

Power over Coax (PoC) Network Switches

8- or 16-port Coax Network Switches and Ethernet to Coax Media Converters

OVERVIEW

The IFS® Power over Coax Network Switches and Media Converters from Interlogix are designed to transmit both Ethernet data and power transmission over coax cable up to 3,281 ft. (1Km). This solution provides a cost-effective way to reduce installation costs and increase ROI by utilizing existing coax to migrate an analog video system to an IP surveillance system.

The PoC Network Switches also provide built-in PD-alive health and status monitoring of an IP camera. In addition, this solution eliminates the need for providing local power at an IP PoE camera location.

The solution contains the following modules:

- The POC2502-8CXP-2T-2S is an 8-port Power over Coax Managed Switch that supplies data and power transmission on coax via BNC ports. In addition, the two RJ45 and two SFP Gigabit ports provide a connection to an Ethernet network.
- The POC2502-16CXP-2T-2S is a 16-port Power over Coax Managed Switch. The switch supplies data and power transmission on coax via BNC ports as well as two RJ45 and two SFP Gigabit ports for connection to an Ethernet network.
- The POC252-1CX-1P Power over Coax Media Converter is for use at the camera end to convert the data/power from the coax. The media converter provides 10/100Mbps data and IEEE 802.3-af/at compliant power on the RJ45 port for an IP camera.
- The POC252-1CXP-1T Power over Coax Media Converter transmits data and injects power over coax for use with the POC252-1CX-1P. This media converter is used to deploy a single IP camera on a length of coax cable when a multi-port BNC switch is not needed.

Note: The actual data rate and power will vary based on the quality of the copper wire, distance and environmental factors. See specifications table for more information.



STANDARD FEATURES

Coax Ports

- 1, 8 or 16 BNC ports
- IEEE 1901 standard compliant for power
- Wavelet-OFDM modulation
- 128-bit AES security encryption
- Daisy-chain (up to 4 devices on one link)





Ethernet Ports

- 10/100Mbps Ethernet (POC252 series)
- Auto-negotiation and auto-MDI/MDI-X
- Half-duplex back pressure and IEEE802.3x full-duplex pause-frame flow control
- Gigabit RJ45/SFP fiber ports (POC2502 series)

Power over Ethernet

- IEEE 802.3-af/at compliant on RJ45 Ethernet port (POC252 series)
- Up to 36W insertion power per coax port (POC2502 series)
- Up to 440W total power budget (dependent on switch model)
- Remote power up to 3,281 ft. (1Km) with RG6 75Ω coaxial cable
- Full PoE management
 - Total power budget control
 - Power enable/disable per port
 - Power priority per port
 - Power limitation per port
 - Power scheduling per port
 - PD alive-checking

Specifications

Part No.		POC252-1CX-1P		POC252-1CXP-1T		POC2502-8CXP-2T-2S		POC2502-16CXP-2T-2S	
Description									
Physical Ports	10/100Base-T(x) Ports	RJ-45 (1) & BNC (1)				BNC (8)		BNC (16)	
	GigE Combo Uplink Ports	N/A				RJ-45 (2) & SFP (2)			
	Port Configuration	Auto MDI/MDI-X							
	Port Speed	Auto-negotiate							
Switch Performance	Switch Architecture	Store-and-Forward							
	Switch Fabric			9.6Gbps (non-blocking)		11.2Gbps (non-blocking)			
	MAC Address Table	8K entries, automatic source address learning and ageing							
	Share Data Buffer	4.1Mb embedded memory for packet buffers							
	Maximum Frame Size	10KBytes on Gig Uplink Ports							
Layer 2 Functions	Flow Control	Back pressure for Half-Duplex; IEEE 802.3x Pause Frame for Full-Duplex							
	Management Interface	Web browser, Telnet, SNMP v1 & v2c, 1 x RS323-to-RJ45 serial port (1115200, 8, N, 1)							
	Port Configuration	Port enable/disable; Auto-negotiation; 10/100/1000Mbps full-and-half duplex mode selection; Flow control							
	Port Status	Display each port's speed duplex mode, link status and flow control status. Auto negotiation status, trunk status							
	Port Mirroring	TX/RX/Both; Many to 1 monitoring							
	VLAN	802.1Q tagged-based VLAN Up to 256 VLAN groups, out of 4094 VLAN IDs 802.1ad Q-in-Q tunneling Voice VLAN Protocol VLAN Private VLAN (Protected port) GVRP							
	Link Aggregation	IEEE 802.3ad LACP and static trunk Supports 4 groups of 4-port trunk							
	Quality of Service (QoS)	8 mapping ID to 8 level priority queues - Port number - 802.1p priority - 802.1Q VLAN tag - DSCP field in IP packet Traffic classification based, strict priority and WRR							
	Multicasting/IGMP	IGMP (v2/v3) Snooping IGMP Querier Up to 256 multicast groups							
	LED Indicators & Switch	LEDs	PWR, LRP LNK, PoE-in-use, LNK/ACT				PWR, SYS, LNK, PoE-in-Use, 1000, LNK/ACK, Fan 1 Alert, Fan 2 Alert, PoE PWR Alert		
Reset Button		N/A				< 5 sec: System reboot > 5 sec: Factory default			
Electrical and Mechanical	Power Input	Via Power Over Coax		Via PoE Switch or 56VDC		100-240V AC, 50/60Hz			
	Power Consumption (Full PoE load)	Max 29 Watts		Max 40 Watts		Max. 280 Watts / 961 BTU		Max. 495 Watts / 1698 BTU	
	Dimensions (W x D x H)	3.70 x 2.76 x 1.02 in. (94 x 70 x 26 mm)				17.32 x 11.81 x 1.75 in. (440 x 300 x 44.5 mm), 1U height			
	Weight	0.83 lbs. (375g)		0.44 lbs. (200g)		9.44 lbs. (4.28kg)		9.77 lbs. (4.43kg)	
Environmental	Operating Temperature	-10°C to +60°C				0°C to +50°C			
	Storage Temperature	-40°C to +75°C				-10°C to +70°C			
	Relative Humidity	0% to 95% (non-condensing)							
	Regulatory Standards	FCC Part 15 Class A, CE							
Standards Compliance	IEEE Standards	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus				IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3z Gigabit Ethernet IEEE 802.3x Full-duplex flow control IEEE 802.1Q VLAN IEEE 802.1p QoS IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus			
	PoE Standard	IEEE 802.3-at / 802.3-at PoE							
Power over Ethernet	PoE Power Supply Type	End-span							
	PoE Power Budget	Up to 25 Watts via Coax		30.8 Watts (Max)		240 Watts (Max)		380 Watts (Max)	
	PoE Power Output Per Port			Max. 30.8 Watts (via PoE Switch) 36 Watts (via PSU)		Per Port 54V DC, Max. 36 Watts		Per Port 52V DC, Max. 36 Watts	
	Power Pin Assignment (RJ45)	1/2(+), 3/6(-)							
	Power Pin Assignment (COAX)	BNC center pole : DC+ / Hi BNC shield : DC - / Lo							
IP Over Coax Interface	Cabling	Coaxial cable: 75 ohm RG-6/U cable (Improved Performance)							
	Communication Standard	IEEE1901							
	Modulation Type	Wavelet-OFDM							
	Security	128-bit AES encryption							
	Frequency Band	2 - 28 MHz							
	Multiple Nodes			Supports up to 3 POC Media Convertors (Camera End) within 1km (Limited by DC/PoE Power Input and the length of coaxial cable)					
Data Rate (Upload/Download)*	200m	93 / 93 Mbps							
	400m	93 / 92 Mbps							
	600m	92 / 88 Mbps							
	800m	83 / 75 Mbps							
	1000m	74 / 55 Mbps							
Typical Power Over Coax*	200m			29W (56VDC in) 16.9W (PoE+ in)		23.2W			
	400m			22W (56VDC in) 14.3W (PoE+ in)		20.1W			
	600m			13W (56VDC in) 10.2W (PoE+ in)		16.2W			
	800m			10W (56VDC in) 8.3W (PoE+ in)		12.8W			
	1000m			8W (56VDC in) 7.1W (PoE+ in)		10W			

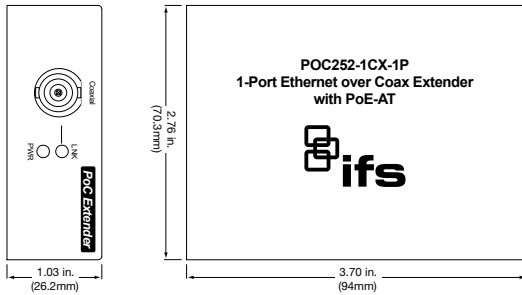
* Based on RG-59 Bare Copper (BC) cable : Data rate and power performance is subject to the quality of Coax cable used and is subject to external environmental factors

Power over Coax (PoC) Network Switches

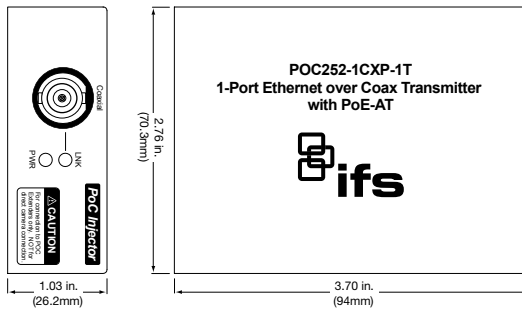
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and Ethernet to Coax Media Converters

Dimensional Diagrams

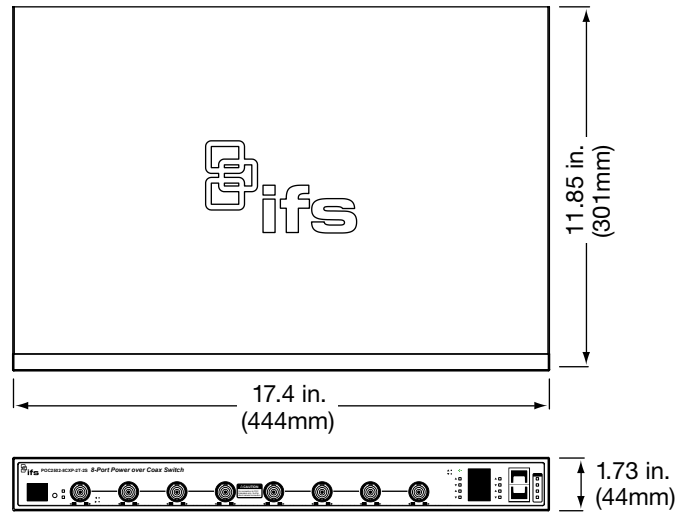
POC252-1CX-1P



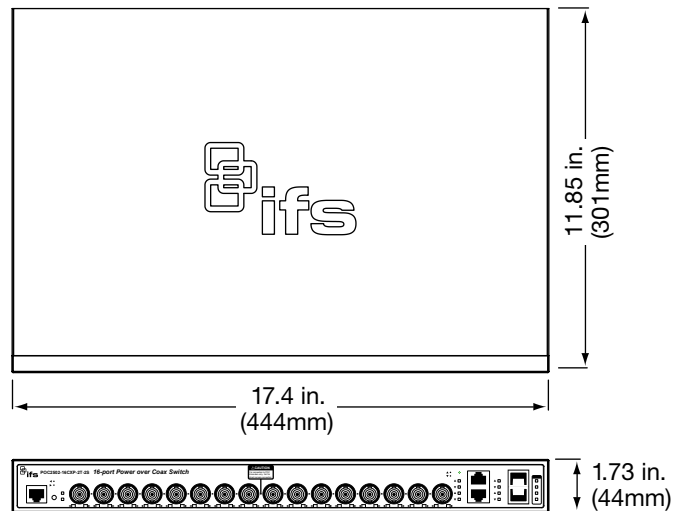
POC252-1CXP-1T



POC2502-8CXP-2T-2S



POC2502-16CXP-2T-2S



Ordering Information

POC252-1CX-1P	IP Power over Coax (camera end) Media Converter with 1-port RJ45 PoE-at
POC252-1CXP-1T	IP Power over Coax (head end) Media Converter - Injects Power over Coax
POC2502-8CXP-2T-2S	8-port BNC IP Power over Coax PoE-at Managed Switch Plus 2 SFP and 2 RJ45 Gigabit Uplink Ports
POC2502-16CXP-2T-2S	16-port BNC IP Power over Coax PoE-at Managed Switch Plus 2 SFP and 2 RJ45 Gigabit Uplink Ports

Note: Not compatible with the MCE-COAX or MC252 Series Ethernet to Coax Media converters.

Accessories

PS56VDC65W-US	56VDC - 65w Wall Mount Power Supply*
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*For use on single channel operation without a PoE or PoC switch to inject power onto coax when using the POC252-1CXP-1T (switch end) as a standalone unit.

For use with POC252-1CX-1P (camera end) to inject power remotely in field when higher power is needed at camera location.

Agency Compliances

- FCC
- CE



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