Media Converter Module
100Base-FX/100Base-TX
Single Mode simplex (WDM)

MICROSENS

Description

This Fast Ethernet media converter is for a direct connection between Twisted Pair and Fiber optic cables in a Fast Ethernet network, without repeater.

The converter is designed in the form of an insertion card which can be installed in the MICROSENS 19"chassis with a central power unit. A maximum of 12 converters and a power supply unit can be loaded in a case.

The product is particularly interesting for low-cost conversions of several TP ports onto Fiber optic and for the prolongation of TP segments.

The converter supports both half- and full-duplex transmissions.

The use of single mode optic fibers makes it possible to cover distances up to 20 km in full-duplex mode.

Measurements
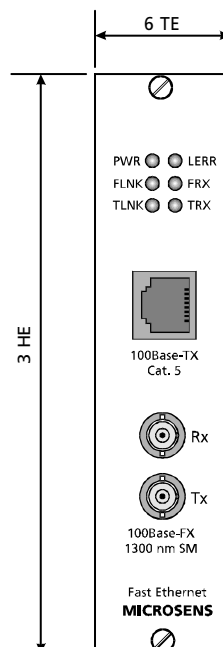
Technical Data

Type	Fast Ethernet Media Converter for repeater less coupling of Twisted-Pair (100Base-TX) to FO-cable (100Base-FX) for mounting in MICROSENS 19" chassis.
Type of Fiber	Single mode 9/125µm simplex with SC-connector
Type of cable	Shielded Twisted Pair cable, 100 Ohm, Category 5
Data rate	100 Mbps
Opt. Budget	min. 10 dB
Max. Distance	20 km
LED	PWR — Standby FLNK — FX- connection intact FRCV — Data are received over FX-port TLNK — TX- connection intact TRCV — Data are received over TX-port LERR — FX Link interrupt
Power supply	12 V DC / max. 400 mA via Backplane
Operat- /Storagetemp.	0°C to 55°C / -20°C to 80°C
rel. Humidity	5% to 80% non condensed
Measurements	3 HU x 6 DU (128 x 31 mm)

Configuration

This version of the converter is built in the form of an insertion card, which can be mounted in MICROSENS 19" modular system, with a central PSU. A maximum of 12 converters and the power supply can be mounted into a chassis.

The insertion cards are supplied with power via a central unit and over the backplane. Optionally a second power supply unit can be built-in for redundancy. In this case, 10 converter insertion modules may be used. In case of a partial equipping, the unloaded slots are masked with blank covers.

Length reduction

Half duplex segment
The converter has a maximum signal delay of 50 bit times. As a result, the maximum segment length of 412m is reduced by approx. 50 m for glass fiber.

Full duplex segment
In Full duplex-segments, the signal delay of the converter has no influence on the maximum segment length.

Pin assignment

The RJ45 connector has the assignment of a non-crossed TX port.

• The converter can be connected with a 1:1 patch cord to a hub and/or switch port.

• For the connection to an end device (e.g. PC card or transceiver) a crossed RJ45 patch cord must be used.

Pin	Direction	Signal
1	Out	TD+
2	Out	TD-
3	in	RD+
4,5	-	Not used
6	in	RD-
7,8	-	Not used

Management

The SNMP and web based management features of the system are provided by the management master module (MS416020-B). Be Aware: it must be considered that the chassis (e.g. MS416001M) and the power supply (MS416004M) support the management too (ordered products with an "M").

To access the data of the modules with the SNMP management, it is necessary to integrate the structure of the data into the existing management platform using the MIB file. The MICROSENS-MIB can be downloaded with http download from the management master. The MIB file has an ASCII format.

Example of visualising and configuration in a SNMP management platform:

3HU chassis MS416001M

Power supply MS416004M (redundant)

Twin module 100Base-TX/FX manageable MS416230M
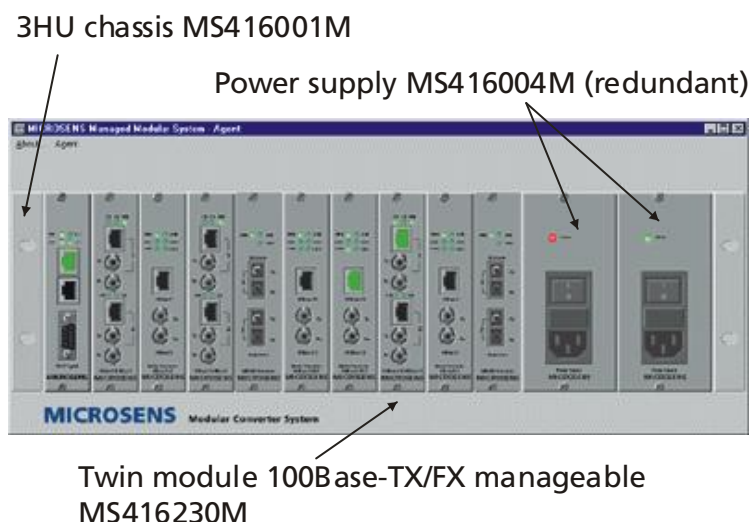
Safety notes

WARNING: Infrared radiation as used for data transmission within the fiber optic, although invisible to the human eye, can nevertheless cause damage.

To avoid damage to the eyes
- *never look straight into the output of fiber optic components – danger of blinding!*
- *cover all unused optical connections with caps.*
- *commission the transmission link only after completing all connections.*

The active laser components used with this product comply with the provisions of **Laser Class 1**.

Order Information

Art.-Nr.	Description	Connectors	
MS416206MA	Fast Ethernet Converter module single mode SC simplex, manageable TX: 1310 nm, RX: 1550 nm; 20 km	1x RJ45 1x SC	100Base-TX 100Base-FX
MS416206MB	Fast Ethernet Converter module single mode SC simplex, manageable TX: 1550 nm, RX: 1310 nm; 20 km	1x RJ45 1x SC	100Base-TX 100Base-FX