

Summer 2004



Dear readers,  
dear partners,

This years CeBIT shows an industry upturn and sets optimistic and realistic signs for an increasing demand in the market. MICROSENS offers intelligent fiber optical products which drive the growth of fiber optic solutions in the metro and provider market as in the enterprise access segment.

Our intelligent fiber solutions show a migration path and guarantee a safe investment. With our new modular xWDM approach the access platform and the metro solutions are converging into one system.

Another clear trend is the Industrial Ethernet. Ethernet is continuing to beat the field bus technologies used to date in automation controls and sensors. Process error-tolerant network components are absolutely essential because the network availability has a direct effect on the production. MICROSENS supports these demands with a family of industrial products, designed for robust applications in industrial and transport networks.

Andreas Beierer  
International Sales Director



Further information at:  
[www.microsens.de/uk/presse/art\\_Modulares\\_xWDM\\_System.htm](http://www.microsens.de/uk/presse/art_Modulares_xWDM_System.htm)

## Transparent fiber/fiber converter with SFPs/GBICs

The new protocol transparent modules offer the conversion of various optical interfaces for both, short distances and long haul applications.

The pluggable optical components, which are offered as GBIC or SFP transceivers, allow an easy adaptation to different requirements.

The field of applications starts with simple point-to-point connections and ends with complex multiplex systems using CWDM and DWDM technology.

Due to the protocol transparency the use of the modules is not limited and allows the connection of different applications with data rates up to 2.7 Gbps.

With the optimised range of optical transceivers (GBICs and SFPs), it is possible to cover distances up to 120 km. It is possible to add a complete signal regeneration (3R) optional.



Further information at:  
[www.microsens.de/uk/produkty/rck\\_WR3RGBIC.htm](http://www.microsens.de/uk/produkty/rck_WR3RGBIC.htm)

## New modular CWDM-/DWDM system

The new xWDM Chassis System, joins MICROSENS existing modular Access platform and offers a high degree of flexibility that it can be deployed by telecommunications providers, metropolitan carriers or even in sophisticated backbone applications.

The system is based on a new telco chassis that can be installed in 19" racks. It occupies 4 HU and accepts up to 28 access modules. Its modular construction provides maximum flexibility for configuration, expansion and maintenance.

### xWDM Access Modules

The system supports a wide range of xWDM modules, including protocol-transparent converters, wide-range retimers for full signal regeneration, optical multiplexers and demultiplexers, line-protection modules and add/drop multiplexers. The redundant power-

supply provides fail-safe power to all installed units. The system is fully compatible with the MICROSENS Modular Access Platform, and users can choose from numerous access modules that can convert any media for any protocol.

### Protocol Transparency

User data transmission is transparent, and not restricted to any particular protocol. The system supports all common protocols such as Fast Ethernet, ATM OC-3/OC-12/OC-48, Gigabit Ethernet, ESCON, FICON and Fibre Channel. Its optimised design provides an optical budget of 24 dB, thus making transfer distances of at least 80 km possible.

### Topologies

Given its modular design, the system can be configured for a wide range of applications: from simple point-to-point applications right up to complex linear add/drop and ring structures.

# Gigabit Access Module with Inband-Management

MICROSENS new Gigabit Ethernet Bridge offers speed adaptation for Ethernet, Fast Ethernet and Gigabit Ethernet copper networks (10/100/1000Base-T) and simultaneous conversion to optical fiber.

## Applications

The bridge is the ideal component for access applications because engineers can use it to create a uniform fiber optic backbone structure based on Gigabit Ethernet. Users connect to the network at exactly the speed they need. The transmission rate can also be set via remote management – a particularly attractive feature for carriers.

## Pluggable Transceivers

The fiber port is modular designed equipped with a GBIC or SFP slot. Using

pluggable transceivers any media can be combined with any other. This allows connecting twisted-pair or fiber-optic ports for multimode or single mode transmission.

There is a wide range of GBIC modules to choose from. Depending on the transceiver module, data can be transmitted over more than 100 km on a single mode optical fiber without optical repeating.

## Signal Regeneration

The bridge uses the store-and-forward procedure, enabling segmentation splitting as well as 3R signal regeneration. This means that network designers can cascade any number of individual Gigabit Ethernet fiber segments.



Further information at:  
[www.microsens.de/uk/produkt/rck1000tlx.htm](http://www.microsens.de/uk/produkt/rck1000tlx.htm)

# 45x45 switch with DIN rail mounting for FTTH



So far the standard design of the 45x45 installation switch was used mainly in cable trunks or sub floor tanks.

With the actual mechanical modification it is possible to mount this device on standardised DIN rails.

Therefore the Fast Ethernet switch with fiber uplink is suitable for the direct mounting into the current distribution box. The combination of safety equipment and data technology is of special interest in Fiber To The Home (FTTH) installations.



Further information at:  
[www.microsens.de/uk/produkt/inst\\_switch45x45.htm](http://www.microsens.de/uk/produkt/inst_switch45x45.htm)

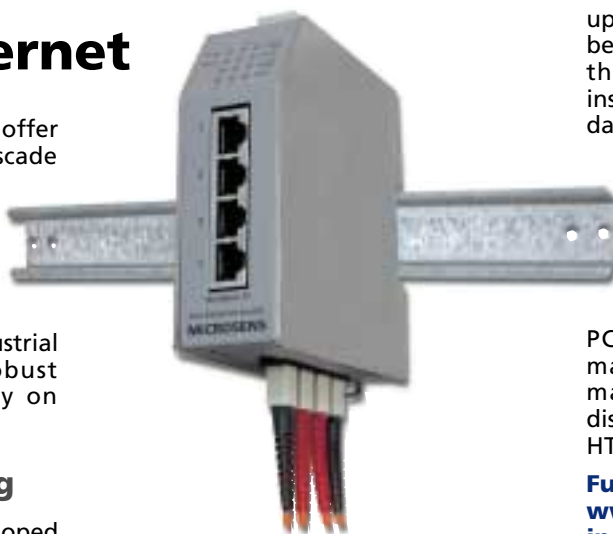
# Industrial Ethernet

MICROSENS Industrial Switches offer two 100Base-FX fiber ports to cascade several industrial switches, or to configure a failure tolerant ring structure, as well as four 10/100Base-TX ports to connect Ethernet devices such as automation controls, network uplinks, consoles and other nodes. The industrial switches are designed in a robust construction for direct assembly on 35 mm DIN rails.

## Fault-tolerant Fiber Ring

The protection mechanism developed by MICROSENS allows users to implement an error-tolerant Ethernet ring. If a component or a connection fails, the intelligent ring topology ensures that all other nodes will continue to remain connected via Ethernet, providing rapid redundancy with a recovery time below 100ms.

**MICROSENS newsticker**  
fiber optic solutions



## Full VLAN functionality and data prioritisation

Support for the full VLAN function as per IEEE 802.1q/p is a standard feature of the industrial switch. One switch handles

up to 16 VLANs for which each port can be assigned its own VLAN. In addition to the familiar trunking, a VID can be inserted automatically in all the received data packages (tagging). The integrated IEEE 802.1p supports setting priorities for voice or critical data.

## Network Management

The switches can be configured and monitored either by SNMP or a PC-based management tool (device manager). In addition to the device manager all status information is displayed web based using an integrated HTTP server.

Further information at:  
[www.microsens.de/uk/produkt/ind\\_switch4TX2FXring.htm](http://www.microsens.de/uk/produkt/ind_switch4TX2FXring.htm)

## Editorial

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