum	–31.8
Typical	–34.5
Maximum	–14

Power Characteristics

Input voltage (auto-ranging)	
Internal power supply	100-120V AC/60Hz, 220-240V AC/50Hz
Power consumption	25W maximum

Power over Ethernet

Opertating mode	IEEE 802.3af Mode A
Maximum power	15.4W

Electrical and Mechanical Approvals

FCC Class B
EN55022 Class B
C-Tick
CE compliant

Environmental Specifications

Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	-25°C to 70°C (-13°F to 158°F)
Relative humidity	5% to 95% (non-condensing)
Operating altitude	Up to 3048 m (10,000 ft)

Physical Specifications

Dimensions	15.5 cm × 13.1 cm × 4 cm
(W × D × H)	6.1 in × 5.6 in × 1.58 in
Weight	0.748 kg (1.65 lb)

Ordering Information

AT-PC2002POE-xx

Two-port Gigabit PoE switch, 10/100/1000T to SFP

Where xx =
    10 AC power supply, US power cord
    20 for no power cord
    30 AC power supply, UK power cord
    40 AC power supply, Australian power cord
    50 AC power supply, European power cord

AT-PC232/POE-xx

Two-port Fast Ethernet PoE switch, 10/100TX to 100FX (SC), 2km

Accessories

AT-SPEX

Multi-mode Fiber, 2km, GbE, SFP

AT-SPSX/I

Multi-mode Fiber, GbE Small Form-factor Pluggable (SFP) 850 nm

AT-SPFX/15

Single-mode Fiber, 15km, 100FX, SFP, 1310 nm

AT-SPLX10

Single-mode Fiber, 10km, GbE SFP, 1310 nm

AT-SPLX40

Single-mode Fiber, 40km, GbE SFP, 1310 n

AT-SPSX

Multi-mode Fiber, GbE Small Form-factor Pluggable (SFP) 850 nm

AT-SPFX/2

Multi-mode Fiber, 2km, 100FX, SFP, 1310 nm

AT-SPFX/40

Single-mode Fiber, 40km, 100FX, SFP, 1310 nm

AT-SPLX10/I

Single-mode Fiber, 10km, GbE SFP, 1310 nm