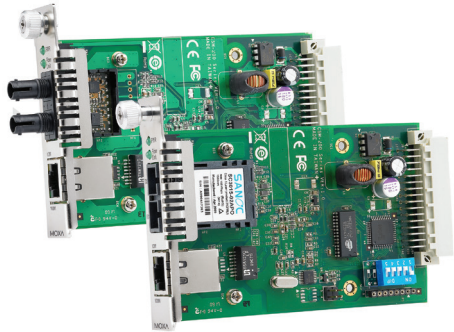


CSM-200 Series

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 |

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

Optical Fiber

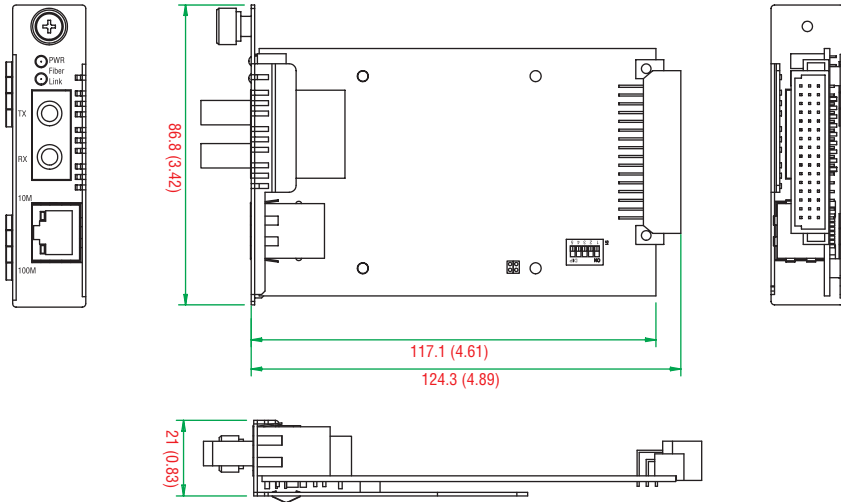
| Fiber Cable Type | 100BaseFX | | |
|------------------|-------------------------|-------------------------|--------------|
| | OM1 | Multi-Mode | Single-Mode |
| | | 50/125 μm 800 MHz*km | G.652 |
| Typical Distance | 4 km | 5 km | 40 km |
| Wave-length | Typical (nm) | 1300 | 1310 |
| | TX Range (nm) | 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).

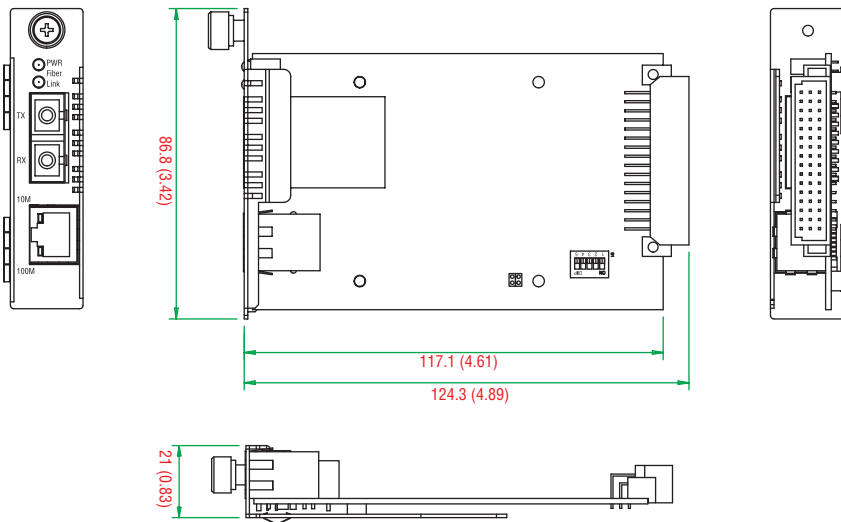
Dimensions

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