# **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 um. 800 MHz\*km fiber optic cable b. 62.5/125 µm, 500 MHz\*km fiber optic cable

c.  $9/125 \mu m$ , 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)

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)

Operating Humidity: 5 to 95% RH

Storage Temperature: -20 to 75°C (-4 to 158°F)

## **Power Requirements**

Input Voltage: 12 VDC

Power Consumption: 180 mA @ 12 VDC

#### **Regulatory Approvals**

CE: Class A

FCC: Part 15 sub part B Class A

EN61000-4-2 (ESD), Criteria A, Level 4 EN61000-4-3 (RS), Criteria A, Level 2 EN61000-4-4 (EFT), Criteria A, Level 3 EN61000-4-5 (Surge), Criteria A, Level 3 EN61000-4-6 (CS), Criteria A, Level 2 EN61000-4-8 (PFMF), Criteria A, Level 3

Freefall: IEC 60068-2-32

#### Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

# **Dimensions** CSM-200-1213 0 0 86.8 mm (3.42 in) 117.1 mm (4.61 in) 124.3 mm (4.89 in) CSM-200-1214/CSM-200-1218 0 86.8 mm (3.42 in) 117.1 mm (4.61 in) 124.3 mm (4.89 in)

### : 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**

- CSM-200 series media converter
- Quick Installation Guide (printed)
- · Warranty Card