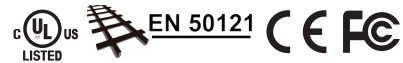


IKS-6728A-8PoE Series

24+4G-port Gigabit modular managed PoE+ Ethernet switches



- > 8 built-in PoE+ ports compliant with IEEE 802.3af/at
- > Up to 36 W output per PoE+ port
- > 3 kV LAN surge protection for extreme outdoor environments
- > PoE diagnostics for powered-device mode analysis
- > 4 Gigabit combo ports for high bandwidth communication
- > -40 to 75°C operating temperature range at 720 W full loading
- > Supports MXstudio for easy, visualized industrial network management
- > V-ON™ ensures millisecond-level multicast data and video network recovery



Introduction

The Moxa IKS-6728A-8PoE series of Gigabit modular managed PoE+ Ethernet switches are designed to meet the demands of mission critical applications for business and industry. The IKS-6728A-8PoE comes standard with up to 24 10/100BaseT(X), or PoE/PoE+, and 4 combo Gigabit Ethernet ports. The IKS-6728A-8PoE Ethernet switches provide up to 30 watts of power per PoE+ port in standard mode, and also support high power output of up to 36 watts for heavy-duty industrial PoE devices, such as weather-proof IP surveillance cameras with wipers/heaters, high-performance wireless access points, and rugged IP phones. IKS-6728A-8PoE Ethernet switches support two

types of power input sources: 48 VDC for PoE+ ports and system power, and 110/220 VAC for system power. These Ethernet switches also support a variety of management functions, including STP/RSTP, Turbo Ring, Turbo Chain, PoE power management, PoE device auto-checking, PoE power scheduling, PoE diagnostic, IGMP, VLAN, QoS, RMON, bandwidth management, and port mirroring. The IKS-6728A-8PoE series is designed especially for harsh outdoor applications with 3kV surge protection to ensure the uninterrupted reliability of PoE systems.

Features and Benefits

- Advanced PoE management functions: PoE output setting, PD failure check, PoE scheduling, and PoE diagnostics
- Command Line Interface (CLI) for quickly configuring major managed functions
- Software-based IEEE 1588 PTPv2 (Precision Time Protocol) for time synchronization of networks
- DHCP Option 82 for IP address assignment with different policies
- Supports EtherNet/IP, Modbus/TCP, and PROFINET protocols for device management and monitoring
- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches), RSTP/STP, and MSTP for network redundancy
- IGMP snooping and GMRP for filtering multicast traffic
- Port-based VLAN, IEEE 802.1Q VLAN, and GVRP to ease network planning
- QoS (IEEE 802.1p/1Q) and TOS/DiffServ to increase determinism
- IEEE 802.3ad, LACP for optimum bandwidth utilization
- TACACS+, IEEE 802.1X, SNMPv3, HTTPS, and SSH to enhance network security
- SNMPv1/v2c/v3 for different levels of network management
- RMON for efficient network monitoring and proactive capability
- Bandwidth management prevents unpredictable network status with "Lock port" to restrict access to authorized MAC addresses
- Port mirroring for online debugging
- Automatic warning by exception through email, relay output
- Automatic recovery of connected device's IP addresses
- Line-swap fast recovery
- Configurable by web browser, Telnet/serial console, CLI, Windows utility, and ABC-02-USB automatic backup configurator

Specifications

Technology

Standards:

- IEEE 802.3af/at for PoE/PoE+ output
- 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
- IEEE 802.1D-2004 for Spanning Tree Protocol
- IEEE 802.1w for Rapid STP
- IEEE 802.1s for Multiple Spanning Tree Protocol
- IEEE 802.1Q for VLAN Tagging
- IEEE 802.1p for Class of Service
- IEEE 802.1X for Authentication
- IEEE 802.3ad for Port Trunk with LACP

Software Features

Management: IPv4/IPv6, SNMP v1/v2c/v3, LLDP, Port Mirror, DDM, RMON, DHCP Server/Client, DHCP Option 66/67/82, BootP, TFTP, SMTP, RARP, Telnet, Syslog, SNMP Inform, Flow Control, Back Pressure Flow Control

Filter: 802.1Q VLAN, Port-Based VLAN, GVRP, IGMP v1/v2/v3, GMRP

Redundancy Protocols: STP, RSTP, MSTP, Turbo Ring v1/v2, Turbo Chain, Link Aggregation

Security: RADIUS, TACACS+, SSL, SSH, Broadcast Storm Protection, Port Lock

Time Management: SNTP, NTP Server/Client, IEEE 1588v2 PTP (software-based)

Industrial Protocols: EtherNet/IP, Modbus/TCP, PROFINET

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

Switch Properties

Priority Queues: 4

Max. Number of VLANs: 64

VLAN ID Range: VID 1 to 4094

IGMP Groups: 2048

MAC Table Size: 16 K

Packet Buffer Size: 12 Mbit

Jumbo Frame Size: 9.6 KB

Interface

Fast Ethernet: 8-port 10/100BaseT(X) or PoE+ 10/100BaseT(X) 2 modular slots for any 8-, or 6-port Interface Modules with 10/100BaseT(X), 100BaseFX (SC/ST connector), 100Base SFP, or PoE+ 10/100BaseT(X)

Note: See the IM-6700A datasheet for Fast Ethernet module and PoE+ module product information.

Gigabit Ethernet: 4-port 10/100/1000BaseT(X) or 100/1000Base SFP

Console Port: USB-serial console (Type B connector)

Storage Port: USB storage (Type A connector for ABC-02-USB)

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

Power Requirements

Input Voltage:

HV models:

- 110/220 VAC for switch system
- 48 VDC for PoE system (53 to 57 VDC is recommended for PoE+ devices)

48 VDC models:

- 48 VDC (46 to 57 VDC) for switch and PoE system

Operating Voltage:

HV models:

- 85 to 264 VAC for switch system
- 46 to 57 VDC for PoE system

48 VDC models:

- 46 to 57 VDC for Switch and PoE system

Modular Rackmount Ethernet Switch System, IKS-6728A-8PoE series

IKS-6728A-8PoE-4GTXSFP-HV-T
 IKS-6728A-8PoE-4GTXSFP-HV-HV-T
 IKS-6728A-8PoE-4GTXSFP-48-T
 IKS-6728A-8PoE-4GTXSFP-48-48-T



Input Current:

HV models:

- PWR input current (switch system):
 Max. 0.33 A @ 110 VAC
 Max. 0.24 A @ 230 VAC

- EPS input current (PoE system):
 Max. 0.29 A @ 48 VDC (excluding power consumption of PoE devices)

48 VDC models:

- PWR/EPS input current (switch and PoE systems):
 Max. 0.53 A @ 48 VDC (excluding power consumption of PoE devices)

Overload Current Protection: Present

Reverse Polarity Protection: Present

Physical Characteristics

IP Rating: IP30 protection

Dimensions: 440 x 44 x 280 mm (17.32 x 1.37 x 11.02 in)

Weight: IKS-6728A-8PoE-4GTXSFP-HV-HV-T: 4250 g (9.38 lb)

IKS-6728A-8PoE-4GTXSFP-HV-T: 4150 g (9.15 lb)

IKS-6728A-8PoE-4GTXSFP-48-48-T: 4250 g (9.38 lb)

IKS-6728A-8PoE-4GTXSFP-48-T: 4150 g (9.15 lb)

Installation: 19-inch 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: UL 60950-1, EN 60950-1

EMC: EN 55032/24

EMI: FCC Part 15 Subpart B Class A

EMS:

IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV

IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m

IEC 61000-4-4 EFT: Power: 2 kV; Signal: 3 kV

IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV

IEC 61000-4-6 CS: Signal: 10 V

IEC 61000-4-8

Rail Traffic: EN 50121-4

Shock: IEC 60068-2-27

Freefall: IEC 60068-2-32

Vibration: IEC 60068-2-6

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

MTBF (mean time between failures)

Time:

IKS-6728A-8PoE-4GTXSFP-48-T: 224,420 hrs

IKS-6728A-8PoE-4GTXSFP-48-48-T: 215,994 hrs

IKS-6728A-8PoE-4GTXSFP-HV-T: 159,173 hrs

IKS-6728A-8PoE-4GTXSFP-HV-HV-T: 120,731 hrs

Standard: Telcordia (Bellcore), GB

Warranty

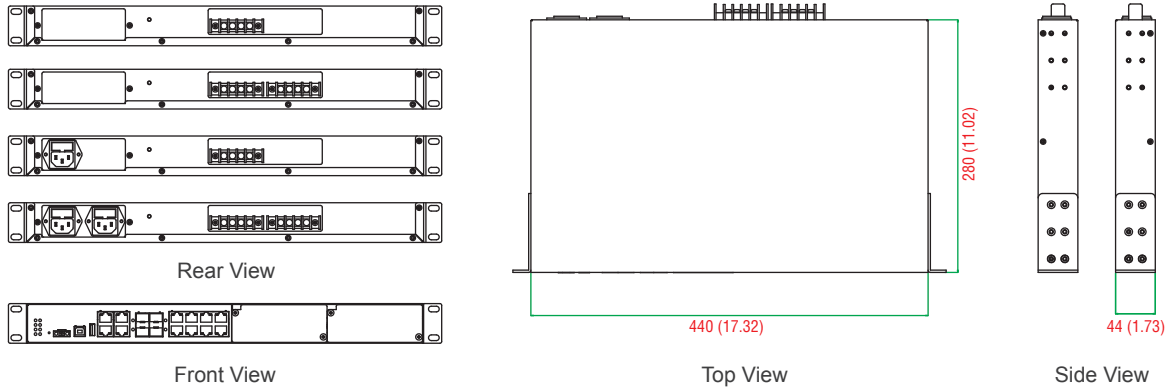
Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions

IKS-6728A-8PoE-4GTXSFP Series

Unit: mm (inch)



Ordering Information

Step 1: Select Ethernet switch system

Step 2: Select interface modules

IKS-6728A-8PoE with power supply



IM-6700A modules (PoE+/Fast Ethernet)

Note: The IKS-6728A-8PoE Ethernet switch system is delivered without interface modules. See the IM-6700A datasheet to determine which interface modules are suitable for your application.

IKS-6728A-8PoE Modular Rackmount Ethernet PoE+ Switch System

Modular managed rackmount Ethernet PoE+ switch with 8 built-in 10/100BaseT(X) PoE+ ports, 4 Gigabit Copper/SFP combo ports, and 2 slots for Fast Ethernet PoE+ modules. Support up to 24+4G ports with 8 built-in PoE+ ports and up to 24 PoE+ ports, -40 to 75°C operating temperature.

| Available Models | Port Interface | | | | Power Supply | | | |
|--------------------------------|------------------|---|--------------------------------|-----------|-------------------------|--------------------|-------------------------|--------------------|
| | Gigabit Ethernet | Fast Ethernet | | | Isolated Power Supply 1 | | Isolated Power Supply 2 | |
| | | 10/100/1000BaseT(X) or 100/1000BaseSFP* | 10/100BaseT(X) (or PoE+ ports) | 100BaseFX | 100BaseSFP* | HV (85 to 264 VAC) | 48 VDC (46 to 57 VDC) | HV (85 to 264 VAC) |
| IKS-6728A-8PoE Series | | | | | | | | |
| IKS-6728A-8PoE-4GTXSFP-HV-T | 4 | Up to 24 | Up to 12 | Up to 20 | 1 | – | – | – |
| IKS-6728A-8PoE-4GTXSFP-HV-HV-T | 4 | Up to 24 | Up to 12 | Up to 20 | 1 | – | 1 | – |
| IKS-6728A-8PoE-4GTXSFP-48-T | 4 | Up to 24 | Up to 12 | Up to 20 | – | 1 | – | – |
| IKS-6728A-8PoE-4GTXSFP-48-48-T | 4 | Up to 24 | Up to 12 | Up to 20 | – | 1 | – | 1 |

Note:

The IKS-6728A-8PoE series needs an external 48 VDC (46 to 57 VDC) power supply for PoE+ output

The IKS-6728A-8PoE series supports up to 24 PoE+ ports. 8 PoE+ ports are built in. Two IM-6700A-8PoE modules can add up to 16 more PoE+ ports.

The IKS-6728A-8PoE series supports 100BaseSFP and 100/1000BaseSFP slots. Please the SFP-1G and SFP-1FE datasheets for SFP module product information

Optional Accessories (can be purchased separately)

MXview: Moxa industrial network management software with 50, 100, 250, 500, 1000, or 2000 nodes

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

ABC-02-USB: Configuration backup and restoration tool for managed Ethernet switches, 0 to 60°C operating temperature

Power Cords: See Appendix A for details

Package Checklist

- IKS-6728A-8PoE switch
- USB Cable: CBL-USBA/B-100
- AC power cord (US type x1, EU type x1, HV model only)
- Protective caps for unused ports
- 2 rackmount ears
- Documentation and software CD
- Hardware installation guide (printed)
- Warranty card

IM-6700A Series

Fast Ethernet modules for IKS-6726A-2GTXSFP/IKS-6728A-4GTXSFP/IKS-6728A-8PoE-4GTXSFP series switches

Specifications

Fast Ethernet Interface Modules, IM-6700A series



IM-6700A-8TX



IM-6700A-8SFP*



IM-6700A-6SSC
IM-6700A-6MSC



IM-6700A-6MST



IM-6700A-2MSC4TX
IM-6700A-2SSC4TX



IM-6700A-2MST4TX



IM-6700A-4MSC2TX
IM-6700A-4SSC2TX



IM-6700A-4MST2TX



IM-6700A-8PoE**

*See the SFP-1FE datasheet for Fast Ethernet module product information.

**IM-6700A-8PoE is supported by the IKS-6728A-8PoE series

Interface

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

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

PoE Ports: 10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection, IEEE 802.3af/at standards, Mode A

Optical Fiber

| | | 100BaseFX | | |
|------------------|-------------------------|------------------|-------------------------|--------------|
| | | Multi-Mode | | Single-Mode |
| Fiber Cable Type | | OM1 | 50/125 μm 800 MHz*km | G.652 |
| | | Typical Distance | | 4 km |
| Wave-length | 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 |

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) > dispersion penalty (dB) + total link loss (dB).

Power Requirements

Power Consumption:

IM-6700A-8TX: 1.21 W
 IM-6700A-8PoE: 1.21 W (w/o PoE output)
 IM-6700A-8SFP: 0.92 W
 IM-6700A-6MSC/6MST/6SSC: 7.57 W
 IM-6700A-4MSC2TX/4MST2TX/4SSC2TX: 5.28 W
 IM-6700A-2MSC4TX/2MST4TX/2SSC4TX: 3.19 W

Physical Characteristics

Weight:

IM-6700A-8TX: 225 g (0.50 lb)
 IM-6700A-8PoE: 260 g (0.58 lb)
 IM-6700A-8SFP: 295 g (0.65 lb)
 IM-6700A-6MSC-6MSC/6MST/6SSC: 390 g (0.86 lb)
 IM-6700A-4MSC2TX-4MSC2TX/4MST2TX/4SSC2TX: 270 g (0.60 lb)
 IM-6700A-2MSC4TX-2MSC4TX/2MST4TX/2SSC4TX: 270 g (0.60 lb)

Reliability

MTBF (mean time between failures):

IM-6700A-8TX: 10,412,400 hrs
 IM-6700A-8SFP: 3,510,110 hrs
 IM-6700A-6MSC: 366,119 hrs
 IM-6700A-6MST: 365,741 hrs
 IM-6700A-6SSC: 365,741 hrs
 IM-6700A-4MSC2TX: 530,268 hrs
 IM-6700A-4MST2TX: 537,942 hrs
 IM-6700A-2MSC4TX: 1,031,180 hrs
 IM-6700A-2MST4TX: 1,031,180 hrs
 IM-6700A-2SSC4TX: 1,031,180 hrs
 IM-6700A-8PoE: 338,800 hrs

Database: Telcordia (Bellcore), GB

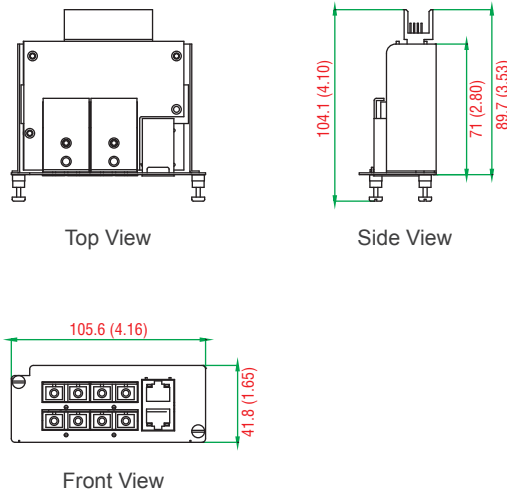
Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions

Unit: mm (inch)



Ordering Information

Compatible Rackmount Ethernet Switch Systems

Modular Rackmount Ethernet Switch System:

IKS-6726A-2GTXSFP



IKS-6728A-4GTXSFP



IKS-6728A-8PoE



Fast Ethernet Modules, IM-6700A Series

| Available Models | Port Interface | | | | |
|------------------|----------------|--------------------------|--------------------------|---------------------------|-------------|
| | 10/100BaseT(X) | 100BaseFX | | | 100BaseSFP* |
| | | Multi-Mode, SC Connector | Multi-Mode, ST Connector | Single-Mode, SC Connector | |
| IM-6700A-8TX | 8 | – | – | – | – |
| IM-6700A-8SFP | – | – | – | – | 8 |
| IM-6700A-6MSC | – | 6 | – | – | – |
| IM-6700A-6MST | – | – | 6 | – | – |
| IM-6700A-6SSC | – | – | – | 6 | – |
| IM-6700A-4MSC2TX | 2 | 4 | – | – | – |
| IM-6700A-4MST2TX | 2 | – | 4 | – | – |
| IM-6700A-4SSC2TX | 2 | – | – | 4 | – |
| IM-6700A-2MSC4TX | 4 | 2 | – | – | – |
| IM-6700A-2MST4TX | 4 | – | 2 | – | – |
| IM-6700A-2SSC4TX | 4 | – | – | 2 | – |
| IM-6700A-8PoE | 8 (PoE+ ports) | – | – | – | – |

Package Checklist

- IM-6700A series interface module
- Warranty card

SFP-1G Series

1-port Gigabit Ethernet SFP modules



- > Digital Diagnostic Monitor Function
- > -40 to 85°C operating temperature range (T models)
- > IEEE 802.3z compliant
- > Differential LVPECL inputs and outputs
- > TTL signal detect indicator
- > Hot pluggable LC duplex connector
- > Class 1 laser product, complies with EN 60825-1



Specifications

Interface

Ethernet Ports: 1

Connectors: Duplex LC Connector or Simplex LC Connector (WDM-type only)

Optical Fiber

| | | Gigabit Ethernet SFP | | | | | | | | | |
|------------------|-------------------------|----------------------|-------|--------------|------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | SFP-SX | | SFP-LSX | | SFP-LX | SFP-LH | SFP-LHX | SFP-ZX | SFP-EZX | SFP-EZX-120 |
| Transceiver Type | | Multi-Mode | | Multi-Mode | | Single-Mode | Single-Mode | Single-Mode | Single-Mode | Single-Mode | Single-Mode |
| Fiber Cable Type | | OM1 | OM2 | OM2 | OM1 | G.652 | G.652 | G.652 | G.652 | G.652 | G.652 |
| Typical Distance | | 300 m | 550 m | 1 km | 2 km | 10 km | 30 km | 40 km | 80 km | 110 km | 120 km |
| Wave-length | Typical (nm) | 850 | | 1310 | | 1310 | 1310 | 1310 | 1550 | 1550 | 1550 |
| | TX Range (nm) | 830 to 860 | | 1270 to 1355 | | 1280 to 1355 | 1280 to 1355 | 1280 to 1340 | 1530 to 1570 | 1530 to 1570 | 1530 to 1570 |
| | RX Range (nm) | 770 to 860 | | 1260 to 1610 | | 1260 to 1610 | 1260 to 1610 | 1260 to 1610 | 1260 to 1610 | 1260 to 1610 | 1100 to 1600 |
| Optical Power | TX Range (dBm) | -4 to -9.5 | | -1 to -9 | | -3 to -9 | -3 to -8 | +3 to -4 | +5 to 0 | +5 to 0 | +3 to -2 |
| | RX Range (dBm) | 0 to -18 | | -1 to -19 | | -3 to -21 | -3 to -23 | -1 to -24 | -1 to -24 | -9 to -30 | -8 to -33 |
| | Link Budget (dB) | 8.5 | | 10 | | 12 | 15 | 20 | 24 | 30 | 31 |
| | Dispersion Penalty (dB) | 4.3 | 3.6 | 5 | 5 | 1 | 1 | 1 | 1 | 1 | 2 |

Note: When connecting the SFP-LHX, ZX, EZX, or EZX-120, we recommended using an attenuator to prevent the transceiver from being damaged by excessive optical power.

| | | WDM Gigabit Ethernet SFP | | | | | | |
|------------------|-------------------------|--------------------------|------------------|------------------|------------------|------------------|------------------|--------------|
| | | SFP-10A | | SFP-10B | SFP-20A | SFP-20B | SFP-40A | SFP-40B |
| Transceiver Type | | Single-Mode | | Single-Mode | | Single-Mode | | |
| Fiber Cable Type | | G.652 | | G.652 | | G.652 | | |
| Typical Distance | | 10 km | | 20 km | | 40 km | | |
| Wave-length | Typical (nm) | TX 1310, RX 1550 | TX 1550, RX 1310 | TX 1310, RX 1550 | TX 1550, RX 1310 | TX 1310, RX 1550 | TX 1550, RX 1310 | |
| | TX Range (nm) | 1270 to 1355 | | 1530 to 1570 | | 1290 to 1330 | | 1530 to 1570 |
| | RX Range (nm) | 1480 to 1580 | | 1260 to 1360 | | 1480 to 1580 | | 1260 to 1360 |
| Optical Power | TX Range (dBm) | -3 to -9 | | -2 to -8 | | +2 to -3 | | |
| | RX Range (dBm) | -3 to -21 | | -2 to -23 | | -1 to -23 | | |
| | Link Budget (dB) | 12 | | 15 | | 20 | | |
| | Dispersion Penalty (dB) | 2 | | 3 | | 1 | | |

Note: WDM-type SFP modules must be used in pairs (e.g., SFP-1G10ALC and SFP-1G10BLC)

Note: When connecting the SFP-40A and 40B, we recommend using an attenuator to prevent damage caused by excessive optical power.

Typical Distance: To reach the typical distance of specified fiber transceiver, please refer to formula: Link budget(dB) > dispersion penalty(dB) + total link loss(dB).

Power Requirements

Power Consumption: Max. 1 W

Environmental Limits

Operating Temperature:

Standard Models: 0 to 60°C (32 to 140°F)

Wide Temp. Models: -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)

Standards and Certifications

Safety: CE, FCC, TÜV (EN 60825), UL 60950-1

Marine: DNV, GL

Warranty

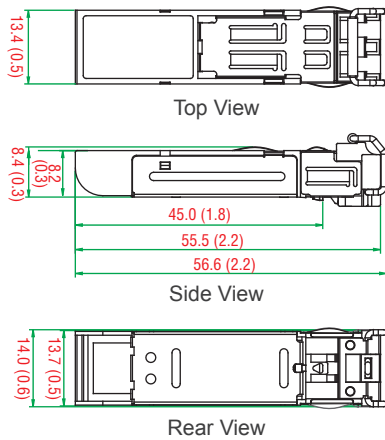
Warranty Period: 5 years

Details: See www.moxa.com/warranty

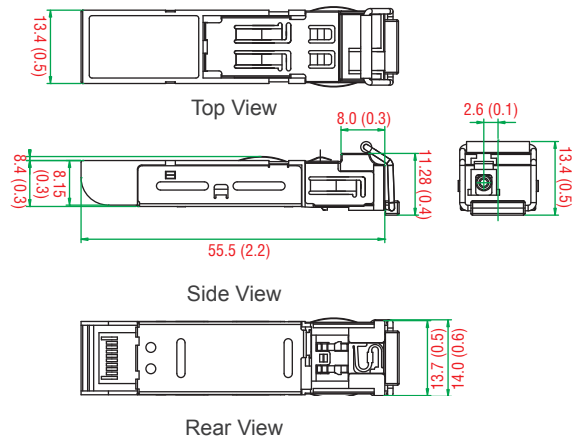
Dimensions

Unit: mm (inch)

SFP-1G Series



SFP-1G Series (WDM Type)



Ordering Information

| Gigabit Ethernet SFP Models | | | | WDM Gigabit Ethernet SFP Models | | | |
|---|---------------------------------------|-----------------|------------------|----------------------------------|--------------------------------|-----------------|------------------|
| Standard Temperature Models (0 to 60°C) | Wide Temperature Models (-40 to 85°C) | Tranceiver Type | Typical Distance | Standard Temperature (0 to 60°C) | Wide Temperature (-40 to 85°C) | Tranceiver Type | Typical Distance |
| SFP-1GSXLC | SFP-1GSXLC-T* | Multi-Mode | 300/550 m | SFP-1G10ALC | SFP-1G10ALC-T | Single-Mode | 10 km |
| SFP-1GLSXLC | SFP-1GLSXLC-T | Multi-Mode | 1/2 km | SFP-1G10BLC | SFP-1G10BLC-T | Single-Mode | 10 km |
| SFP-1GLXLC | SFP-1GLXLC-T | Single-Mode | 10 km | SFP-1G20ALC | SFP-1G20ALC-T | Single-Mode | 20 km |
| SFP-1GLHLC | SFP-1GLHLC-T | Single-Mode | 30 km | SFP-1G20BLC | SFP-1G20BLC-T | Single-Mode | 20 km |
| SFP-1GLHXL | SFP-1GLHXL-T | Single-Mode | 40 km | SFP-1G40ALC | SFP-1G40ALC-T | Single-Mode | 40 km |
| SFP-1GZXLC | SFP-1GZXLC-T | Single-Mode | 80 km | SFP-1G40BLC | SFP-1G40BLC-T | Single-Mode | 40 km |
| SFP-1GEZXLC | - | Single-Mode | 110 km | - | - | - | - |
| SFP-1GEZXLC-120 | - | Single-Mode | 120 km | - | - | - | - |

*SFP-1GSXLC-T: -20 to 75°C operating temperature

Package Checklist

- SFP-1G module
- Warranty card

SFP-1FE Series

1-port Fast Ethernet SFP modules



- > Digital Diagnostic Monitor Function
- > IEEE 802.3u compliant
- > Differential PECL inputs and outputs
- > TTL signal detect indicator
- > Hot pluggable LC duplex connector
- > Class 1 laser product; complies with EN 60825-1



Specifications

Interface

Ethernet Ports: 1

Connectors: Duplex LC Connector

Optical Fiber

| | Fast Ethernet SFP | | | |
|------------------|-------------------------|--------------------------|--------------|--------------|
| | SFP-M | | SFP-S | SFP-L |
| Transceiver Type | Multi-Mode | | Single-Mode | |
| Fiber Cable Type | OM1/OM2 | 62.5/125, 50/125 μ m | G.652 | G.652 |
| | | 800 MHz* km | | |
| Typical Distance | 2 km | 4 km | 40 km | 80 km |
| Wave-length | Typical (nm) | 1310 | 1310 | 1550 |
| | TX Range (nm) | 1280 to 1340 | 1280 to 1340 | 1530 to 1570 |
| | RX Range (nm) | 1100 to 1650 | 1100 to 1600 | 1100 to 1600 |
| Optical Power | TX Range (dBm) | -8 to -18 | 0 to -5 | 0 to -5 |
| | RX Range (dBm) | -3 to -32 | -3 to -34 | -3 to -34 |
| | Link Budget (dB) | 14 | 29 | 29 |
| | Dispersion Penalty (dB) | 2 | 3 | 1 |

Note: When connecting the SFP-S or L, we recommend using an attenuator to prevent damage caused by excessive optical power.

Power Requirements

Power Consumption: Max. 1 W

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)

Standards and Certifications

Safety: CE, FCC, TÜV, UL 60950-1

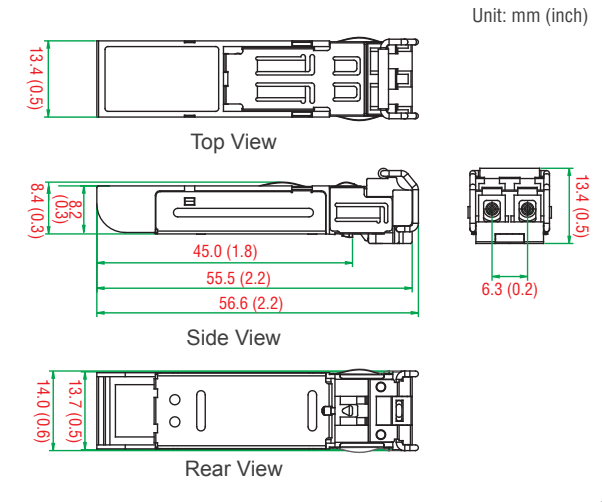
Marine: DNV, GL

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions



Ordering Information

| Available Models | Port Interface | | |
|------------------|---|---|---|
| | 100BaseFX, Multi-Mode, LC Connector, 4 km | 100BaseFX, Single-Mode, LC Connector, 40 km | 100BaseFX, Single-Mode, LC Connector, 80 km |
| SFP-1FEMLC-T | 1 | - | - |
| SFP-1FESLC-T | - | 1 | - |
| SFP-1FELLC-T | - | - | 1 |

Package Checklist

- SFP-1FE module
- Warranty card