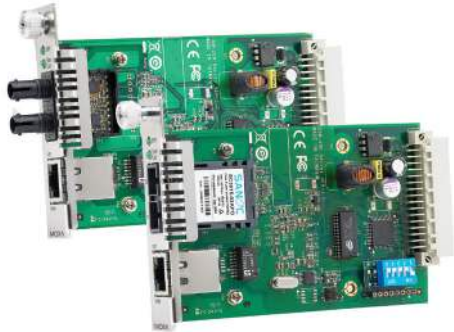


# CSM-200 Series

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

### Optical Fiber

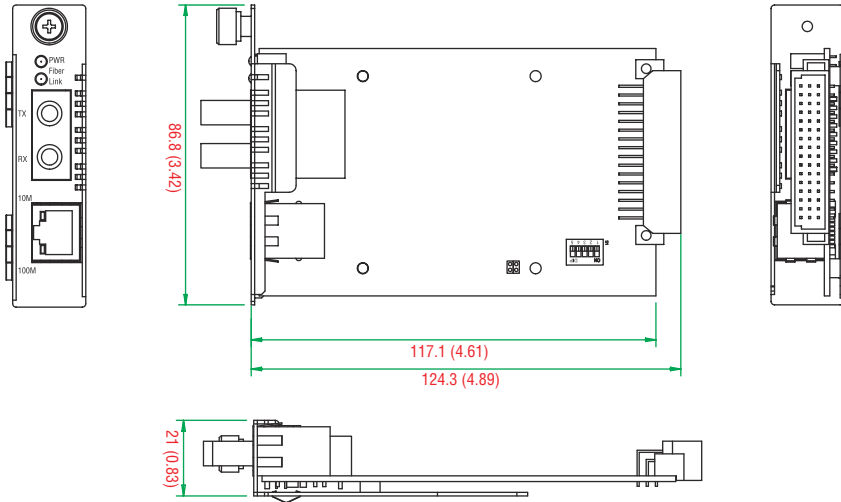
Fiber Cable Type	100BaseFX		
	OM1	Multi-Mode	Single-Mode
		50/125 μm 800 MHz*km	G.652
Typical Distance	4 km	5 km	40 km
Wave-length	Typical (nm)	1300	1310
	TX Range (nm)	1260 to 1360	1280 to 1340
	RX Range (nm)	1100 to 1600	1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20	0 to -5
	RX Range (dBm)	-3 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).

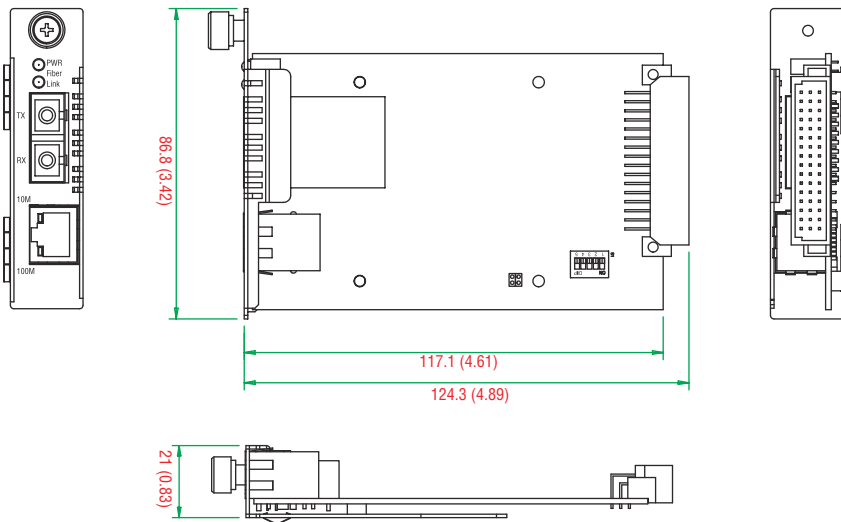
**Dimensions**

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