

PT-7324 Series

IEC 61850-3 22+2G-port Gigabit smart Ethernet switch



- > IEC 61850-3, IEEE 1613 (power substations), NEMA TS2 (traffic control systems), and EN50121-4 (railway applications) compliant
- > Port-based VLAN to enhance security/network performance
- > 802.1p priority queues, port-based QoS
- > Smart web-based management makes configuration easy
- > Universal power supply range, 24/48 VDC or 110/220 VDC/VAC
- > -40 to 85°C operating temperature range



Introduction

The PowerTrans PT-7324 smart Ethernet switch is designed to meet the demands of power substation automation systems (IEC 61850-3, IEEE 1613), traffic control systems (NEMA TS2), and railway applications (EN50121-4). The PT-7324 is also equipped with smart features, "Class of Service" features suitable for multimedia applications, and port-based

VLAN features that can be used to segment your network without being restricted by physical connections. If you do not want to receive too many broadcast packets, the broadcast storm filtering feature will discard broadcast packets if the number of such packets exceeds a threshold in a preset period of time.

Features and Benefits

- Port-based VLAN to ease network planning
- 802.1p priority queues and port-based QoS to increase determinism
- Broadcast storm filtering

Specifications

Smart Rackmount Ethernet Switch System, PT-7324



LED Indicators: STAT, PWR1, PWR2, FAULT, LNK/ACT, FDX/HDX, SPEED
Alarm Contact: One relay output with current carrying capacity of 3A@30 VDC or 3A@240 VAC

Power Requirements

Input Voltage: 24/48 VDC (9 to 60 V), or HV: 88 to 300 VDC and 85 to 264 VAC

Input Current:

Max. 0.68A @ 24 VDC
 Max. 0.35A @ 48 VDC
 Max. 0.17/0.11A @ 110/220 VDC
 Max. 0.33/0.23A @ 110/220 VAC

Connection: 10-pin terminal block

Overload Current Protection: Present

Reverse Polarity Protection: Present

Physical Characteristics

Casing: IP30 protection

Dimensions (W x H x D): 440 x 44 x 254 mm (17.32 x 1.73 x 10.00 in.)

Weight: 4700 g

Installation: 19" rack mounting

Environmental Limits

Operating Temperature: -40 to 85°C (-40 to 185°F)

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 5 to 95% (non-condensing)

Technology

Standards: IEEE 802.3 for 10BaseT,
 IEEE 802.3u for 100BaseT(X) and 100BaseFX,
 IEEE 802.3ab for 1000BaseT(X),
 IEEE 802.3z for 1000BaseSX/LX/LHX/ZX,
 IEEE 802.3x for Flow Control,
 IEEE 802.1p for Class of Service

Flow Control: IEEE 802.3x flow control, back pressure flow control

Switch Properties

Priority Queues: 2

Max. Number of Available VLANs: 24

Interface

RJ45 Ports: 10/100BaseT(X) or 10/100/1000BaseT(X) auto negotiation speed, F/H duplex mode and auto MDI/MDI-X connection

Fiber Ports: 100BaseFX (SC/ST connector) or 1000BaseSFP slots

*Slot 1 for 2-port PM-7200 Gigabit Ethernet combo module, or 2- or 1-port PM-7200 fast Ethernet modules.

Regulatory Approvals

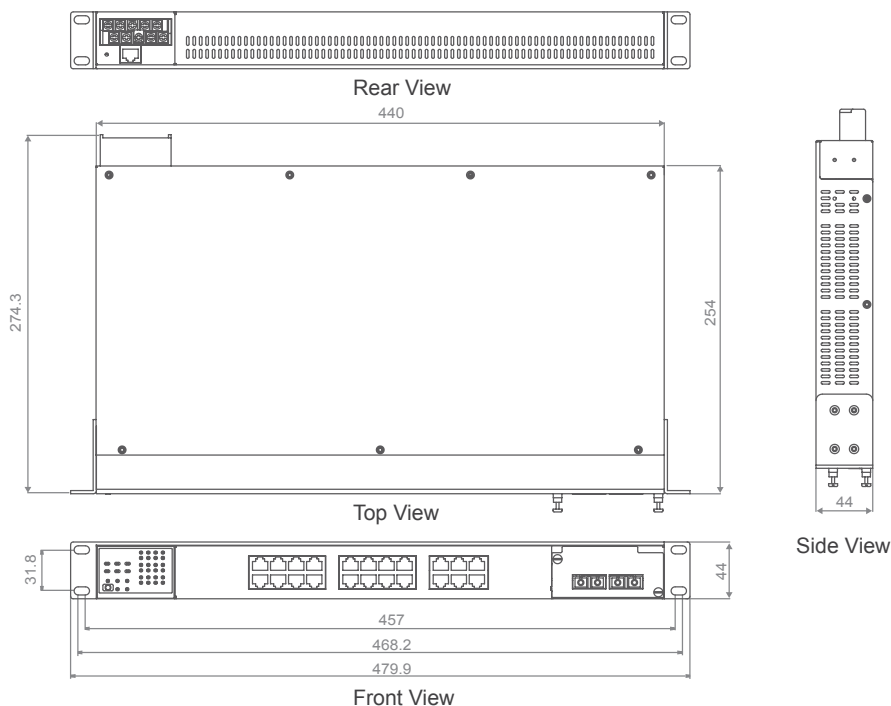
Safety: EN60950-1 (Pending)
Power Automation: IEC 61850-3, IEEE 1613
Road Traffic: NEMA TS2
Rail Traffic: EN50121-4 (Pending)
Maritime: DNV (Pending), GL (Pending)
EMI: FCC Part 15, CISPR (EN55022) class A

*Please check Moxa's website for the most up-to-date certification status

Warranty

5 years (see www.moxa.com/warranty for details)

Dimensions (unit = mm)



Ordering Information

Step 1: Select Ethernet switch system

Step 2: Select interface modules

PT-7324 with power supply



PM-7200 series
(Gigabit or fast Ethernet)

*The PT-7324 Ethernet switch system is delivered without interface module. Please refer to page 4-23 to choose PM-7200 interface modules.

Smart Rackmount Ethernet Switch System, PT-7324

Smart rackmount Ethernet switch system with 22 10/100BaseT(X) ports, and 1 slot for fast Ethernet or Gigabit Ethernet modules, for a total of up to 24 or 22+2G ports, -40 to 85°C

Product Model		Power Supply	
Front Cabling, Front Display	Rear Cabling, Front Display	LV: 24/48 VDC (9 to 60 V) (Dual power inputs)	HV: 88 to 300 VDC and 85 to 264 VAC, isolated
PT-7324-F-LV	PT-7324-R-LV	1	
PT-7324-F-HV	PT-7324-R-HV		1

* The PT-7324 Ethernet switch systems provide 1 slot for Gigabit Ethernet or fast Ethernet interface modules. Please refer to page 4-23 to select the PM-7200 series Gigabit Ethernet and fast Ethernet interface modules that you need for your own application.

PT-7324-F series
(Front Cabling, Front Display)



PT-7324-R series
(Rear Cabling, Front Display)



Gigabit/Fast Ethernet Modules for the PT-7324

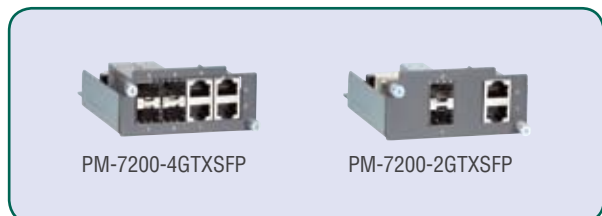
Interface Module	
	PM-7200-2GTXSFP
	PM-7200-1MSC
	PM-7200-1MST
	PM-7200-1SSC
	PM-7200-2MSC
	PM-7200-2MST
	PM-7200-2SSC
Slot 1	√
	√
	√
	√
	√
	√
	√

PM-7200 Series Interface Modules

4- or 2-port Gigabit Ethernet and 8-, 7-, 6-, 2-, or 1-port fast Ethernet interface modules for PT and IKS series rackmount Ethernet switches

Specifications

Gigabit Ethernet Interface Modules, PM-7200-2G/4G series



Interface

RJ45 Ports: 10/100/1000BaseT(X) auto negotiation speed, and auto MDI/MDI-X connection

Fiber Ports: 1000BaseSFP slots

* The PM-7200-2G/4G series Gigabit Ethernet combo modules support 2 or 4 SFP slots. Please refer to page 2-23 to select the SFP-1G series Gigabit Ethernet modules.

Fast Ethernet Interface Modules, PM-7200 series



Interface

RJ45 Ports: 10/100BaseT(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection

Fiber Ports: 100BaseFX ports (SC/ST connector)

Optical Fiber

	100BaseFX		
	Multi Mode	Single Mode	Single Mode, 80 km
Wavelength	1300 nm	1310 nm	1550 nm
Max. TX	-10 dBm	0 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm	-34 dBm
Link Budget	12 dB	29 dB	29 dB
Typical Distance	5 km ^a 4 km ^b	40 km ^c	80 km ^d
Saturation	-6 dBm	-3 dBm	-3 dBm

a. 50/125 μm, 800 MHz*km fiber optic cable
 b. 62.5/125 μm, 500 MHz*km fiber optic cable
 c. 9/125 μm, 3.5 PS/(nm*km) fiber optic cable
 d. 9/125 μm, 19 PS/(nm*km) fiber optic cable

Rackmount Ethernet Switches

Ordering Information

Rackmount Ethernet Switch System and Interface Module Compatibility Chart

Product Model	Interface Module																		
	PM-7200-4GTXSFP	PM-7200-2GTXSFP	PM-7200-1MSC	PM-7200-1MST	PM-7200-2MSC	PM-7200-2MST	PM-7200-1SSC	PM-7200-2SSC	PM-7200-8TX	PM-7200-2MSC4TX	PM-7200-2MST4TX	PM-7200-2SSC4TX	PM-7200-4MSC2TX	PM-7200-4MST2TX	PM-7200-4SSC2TX	PM-7200-6MSC	PM-7200-6MST	PM-7200-6SSC	PM-7200-1LSC6TX
PT-7828	✓	✓							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PT-7728	✓	✓							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PT-7710		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PT-7324		✓	✓	✓	✓	✓	✓	✓											
IKS-6726		✓							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IKS-6324		✓	✓	✓	✓	✓	✓	✓											

Gigabit Ethernet Modules for PT and IKS Series Rackmount Ethernet Switches, PM-7200-2G/4G Series

Product Model	Port Interface	
	Combo Port, 10/100/1000BaseT(X) or 1000BaseSFP*	
PM-7200-2GTXSFP	2	
PM-7200-4GTXSFP	4	

*The PM-7200-2G/4G series Gigabit Ethernet combo modules support 4 or 2 SFP slots. Please see page 2-23 for the product information of SFP-1G series Gigabit Ethernet SFP modules.

Fast Ethernet Modules for PT and IKS Series Rackmount Ethernet Switches, PM-7200 Series

Product Model	Port Interface			
	10/100BaseT(X)	100BaseFX		
		Multi Mode, SC Connector	Multi Mode, ST Connector	Single Mode, SC Connector
PM-7200-8TX	8			
PM-7200-6MSC		6		
PM-7200-6MST			6	
PM-7200-6SSC				6
PM-7200-4MSC2TX	2	4		
PM-7200-4MST2TX	2		4	
PM-7200-4SSC2TX	2			4
PM-7200-2MSC4TX	4	2		
PM-7200-2MST4TX	4		2	
PM-7200-2SSC4TX	4			2
PM-7200-1LSC6TX	6			1
PM-7200-2MSC		2		
PM-7200-2MST			2	
PM-7200-2SSC				2
PM-7200-1MSC		1		
PM-7200-1MST			1	
PM-7200-1SSC				1