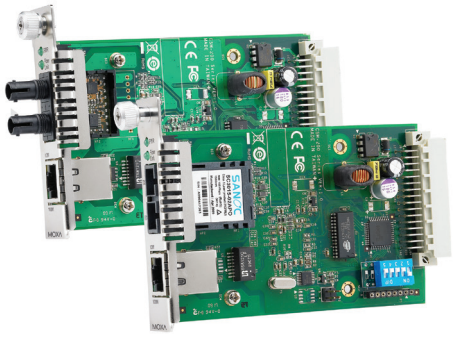
CSM-200 Series

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



- LFP (Link Fault Pass-through) and FEF (Far End Fault)
- Two different operation modes
  - Store-and-Forward
  - Pass Through
- Auto Negotiation
- Plug and Play
- Hot-swap

Introduction

The CSM-200/400 modules are slide-in Ethernet-to-fiber media converters for the NRack System™. The modules provide media conversion from 10/100BaseT(X) to 100BaseFX (SC/ST connectors), and can be installed in any NRack System™ chassis.

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)
DIP Switches:

DIP	Function	ON	OFF
1	Auto Negotiation	Enable	Disable
2	Force TP Speed	100 Mbps	10 Mbps
3	Force TP Duplex	Full Duplex	Half Duplex
4	Link Fault Pass Through	Enable	Disable
5	Operating Mode	Store-and-Forward	Pass Through

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

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-200-1213: 115 g (0.25 lb)
CSM-200-1214/1218: 125 g (0.28 lb)
Packaged:
CSM-200-1213: 170 g (0.37 lb)
CSM-200-1214/1218: 180 g (0.40 lb)

Environmental Limits

Operating Temperature: 0 to 55°C (32 to 131°F)
Storage Temperature: -20 to 75°C (-4 to 167°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Power Requirements

Input Voltage: 12 VDC
Input Current: 180 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

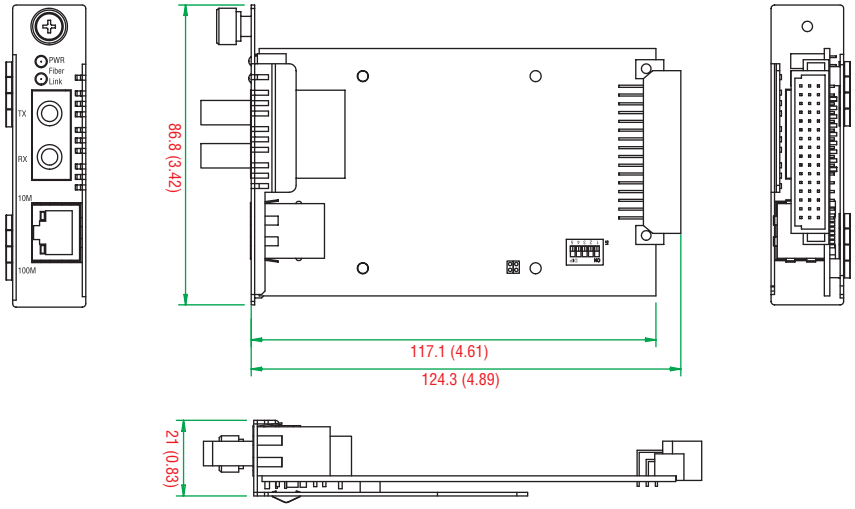
Warranty

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

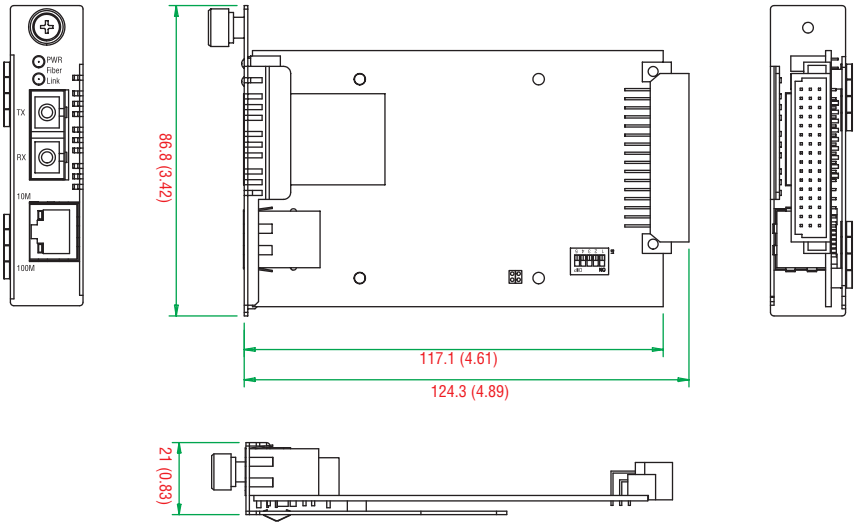
Dimensions

Unit: mm (inch)

CSM-200-1213



CSM-200-1214/CSM-200-1218



Ordering Information

Available Models

CSM-200-1213: 10/100BaseT(X) to 100BaseFX slide-in module media converter, multi-mode ST connector
CSM-200-1214: 10/100BaseT(X) to 100BaseFX slide-in module media converter, multi-mode SC connector
CSM-200-1218: 10/100BaseT(X) to 100BaseFX slide-in module media converter, single-mode SC connector

Package Checklist

- 1 CSM-200 media converter
- Quick installation guide (printed)
- Warranty card