

IKS-6324 Series

22+2G-port Gigabit unmanaged Ethernet switches



- > Meets NEMA TS2, EN 50121-4, and DNV/GL/ABS/LR/NK certifications
- > Universal power supply range, 12/24/48 VDC or 110/220 VDC/VAC
- > -40 to 75°C operating temperature range



Introduction

The IKS-6324 industrial rackmount Ethernet switches are designed to meet the demands of industrial application networks such as traffic control systems (NEMA TS2), and maritime applications (DNV/GL/LR/ABS/NK). The IKS-6324 is a 24-port industrial 19" rackmount Ethernet switch series that provides a rugged and economical solution for your industrial Ethernet connections. Up to two fast Ethernet fiber optic ports and combo Gigabit Ethernet TP or fiber optic ports can be

chosen to make the construction of a reliable Ethernet network easy. A universal power supply range of 12/24/48 VDC or 110/220 VDC/VAC give users greater flexibility in choosing power inputs. The Ethernet switches comply with UL standards and support a wide operating temperature range of -40 to 75°C. All models undergo a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications.

Specifications

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 1000BaseX
- IEEE 802.3x for Flow Control

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

Switch Properties

MAC Table Size: 8 K

Packet Buffer Size: 2.5 Mbit

Interface

- Fiber Ports:** 100BaseFX (SC/ST connector) or 1000BaseSFP slots
- RJ45 Ports:** 10/100BaseT(X) or 10/100/1000BaseT(X) auto negotiation speed, Full/Half duplex mode and auto MDI/MDI-X connection
- LED Indicators:** STAT, PWR1, PWR2, FAULT, LNK/ACT, FDX/HDX, SPEED

Note: Slot 1 is for a 2-port PM-7200 Gigabit Ethernet combo module, or 1 or 2-port PM-7200 Fast Ethernet module. See below for details.

Power Requirements

Input Voltage: 12/24/48 VDC (9 to 60 V), or 110/220 VDC/VAC (88 to 300 VDC and 85 to 264 VAC)

Input Current: (with max. number of fiber ports installed)

- Max. 1.36 A @ 12 VDC
- Max. 0.68 A @ 24 VDC
- Max. 0.35 A @ 48 VDC
- Max. 0.17/0.11 A @ 110/220 VDC
- Max. 0.33/0.23 A @ 110/220 VAC

Overload Current Protection: Present

Connection: 10-contact terminal block

Reverse Polarity Protection: Present

Unmanaged Rackmount Ethernet Switch System, IKS-6324



Physical Characteristics

- Housing:** IP30 protection
- Dimensions:** 440 x 44 x 278.3 mm (17.32 x 1.73 x 10.96 in)
- Weight:** 4300 g
- Installation:** 19" rack mounting

Environmental Limits

- Operating Temperature:** -40 to 75°C (-40 to 167°F)
- Storage Temperature:** -40 to 85°C (-40 to 185°F)
- Ambient Relative Humidity:** 5 to 95% (non-condensing)

Standards and Certifications

- Safety:** EN 60950-1
 - EMI:** FCC Part 15 Subpart B Class A, EN 55022 Class A
 - Marine:** DNV, GL, LR, ABS, NK
 - Traffic Control:** NEMA TS2
 - Rail Traffic:** EN 50155, EN 50121-4
- Note: Please check Moxa's website for the most up-to-date certification status.*

MTBF (mean time between failures)

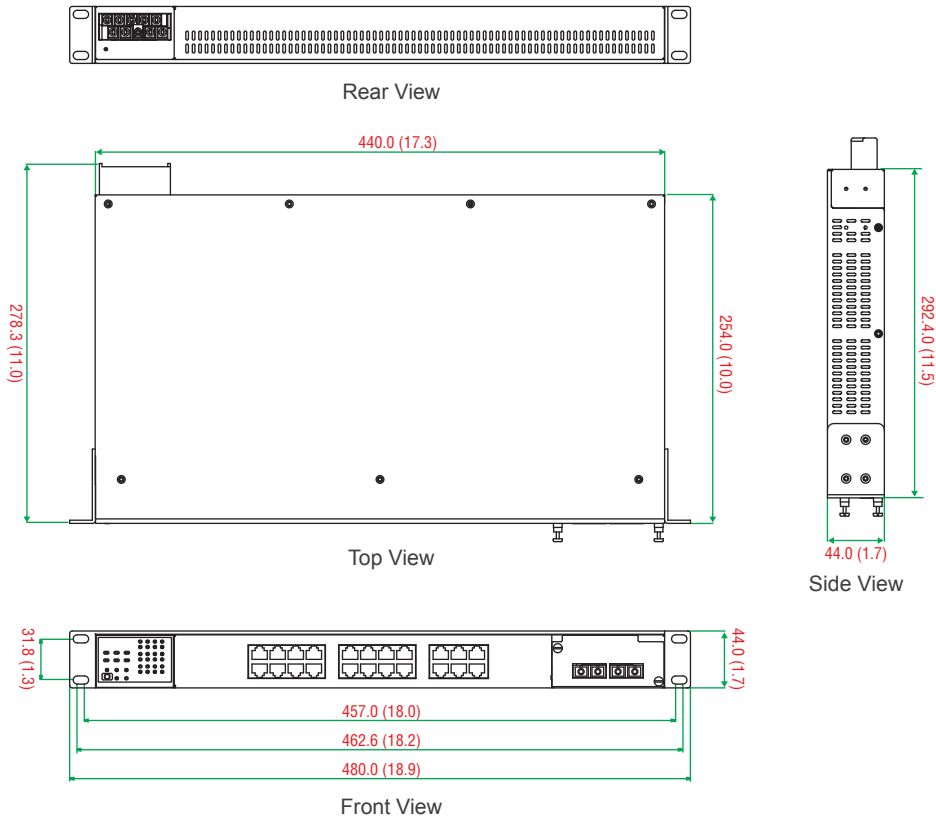
- Time:** 197,700 hrs
- Database:** Telcordia (Bellcore), GB

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

IKS-6324 with power supply



PM-7200 modules
(Gigabit or Fast Ethernet)

Note: The IKS-6324 Ethernet switch system is delivered without interface modules. See below to determine which PM-7200 interface modules are suitable for your application.

IKS-6324 Unmanaged Rackmount Ethernet Switch System

The IKS-6324 switch system consists of 2 unmanaged rackmount Ethernet switch systems with 22 10/100BaseT(X) ports, and 1 slot for Fast Ethernet or Gigabit Ethernet modules. A total of up to 24 or 22+2G ports can be installed, and the switch can be used in a temperature range from -40 to 75°C.

| Product Model | Power Supply | |
|-----------------|------------------------------|---|
| | LV: 12/24/48 VDC (9 to 60 V) | HV: 88 to 300 VDC and 85 to 264 VAC, isolated |
| IKS-6324-F-LV-T | 1 | - |
| IKS-6324-F-HV-T | - | 1 |

Gigabit/Fast Ethernet Module Compatibility Chart for the IKS-6324 Series

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

Package Checklist

- IKS-6324 switch
- Protective caps for unused ports
- 2 rackmount ears
- Hardware installation guide (printed)
- Warranty card

PM-7200 Series

Gigabit and Fast Ethernet 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

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

Fast Ethernet Interface Modules, PM-7200 Series



*See the SFP-1FE series Fast Ethernet information below to select modules for your system.

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)

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

Rackmount Ethernet Switch System and Interface Module Compatibility Chart

Modular Rackmount Ethernet Switch System:

PT-7828/PT-7728-PTP/
PT-7728

PT-7710

IKS-6324



| | IEEE 1588 Interface Modules | Interface Modules | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|-----------------------------|-------------------|------------------|------------------|----------------------|-----------------|-----------------|-------------------|-------------------|--------------|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|--------------|--------------|---------------|--------------|---------------|-----------------|---|
| | | PM-7200-4TX-PTP | PM-7200-4MSC-PTP | PM-7200-4MST-PTP | PM-7200-1BNC2MST-PTP | PM-7200-4GTXSFP | PM-7200-2GTXSFP | PM-7200-1MSC/2MSC | PM-7200-1MST/2MST | 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-7200-8SFP* | PM-7200-4M12 | PM-7200-8MTRJ | PM-7200-4MST-FL | |
| PT-7828 PT-7728 | Slots 1-3 | - | - | - | - | - | - | - | - | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Slot 4 | - | - | - | - | ✓ | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| PT-7728-PTP | Slots 1-3 | ✓ | ✓ | ✓ | - | - | - | - | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Slot 4 | - | - | - | ✓ | ✓ | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| PT-7710 | Slot 1 | - | - | - | - | - | - | - | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Slot 2 | - | - | - | - | ✓ | ✓ | ✓ | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| IKS-6324 | Slot 1 | - | - | - | - | ✓ | ✓ | ✓ | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Gigabit Ethernet Modules, 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 |

*The PM-7200-2G/4G series Gigabit Ethernet combo modules support 2 or 4 SFP slots.

Fast Ethernet Modules, PM-7200 Series

| Available Models | Port Interface | | | | | | | | | |
|-----------------------|----------------|-----|-----------------------------|-----------------------------|-----------------------------|----------------------------------|------------------------------|--|------------|------------------------------|
| | 10/100BaseT(X) | | 10BaseFL | 100BaseFX | | | | | 100BaseSFP | PPS output, BNC connector |
| | TP | M12 | Multi-mode, ST Connector | 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-7200-2MSC | – | – | – | 2 | – | – | – | – | – | – |
| PM-7200-2MST | – | – | – | – | 2 | – | – | – | – | – |
| PM-7200-2SSC | – | – | – | – | – | – | 2 | – | – | – |
| PM-7200-1MSC | – | – | – | 1 | – | – | – | – | – | – |
| PM-7200-1MST | – | – | – | – | 1 | – | – | – | – | – |
| PM-7200-8SFP | – | – | – | – | – | – | – | – | 8 | – |
| PM-7200-4M12 | – | 4 | – | – | – | – | – | – | – | – |
| PM-7200-8MTRJ | – | – | – | – | – | 8 | – | – | – | – |
| PM-7200-4MST-FL | – | – | 4 | – | – | – | – | – | – | – |
| PM-7200-4TX-PTP | 4 | – | – | – | – | – | – | – | – | – |
| PM-7200-4MSC-PTP | – | – | – | 4 | – | – | – | – | – | – |
| PM-7200-4MST-PTP | – | – | – | – | 4 | – | – | – | – | – |
| PM-7200-1BNC-2MST-PTP | – | – | – | – | 2 | – | – | – | – | 1 |

Package Checklist

- PM-7200 interface modules
- Warranty card