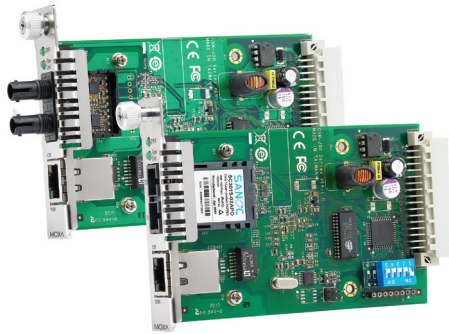


# CSM-200 Series

**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
- > Supports TS-1000 Version 2 protocol
- > Supports Turbo Ring V2
- > Plug and Play
- > Hot-swap



## Introduction

The CSM-200 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
Wavelength	1300 nm	1310 nm
Max. TX	-10 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km <sup>a</sup> 4 km <sup>b</sup>	40 km <sup>c</sup>
Saturation	-6 dBm	-3 dBm

- a. 50/125 μm, 800 MHz\*km fiber optic cable
- b. 62.5/125 μm, 500 MHz\*km fiber optic cable
- c. 9/125 μm, 3.5 PS/(nm\*km) fiber optic cable

### Physical Characteristics

**Housing:** SPCC

**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 60°C (32 to 140°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

**Power Consumption:** 180 mA @ 12 VDC

#### Standards and Certifications

**Safety:** UL 60950-1

**EMC:** CE, FCC

**EMI:** FCC Part 15 Subpart B Class A, EN 55022 Class A

**EMS:**

EN 61000-4-2 (ESD) Level 3,

EN 61000-4-3 (RS) Level 3,

EN 61000-4-4 (EFT) Level 2,

EN 61000-4-5 (Surge) Level 2,

EN 61000-4-6 (CS) Level 2,

EN 61000-4-8 (PFMF) Level 3

**Freefall:** IEC 60068-2-32

**MTBF** (mean time between failures)

**Time:** 1,454,560 hrs

**Database:** Telcordia (Bellcore), GB

#### Warranty

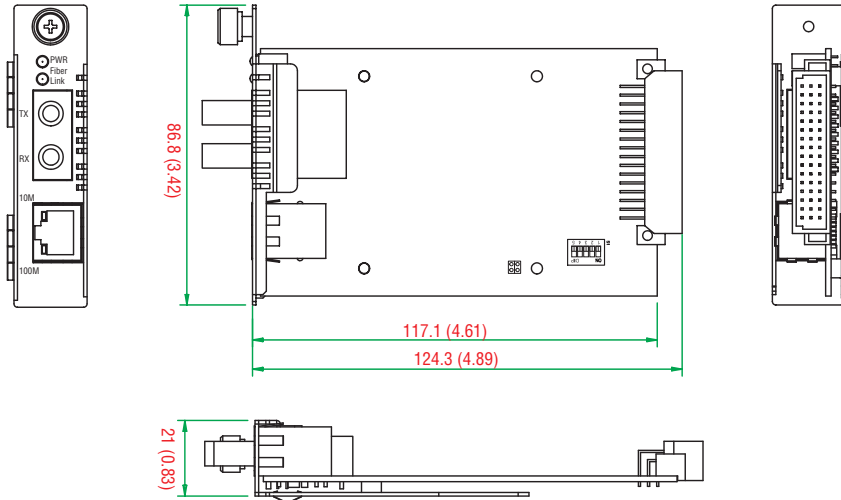
**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

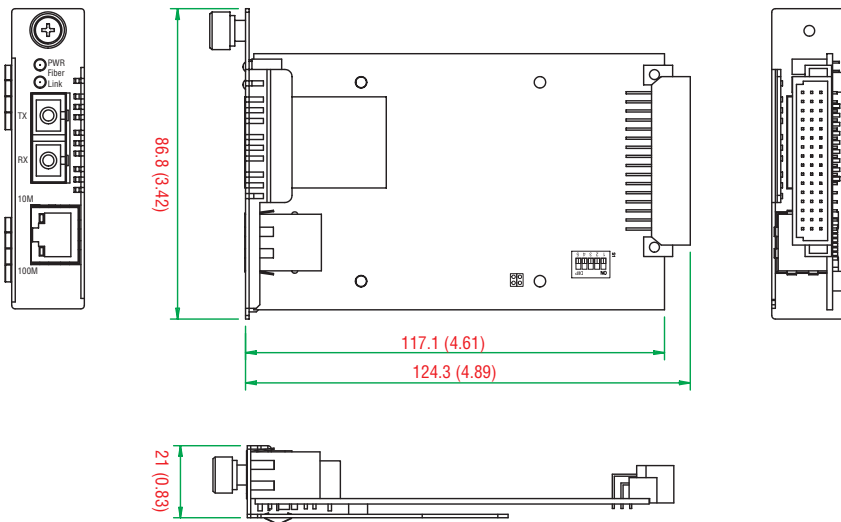
**Dimensions**

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