



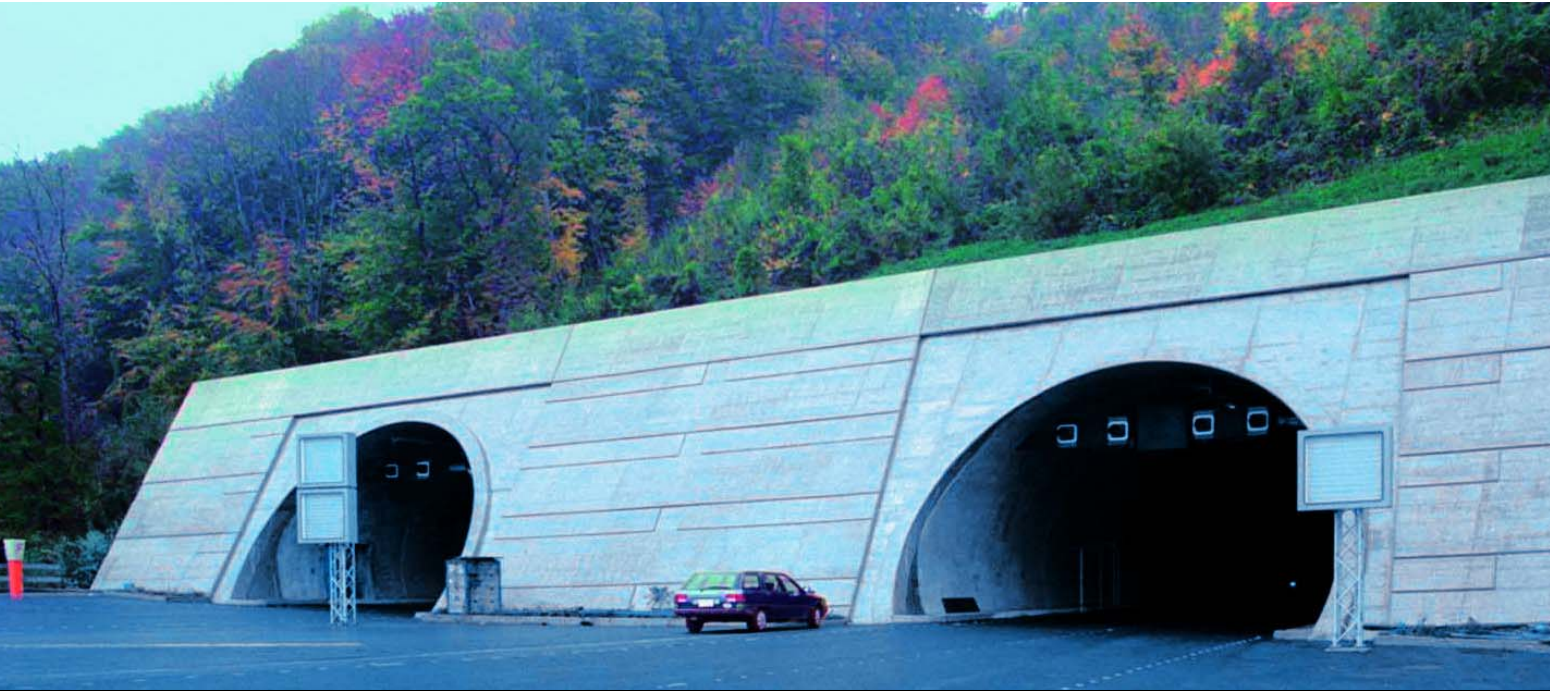
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Success means no compromises.

All the important information is already available within the company but has to be networked over vast distances, intelligently controlled and processed according to predefined priorities.

Data is raw material that should remain accessible to everybody at all times. Hirschmann pioneered the development of ETHERNET as a common standard for the industry well before our competitors. Today we are one of the most highly experienced manufacturers of ETHERNET-based industrial networking products worldwide. Our product families Rail, MICE and MACH are synonymous with company-wide, high-availability network solutions. Our fieldbus products ensure problem-free large range data communication, with security even under the toughest conditions, and high transmission speeds/bandwidths for fast production processes and large quantities of data. With especially easy handling.

With Hirschmann, you can be really sure about your operation – even for the future. We offer you technical competence and understanding coupled with a high level of commitment. We do everything we possibly can do for you. There is only one thing that we do not do – compromise on quality. Because quality in automation technology is an active contribution toward investment protection. We therefore first extensively test each individual component from our comprehensive range of systems before it leaves our factory – only then is it delivered to you – with our highest assurance of quality.



Internet: WWW.HIRSCHMANN.COM

Time is against us.

Quite simply, those who want to win against global competition must move faster than the competitors. The speed of company-wide automation processes needs major improvements.

Economists used to say: the big fish eats the small fish. Today however, it is the fastest who have the greatest appetite – all over the world – irrespective of whether you are in the automobile, transport, electrical, food, packing or chemical industry. Manufacturing has always been a hectic race against the clock: short development cycles, fickle consumers, lightning-fast deliveries, etc. Those who want to win the race against the clock cannot afford a weak link in production.

But it is good to know that one has a highly experienced partner in automation technology whom one can rely on: in the product range “Automation and Network Solutions”, Hirschmann Electronics offers everything from robust connectors, to fieldbus systems, to complex Industrial ETHERNET solutions. This enables us to bring our clients a truly unique offer: open, highly accessible industrial communication solutions ranging from device level (connectors) up to the management information level. Everything is available from one manufacturer and with the reliability that our business partners have come to expect from Hirschmann over the past 75 years. Our products are subjected to the stresses you encounter in the form of electro-magnetic interferences, high-operating temperatures, and mechanical stresses. You can rely on us even under the most difficult circumstances.

Connection to the system.

If you want more, you should get more:
maximum security, flexibility and reliability.



SPIDER 8TX



SPIDER 4TX/1FX-SM EEC



RS2-TX



OCTOPUS 5TX EEC



OCTOPUS 8TX

Entry Level Hubs and Switches

For highly accessible Industrial ETHERNET
and Fast ETHERNET networks

IP-67 Industrial Switches

Industrial ETHERNET networks for extreme conditions

Requirements and Solutions

For the economical installation of a company-wide ETHERNET solution. It allows you to integrate widely dispersed components or serial terminal equipment into your ETHERNET networks or to set up smaller, economical ETHERNET networks without management functions.

Requirements and Solutions

Dirt, temperature fluctuations and other critical environmental conditions at the field level? OCTOPUS has the ability for usage under extreme conditions: IP 67. The open system with standardized M12 technology is ideal for field use wherever space is extremely precious.

Product features

- transceiver for connecting widely dispersed devices over glass fiber
- 3-, 5- and 8-port switches without management functions, with optimum price per port ratio
- 4- and 5-port switches with extended temperature range (-40 °C to +70 °C)
- hubs with twisted pair and optical ports or coaxial connector
- easy remote diagnosis over signal contact that can be detected as a binary signal
- Easy implementing thanks to Autocrossing, Autonegotiation and Autopolarity

Product features

- low cost of cabling thanks to optimized cable length
- direct screw connection with the device is possible
- complete encapsulated construction
- version with or without management available
- standardised 4-pin M12-Technology
- redundancy via HIPER-Ring and Rapid Spanning Tree is possible
- mixed applications with MICE and MACH are possible
- 4- and 8-ports switches with enhanced temperature range (-40°/-25°C up to +60°/+70°C)

Applications

Suitable for use in industrial networks under even extreme climatic conditions, such as refinery and pipeline applications or wind park installations.

Applications

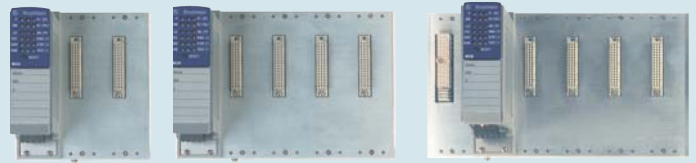
For use in demanding industrial environments such as for example in car manufacturing units, transport automation or in vehicles.





RS20

RS30



MS20

MS30

Compact Industrial Switches

Compact configurable switches for future-proof industrial Fast ETHERNET and Gigabit ETHERNET networks

Modular Industrial Switches

Modular configurable switches for future-proof industrial Fast ETHERNET and Gigabit ETHERNET networks

Requirements and Solutions

Modern industrial data networks require individual solutions. With OpenRail Hirschmann has now started to offer Rail and MICE series switches manufactured to the individual customer's specifications and suitable for almost any applications. These can have specific parameters set quickly and easily by the web configurator and can be ordered in a total of 1000 different versions.

Requirements and Solutions

Modular Rail switches excel due to their flexibility through problem-free planning, minimum storage problems and easy adaptation to the most varied network topologies - with media modules, one can have customized solutions for all industrial data networks and have the capability to expand due to their modular structure. Also the switches of the MICE series can be configured and manufactured individually.

Product features

- individually manufactured rail switches
- Gigabit capable
- 4-, 8-, 10-, 16-, 18-, 24-, 26-ports switches
- freely selectable Uplink ports
- industry-specific installation of devices, without fan (operating temperature from 0 °C to + 60 °C, or -40° to +70°C)
- maximal reliability via lacquering of the circuit board (conformal coating)
- highest network and installation availability using the HIPER-Ring redundancy concept, RSTP, redundant coupling and dual homing
- freely selectable software, temperature range and conformity
- large range of security features
- future-proof hardware platform
- management functions support Web and SNMP-based tools
- Plug & Work for terminal devices; DHCP option 82

Product features

- MICE modular construction system
- Gigabit capable
- fast installation on DIN rail
- industry-specific installation of devices, without fan (operating temperature from 0 °C to + 60 °C, or -40° to +70°C)
- highest network and installation availability using the HIPER-Ring redundancy concept, RSTP, redundant coupling and dual homing
- freely selectable software, temperature range and conformity
- large range of security features
- future-proof hardware platform
- management functions support Web and SNMP-based tools
- Plug & Work for terminal devices; DHCP option 82

Applications

For use in demanding industrial environments such as for example in car manufacturing units, transport automation or in the food industry.

Applications

Modular Rail switches offer the highest network availability even under adverse environmental conditions, such as electromagnetic interference fields, high temperature loads and mechanical stress and are especially suited for applications in which installation shutdowns should not occur even if a connection breaks.





MS4128-5



Gigabit ETHERNET media module



MACH 3001



MACH 3002



MACH 3005



MACH 4000



MACH 4002

Power MICE

For future-proof industrial Gigabit ETHERNET networks

Modular Gigabit ETHERNET Switches

For industrial Gigabit and Fast ETHERNET Backbones

Requirements and Solutions

Industrial networks are growing faster and faster, which requires very efficient switches, also on the rail. The switches of the MICE series offer full layer 3 functions and 4 Gigabit ports. Integrated security mechanisms provide a good control of the data traffic. With the MICE media modules, one can have customized solutions for all industrial data networks and have the capability to expand due to their modular structure.

Requirements and Solutions

The MACH backbone switch is a genuine all rounder and is capable of handling any application with a variety of media modules and the extendable IP routing functionality. Devices of the MACH series are used in particular where large networks are set up under industrial environmental conditions and where therefore special performance characteristics, such as availability and failure safety are concerned.

Product features

- MICE modular construction system
- effective layer 3 switch
- 4 Gigabit ports
- 3 different switch versions: MS4128-L2P (Layer 2 Professional), MS4128-L3E (Layer 3 Enhanced), MS4128-L3P (Layer 3 Professional).
- industry-specific installation of devices, without fan (0 °C to +60 °C)
- Support several redundancy mechanisms like HIPER-Ring, RSTP, redundant coupling, dual homing and link aggregation
- freely selectable software, temperature range and conformity
- large range of security features like ACL, 802.1x, port security
- future-proof hardware platform
- management functions support Web and SNMP-based tools
- Plug & Work for terminal devices; DHCP option 82

Product features

- design of large Gigabit ETHERNET ring structures in which individual switches may be as much as 70 km away from each other
- guaranteed fastest switching time in the case of a connection (HIPER Ring) or router (HiRRP) failure, RSTP, redundant coupling and dual homing
- company-wide redundancy design of the machine control system up to the backbone
- separation of networks by VLANs and IP routing
- extended temperature range from 0 °C to +50 °C
- Support several redundancy mechanisms like HIPER-Ring, RSTP, redundant coupling, dual homing and link aggregation
- freely selectable software, temperature range and conformity
- large range of security features like ACL, 802.1x, port security
- management functions support Web and SNMP-based tools
- Plug & Work for terminal devices; DHCP option 82

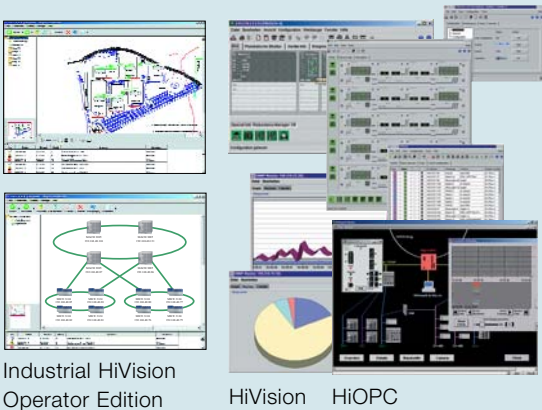
Applications

The Power MICE switches offer even under adverse environmental conditions, such as electromagnetic interference fields, high temperature loads and mechanical stress all software features which are normally available only in office switches. For application in tunnels and highways as well as in process automation.

Applications

The high performance MACH is the nerve center in the control system of a production setup. In addition, it also handles voice or video transmission, wherever the highest network accessibility is required. Typical areas of application are process and factory automation.





Industrial HiVision Operator Edition

HiVision HiOPC



SmartLION-TP/FX



PowerLION-24TP



Giga LION-24TP

Network Management

Configuration, diagnosis and monitoring for industry

Control Room Switches

Faster and more comfortable edge connection via copper or fiberoptic

Requirements and Solutions

The Operator Edition permits at-a-glance monitoring of network status by mapping the network with its complete hierarchical structure and topology.

HiVision and HiOPC enable secure and easy configuration as well as the monitoring of industrial network components – in real time.

Requirements and Solutions

Workgroup switches of the LION series interconnect a workgroup with variable number of end users and offer a high-performance connection to the backbone. The availability of the network in these applications meets the requirements comparable to typical office environment.

Product features

- Industrial HiVision Operator Edition permits monitoring of all IP devices, visualization of the topology and mapping of the network hierarchy. Events can be forwarded by e-mail, SMS or message window.
- HiVision offers graphically interactive configurations providing user-friendly access to all features of the network components. Graphic interactive configurations allow easy access to all performance characteristics of network components. Device status and events can be communicated to all conventional SCADA systems over OPC interface. High-performance management from the low-cost entry-level version for Windows up to HP OpenView Integration under HPUX.
- HiOPC is a high-performance gateway between SNMP and OPC that integrates network management seamlessly in all SCADA systems. All SNMP data become available over an OPC interface

Product features

- 24 fast ETHERNET ports, flexible thanks to 8 ports modules RJ-45/optical as well as 2 Gigabit ports via uplink modules (only SmartLION)
- 24 Gigabit ETHERNET ports 10/100/1000BASE-T (RJ-45) with 4 Gigabit ETHERNET Combo ports (only Power- and GigaLION) 10 GE uplink modules (only PowerLION)
- Redundancy: link aggregation, RSTP, MSTP (only Power- and GigaLION), VRRP (only PowerLION)
- Routing: static and dynamic via RIP and OSPF, ACL, multicast routing (only PowerLION)
- Diagnosis: web-based management, LEDs
- Configuration: Command Line Interface (CLI), TELNET, DHCP Client
- Security and other services: Security 802.1x Port, Authentication, IGMP snooping and querier, broadcast limiter, QoS and port-based VLANs

Applications

The Operator Edition features scaleable license management, offering a cost-effective entry-level option for fast visualization and reliable monitoring of industrial networks. HiVision provides user-friendly system expansion for network monitoring. HiOPC integrates all network components in SCADA systems. Specially in process and factory automation.

Applications

The fast and reliable connection of end users via workgroup switches is perfectly suited to all production-related application areas with normal environmental conditions. Typical applications particularly include control rooms in process and factory automation.



W. HIRSCHMANN



BAT54M



BAT54-Rail



EAGLE TX/TX



Variant with fiberoptic connection
e.g. EAGLE FW MM SC/SM SC

BAT Wireless LAN AP/AC

Wireless technology for industrial applications

Security

For dedicated network access

Requirements and Solutions

Lower installation costs and higher mobility and flexibility are the key reasons why industry is switching more and more from wired systems to radio remote control technology. Hirschmann offers a reliable complete package featuring tried and tested technology, installed and tested on site.

Requirements and Solutions

The company-wide network becomes reality: ETHERNET is deployed in all departments, from the office through to production. This advantage also brings with it some risks, however, in the form of viruses and worms. As a result, it is becoming ever more important to control access to the production network and to construct secure tunnels based on VPN technology.

Product features

- Dual-Band Outdoor Access Point / Bridge optional with an integrated 5 GHz antenna and 2 external N-Antenna connections and integrated lightning protection (only BAT54/BAT54M)
- Dual-Band Access Point /Access Client /Bridge in compact form for rail mounting (only BAT54-Rail)
- IP routing as well as integrated firewall as well as transparency for industrial ETHERNET protocols (only BAT54-Rail)
- Roaming according to IAPP
- Power supply: Power-over-ETHERNET
- Security: 802.1x Authentication, Radius Client, ACL, WPA and AES

Product features

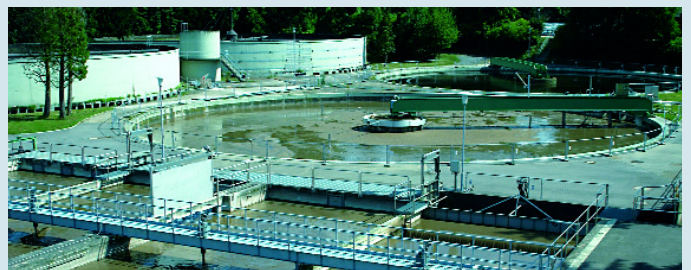
- Stateful Inspection Firewall and Firewall with VPN functionality
- VPN: IPSec, L2TP
- Modes: Router, Single Client Transparent, Multi Client Transparent
- Secured and unsecured ports each with:
 - 10/100Base-TX twisted pair ports
 - Fiber ports, Multimode, Singlemode, Long Haul
- V.24 port: Configuration, modem connection or autoconfiguration adapter
- Redundant 24 V power supply
- Extensive diagnostic options: LEDs, signaling contact, log files
- Management: Serial, HTTPS, SNMP V1/V2/V3, HiVision, HiDiscovery
- Additional functionality: DHCP Server/Client/Relay, NTP, DynDNS, 1:1 NAT, Firewall redundancy, VLAN support, MAC filter, ARP limiter, virus scans

Applications

As a "control service on site", BAT wireless LAN AP/AC extends existing solutions ideally and opens completely new scope for movement, even in the case of storage administration logistics and cable cars, in mobile use and remote monitoring.

Applications

Communication must be shielded against internal and external influences wherever process and production data flows into cross-departmental data acquisition systems or where systems cross-reference each other within the automation network. Production plant or remote maintenance access to production plant can be easily and securely segmented with the EAGLE system.





OZD 485
G12 BAS



OZD 485
G12 PRO



OZD 485
G12



OZD FIP



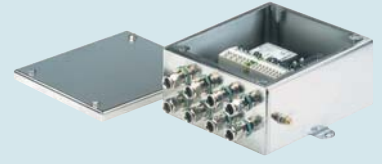
OZD Profi
12M



OZD
Genius



OZD Modbus
Plus



OZD Profi
ATEX

Fiberoptic Technology for Fieldbuses

The extra operating reliability advantage for leading fieldbuses

Fiberoptic Fieldbuses for explosion vulnerable zone

speed data communication, approved for Ex-zone 1 and 2

Requirements and Solutions

In an EMC-polluted environment, fiberoptic technology is the first choice for higher operational reliability in industrial installations. Media converters extend the ranges of the fieldbus networks and make possible easy network planning and commissioning.

Requirements and Solutions

Prevention of explosions in hazardous locations requires the ultimate precautions. Fiber optic cables fit those demands perfectly, as light simply causes no sparks and thus no ignition. The necessary media converters are approved by the responsible authorities. Thus data rates, redundancy mechanisms and preventive maintenance, well known in standard automation, can now be used in hazardous locations as well.

Product features

- fiberoptic repeaters for fieldbus systems such as PROFIBUS, Modbus, WorldFIP, Genius Bus et al.
- digital fiber ports for V.24/RS 232 and RS 485 interfaces
- high operational security and plant accessibility thanks to 0ms switch over time in case of fiber break, redundant power supply, remote monitoring and preventative maintenance possibilities
- DIN rail devices with metal housing suitable for industrial use or compact plug-in modules
- suitable for plastic or HCS® fibers as well as single-mode fiber for long distances

Product features

- Fibre optic repeater for PROFIBUS; Geniusbus, Modbus
- Approvals according to ATEX directive 94/9 for Zone 1, 21, 2 and 22 (OZD Profi G12 ATEX 1) resp. Zone 2
- Approvals according to UL 1604 Class1 Div 2,
- Redundancy
- Preventive maintenance via SCADA possible

Applications

Media converters for various fieldbuses are mainly used in process automation and transport technology, particularly in extended installations in which the risk of operating faults is to be minimized.

Applications

Fibre optic field bus repeaters with approvals for hazardous locations are used in chemical, petrochemical and pharmaceutical industries. Likewise applicable for installations with inflammable dusts, e.g. in parts of the food industry, fibre optics expand the range of rapid real-time field buses without any barriers to protection zone 1.

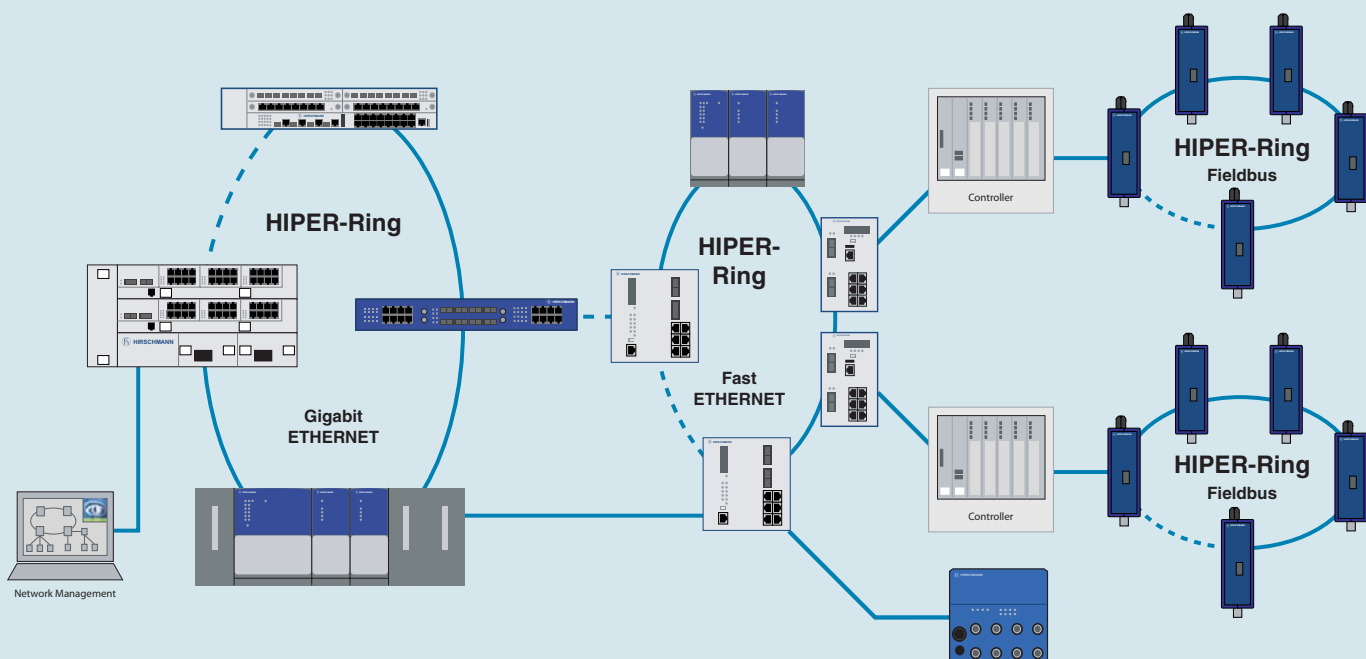




HIPER-Ring. For redundancy in the network.

After all, you don't have a second to lose.

In regards to redundancy and the high availability, Hirschmann is one step ahead of the rest. If a transmission path fails, the HIPER-Ring redundancy feature will bypass it within a fraction of a second. You don't need to wait longer these days! This is good for your data transmission security and even better for your company.





The whole world of reliable connections.

Curious to know more?

You will find detailed information on our products at www.hirschmann.com.
On request we will gladly send you more detailed information.





HIRSCHMANN

Hirschmann. Simply a good Connection.



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- Sales subsidiaries
- Selected distribution partners

Hirschmann Automation and Control GmbH

Industrial ETHERNET
FiberINTERFACES
Industrial Connectors
Test & Measurement
Electronic Control Systems

WWW.HIRSCHMANN.COM

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