

Gigabit Ethernet Bridge

10/100/1000Base-T / SFP 1000Base-X

MICROSENS

General

The Gigabit Ethernet Bridge has one RJ-45 port with 10/100/1000Base-T and one SFP slot according to 1000Base-X. The SFP slot accepts all SFPs available on the market, which offers a high flexibility.

The device is mainly used in enterprise networks, to combine the media copper and fiber. Beside the media converter also the speed can be adjusted with 10, 100 and 1000 Mbps. This enables the connectivity of older devices to the converter. An additional application of this device is in Fiber To The Home installations.

Beside the automatic configuration of the ports can be configured manually as well by using the integrated DIP switches. Coloured LEDs are showing the status information and can be used for diagnostics of the network.

Connectors

RJ-45 Port:

The RJ-45 port selects automatically the highest possible speed with 10 Mbps (10Base-T Ethernet), 100 Mbps (100Base-TX Fast Ethernet) or 1 Gbps (1000Base-T Gigabit Ethernet).

With the integrated auto crossover function the pinout of a connection to a switch or a PC is recognised. Therefore it is possible to use one type of patch cables only.

SFP Slot:

All common SFP transceiver according to the Revision 5.4 are supported. The SFPs slot supports Gigabit Ethernet (1000Base-X) only. Other data rates are not supported at this SFP slot.

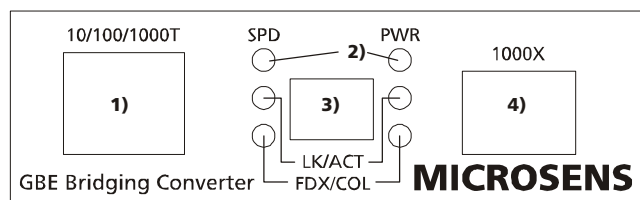
Features

- Compact Desktop Device
- Media conversion 1000Base-T/1000Base-X
- Speed conversion 10/100/1000 Mbps
- Half/full duplex with autonegotiation or manually configurable
- Integrated auto crossover function for the use of standard patch cables

Technical Specifications

Type	Gigabit Ethernet Bridge for the interconnection of Twisted-Pair- (10/100/1000Base-T) and fiber- (1000Base-X) segments
Fiber Port	SFP Slot
Cable Type	Shielded Twisted Pair cable, 100 Ohm, Category 5e
LED displays	<i>PWR</i> ready for operation <i>FX LNK</i> fiber connection correct <i>FX FDX</i> fiber connection in full duplex mode <i>TP LNK</i> Twisted-Pair connection correct <i>TP FDX</i> TP connection in full duplex mode <i>ACT</i> Activity (Data Transmission)
Power Supply	9 V DC / max. 0.7 A via external supply
Operating Temp.	0 °C to 50 °C
Storage Temp.	-20 °C to 80 °C
Humidity	5 % to 90 % non condensing
Dimensions	26.2 x 70.3 x 94 mm (h x w x d)

Construction



- | | |
|----------------|----------------|
| (1) RJ-45 Port | (3) DIP-Switch |
| (2) LEDs | (4) SFP Slot |

Fig. 1: Front View

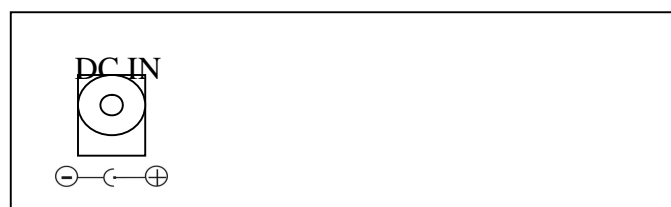


Fig. 2: Rear View

Configuration

The Gigabit Ethernet Bridge can be configured manually by DIP-Switches. The factory default setting of all switches is "Off".

Configurable are:

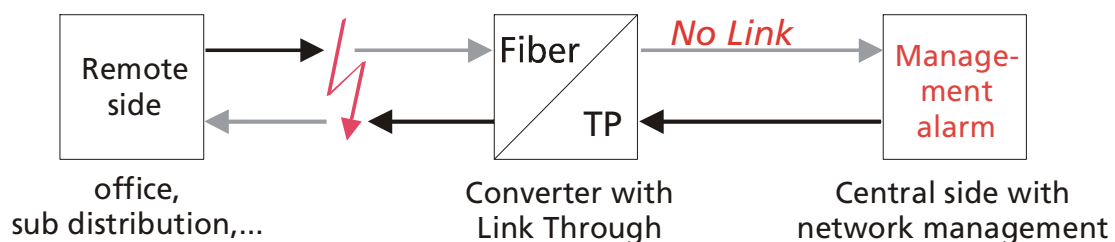
- Link Through function for both directions
- Operation Mode for the SFP Slot

DIP-Switch	Status	Function
1	On	Full duplex for SFP Slot
	Off	Autonegotiation for SFP Slot
2	On	Link Through for RJ-45 ports activated
	Off	Link Through for RJ-45 ports deactivated
3	On	Link Through for SFP Slots activated
	Off	Link Through for SFP Slots deactivated

Note: For operation in a pair the SFP ports of both bridges should be configured to autonegotiation.

Link Through

The converter has the integrated "Link Through" functionality to support the connection control. The connection status of the fiber segment is forwarded to the twisted pair segment. In due to this the twisted pair connection is switched off in a case of failure at the fiber segment.



LED-Displays

LED	Status	Function
PWR	Green	Ready for operation
SPD	Green	RJ-45 port with 1000 Mbps
	Orange	RJ-45 port with 100 Mbps
	Off	RJ-45 port with 10 Mbps
LNK/ACT (RJ-45 port)	Green	Link at RJ-45 port
	Flashing	Data received on RJ-45 port
	Off	No Link at RJ-45 port
FDX (RJ-45 port)	Orange	Connection at RJ-45 port with full duplex
	Off	No connection at RJ-45 port or connection with full duplex
LNK/ACT (SFP Slot)	Green	Link at SFP Slot
	Flashing	Data received on SFP Slot
	Off	No Link at SFP Slot
FDX (SFP Slot)	Orange	Connection at SFP Slot with full duplex
	Off	No connection at SFP Slot or connection with half duplex

Order Information

Art.-No.	Description	Connectors
MS400229	Gigabit Ethernet Bridge 10/100/1000Base-T / SFP 1000Base-X	1 x SFP Port 1 x RJ-45 1 x Power
MS100200G	SFP, Gigabit Ethernet 850 nm Multimode Transceiver, max. 1.25 Gbps	LC duplex
MS100210G	SFP, Gigabit Ethernet / Fibre Channel 1310 nm Single Mode Transceiver, max. 1.25 Gbps, min. 10 km	LC duplex

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