

Gigabit Multiplexer (TDM)

- **Multiplexing of up to 8 x E1/T1 or 1 x E3/DS3 plus one Gigabit Ethernet transparent over fiber optics**
- **4 x 10/100/1000Base-T integrated Ethernet switch VLAN and QoS support bandwidth limitation**
- **Redundant SFP module slot to the fiber for use with SM, MM or WDM/CWDM transceivers**
- **Optimal expandability due to pluggable transceivers**
- **Onboard-Management via VT100-CLI, SNMP and Telnet**



Description

The MICROSENS Gigabit TDM is an optical time-division multiplexer that facilitates the transmission of voice and data at the same time. It connects one Gigabit Ethernet at full wirespeed and up to eight E1/T1 or one E3/DS3 connection over one 1.25Gbps fiber optical link. Additional formerly required leased lines for voice can be fully substituted.

Reliability

Resulting from the power supply redundancy concept and the two mutually back-up fiber optic connectors to the line, a very high reliability is being achieved. Because of this, with MICROSENS Gigabit TDM devices, Carriers/Providers can offer highly available access solutions with low cost-to-performance ratio.

Optimal expandability

MICROSENS Gigabit TDM multiplexer can be used as an extension of MICROSENS CWDM system for further increasing bandwidth requirements resulted from rising amount of transferred data.

By implementing the cost-efficient CWDM technology MICROSENS sets in its modular WDM systems an optimal scalability together with lower initial costs. With this technology MICROSENS offers the possibility to cover data transmission rate of min. 20 Gbps on standard optical fibers.

Management

The onboard-management in the multiplexer supports SNMP. After the installation the management can be configured over the RS-232

interface by means of a terminal.

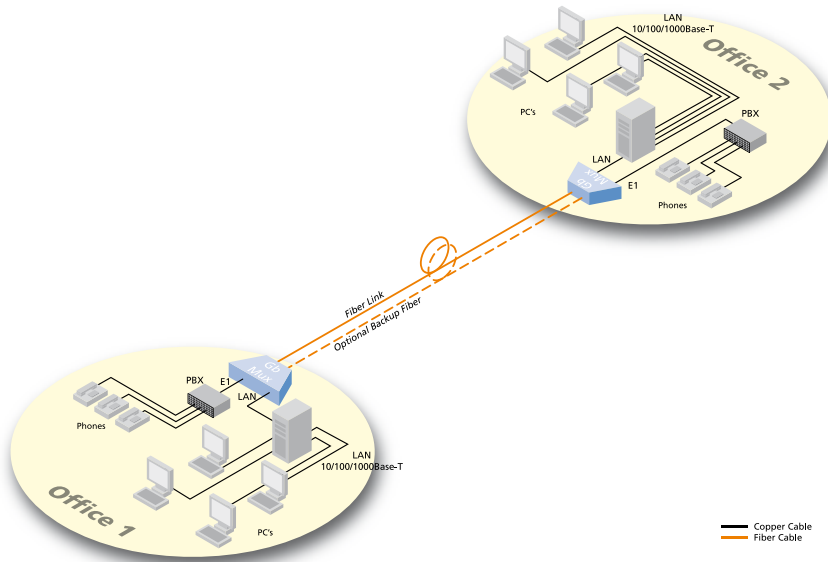
The connection with the Ethernet network is made by one of the local RJ-45 sockets, which supports 10/100/1000Base-TX connections. The multiplexer is in-band-management-able. Thus all interconnected multiplexers can be managed at the same time over the TDM distance likewise over this local RJ-45 socket.

All equipment functions can also be configured and queried via a local serial terminal. This terminal is available over the network port management by means of Telnet protocol. The integrated software management can be updated by TFTP download over the network at any time.

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Applications

The main advantage of the multiplexer lies in the increase of the capacity of existing fiber infrastructure, by bundling several services on a transmission fiber.



Application Examples:

- Point-to-point Ethernet-plus-TK connection over fiber
- Cross-Linking of two LANs with PBXs coupling
- Freespace optic connection of two buildings
- Last-Mile Ethernet access for Carriers/Providers

Ordering Information

Art.-No.	Description	Connectors
MS419781-x	4 x E1/T1 switchable, 4 x 10/100/1000Base-T, 2x Gigabit Ethernet SFP Slot	4x RJ45 4x RJ-45 2x SFP slot 1x DB9
MS419782-x	8 x E1/T1 switchable, 4 x 10/100/1000Base-T, 2x Gigabit Ethernet SFP Slot	8x RJ-45 4x RJ-45 2x SFP slot 1x DB9
MS419783-x	1 x E3/DS3 switchable, 4 x 10/100/1000Base-T, 2x Gigabit Ethernet SFP Slot	2x BNC 4x RJ45 2x SFP slot 1x DB9

x – 1, 2, 3 Power supply option:
 1 – 1x 100-240V, european plug
 2 – 1x 100-240V, US plug
 3 – 1x 48 V DC

Further products on request.

MICROSENS reserves the right to make any changes without further notice to any product to improve reliability, function or design. MICROSENS does not assume any liability arising out of the application or use of any product. 0907/jr/fr

Technical Specifications

Type

MICROSENS TDM multiplexer for transparent transmission of 8 x E1/T1 or 1xE3/DS3 plus Gigabit Ethernet channel over one fiber optic line

Local line

TDM Data Rates E1/T1
 Four/eight Interface Ports with
 1.544 Mbps at T1 or
 2.048 Mbps at E1

TDM Data Rates E3/DS3

One Interface Port with
 34.368 Mbps at E3 or
 44.736 Mbps at DS3

Ethernet

Integrated Ethernet Switch with
 4 x 10/100/1000Base-T, Auto Negotiation, MDI / MDI-X, VLAN, QoS, Rate Limiting, RMON-MIB

Main line

SFP connector
 Multimode 62.5/125 or 50/125 µm,
 Single Mode 9/125 µm duplex,
 LC connector

WDM/CWDM/DWDM SFP connector
 Single Mode 9/125 µm simplex/duplex,
 SC/LC-connector

Bandwidth

1,25 GBit/s

LED displays

<i>Power1</i>	Multiplexer operational
<i>Power2</i>	Redundant power supply active
<i>Lnk</i>	BNC Link (E3/T3)
<i>Lnk1</i>	FO Link 1
<i>Lnk2</i>	FO Link 2
<i>TDM</i>	TDM active
<i>Sync</i>	Synchronisation active

TP-Ports integrated LED's:

<i>LED's green</i>	Twisted Pair-Link
<i>LED's amber</i>	Twisted Pair-Transmission

Management

VT100-CLI, SNMP Config and Monitoring, Telnet-CLI, Power and Status LEDs, Software Update via TFTP

Diagnostics

Several loop modes, BERT Generator/ Test

Power supply

1x 100..240 V AC, 50..60 Hz,
 max. 90 W or 1x 48 VDC, max. 90 W

Operating temperature

0°C to 40°C

Storage temperature

0°C to 50°C

Rel. humidity

5% to 90% non condensing

Dimensions

19" 1HU, depth 260 mm

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