

Industrial

MICROSENS
fiber optic solutions



Solutions

Industrial Revolution

Ethernet is replacing traditional field bus systems in industrial environments. The significant advantages of Ethernet technology are the major driving force for the rapid deployment.

Standards and Compatibility

Ethernet is an international standard that has been proven in millions of applications worldwide, ensuring the compatibility of components from various vendors.

Speed and Scalability

Standard Ethernet with 10 Mbps already operates significantly faster than most field bus systems. Transition to Fast Ethernet (100 Mbps) and Gigabit Ethernet (1 Gbps) enables additional scaling of the data transmission rate to improve throughput and latency.

Integration

Integration of the industrial network with the data network is easily done without protocol conversion.

Industrial Fiber Optic Ethernet

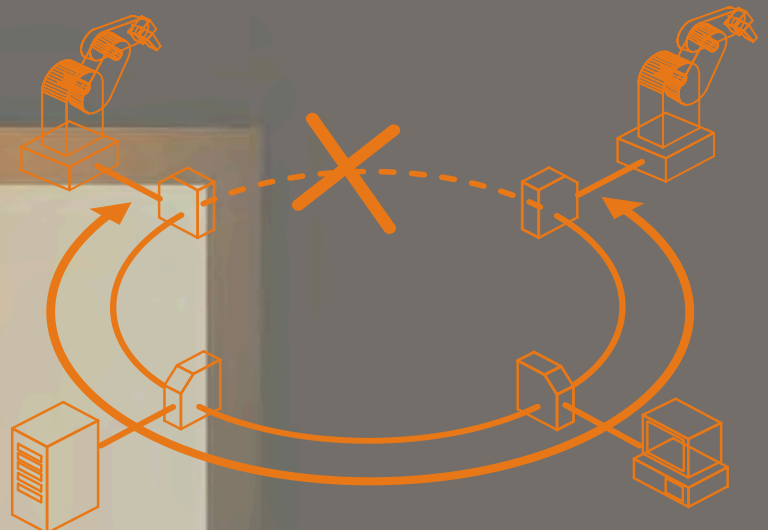


Self Healing Ring Topology

The Ethernet ring technology, patented by MICROSENS, permits the setup of redundant ring structures in Ethernet networks.

The ultra-fast protection mechanism provides short reaction time for mission critical and fail sensitive applications.

The physical ring structure optimizes cabling demands and helps to save costs for optical cables.



Fault tolerant Ethernet Ring

Industrial Ethernet Everywhere

MICROSENS industrial line products are specially designed for applications demanding high reliability like:

Manufacturing

- Sensor / actor communication
- Robust production networks
- Interfacing of robots / machines

Transport

- Toll collection
- Tunnel surveillance
- Traffic information systems

Railway

- Operating data logging
- Signalisation, ticketing
- Video surveillance

Energy

- Windmill control / wind farms
- Long-haul data connectivity
- Powerline communications

Mining

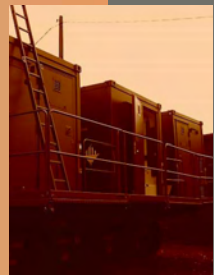
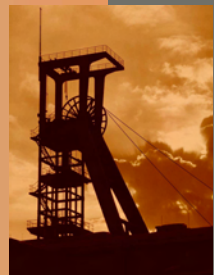
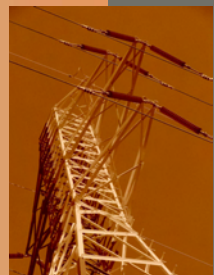
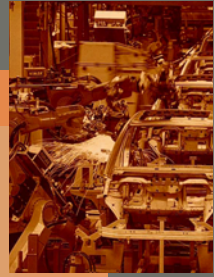
- Machine control
- Automized conveyor belts
- Intrinsically safe switches (explosion-proof)

Military

- Mobile control centers
- Border patrol
- Secure fiber based infrastructure

Security

- Area monitoring
- Video surveillance city area
- Access control



Robust Design for Harsh Environments

- Heavy duty design for use in industrial environments
- Mounting on standard 35 mm DIN rails
- Protection against electromagnetic disturbance
- Extended temperature range
- 24 V DC (optional 48 V DC) power supply with additional redundant input
- Relay contact for external alarm signalization
- Multimode, single mode and simplex-fiber (WDM) versions



Power-over-Ethernet

The new IEEE® Std. 802.3af® standard enables the parallel sourcing of data and electrical power to connected devices. The electrical power is transmitted via the twisted pair data cable.

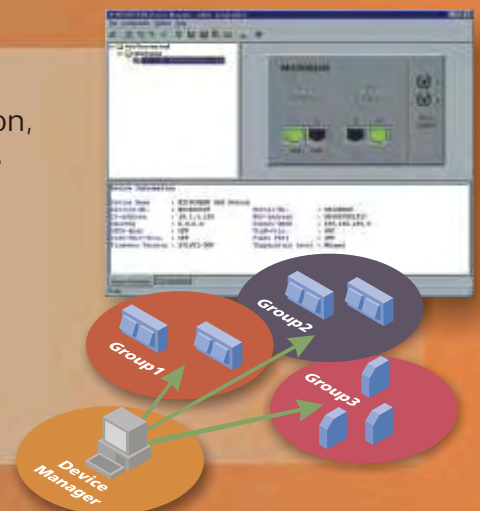
Providing the electrical power required via the data network link eliminates the need of additional power supply outlets. This is a crucial aspect when installing IP cameras, WLAN access points or IP phones. Power-over-Ethernet technology drives new industrial applications like sensor / actor integration and signaling.



Management

The Device Manager software allows the configuration, monitoring and administration of MICROSENS switches from a central workstation.

- Clear Graphical User Interface
- Simple administration of device groups
- Automated detection and device handling
- Supported protocols: Telnet, SNMP/Traps, Syslog, Device Manager (GUI software)



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Industrial Products

Gigabit 10 Port Ring Switch

- 7x 10/100Base-TX, 1x 10/100/1000Base-T
- 2x 1000Base-SX/LX (ring ports)
- 1x 1000Base-SX/LX (uplink, optional)
- Fiber ports for fault tolerant rings
- Uplink port for redundant ring interconnection (optional)
- Ultra-fast ring recovery time, less than 20 ms
- Power-over-Ethernet on all TX ports (optional)



Fast Ethernet 6 Port Ring Switch

- 4x 10/100Base-TX, 2x 100Base-FX (ring ports)
- Fiber ports for fault tolerant rings
- Fast ring recovery time, less than 100 ms
- 5 port version available:
 - 4x 10/100Base-TX, 1x 100Base-FX



Wireless Access Point

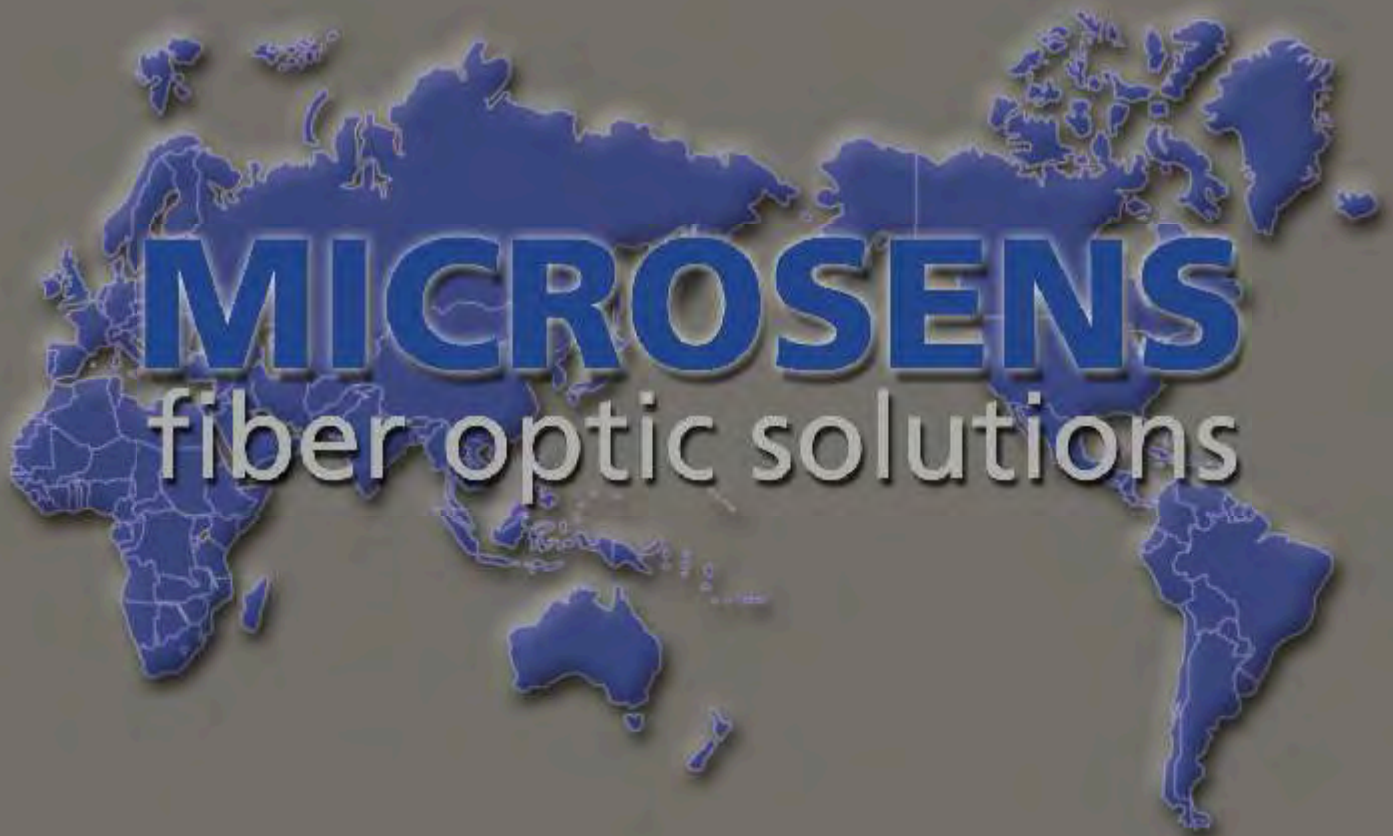
- Manageable Access Point with Gigabit Ethernet Switch
- 1x 10/100/1000T, 3x 10/100TX, 2x 1000X (ring ports)
- Wireless up to 54 Mbps acc. IEEE 802.11b/g
- Security acc. WEP64, WEP128, WPA / WPA2
- Authentication acc. IEEE 802.1X
- Power-over-Ethernet acc. IEEE 802.3af (option)



Copper to fiber converters

- Simple interfacing of copper and fiber media for harsh environments and industrial applications
- Fast Ethernet
- RS-232 (V.24)
- RS-422 (V.11)
- RS-485 field bus





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