

PT-7828 Series

IEC 61850-3 / EN50155 24+4G-port Layer 3 Gigabit modular managed rackmount Ethernet switches



- > IEC 61850-3, IEEE 1613 (power substations), and EN 50155, EN 50121-4 (railway applications) compliant
- > Turbo Ring, Turbo Chain, RSTP/STP, and MSTP* for network redundancy
- > VLAN Unaware: Supports priority-tagged frames to be received by specific IEDs
- > Up to 12 ports with M12 connectors
- > Isolated redundant power inputs with universal 24/48 VDC or 110/220 VDC/VAC power supply range
- > Supports multicast routing protocols PIM-DM/DVMRP*
- > NERC CIP compliance
- > -40 to 85°C operating temperature range

*Available in Q3, 2011



Introduction

The PowerTrans PT-7828 switches are high performance Layer 3 Ethernet switches that support Layer 3 routing functionality to facilitate the deployment of applications across networks. The PT-7828 switches are also designed to meet the strict demands of power substation automation systems (IEC 61850-3, IEEE 1613), and railway applications (EN50155/EN50121-4).

The PT-7828's Gigabit and fast Ethernet backbone, redundant ring, and 24/48 VDC or 110/220 VDC/VAC dual isolated redundant power supplies increase the reliability of your communications and save on cabling and wiring costs. The modular design of the PT-7828 makes network planning easy, and allows greater flexibility by letting you install up to 4 Gigabit ports and 24 fast Ethernet ports. Optional front or rear wiring makes the PT-7828 switches suitable for a variety of applications.

General Features and Benefits

- Layer 3 switching functionality to divide a large network into hierarchical subnets and allow data and information to communicate across networks
- Command Line Interface (CLI) for quickly configuring major managed functions*
- IPv6 Ready logo awarded (IPv6 Logo Committee certified)
- Software-based IEEE 1588 PTP V2* (Precision Time Protocol) for precise time synchronization of networks
- DHCP Option 82 for IP address assignment with different policies
- EtherNet/IP* and Modbus/TCP industrial Ethernet protocols supported
- Turbo Ring, Turbo Chain, and RSTP/STP, and MSTP for network redundancy
- Supports multicast routing protocols PIM-DM/DVMRP*

- VLAN Unaware: Supports priority-tagged frames to be received by specific IEDs
- Supports advanced VLAN capability with Q-in-Q tagging*
- IGMP snooping and GMRP for filtering multicast traffic from industrial Ethernet protocols
- IEEE 802.3ad, LACP for optimum bandwidth utilization
- Bandwidth management prevents unpredictable network status
- Multi-port mirroring for online debugging
- Automatic warning by exception through email, relay output
- RMON for efficient network monitoring and proactive capability
- Automatic recovery of connected device's IP addresses
- Line-swap fast recovery
- Configurable by Web browser, Telnet/Serial console, CLI* Windows utility, and ABC-01 automatic backup configurator

*Available in Q3, 2011

Cyber-security Features

- User passwords with multiple levels of security protect against unauthorized configuration
- SSH/HTTPS is used to encrypt passwords and data
- Lock switch ports with 802.1x port-based network access control so that only authorized clients can access the port
- Disable one or more ports to block network traffic

- 802.1Q VLAN allows you to logically partition traffic transmitted between selected switch ports
- Secure switch ports so that only specific devices and/or MAC addresses can access the ports
- Radius/TACACS+ allows you to manage passwords from a central location (available in Q1 Y2011)
- SNMPv3 provides encrypted authentication and access security

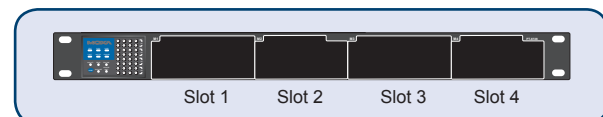
Specifications

Technology

Standards:

- IEEE 802.3 for 10BaseT
- IEEE 802.3u for 100BaseT(X) and 100Base FX
- IEEE 802.3ab for 1000BaseT(X)
- IEEE 802.3z for 1000BaseX
- IEEE 802.3x for Flow Control
- IEEE 802.1D-2004* for Spanning Tree Protocol

Layer 3 Modular Rackmount Ethernet Switch System, PT-7828



IEEE 802.1s* for Multiple Spanning Tree Protocol
 IEEE 802.1w for Rapid STP
 IEEE 802.1Q for VLAN Tagging
 IEEE 802.1p for Class of Service

Protocols: IGMPv1/v2, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, BootP, TFTP, SNTP, SMTP, RARP, RMON, RIP V1/V2, HTTP, HTTPS, Telnet, SSH, Syslog, DHCP Option 66/67/82, LLDP, Modbus/TCP, IEEE 1588 PTP V2*, SNMP Inform, NTP Server/Client*

Layer 3 Switching: Static routing, RIP V1/V2, OSPF, VRRP for router redundancy

MIB: MIB-II, Ethernet-like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Groups 1, 2, 3, 9

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

*Available in Q3, 2011

Switch Properties

Priority Queues: 4
Max. Number of Available VLANs: 64
VLAN ID Range: VID 1 to 4094
IGMP Groups: 256

Interface

Fast Ethernet: Slots 1, 2, and 3 for combinations of 2, 4, 6, 7, or 8-port PM-7200 fast Ethernet modules with 10/100BaseT(X) (TP/M12 interface), 100BaseFX (SC/ST/MTRJ connector), or 100BaseSFP.

Gigabit Ethernet: Slot 4 for 2 or 4-port PM-7200 Gigabit Ethernet combo module, 10/100/1000BaseT(X) or 1000BaseSFP

Console Port: RS-232 (RJ45)

System LED Indicators: STAT, PWR1, PWR2, FAULT, MSTR/HEAD, CPLR/TAIL

Mode LED Indicators: LNK/ACT, FDX/HDX, RING/CHAIN PORT, COUPLER PORT, SPEED

Alarm Contact: 1 relay output with current carrying capacity of 3 A @ 30 VDC or 3 A @ 240 VAC

Power Requirements

Input Voltage:

- 24 VDC (18 to 36 V)
- 48 VDC (36 to 72 V)
- 110/220 VDC/VAC (88 to 300 VDC, 85 to 264 VAC)

Input Current: (all ports are equipped with fiber)

- Max. 2.58 A @ 24 VDC
- Max. 1.21 A @ 48 VDC
- Max. 0.64/0.33 A @ 110/220 VDC
- Max. 0.53/0.28 A @ 110/220 VAC

Overload Current Protection: Present

Connection: 10-pin terminal blocks

Reverse Polarity Protection: Present

Physical Characteristics

Housing: IP30 protection

Dimensions: 440 x 44 x 325 mm (17.32 x 1.73 x 12.80)

Weight: 5900 g

Installation: 19" rack mounting

Environmental Limits

Operating Temperature: -40 to 85°C (-40 to 185°F), cold start requires min. of 100 VAC at -40°C

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

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

Standards and Certifications

Safety: UL 60950-1, CSA C22.2 No. 60950-1, EN 60950-1

EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A

Power Automation: IEC 61850-3, IEEE 1613

Rail Traffic: EN 50155, EN 50121-4

Note: Please check Moxa's website for the most up-to-date certification status.

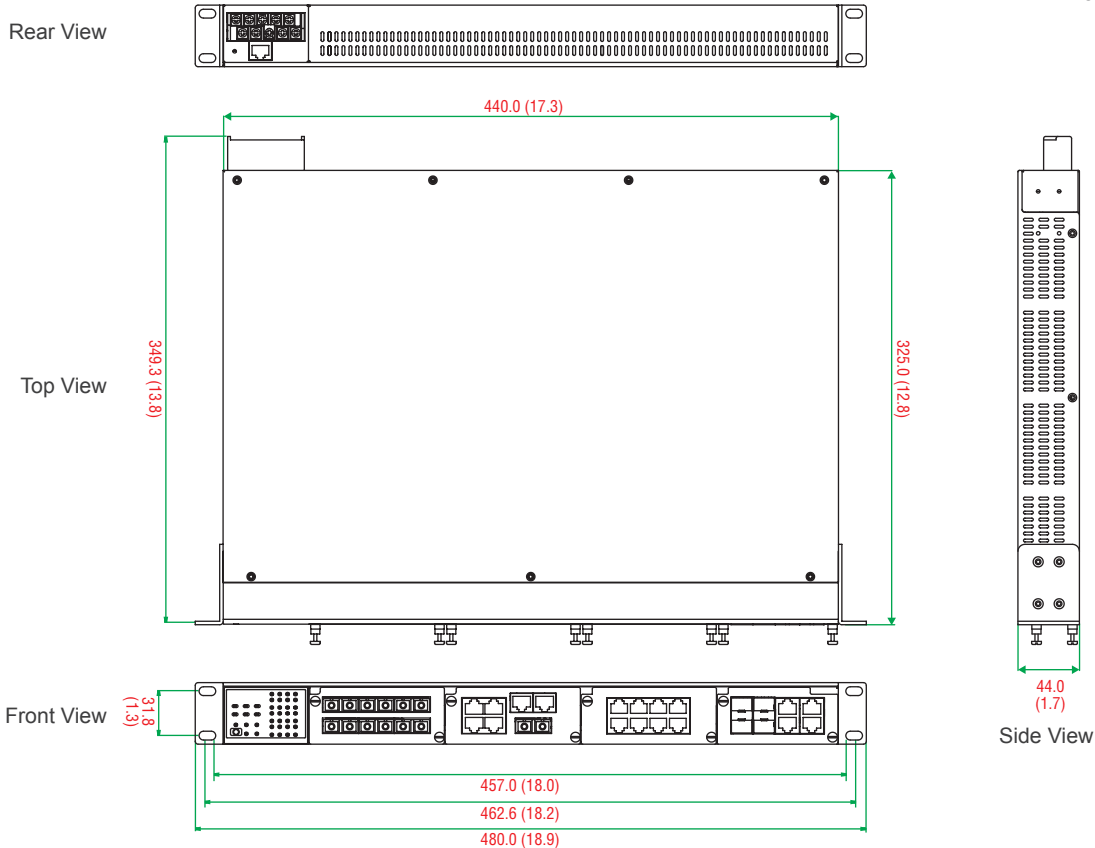
Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions

Unit: mm (inch)



Ordering Information

Step 1: Select Ethernet switch system

Step 2: Select interface modules

PT-7828 with power supply



PM-7200 module
(Gigabit or fast Ethernet)

Note: The PT-7828 Ethernet switch system is delivered without interface modules. See page 2-42 to choose PM-7200 interface modules.

PT-7828 Layer 3 Modular Rackmount Ethernet Switch System

The PT-7828 switch system consists of 18 Layer 3 modular managed rackmount Ethernet switch systems, each with 3 slots for fast Ethernet modules, and 1 slot for a Gigabit Ethernet module. A total of 28 or 24+4G ports can be installed, and the switch can be used in a temperature range from -40 to 85°C.

| Available Models | | Power Supply | | | | | |
|---------------------------------|--------------------------------|-------------------------|------------------------|---|-------------------------|------------------------|---|
| Front Cabling, Front Display | Rear Cabling, Front Display | Isolated Power Supply 1 | | | Isolated Power Supply 2 | | |
| | | 24 VDC (18 to 36 V) | 48 VDC (36 to 72 V) | HV: 88 to 300 VDC and 85 to 264 VAC | 24 VDC (18 to 36 V) | 48 VDC (36 to 72 V) | HV: 88 to 300 VDC and 85 to 264 VAC |
| PT-7828-F-24 | PT-7828-R-24 | 1 | – | – | – | – | – |
| PT-7828-F-24-24 | PT-7828-R-24-24 | 1 | – | – | 1 | – | – |
| PT-7828-F-24-48 | PT-7828-R-24-48 | 1 | – | – | – | 1 | – |
| PT-7828-F-24-HV | PT-7828-R-24-HV | 1 | – | – | – | – | 1 |
| PT-7828-F-48 | PT-7828-R-48 | – | 1 | – | – | – | – |
| PT-7828-F-48-48 | PT-7828-R-48-48 | – | 1 | – | – | 1 | – |
| PT-7828-F-48-HV | PT-7828-R-48-HV | – | 1 | – | – | – | 1 |
| PT-7828-F-HV | PT-7828-R-HV | – | – | 1 | – | – | – |
| PT-7828-F-HV-HV | PT-7828-R-HV-HV | – | – | 1 | – | – | 1 |

Note: The PT-7828 Layer 3 Ethernet switch systems provide combinations of 1 slot for a Gigabit Ethernet interface module, 3 slots for fast Ethernet interface modules. See page 2-42 to select the PM-7200 Gigabit Ethernet and fast Ethernet interface modules for your own application.

PT-7828-F series
(Front Cabling, Front Display)



PT-7828-R series
(Rear Cabling, Front Display)



Gigabit/Fast Ethernet Modules for the PT-7828

| | Interface Modules | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|-------------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|--------------|--------------|-----------------|-----------------|-----------------|-----------------|--------------|--------------|--------------|---------------|---------------|-----------------|-----------------|------------------|------------------|----------------------|
| | 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 | PM-7200-1MST6TX | PM-7200-1SSC6TX | PM-7200-1MSC6TX | PM-7200-8PoE | PM-7200-8SFP | PM-7200-4M12 | PM-7200-2MTRJ | PM-7200-8MTRJ | PM-7200-4MST-FL | PM-7200-4TX-PTP | PM-7200-4MST-PTP | PM-7200-4MSC-PTP | PM-7200-1BNC2MST-PTP |
| Slot 1 | – | – | – | – | – | – | – | – | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | – | ✓ | ✓ | ✓ | ✓ | – | – | – | – | – |
| Slot 2 | – | – | – | – | – | – | – | – | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | – | ✓ | ✓ | ✓ | ✓ | – | – | – | – | – |
| Slot 3 | – | – | – | – | – | – | – | – | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | – | ✓ | ✓ | ✓ | ✓ | – | – | – | – | – |
| Slot 4 | ✓ | ✓ | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

Optional Accessories (can be purchased separately)

MXview: Moxa industrial network management software with 50, 100, 250, 500, or 1000 nodes

EDS-SNMP OPC Server Pro: OPC server software that works with all SNMP devices

ABC-01 Series: Configuration backup and restoration tool for managed Ethernet switches, 0 to 60°C operating temperature

Package Checklist

- PT-7828 series switch
- RJ45-to-DB9 console port cable
- Protective caps for unused ports
- 2 rackmount ears
- Documentation and software CD
- Hardware installation guide
- Warranty card

PM-7200 Series

Gigabit and fast Ethernet modules for PT and IKS series switches

Specifications



PM-7200-4GTXSFP



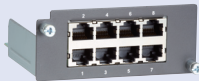
PM-7200-2GTXSFP

Interface

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

Fiber Ports: 1000BaseSFP slots

Note: The PM-7200-2G/4G series Gigabit Ethernet combo modules support 2 or 4 SFP slots. See page 1-87 to select the SFP-1G series Gigabit Ethernet modules for your application.



PM-7200-8TX



PM-7200-6MSC
PM-7200-6SSC



PM-7200-6MST



PM-7200-4MSC2TX
PM-7200-4SSC2TX



PM-7200-4MST2TX



PM-7200-2MSC4TX
PM-7200-2SSC4TX



PM-7200-2MST4TX



PM-7200-1LSC6TX



PM-7200-2MSC
PM-7200-2SSC



PM-7200-2MST



PM-7200-1MSC
PM-7200-1SSC



PM-7200-1MST



PM-7200-1MST6TX



PM-7200-1MSC6TX
PM-7200-1SSC6TX



PM-7200-8PoE



PM-7200-8SFP*



PM-7200-4M12



PM-7200-2MTRJ



PM-7200-8MTRJ



PM-7200-4MST-FL



PM-7200-4TX-PTP



PM-7200-4MST-PTP



PM-7200-4MSC-PTP



PM-7200-1BNC2MST-PTP

* See page 1-87 and 1-89 to select SFP-1G/1FE series Gigabit Ethernet and fast Ethernet modules.

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/MTRJ or SFP LC connector)

PoE Ports: IEEE 802.3af Power-over-Ethernet Technology, provide up to 15.4 watts per port

M12 Ports: 10/100BaseT(X) auto negotiation speed, and auto MDI/MDI-X connection






BNC Ports: Time clock signal PPS (pulses per second) output for IEEE 1588 time synchronization

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 single-mode fiber optic cable
- d. 9/125 μm single-mode fiber optic cable (80 km)

Ordering Information

| | | | | |
|---|---|---|--|---|
| PT-7828/PT-7728-PTP/ PT-7728 | PT-7710 | IKS-6726 | IKS-6726-8PoE | IKS-6324 |
|  |  |  |  |  |
| Slot 1 Slot 2 Slot 3 Slot 4 | Slot 1 Slot 2 | Slot 1 Slot 2 Slot 3 | Slot 1 Slot 2 | Slot 1 |

| | | Interface Modules | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|-----------|-------------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|--------------|--------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------|---------------|---------------|-----------------|-----------------|------------------|------------------|----------------------|
| | | 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-7200-1MSC6TX | PM-7200-1MST6TX | PM-7200-1SSC6TX | PM-7200-1LSC6TX | PM-7200-8PoE | PM-7200-8SFP* | PM-7200-4M12 | PM-7200-2MTRJ | PM-7200-8MTRJ | PM-7200-4MST-FL | PM-7200-4TX-PTP | PM-7200-4MST-PTP | PM-7200-4MSC-PTP | PM-7200-1BNC2MST-PTP |
| PT-7828 PT-7728 | Slots 1-3 | - | - | - | - | - | - | - | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | - | - |
| | Slot 4 | ✓ | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| PT-7728-PTP | Slots 1-3 | - | - | - | - | - | - | - | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - |
| | Slot 4 | ✓ | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ✓ |
| PT-7710 | Slot 1 | - | - | - | - | - | - | - | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | - | - |
| | Slot 2 | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| IKS-6726 | Slots 1-2 | - | - | - | - | - | - | - | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | - | - | - | - | - | - | - |
| | Slot 3 | - | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| IKS-6726-8PoE | Slot 1 | - | - | - | - | - | - | - | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | - | - | - | - | - | - | - |
| | Slot 2 | - | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| IKS-6324 | Slot 1 | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

* If you are using an SFP-1FELLC module, the operating temperature is limited to -40 to 75°C (-40 to 167°F).

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

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

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

| Available Models | Port Interface | | | | | | | | | | |
|----------------------|----------------|-----|-----|--------------------------|--------------------------|----------------------------|---------------------------|----------------------------------|---|------------|---------------------------|
| | 10/100BaseT(X) | | | 100BaseFX | | | | | | 100BaseSFP | PPS output, BNC connector |
| | TP | PoE | M12 | Multi-mode, SC Connector | Multi-mode, ST Connector | Multi-mode, MTRJ Connector | Single-mode, SC Connector | Single-mode, SC Connector, 80 km | | | |
| 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 | – | – | – | |
| PM-7200-1MSC6TX | 6 | – | – | 1 | – | – | – | – | – | – | |
| PM-7200-1MST6TX | 6 | – | – | – | 1 | – | – | – | – | – | |
| PM-7200-1SSC6TX | 6 | – | – | – | – | – | 1 | – | – | – | |
| PM-7200-8SFP | – | – | – | – | – | – | – | – | 8 | – | |
| PM-7200-4M12 | – | – | 4 | – | – | – | – | – | – | – | |
| PM-7200-2MTRJ | – | – | – | – | – | 2 | – | – | – | – | |
| PM-7200-8MTRJ | – | – | – | – | – | 8 | – | – | – | – | |
| PM-7200-4MST-FL | – | – | – | – | 4 | – | – | – | – | – | |
| PM-7200-4TX-PTP | 4 | – | – | – | – | – | – | – | – | – | |
| PM-7200-4MST-PTP | – | – | – | – | 4 | – | – | – | – | – | |
| PM-7200-4MSC-PTP | – | – | – | 4 | – | – | – | – | – | – | |
| PM-7200-1BNC2MST-PTP | – | – | – | – | 2 | – | – | – | – | 1 | |
| PM-7200-8PoE | – | 8 | – | – | – | – | – | – | – | – | |

Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.



AutoCont IPC a.s.

Váš dodavatel průmyslových počítačů, komponent a speciálních průmyslových IT systémů.

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PRŮMYSLOVÉ POČÍTAČE

fanless embedded PC, do racku, ...



POČÍTAČE S DISPLEJEM

panelové PC, terminály, do vozidel, ...



AUTOMATIZACE A SBĚR DAT

převodníky, karty, moduly, switche, ...



PERIFERIE A KOMPONENTY

monitory, klávesnice, desky, skříně, ...



NOTEBOOKY A TABLETY

odolné, windows, android, IP65, ...



INFORMAČNÍ KIOSKY

interiérové, venkovní, ...



MEDICÍNSKÁ TECHNIKA

počítače, tablety, LCD, klávesnice, ...



SOFTWAREVÁ ŘEŠENÍ

pro výrobu, zaměstnance, kiosky, ...



PŘEJÍT DO E-SHOPU

eshop.autocont-ipc.cz



DOPRAVA ZDARMA

Doprava zdarma v ČR a SR při objednávce nad 10 000 Kč bez DPH nebo nad 400 EUR.



PRODLOUŽENÁ ZÁRUKA

Záruka 2 roky na vyráběné počítače s možností jejího prodloužení až na 5 let.



ODMĚNA ZA VĚRNOST

Pravidelní zákazníci u nás nakupují za nižší ceny. Výše slevy se odvíjí od realizovaného obrátu.



SERVIS ON-SITE A IN-TIME

K projektovým dodávkám nabízíme rozšířenou podporu a servis s garancí výměny zařízení do 48 hodin.