

IM Module Series

2-port Gigabit Ethernet and 4-port Fast Ethernet modules for the EDS-728/828 Series



Features and Benefits

- Modular design lets you choose from a variety of media combinations
- Modular design makes port expansion easy

Certifications



Introduction

The IM Module Series has been designed for Moxa's EDS-728 Series and EDS-828 Series modular switches. The IM Module Series includes 6 Fast Ethernet modules, each with 4 ports supporting the TX, MSC, SSC, and MST media types. In addition, the IM Module Series includes 2 Gigabit Ethernet modules, one with 2 copper ports, and one with 2 fiber ports. Multiple modules can be used with the EDS-728 and EDS-828 switches, allowing each switch to support up to 24 Fast Ethernet ports and 4 Gigabit Ethernet ports.

Specifications

Ethernet Interface	
10/100/1000BaseT(X) Ports (RJ45 connector)	IM-2GTX: 2, Auto negotiation speed, Auto MDI/MDI-X connection
1000BaseSFP Slots	IM-2GSFP: 2
10/100BaseT(X) Ports (RJ45 connector)	IM-2MSC/2TX, IM-2MST/2TX, IM-2SSC/2TX: 2 IM-1LSC/3TX: 3, IM-4TX: 4 Supported functions: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	IM-2MSC/2TX: 2 IM-4MSC: 4
100BaseFX Ports (multi-mode ST connector)	IM-2MST/2TX: 2 IM-4MST: 4
100BaseFX Ports (single-mode SC connector)	IM-2SSC/2TX: 2 IM-4SSC: 4

100BaseFX Ports, Single-Mode SC Connector, 80 km	IM-1LSC/3TX: 1					
Optical Fiber			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
	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).					

LED Interface

LED Indicators	Fast Ethernet Modules: PWR, P1, P2, P3, P4 port status Gigabit Modules: Port status
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Power Parameters

Power Consumption	IM-1LSC/3TX: 2.12 W (max.) IM-2GSFP: 2.96 W (max.) IM-2GTX: 3.04 W (max.) IM-2MSC/2TX, IM-2MST/2TX, IM-2SSC/2TX: 2.06 W (max.) IM-4MSC, IM-4MST, IM-4SSC: 6.6 W (max.) IM-4TX: 1.29 W (max.)
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Physical Characteristics

Housing	IP30
Dimensions	Fast Ethernet Modules: 40 x 127.8 x 100 mm (1.57 x 5.03 x 3.94 in) Gigabit Modules: 24 x 65.9 x 101.1 mm (0.94 x 2.59 x 3.98 in)
Weight	IM-1LSC/3TX: 235 g (0.52 lb) IM-2GSFP: 150 g (0.33 lb) IM-2GTX: 148 g (0.33 lb) IM-2MSC/2TX, IM-2SSC/2TX: 245 g (0.54 lb) IM-2MST/2TX, IM-4MSC: 250 g (0.56 lb) IM-4MST, IM-4SSC: 270 g (0.6 lb) IM-4TX: 215 g (0.48 lb)

MTBF

Standards	Telcordia (Bellcore), GB
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Warranty

Warranty Period	5 years
Details	See www.moxa.com/warranty

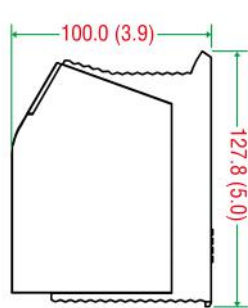
Package Contents

Device	1 x IM Module Series module
Documentation	1 x warranty card

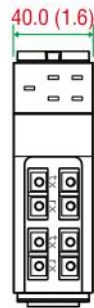
Dimensions

Fast Ethernet Interface Modules

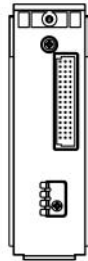
Unit: mm (inch)



Side View



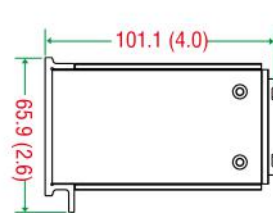
Front View



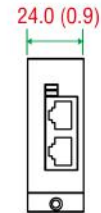
Rear View

Gigabit Ethernet Interface Modules

Unit: mm (inch)



Side View



Front View

Ordering Information

Model Name	10/100/1000BaseT(X) Ports RJ45 Connector	1000Base SFP	10/100BaseT(X) Ports RJ45 Connector	100BaseFX Ports Multi-Mode SC Connector	100BaseFX Ports Multi-Mode ST Connector	100BaseFX Ports Single-Mode SC Connector	100BaseFX Ports Single-Mode SC Connector, 80 km
IM-2GTX	2	–	–	–	–	–	–
IM-2GSFP	–	2	–	–	–	–	–
IM-4TX	–	–	4	–	–	–	–
IM-4MSC	–	–	–	4	–	–	–
IM-4MST	–	–	–	–	4	–	–
IM-2MSC/2TX	–	–	2	2	–	–	–
IM-2MST/2TX	–	–	2	–	2	–	–
IM-4SSC	–	–	–	–	–	4	–
IM-2SSC/2TX	–	–	2	–	–	2	–
IM-1LSC/3TX	–	–	3	–	–	–	1

Accessories (sold separately)

SFP Modules

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

