Introduction

MS400289 operates as media converter at different data rates up to 10 Gigabit Ethernet. It is equipped with one SFP/SFP+ slot and a RJ-45 port. The device is suited to couple network segments that operates at the same speed.

Packing list

Please check the following items in the package before installing the media converter:

- 10 Gigabit Ethernet media converter
- AC/DC adapter
- User manual

Please contact Microsens immediately for any loss or damage to the above items.

Interfaces

Fiber interface:

Standard SFP transceivers are equipped with LC duplex connectors. One connector is used for the optical transmitter (marked as TX), the other one is used for the receiver (RX). To establish an optical link the duplex fiber between two transceivers has to be crossed. The TX connector of the first transceiver is connected with the RX connector of the second one and vice versa.

Please ensure that the SFP transceiver matches with the used fiber (Multimode or Single Mode). Furthermore the optical power budget and the dispersion budget of the transceivers have to be considered. Please refer to the data sheets of the SFP modules to get the required information.

MICROSENS offers a wide range of SFP or SFP+ transceivers for different data rates, transmission distances, wavelength (850 nm, 1310 nm, CWDM or DWDM...) and fiber types (MM or SM).
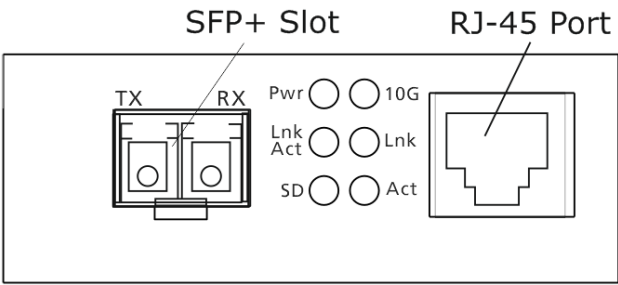
RJ-45 interface:

The RJ-45 interface is intended for the transmission of Ethernet traffic over twisted-pair cables. Different data rates from 1000Base-T to 10G-Base-T are supported. The transmission speed is determined by auto-negotiation. Auto-crossing allows the use of crossed or straight twisted-pair cables.

Power interface:

The power connector is placed at the rear side of the device. Here you can connect the DC port of the power adapter, which is included in the delivery.

Commissioning

The SFP+ slot, RJ-45 connector and LED indicators are placed at the front side of the media converter. Connect the RJ-45 port via a twisted-pair cable, insert a SFP (+) module and establish the fiber connection. Finally, the media converter must be powered by connecting the power plug.

Observe the corresponding LEDs to check the connection. After successful installation link and power, LEDs should light green. Please check the connection of TX and RX ports if the link LEDs are off.

Front View: SFP Slots and LED Interface

Rear View: Power Interface

Description for LEDs

LED indicator lamps serve as device monitoring and for trouble shooting. The functions of the LEDs are described in the following table:

LED	Status	Function
PWR	On	Power supplied
SD	On	Fiber signal detected
Lnk	On	Valid link established
Act	Blinking	Indicates data transmission
10G	On	RJ-45 port operates at 10 G

Technical Specifications:

Type:	10 Gigabit Media Converter, 1x RJ-45 port, 1x SFP+ slot
Mode of operation:	1000Base-T to 1000Base-X 2.5GBase-T to 2500Base-X 5GBase-T to 5GBase-R 10GBase-T to 10GBase-R
Fiber type:	Multimode fiber 50 or 62.5/125 µm, single mode fiber 9/125 µm, duplex LC-connector (optional SC simplex)
RJ-45 interface:	1000Base-T, 2.5/5/10GBase-T, auto-negotiation and auto-crossing
RJ-45 cabling:	Cat. 5 UTP/STP for 1000Base-T (max. 100 m) Cat 5e UTP/STP for 2.5/5GBase-T (max. 50 m) Cat 6e UTP/STP for 10GBase-T (max. 50 m)
Power supply:	5 VDC / max. 1 A via external power supply (included at delivery)
Operating temperature:	0° C to 55° C
Humidity:	5 % to 80 % non-condensing
Dimensions:	27 x 71 x 94 mm (H x B x T)

Order Information

Article-No	Description
MS400289	1/2.5/5/10 Gigabit Ethernet Media Converter 1x SFP+ slot, 1x RJ-45 port, ext. power supply

Accessories*

Article-No	Description
MS100200	SFP Transceiver, Gigabit Ethernet, 850 nm Multimode, 1000Base-SX, LC duplex
MS100210	SFP Transceiver, Gigabit Ethernet, 1310 nm single mode, 1000Base-LX, LC duplex
MS100700D	SFP Transceiver, 10 GBE, 5.1 dB, 300 m, 850 nm Multimode, LC duplex
MS100702D	SFP Transceiver, 10 GBE, 8.4 dB, 10 km, 1310 nm single mode, LC duplex

* CWDM/DWDM and further wavelength on request

MICROSENS

10 Gigabit Ethernet Media Converter MS400289

User Manual