

# PM-7200 Module Series

Gigabit and Fast Ethernet modules for PT Series rackmount Ethernet switches



## Features and Benefits

- -40 to 85°C wide operating temperature
- IEC 61850-3 and IEEE 1613 compliant

## Certifications



## Introduction

The PM-7200 Module Series includes Gigabit and Fast Ethernet modules for the PT Series rackmount Ethernet switches. IEEE 1588 interface modules provide hardware-based PTP functions for precise time synchronization across the network.

## Specifications

### Ethernet Software Features

Time Management	PTP models: IEEE 1588 PTP v1/v2 (hardware-based)
Redundancy Protocols	PM-7200-PHR-PTP Series: HSR, PRP

### Ethernet Interface

Combo Ports (10/100/1000BaseT(X) or 1000BaseSFP)	PM-7200-2GTXSFP: 2 PM-7200-4GTXSFP: 4
10/100/1000BaseT(X) Ports PRP/HSR Ports	PM-7200-4GTX-PHR-PTP: 2
100/1000BaseSFP PRP/HSR Ports	PM-7200-4GSFP-PHR-PTP: 2
10/100/1000BaseT(X) Ports (RJ45 connector)	PM-7200-4GTX-PHR-PTP: 2
100/1000BaseSFP Ports	PM-7200-4GSFP-PHR-PTP: 2
10/100BaseT(X) Ports (RJ45 connector)	PM-7200-2TX Series: 2 PM-7200-4TX Series: 4 PM-7200-8TX: 8
10/100BaseT(X) Ports (M12 D-coded 4-pin female connector)	PM-7200-4M12: 4
100BaseSFP Slots	PM-7200-8SFP: 8
100BaseFX Ports (multi-mode SC connector)	PM-7200-1MSC: 1 PM-7200-2MSC Series: 2 PM-7200-4MS Series: 4 PM-7200-6MSC: 6
100BaseFX Ports (multi-mode ST connector)	PM-7200-1MST: 1 PM-7200-2MST Series: 2

	PM-7200-4MST Series: 4 PM-7200-6MST: 6																																																		
100BaseFX Ports (single-mode SC connector)	PM-7200-2SSC Series: 2 PM-7200-4SSC2TX: 4 PM-7200-6SSC: 6																																																		
100BaseFX Ports, Multi-Mode MTRJ Connector	PM-7200-8MTRJ: 8																																																		
PPS Output, BNC Connector	PM-7200-1BNC2MST-PTP: 1																																																		
Optical Fiber	<table border="1"> <thead> <tr> <th colspan="2" rowspan="2"></th> <th colspan="3">100BaseFX</th> </tr> <tr> <th colspan="2">Multi-Mode</th> <th>Single-Mode</th> </tr> <tr> <th rowspan="2">Fiber Cable Type</th> <th rowspan="2">OM1</th> <th colspan="2">50/125 μm</th> <th rowspan="2">G.652</th> </tr> <tr> <th colspan="2">800 MHz x km</th> </tr> </thead> <tbody> <tr> <td colspan="2">Typical Distance</td> <td>4 km</td> <td>5 km</td> <td>40 km</td> </tr> <tr> <td rowspan="3">Wavelength</td> <td>Typical (nm)</td> <td colspan="2">1300</td> <td>1310</td> </tr> <tr> <td>TX Range (nm)</td> <td colspan="2">1260 to 1360</td> <td>1280 to 1340</td> </tr> <tr> <td>RX Range (nm)</td> <td colspan="2">1100 to 1600</td> <td>1100 to 1600</td> </tr> <tr> <td rowspan="4">Optical Power</td> <td>TX Range (dBm)</td> <td colspan="2">-10 to -20</td> <td>0 to -5</td> </tr> <tr> <td>RX Range (dBm)</td> <td colspan="2">-3 to -32</td> <td>-3 to -34</td> </tr> <tr> <td>Link Budget (dB)</td> <td colspan="2">12</td> <td>29</td> </tr> <tr> <td>Dispersion Penalty (dB)</td> <td colspan="2">3</td> <td>1</td> </tr> </tbody> </table> <p>Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power. Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) &gt; dispersion penalty (dB) + total link loss (dB).</p>			100BaseFX			Multi-Mode		Single-Mode	Fiber Cable Type	OM1	50/125 μm		G.652	800 MHz x km		Typical Distance		4 km	5 km	40 km	Wavelength	Typical (nm)	1300		1310	TX Range (nm)	1260 to 1360		1280 to 1340	RX Range (nm)	1100 to 1600		1100 to 1600	Optical Power	TX Range (dBm)	-10 to -20		0 to -5	RX Range (dBm)	-3 to -32		-3 to -34	Link Budget (dB)	12		29	Dispersion Penalty (dB)	3		1
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## Warranty

Warranty Period	5 years
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>

## Package Contents

Device	1 x PM-7200 Series module
Documentation	1 x warranty card 1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese

## Ordering Information

Model Name	1000 Mbps	100 Mbps	PPS Output	Hardware-Based IEEE 1588 PTP V2	PRP/HSR	Operating Temp.
PM-7200-1MSC	-	1 x 100BaseFX, multi-mode, SC connector	-	-	-	-45 to 85°C
PM-7200-1MST	-	1 x 100BaseFX, multi-mode, ST connector	-	-	-	-45 to 85°C
PM-7200-2GTXSFP	2 x combo port, 10/100/1000BaseT (X) or 1000BaseSFP	-	-	-	-	-45 to 85°C

Model Name	1000 Mbps	100 Mbps	PPS Output	Hardware-Based IEEE 1588 PTP V2	PRP/HSR	Operating Temp.
PM-7200-2MSC	-	2 x 100BaseFX, multi-mode, SC connector	-	-	-	-45 to 85°C
PM-7200-2MSC4TX	-	4 x 10/100BaseT(X) 2 x 1000BaseFX, multi-mode, SC connector	-	-	-	-45 to 85°C
PM-7200-2MST	-	2 x 100BaseFX, multi-mode, ST connector	-	-	-	-45 to 85°C
PM-7200-2MST4TX	-	4 x 10/100BaseT(X) 2 x 100BaseFX, multi-mode, ST connector	-	-	-	-45 to 85°C
PM-7200-2SSC	-	2 x 100BaseFX, single-mode, SC connector	-	-	-	-45 to 85°C
PM-7200-2SSC4TX	-	4 x 10/100BaseT(X) 2 x 100BaseFX, single-mode, SC connector	-	-	-	-45 to 85°C
PM-7200-4GTXSFP	4 x combo port, 10/100/1000BaseT (X) or 100/1000BaseSFP	-	-	-	-	-45 to 85°C
PM-7200-4M12	-	4 x 10/100BaseT(X), M12 connectors	-	-	-	-45 to 85°C
PM-7200-4MSC2TX	-	2 x 10/100BaseT(X) 4 x 100BaseFX, multi-mode, SC connector	-	-	-	-45 to 85°C
PM-7200-4MST2TX	-	2 x 10/100BaseT(X) 4 x 100BaseFX, multi-mode, ST connector	-	-	-	-45 to 85°C
PM-7200-4SSC2TX	-	2 x 10/100BaseT(X) 4 x 100BaseFX, single-mode, SC connector	-	-	-	-45 to 85°C
PM-7200-6MSC	-	6 x 100BaseFX, multi-mode, SC connector	-	-	-	-45 to 85°C
PM-7200-6MST	-	6 x 100BaseFX, multi-mode, ST connector	-	-	-	-45 to 85°C
PM-7200-6SSC	-	6 x 100BaseFX, single-mode, SC connector	-	-	-	-45 to 85°C
PM-7200-8SFP	-	8 x 100BaseFX	-	-	-	-45 to 85°C
PM-7200-8TX	-	8 x 10/100BaseT(X)	-	-	-	-45 to 85°C
PM-7200-1BNC2MST-PTP	-	2 x 100BaseFX, multi-mode, ST connector	1 x BNC connector	-	-	-45 to 85°C
PM-7200-8MTRJ	-	8 x 100BaseFX, multi-mode, MTRJ connector	-	-	-	-45 to 85°C
PM-7200-4TX-PTP	-	4 x 10/100BaseT(X)	-	✓	-	-45 to 85°C
PM-7200-4MST-PTP	-	4 x 100BaseFX, multi-mode, ST connector	-	✓	-	-45 to 85°C

Model Name	1000 Mbps	100 Mbps	PPS Output	Hardware-Based IEEE 1588 PTP V2	PRP/HSR	Operating Temp.
PM-7200-4MSC-PTP	–	4 x 100BaseFX, multi-mode, SC connector	–	✓	–	-45 to 85°C
PM-7200-4GTX-PHR-PTP	2 x 10/100/1000BaseT(X)	–	–	✓	2 x 10/100/1000BaseT(X) PRP/HSR ports	-45 to 85°C
PM-7200-4GSFP-PHR-PTP	2 x 100/1000BaseSFP	–	–	✓	2 x 100/1000-BaseSFP PRP/HSR ports	-45 to 85°C

## Accessories (sold separately)

### SFP Modules

SFP-1FELLC-T	SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1FEMLC-T	SFP module with 1 100Base multi-mode with LC connector for 4 km transmission, -40 to 85°C operating temperature
SFP-1FESLC-T	SFP module with 1 100Base single-mode with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G40ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G40ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G40BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G40BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1GEZXC	SFP module with 1 1000BaseEZXC port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXC-120	SFP module with 1 1000BaseEZXC port with LC connector for 120 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXLC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature

SFP-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GLSXLC	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, 0 to 60°C operating temperature
SFP-1GLSXLC-T	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, -40 to 85°C operating temperature
SFP-1GLXLC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, 0 to 60°C operating temperature
SFP-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, -40 to 85°C operating temperature
SFP-1GZXLC	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
SFP-1GZXLC-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature

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