

CHOOSE YOUR OWN SWITCH



With your personal PIN for the individual switch:
OpenRail.

- Individually configured switches (1000 versions)
- Gigabit technology
- Software range that can be expanded significantly
- Short delivery times and absolute flexibility



HIRSCHMANN

Product features

- 100 % flexible due to its standard basic circuit board
- Gigabit capable for industrial use
- Optional 4–26 port switches
- Extended range of use due to its freely selectable temperature ranges and different software versions
- Meets all relevant industry standards
- Selectable uplink ports
- Remote diagnosis via signalling switches
- Time-saving commissioning using auto negotiation, auto polarity, auto crossing and diagnosis displays
- Compatible with Profinet, EtherNet/IP, Modbus/TCP etc.

Applications

It doesn't matter whether it is being designed for small, medium or large networks, whether it is for entry level or management level, whether it is for mining, automobile production, mechanical engineering, process or transport automation, the extreme variability of **OpenRail** offers a tailor-made solution for all areas of use. Therefore **OpenRail** switches can be used

in economic automation applications such as in networks in harsh industrial environments, or in highly complex applications that require high port density or the highest availability and reliability. Hirschmann's **OpenRail** offers individuality in series production – for almost any area of use.

Ordering with the OpenRail system

OpenRail – is an ordering system that can cope with any customer requirement and offers a simple, transparent ordering option. It doesn't matter which of the 1000 versions you or your customers opt for. Step by step you are asked for the parameters by means of which an order code with all the required

information is generated. After we have received your order, your individual switches are manufactured in our specific customer requirement production unit. There is no simpler and more economical solution.

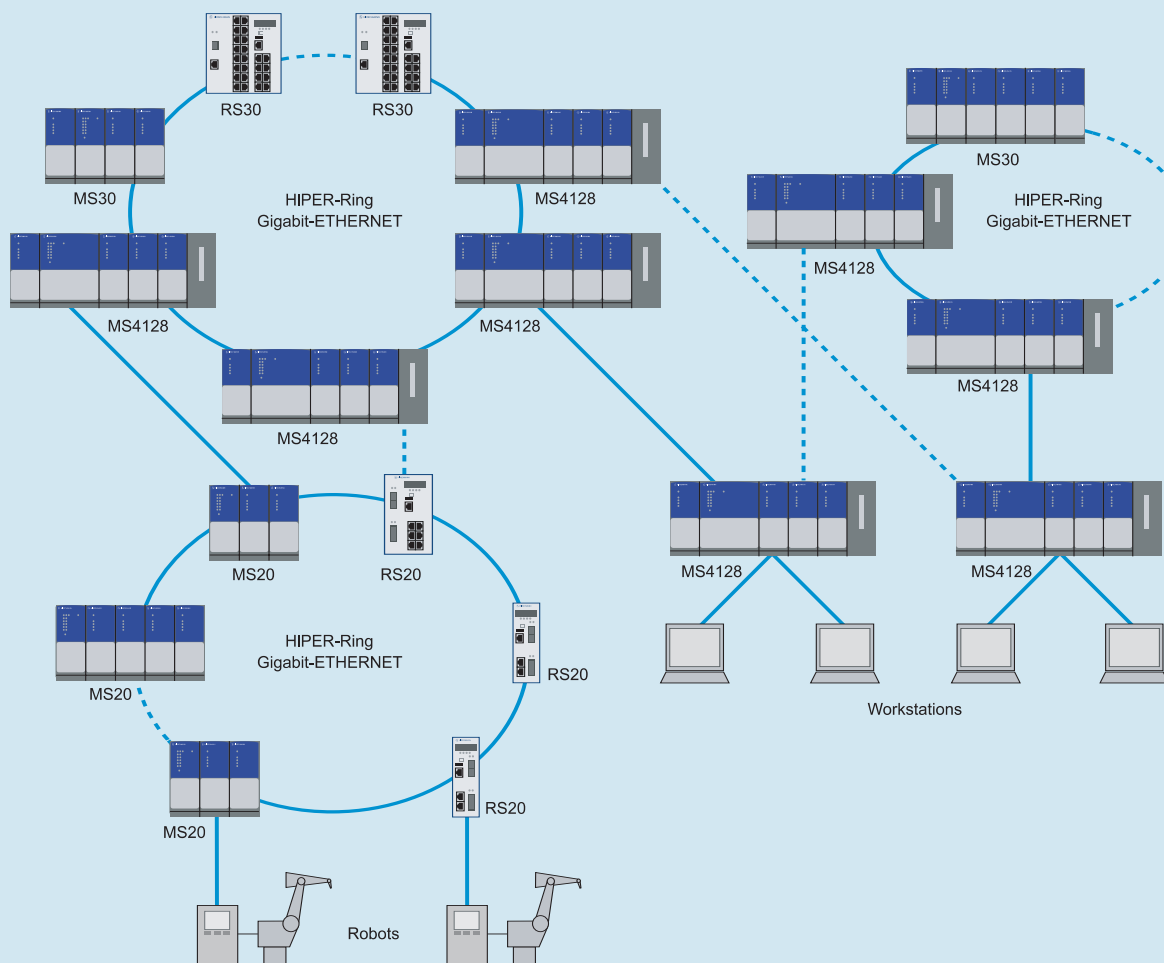


OpenRail: A made-to-measure switch that pays off every time.

Requirements and Solutions

In practice there are very many different requirements for industrial ETHERNET: From the economical, small, integrated ETHERNET solution up to complex Fast-ETHERNET solutions with management functions, high availability, Gigabit capability and many more functions. Here most standard switches do not offer suitable features and thus cause unnecessary costs. Therefore tailor-made solutions are required, in other words, individually designed, configured switches that comply exactly with the customer's requirements.

With **OpenRail** Hirschmann has now started to offer Rail and MICE series switches manufactured to the customer's specifications and suitable for almost any application. These can have specific parameters set quickly and easily by a web configurator and can be ordered in a total of 1000 different versions. All this is available at the same price and delivery conditions as series products – and with the customary high Hirschmann quality.



For its managed switches Hirschmann offers the option of two different software packages.

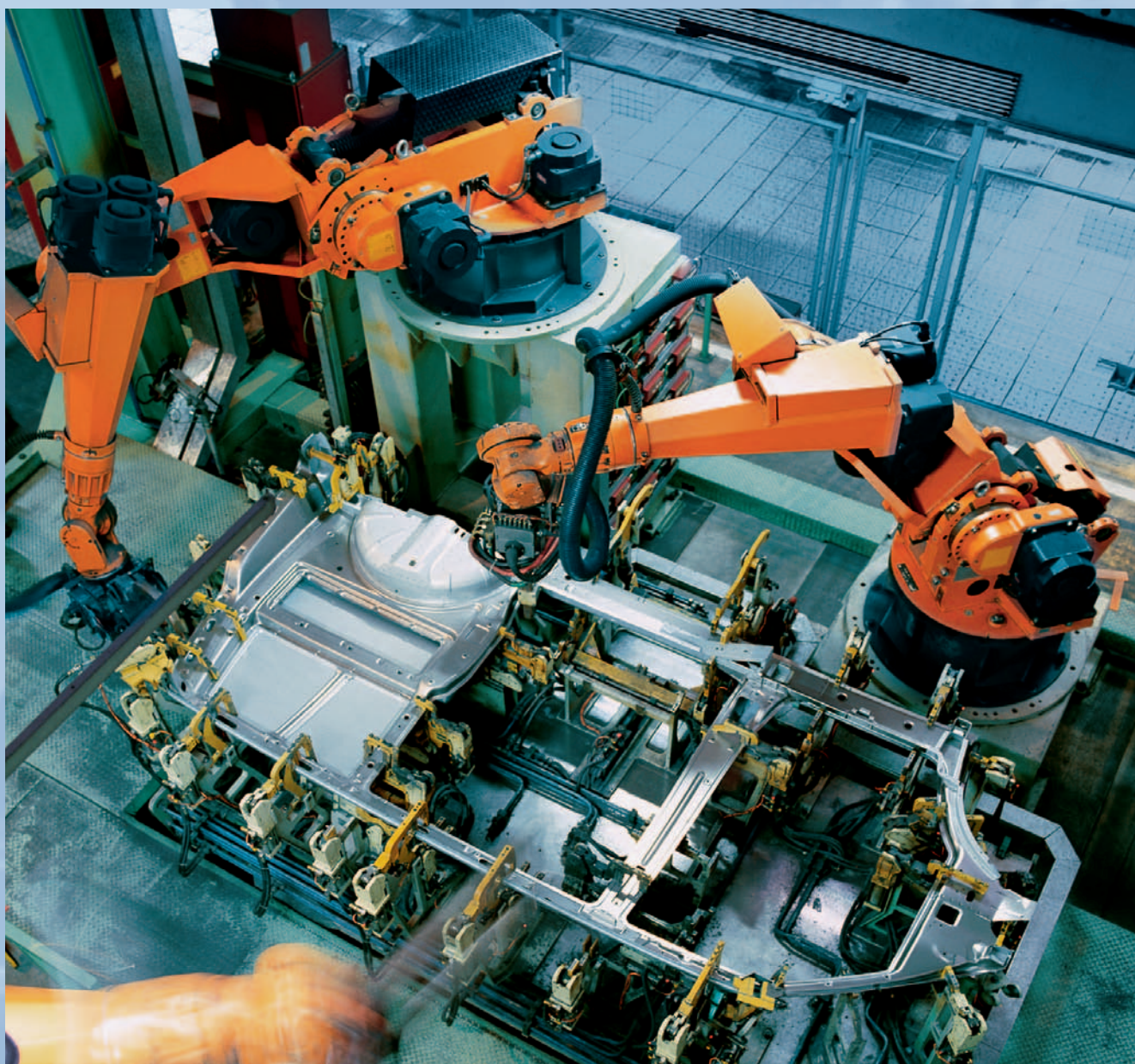
Software options

Enhanced software

The software with a wide range of management and diagnosis functions, that is easy to configure and offers a large number of filter functions. Fast redundancy mechanisms and security features are also supported such as real-time applications. Thus it is ideally suited to standard industrial applications. It is not possible to upgrade from "Enhanced" to "Professional" later.

Professional software

The "Professional" software contains the full range of "Enhanced" software functions plus extended diagnosis and filter properties. The extensions in the security and redundancy areas leave nothing to be desired. The powerful hardware has enough reserves for additional features. A software package for applications where great value is placed on uncompromising plant safety and the highest level of availability.



12 parameters, 1000 versions: The Hirschmann managed switch range for maximum

The core of your order:

RS 30

Design

24

FE ports

02

GE ports

T1

Type 1 uplink port

O6

Type 2 uplink port

S

Temperature

Compact switch (Rail)

RS 20 Fast-ETHERNET uplinks

RS 30 Gigabit-ETHERNET uplinks

Modular switch (MICE)

MS 20 Fast-ETHERNET uplinks

MS 30 Gigabit-ETHERNET uplinks

Number of Fast-ETHERNET ports

04 4 x 100 Mbit

08 8 x 100 Mbit

16 16 x 100 Mbit

24 24 x 100 Mbit

Number of Gigabit-ETHERNET ports

00 0 x 1000 Mbit

02 2 x 1000 Mbit

Type 1 uplink port (only for RS20/RS30)

T1 Twisted Pair / RJ45

T5 Twisted Pair / M12 (100 Mbit)

M2 Multimode / SC (100 Mbit)

M4 Multimode / ST (100 Mbit)

S2 Singlemode / SC (100 Mbit)

L2 Singlemode LH / SC (100 Mbit)

O6 SFP slot (1000 Mbit)

Type 2 uplink port (only for RS20/RS30)

T1 Twisted Pair / RJ45

T5 Twisted Pair / M12 (100 Mbit)

M2 Multimode / SC (100 Mbit)

M4 Multimode / ST (100 Mbit)

S2 Singlemode / SC (100 Mbit)

L2 Singlemode LH / SC (100 Mbit)

O6 SFP slot (1000 Mbit)



Compact switch, Rail

= Compulsory field

= Optional

individuality.



The order code that contains all the important options for us and using which you can track your order at any time (online tracking).

D**B****P****H****H****01.0**

Power supply

Approvals

Software

Configuration

OEM type

Software release



Modular switch, MICE

Software release

01.0 Software release 1.0

OEM type

H Standard
X Customer specific

Configuration

H Standard
X Customer specific

Software version

E Enhanced:
Remote access, diagnosis, filters, redundancy
P Professional:
Enhanced software plus security, extended
diagnosis and redundancy

Approvals

A cUL508, cUL1604 Class1 Div.2
B cUL508, cUL1604 Class1 Div.2, GL
Substation IEC61850,
Railway standard EN 50121-4/EN 50155
ATEX 100a Zone 2

Power supply

A 18–32 V DC MICE
C 32–60 V DC MICE
D 9.6–60 V DC and 18–30 V AC Rail

Temperature range

S Standard 0 °C up to +60 °C
E Extended –40 °C up to +70 °C
inclusive Conformal Coating

Information and Facts OpenRail

Product description		Fast-ETHERNET		Gigabit-ETHERNET	
Description		Managed Industrial ETHERNET Switch ETHERNET (10 Mbit/s) and Fast-ETHERNET (100 Mbit/s)		Managed Industrial ETHERNET Switch ETHERNET (10 Mbit/s) and Fast-ETHERNET (100 Mbit/s) and Gigabit-ETHERNET (1000 Mbit/s)	
		modular		modular	
Type		MS20xx	RS20xx	MS30xx	RS30xx
Technical data					
Port type and quantity		4 – 24 ports Fast-ETHERNET		8 – 24 ports Fast-ETHERNET and 2 ports Gigabit-ETHERNET, 1000Base fiber with SFP modules, or 10/100/1000Base-TX	
		media modules	integrated	media modules	integrated
Operating voltage		24 V DC (18–32 V) or 48 V DC (32–60 V)	24/48 V DC (9.6–60 V) and 24 V AC (18–30 V)	24 V DC (18–32 V) or 48 V DC (32–60 V)	24/48 V DC (9.6–60 V) and 24 V AC (18–30 V)
Operating temperature		0 °C to +60 °C standard –40 °C to +70 °C extended (incl. conformal coating)			
Approvals					
Standard		cUL 508 (pending) cUL 1604 Class 1 Div 2 hazardous locations (pending)			
Extended		Germanischer Lloyd, shipbuilding (pending) ATEX 100a, Zone 2, hazardous locations (in preparation) IEC 61850, substation (pending) EN 50121-4, train standard (railtrack) EN 50155, train standard (in train)			
Software Enhanced					
Network topologies		any line-/star topology, ring structure (HIPER-Ring, RSTP)			
Management		serial interface, web interface, SNMP v1/v2, HiVision, file transfer SW HTTP/TFTP			
Diagnostics		LEDs (power, link status, data, 100 Mbit/s, auto negotiation, full duplex, error, Redundancy Manager, ring port, LED test), log file, syslog, 2 x signaling contacts, RMON (statistics, history, alarms, events), port mirroring, topology discovery IEEE 802.1AB (LLDP)			
Configuration		Command Line Interface (CLI), TELNET, BootP, DHCP, DHCP option 82 (prepared), HiDiscovery, auto configuration adapter (ACA21-USB)			
Security		port security (MAC based and IP based), SNMP V3 (no encryption)			
Redundancy functions		HIPER-Ring (ring structure), RSTP IEEE 802.1w, redundant network/ring coupling, dual homing, redundant 24 V DC power supply, redundant signal contact			
Other services		QoS 4 classes, prioritization (IEEE 802.1D/p), VLAN (IEEE 802.1Q), multicast (IGMP snooping/querier), multicast detection/unknown multicast, broadcast limiter, fast aging			
Real-time		SNTP server, PTP/IEEE 1588, hardware support with media module			
Flow Control		flow control IEEE 802.3x, port priority IEEE 802.1D/p, priority (TOS/DIFFSERV)			
Software Professional > Consist of Software Enhanced and additional of					
Diagnostics		cable diagnostics			
Security		SNMP V3, SSH, authentication (IEEE 802.1x)			
Filtering services		multicast GMRP IEEE 802.1D			
Flow Control		prio (MAC/IP), prio mapping (TOS Layer2), traffic shaping (unicast, multicast, broadcast) Ingress/Egress			
Other services		real-time clock with energy buffer			
Software Professional prepared for					
Diagnostics		loop detection			
Security		ACL (access control list)			
Redundancy functions		trunking trunking with HIPER-Ring link aggregation dynamic and static (max. 8 trunks, 8 ports/trunk, LACP) link aggregation with HIPER-Ring MSTP IEEE 802.1s			
Filtering services		VLAN GVRP IEEE 802.1Q			





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Hirschmann. Simply a good Connection.

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