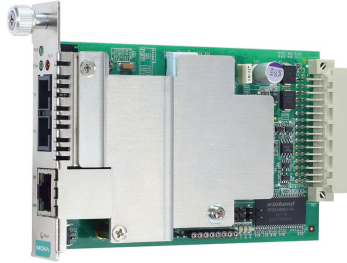


CSM-400 Series

10/100BaseT(X) to 100BaseFX slide-in modules for the NRack System™



- > LFP (Link Fault Pass-through) and FEF (Far End Fault)
- > Supports Store-and-Forward mode and Pass Through mode
- > Auto Negotiation
- > Supports IEEE 802.3AH OAM protocol
- > Plug and Play
- > Hot-swap
- > IP-based remote management
- > Supports WDM type modules



Introduction

The CSM-400 modules are slide-in Ethernet-to-fiber managed media converters for the NRack System™. The modules provide media conversion from 10/100BaseT(X) to 100BaseFX (with SC/ST connectors), and can be installed in any NRack System™ chassis. The

CSM-400 modules support LFP and FEF for easily tracing network link failures, and support store-and-forward and pass through modes, 802.3AH OAM for remote management and monitoring, as well as WDM-type fiber modules to reduce fiber cable cost.

Specifications

Technology

Standards:

IEEE 802.3 for 10BaseT

IEEE 802.3u for 100BaseT(X), 100BaseFX

Interface

RJ45 Ports: 10/100BaseT(X)

Fiber Ports: 100BaseFX (SC/ST connectors)

LED Indicators: PWR, Fiber Link, 10/100M (TP port)

Optical Fiber

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 μm 800 MHz*km	G.652
Typical Distance		4 km	5 km	40 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

		100BaseFX WDM-A	100BaseFX WDM-A
		Single-Mode	Single-Mode
Fiber Cable Type		G.652	G.652
Typical Distance		20 km	20 km
Wave-length	Typical (nm)	1310/1550 nm	1550/1310 nm
	TX Range (nm)	1280 to 1340	1480 to 1600
	RX Range (nm)	1480 to 1600	1280 to 1340
Optical Power	TX Range (dBm)	-5 to -15	-5 to -15
	RX Range (dBm)	-3 to -32	-3 to -32
	Link Budget (dB)	17	17
	Dispersion Penalty (dB)	1	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).

Physical Characteristics

Dimensions: 86.8 x 124.3 x 21 mm (3.42 x 4.89 x 0.83 in)

Weight:

Product only:

CSM-400-1213/1214/1218: 115 g (0.25 lb)

CSM-400-1224/1225: 125 g (0.28 lb)

Packaged:

CSM-400-1213/1214/1218: 170 g (0.37 lb)

CSM-400-1224/1225: 180 g (0.40 lb)

Environmental Limits

Operating Temperature:

Standard Models: -20 to 55°C (-4 to 131°F)

Wide Temp. Models: -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)

Power Requirements

Input Voltage: 12 VDC

Input Current: 220 mA @ 12 VDC max.

Standards and Certifications

Safety: UL 60950-1

EMC: EN 55032/24

EMI: CISPR 32, FCC Part 15B Class A

EMS:

EN 61000-4-2 (ESD): Contact: 4 kV; Air: 8 kV

EN 61000-4-3 (RS): 80 MHz to 1 GHz: 3 V/m

EN 61000-4-4 (EFT): Power: 1 kV; Signal: 0.5 kV

EN 61000-4-5 (Surge): Power: 1 kV; Signal: 0.5 kV

EN 61000-4-6 (CS): 150 kHz to 80 MHz: 3 V/m

EN 61000-4-8 (PFMF)

EN 61000-4-11

Freefall: IEC 60068-2-32

MTBF (mean time between failures)

Time: 1,454,560 hrs

Standard: Telcordia (Bellcore), GB

Warranty

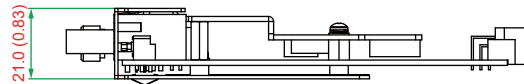
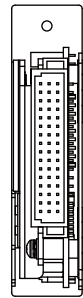
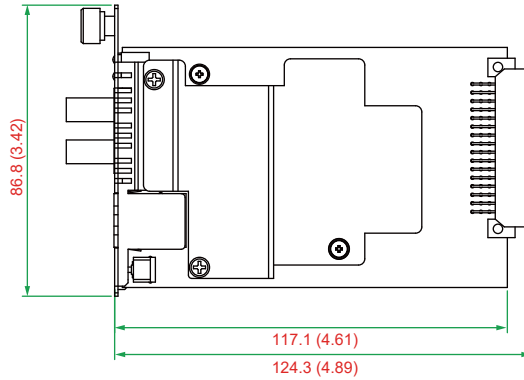
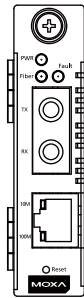
Warranty Period: 5 years

Details: See www.moxa.com/warranty

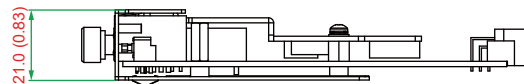
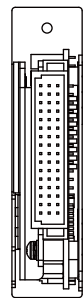
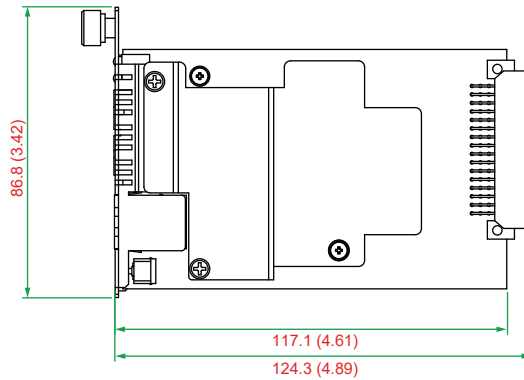
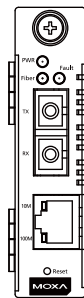
Dimensions

Unit: mm (inch)

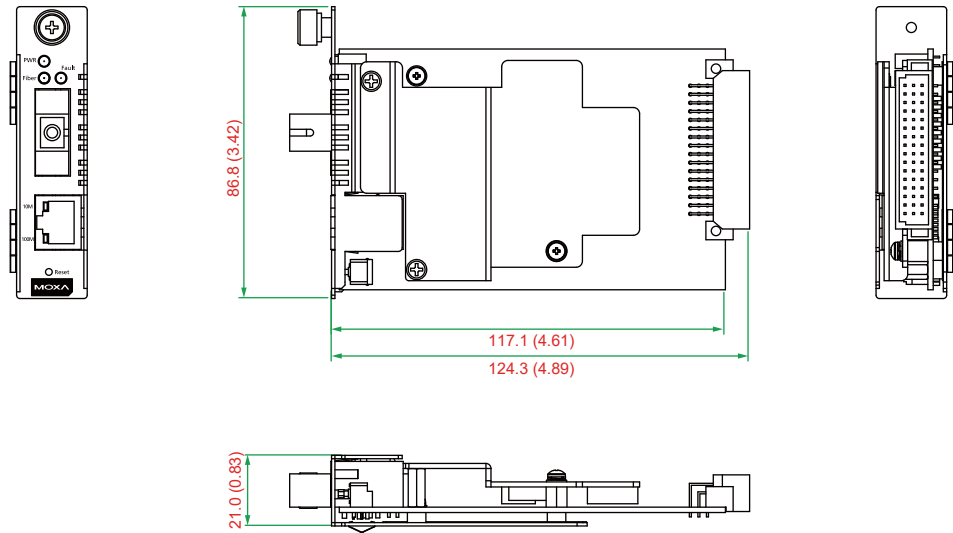
CSM-400-1213



**CSM-400-1214
CSM-400-1218**



CSM-400-1224
CSM-400-1225



Ordering Information

Available Models

CSM-400-1213: 10/100BaseT(X) to 100BaseFX slide-in management module converter, multi-mode ST connector, -20 to 55°C

CSM-400-1213-T: 10/100BaseT(X) to 100BaseFX slide-in management module converter, multi-mode ST connector, -40 to 75°C

CSM-400-1214: 10/100BaseT(X) to 100BaseFX slide-in management module converter, multi-mode SC connector, -20 to 55°C

CSM-400-1214-T: 10/100BaseT(X) to 100BaseFX slide-in management module converter, multi-mode SC connector, -40 to 75°C

CSM-400-1218: 10/100BaseT(X) to 100BaseFX slide-in management module converter, single-mode SC connector, -20 to 55°C

CSM-400-1218-T: 10/100BaseT(X) to 100BaseFX slide-in management module converter, single-mode SC connector, -40 to 75°C

CSM-400-1224: 10/100BaseT(X) to 100BaseFX slide-in management module converter, WDM-A single-mode SC connector, -20 to 55°C

CSM-400-1224-T: 10/100BaseT(X) to 100BaseFX slide-in management module converter, WDM-A single-mode SC connector, -40 to 75°C

CSM-400-1225: 10/100BaseT(X) to 100BaseFX slide-in management module converter, WDM-B single-mode SC connector, -20 to 55°C

CSM-400-1225-T: 10/100BaseT(X) to 100BaseFX slide-in management module converter, WDM-B single-mode SC connector, -40 to 75°C

Package Checklist

- 1 CSM-400 media converter
- Quick installation guide (printed)
- Warranty card