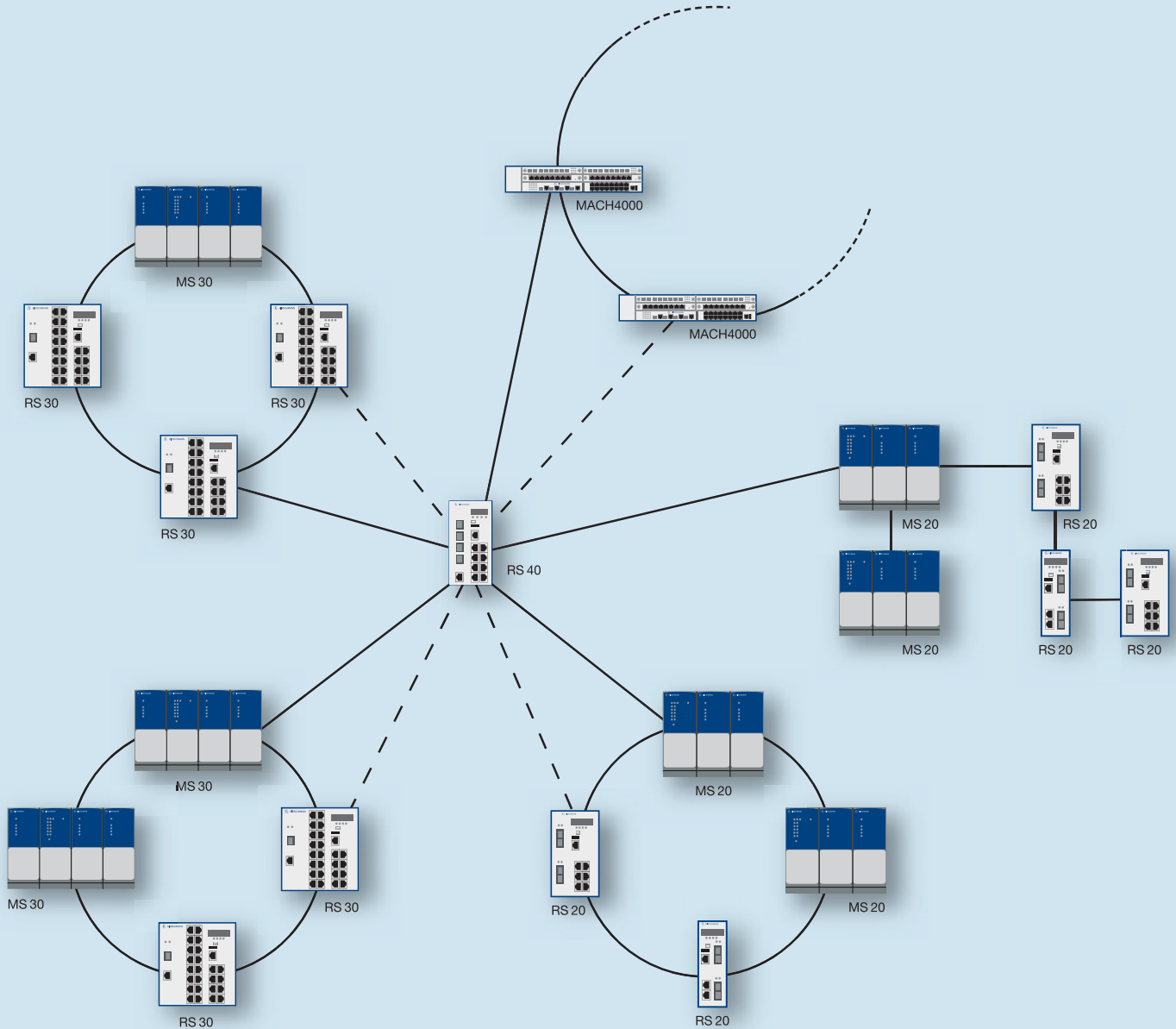**Hirschmann Switch-Tuning:**

The new Gigabit OpenRail.

- 9-port Full-Gigabit ETHERNET switch
- For upgrading slower networks
- Highest levels of flexibility thanks to the SFP
- Designed for use in industrial environments
- Maximum cost efficiency

HIRSCHMANN

A Belden Company

The highly flexible power pack for industrial applications: Gigabit OpenRail Switch.

MACH4000

MACH4000

MS 30

RS 30

RS 30

RS 30

MS 20

RS 20

MS 20

RS 20

RS 20

RS 40

MS 30

MS 30

RS 30

RS 30

MS 20

RS 20

MS 20

RS 20

Applications

Whether it's a case of upgrading slower networks or segmenting existing networks – anywhere, where different electrical or optical signals have to be combined, the new Gigabit OpenRail Switches from Hirschmann ensure massive performance and high flexibility: 4 Combo ports and 5 fixed TX ports offer decisive advantages for video monitoring in tunnels, traffic automation, process monitoring in power stations or on cruise ships, supplying data in great bandwidths and in real time.

RS40-

Model

RS40	Full Gigabit

00

Ports FE

00	none

09

Ports GE

09	9 x 1000 Mbits

CC

Ports Type 1. Uplink

CC	2 x SFP Combo	100/1000Mbit	SFP/RJ45

CC

Ports Type 2. Uplink

CC	2 x SFP Combo	100/1000Mbit	SFP/RJ45

S

Temperature range

S	0° C up to +60° C	
T	−40° C up to +70° C	
E	−40° C up to +70° C	inclusive Conformal Coating

D

Power supply

D	12/24/48 V DC and 24 V AC

A

Approvals

A	cUL508 · cUL1604 · Class 1 Div.2
H	cUL508 · cUL1604 · Class 1 Div.2
	GL: German Lloyd · IEC 61850-3: Substation
	IEEE1613: Substation · EN50121-4: Railway (along track)
B	cUL508 · cUL1604 · Class 1 Div.2
	GL: German Lloyd · IEC 61850-3: Substation
	IEEE1613: Substation · EN50121-4: Railway (along track)
	ATEX100a, Zone 2: Hazardous Location

P

Software version

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

H

Configuration

H	Standard
X	Customer specific

H

OEM type

H	Standard
X	Customer specific

03.0

Software release

03.0	Software release 3.0

Compulsory field   Optional

(RS40-) (00) (09) (CC) (CC) (S) (D) (A) (P) (H) (H) (03.0)

Configure your Gigabit OpenRail Switch simply with our online tool.
configurator.hirschmann.com

Gigabit Rail Switch

Product name	RS40-0009CCCCSDAEHH03.0	RS40-0009CCCCSDAPHH03.0
Product description		
Description	ETHERNET/Fast-ETHERNET/Gigabit-ETHERNET switch accoring to IEEE 802.3 compact, managed, Industrial switch for DIN rail, store-and-forward-switching, fanless design **Software Layer 2 Enhanced**	ETHERNET/Fast-ETHERNET/Gigabit-ETHERNET switch according to IEEE 802.3 compact, managed, Industrial switch for DIN rail, store-and-forward-switching, fanless design **Software Layer 2 Professional**
Port type and quantity	Gigabit-ETHERNET ports in total: 9 4 x Combo ports (10/100/1000 BASE TX RJ 45 plus related FE/GE-SFP slot) 5 x 10/100/1000 BASE TX RJ 45	Gigabit-ETHERNET ports in total: 9 4 x Combo ports (10/100/1000 BASE TX RJ 45 plus related FE/GE-SFP slot) 5 x 10/100/1000 BASE TX RJ 45
Type	RS40-0009CCCCSDAEHH03.0.	RS40-0009CCCCSDAPHH03.0.
Order No.	RS40-0009CCCCSDAEHH03.0.	RS40-0009CCCCSDAPHH03.0.
More interfaces		
Power supply/signaling contact	1 x plug-in terminal block, 6-pin	
V.24 interface	1 x RJ 11 socket	
USB interface	1 x to connect autoconfiguration adapter ACA21-USB	
Network size – lenght of cable		
Twisted pair (TP)	0 – 100 m	
Optical fiber connections	see tables Fast-ETHERNET SFP Transceiver and Gigabit-ETHERNET SFP Transceiver	
Network size – cascadibility		
Line-/star topology	any	
Ring structure (HIPER-Ring)	50 (reconfiguration time < 0.3 sec.)	
Power requirements		
Operating voltage	12/24/48 V DC (9.6 – 60) V and 24 V AC (18 – 30) V	
Current consumption at 24 V DC	750 mA	770 mA
Current consumption at 48 V DC	375 mA	385 mA
Power output in Btu (IT) h	61.5	64
Software		
Management	Serial interface, Web interface, SNMP V1/V2, HiVision file transfer SW HTTP/TFTP	
Diagnostics	LEDs, log-file, syslog, signal contact, RMON, port mirroring, topology discovery 802.1AB	LEDs, log-file, syslog, signal contact, RMON, port mirroring, topology discovery 802.1AB, cable tester
Configuration	Command Line Interface (CLI), TELNET, BootP, DHCP, DHCP option 82, HIDiscovery, autoconfiguration adapter (ACA21-USB, ACA11 read support)	
Security	Port security (IP and MAC), SNMP V3 (no encryption)	Port security (IP and MAC), SNMP V3, SSH, authentication (802.1x)
Redundancy functions	HIPER-Ring (ring structure), RSTP 802.1w, redundant network/ring coupling, redundant 24 V power supply	HIPER-Ring (ring structure), RSTP 802.1w, redundant network/ring coupling, link aggregation, redundant 24 V power supply
Filter	QoS 4 classes, port priority (IEEE 802.1D/p), VLAN (IEEE 802.1Q), multicast (IGMP snooping/querier), broadcast limiter, fast aging	QoS 4 classes, port priority (IEEE 802.1D/p), VLAN (IEEE 802.1Q), multicast (IGMP snooping/querier), unknown multicast detection, broadcast-, unicast-, multicast limiter, fast aging, GMRP IEEE 802.1D
Realtime	SNTP server, PTP/IEEE 1588	
Flow Control	Flow control 802.3x	
Ambient conditions		
Operating temperature	0° up to + 60° C – 40° up to + 70° C EEC	
Storage/transport temperature	– 40° up to + 70° C – 40° up to + 85° C EEC	
Protective coating on PCB	optional	
Relative humidity (non-condensing)	10 % up to 95 %	
MTBF	22 years (MIL-HDBK-217F)	21 years (MIL-HDBK-217F)
Mechanical construction		
Dimensions (W x H x D)	74 (110 EEC) x 131 x 111	
Mounting	DIN Rail mounting	
Weight	530 g (EEC 700)	
Protection class	IP 20	
Mechanical stability		
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks	
IEC 60068-2-6 vibration	1 mm, 2 – 13.2 Hz, 90 min.; 0.7g, 13.2 – 100 Hz, 90 min.; 3.5 mm, 3 – 9 Hz, 10 cycles, 1 octave/min.; 1 g, 9 – 150 Hz, 10 cycles, 1 octave/min.	
Approvals		
Safety of industrial control equipment	cUL 508 (pending)	
Hazardous locations	cUL 1604 Class 1 Div.2 (pending)	
German Lloyd	optional	
Substation	optional	
Railway standard	optional	

Fast-ETHERNET SFP Transceiver

Type	M-FAST SFP-LH/LC	M-FAST SFP-SM+/LC	M-FAST SFP-SM/LC	M-FAST SFP-MM/LC	
Order No.	943 868-001	943 867-001	943 866-001	943 865-001	
Technical data					
Multimode fiber (MM) 50/125 µm				5 km	
Multimode fiber (MM) 62.5/125 µm				4 km	
Singlemode fiber (SM) 9/125 µm	44 – 120 km	25 – 65 km	25 km		

Gigabit-ETHERNET SFP Transceiver

Type	M-SFP-LH+/LC	M-SFP-LH/LC	M-SFP-LX/LC	M-SFP-SX/LC	
Order No.	943 049-001	943 042-001	943 015-001	943 014-001	
Technical data					
Multimode fiber (MM) 50/125 µm			0 – 550 m	0 – 550 m	
Multimode fiber (MM) 62.5/125 µm			0 – 550 m	0 – 275 m	
Singlemode fiber (SM) 9/125 µm	44 – 120 km	16 – 80 km	0 – 20 m		

Product features

Maximum power output at every port: Whether it's a fiber port or wired, the Gigabit OpenRail switches from Hirschmann enable the highest levels of data transfer by means of Full-Gigabit ETHERNET in combination with all the advantages offered by the OpenRail principle at these highest levels of quality:

- Large bandwidths e.g. for real time applications
- Compatible with 10/100/1000 ETHERNET
- Highly flexible to use
- Designed for use in an industrial environment
- For the optimization of older sub-nets
- Maximum cost-effectiveness

High flexibility

- 4 Combo ports for 10/100/1000BASE TX or 100/1000BASE FX mit SFP
- 5 extra fixed 10/100/1000BASE TX ports

Requirements and Solutions

Up to now, whenever a high degree of flexibility in port deployment was required in the field, along with a unique level of performance and durability, most switch manufacturers had to pass. Gigabit Uplink ports and the 9-port Full-Gigabit switch were the great unknowns still waiting to be discovered. But that's all now in the past. With its new Gigabit OpenRail switches, Hirschmann combines a concentrated Gigabit performance with high flexibility via 4 Combo ports.

In this way nearly every fiber variant, such as multimode, single-mode or long haul, can be realized by the use of SFP fiber modules and, furthermore, 5 fixed Gigabit TX ports can be used.

With Gigabit OpenRail Hirschmann can offer a compact power pack for tough ETHERNET use in the industrial environment. In this way we can ensure the optimal combination of power and speed.

Hirschmann Competence Center

If complete commercial solutions are sought along with products of high quality, Hirschmann Competence Center is the right partner for you. It is here that you will receive high-quality consulting, service and support from the pioneer in the field of industrial network technology. Talk to us about your specific requirements.

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