

March 2003



Dear readers,
dear partners,

It has come round again – CeBIT, the largest specialist trade fair for information technology and telecommunication,

opens its doors again on March 12th in Hannover.

Over 6,500 exhibitors will be presenting their newest products in the IT sector until 19th March. Our company will again be presenting a wide range of new developments this year.

We have moved into the telecommunications hall because of the company's strategic alignment to high-quality, fiber access and metro solutions.

The current motto at MICROSENS is multifunctionality. Because of the interaction between hardware and software, our systems are becoming ever more intelligent.

This applies to both optical multiplexers used in metros and to switches in the "fiber to the office" sector.

Our strengthened sales team is looking forward to your visit. This year we are located in **hall 27, booth E43**.

Yours Thomas Kwaterski
Marketing & Sales Director

Installation switch with VLAN and power over LAN

The new MICROSENS installation switches offer a range of additional functions apart from network management.

Power is supplied to connected devices and data is transferred via the Ethernet port using **power over LAN**. This enables to supply directly with power access points, IP telephones and web cameras.

The new IEEE 802.3af standard is expected to be passed during the summer this year. This defines the simultaneous transfer of data and power via twisted pair cables.

The switches' power over LAN function is activated via network management. Furthermore, integrated management enables the implementation of port-based **VLANs** (= virtual LANs).

The switch can generate VLANs as well as simply recognising and filtering



them. For this a corresponding VLAN tag is inserted into the data packet.

The individual connections are configured and the data for VoIP applications is prioritised using the **network management**, supplied with the device.

With this new innovation, MICROSENS provides for the first time the features familiar in the central sector in the SOHO sector.

Multifunctional bridges with redundancy and bandwidth control

The new twin bridge enables connection of copper and glass fiber segments to Ethernet and Fast Ethernet.

In addition to the standard function as a **doubled copper/ fiber bridge** the two bridges can be switched to one bridge for **redundant connections**. Two routes are possible via both fiber and copper. Switching occurs physically by link recognition.

A further setting permits the connections to be grouped into a **4-port switch** with two fiber ports (100Base-FX) and two copper ports (10/100Base-TX). This switch makes it extremely easy to implement service networks, e.g. for coupling management agents in existing connections.

An additional operating mode allows the module to be configured as a fiber/ fiber bridge with the option of **limitation of bandwidth**. Service



providers can use this to release data rates to customers in a targeted way.

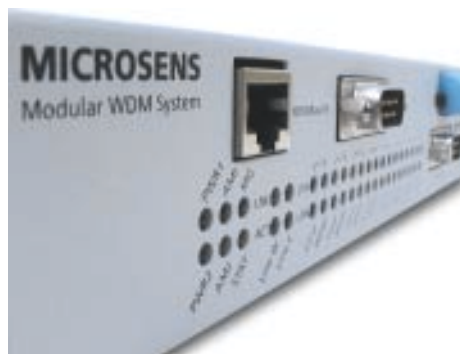
In addition to multimode versions MICROSENS also offers single mode bridges with altered optical parameters.

Hannover
12. - 19. 3. 2003

CeBIT

Get the spirit
of tomorrow

Modular CWDM system with 16 channels



MICROSENS is counting on its modular WDM systems for cost-efficient CWDM technology in order to ensure the best possible scalability and low purchasing costs.

Up to eight independent high speed services can be transferred via a single mode route using the basic system.

If you wish to transfer more than eight channels using a multiplexer, it was only possible until now by switching to DWDM technology.

In contrast there are two further approaches that are 100% based on CWDM technology.

Using the second optical window

To extend the number of channels you can also use the wavelengths from 1310 to 1450 nm however this needs to take the physical restrictions into account.

Fiber damping is considerably higher in the second optical window than in the third. This reduces the usable optical budget for all channels.

Standard fibers demonstrate considerable higher damping between the second and third window in a range, the so-called "water peak".

Special "zero water peak" fibers that have constant damping behaviour between the second and third window have been developed to solve this problem.

The use of the lower CWDM wavelengths is restricted substantially by these limitations.

Direction-dependant coupling

One attractive method of doubling the usable channels from 8 to 16 on a duplex fiber is to use a special direction-dependent optical coupler.

In a standard system each fiber is only used to transfer data in a single direction.

By using a special coupler it is possible to transfer in both directions without interference on the same fiber. Here the same wavelength is used in both the send and receive directions.

The advantage of this solution is that only the upper CWDM wavelengths are used in the third optical window whereby this method does not affect the maximum distances.

Industrial switch with ring redundancy

Ethernet is increasingly replacing field bus systems in industrial applications. Ethernet networks have substantial advantages that are driving forward their use.

MICROSENS has developed special media converters and industrial switches for this highly demanding environment.

The current switches enable several devices to be switched in the form of a fiber ring. Even if the ring is interrupted, the redundant design means that operation continues without any malfunction.

MICROSENS has registered a patent for the mechanism used to rapidly recognise ring interruptions.

The switches can be ideally depicted in a network management environment. The devices are administrated and configured using a PC-based management tool that is delivered as standard.

The switches support data prioritization (class of service) for time-critical applications and also have complete VLAN functionality.



MICROSENS

fiber optic solutions

Hall 27, Booth E43



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