

**Product:** RSPE35-24044O7T99-SK9V999HHPE2AXX.X.XX

**Configurator:** RSPE - Rail Switch Power Enhanced configurator



### Configurator Description

The compact and extremely robust RSPE switches comprise a basic device with eight twisted pair ports and four combination ports that support Fast Ethernet or Gigabit Ethernet. The basic device – optionally available with the HSR (High-Availability Seamless Redundancy) and PRP (Parallel Redundancy Protocol) uninterruptible redundancy protocols, plus precise time synchronization in accordance with IEEE 1588 v2 - can be extended to provide up to 28 ports by adding two media modules.

### Technical Specifications

#### Product description

Description	Managed Fast/Gigabit Industrial Ethernet Switch, fanless design Enhanced (PRP, Fast MRP, HSR, DLR, NAT, TSN)
Software Version	Release 10.3.00
Port type and quantity	Ports in total up to 28 Base unit: 4 x Fast/Gigabit Ethernet Combo ports plus 8 x Fast Ethernet TX ports expandable with two slots for media modules with 8 Fast Ethernet ports each

#### More Interfaces

Power supply/signaling contact	1 x plug-in terminal block 3-pins, 1x plug-in terminal block 2-pins
V.24 interface	1 x RJ11 socket
SD-card slot	1 x SD card slot to connect the auto configuration adapter ACA31
USB interface	1 x USB to connect auto-configuration adapter ACA22-USB

#### Network size - length of cable

Twisted pair (TP)	0-100 m
Single mode fiber (SM) 9/125 µm	see SFP modules
Single mode fiber (LH) 9/125 µm (long haul transceiver)	see SFP modules
Multimode fiber (MM) 50/125 µm	see SFP modules
Multimode fiber (MM) 62.5/125 µm	see SFP modules

#### Network size - cascading

Line - / star topology	any
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#### Power requirements

Operating Voltage	1 x 60-250 V DC (48-320 V DC) and 110-230 V AC (88-265 V AC)
Power consumption	maximum 36W depending on fiber port count

#### Software

Switching	CoS Queue Management, Egress Interface Shaping, Fast Aging, Flow Control (802.3X), Forward unknown multicast to query ports, IGMP Snooping/Querier per VLAN (v1/v2/v3), Independent VLAN Learning, Ingress Storm Protection, Interface Trust Mode, Jumbo Frames, Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP), Multiple VLAN Registration Protocol (MVRP), QoS / Port Prioritization (802.1D/p), Queue-Shaping / Max. Queue Bandwidth, Static Unicast/Multicast Address Entries, TOS/DSCP Prioritization, Unknown Multicast Filtering, VLAN (802.1Q), VLAN Unaware Mode, Voice VLAN, Double VLAN Tagging (QinQ), GARP Multicast Registration Protocol (GMRP), GARP VLAN Registration Protocol (GVRP), IP Ingress DiffServ Classification and Policing, IP subnet-based VLAN, MAC-based VLAN, Protocol-based VLAN
Redundancy	Link Aggregation with LACP, Link Backup, Media Redundancy Protocol (MRP) (IEC62439-2), RSTP 802.1D-2004 (IEC62439-1), RSTP Guards, HIPER-Ring (Ring Switch), HIPER-Ring over Link Aggregation, MRP over Link Aggregation, MSTP (802.1Q), Redundant Network Coupling, Sub Ring Manager, Fast MRP (IEC62439-2), High Availability Seamless Redundancy Protocol (HSR) (IEC62439-3), Parallel Redundancy Protocol (PRP) (IEC62439-3)

Management	Dual Software Image Support, HTTP, HTTPS, IPv6 Management, LLDP (802.1AB), LLDP-MED, SCP, SFTP, SNMP v1/v2/v3, SNMPv3 Traps, SSHv2, Telnet, TFTP, Traps, V.24, DNS Client, ITxPT Module Inventory, OPC-UA Server, Service Discovery (bonjour), SNMPv1/v2 Read-Only
Diagnostics	Configuration Check Dialog, Copper Cable Test, Device Status Indication, Duplex Mismatch Detection, LEDs, Link Flap Detection, Link Speed and Duplex Monitoring, MAC Notification, Management Address Conflict Detection, Overload Detection, Persistent Logging on ACA, Port Mirroring 1:1, Port Mirroring 8:1, Port Mirroring N:1, Port Monitoring with Auto-Disable, RMON (1,2,3,9), Self-Tests on Cold Start, SFP Management, Signal Contact, Snapshot Configuration Feature, Switch Dump, Syslog, System Information, TCPDump, Email Notification, Loop Protection, RSPAN, SFLOW, VLAN Mirroring
Configuration	Auto Disable, AutoConfiguration Adapter ACA21/22 (USB), AutoConfiguration Adapter ACA31 (SD card), Automatic Configuration Undo (roll-back), Backup config on a remote server when saving, BOOTP/DHCP Client with Auto-Configuration, Clear config but keep IP settings, CLI script handling over ENVm at boot, CLI Scripting, Command Line Interface (CLI), Configuration Fingerprint, Context-sensitive Help, DHCP Relay with Option 82, DHCP Server: per Port, DHCP Server: Pools per VLAN, Full-featured MIB Support, HiDiscovery, HTML5 based Management, Web-based Management, XML-based Configuration File, Interface Shutdown via Tracking
Security	Access to Management restricted by VLAN, Appropriate Use Banner, Audit Trail, Basic ACL, CLI Logging, Configurable Number of Login Attempts, Configurable Password Policy, Denial-of-Service Prevention, Device Security Indication, Guest/unauthenticated VLAN, HTTPS Certificate Management, Ingress VLAN-based ACL, Integrated Authentication Server (IAS), Local User Management, MAC-based Port Security, Multiple Privilege Levels, Password change on first login, Port-based Access Control with 802.1X, RADIUS Client, RADIUS VLAN Assignment, Remote Authentication via RADIUS, Restricted Management Access, Signed Firmware Images, SNMP Logging, User Account Locking, VLAN-based ACL, ACL Flow-based Limiting, DHCP Snooping, Dynamic ARP Inspection, Format options for MAC authentication bypass, Ingress IPv4-based ACL, Ingress MAC-based ACL, LDAP, MAC Authentication Bypass, Multi-Client Authentication per Port, RADIUS Policy Assignment, Time-based ACL
Time synchronisation	802.1AS, 802.1AS-2020, Buffered Real Time Clock, PTPv2 Boundary Clock, PTPv2 Transparent Clock two-step, SNTP Client, SNTP Server, , 802.1AS
Industrial Profiles	EtherNet/IP Protocol, IEC61850 Protocol (MMS Server, Switch Model), Modbus TCP, PROFINET Protocol
Miscellaneous	Manual Cable Crossing, Port Power Down

Ambient conditions

MTBF (Telecordia SR-332 Issue 3) @ 25°C	990 877 h
Operating temperature	0-+60
Storage/transport temperature	-40-+70 °C
Relative humidity (non-condensing)	10-95 %

Mechanical construction

Dimensions (WxHxD)	209 mm x 164 mm x 120 mm
Weight	2200 g
Mounting	DIN rail
Protection class	IP20

Mechanical stability

IEC 60068-2-6 vibration	1 mm, 2 Hz-13.2 Hz, 90 min.; 0.7 g, 13.2 Hz-100 Hz, 90 min.; 3.5 mm, 3 Hz-9 Hz, 10 cycles, 1 octave/min.; 1 g, 9 Hz-150 Hz, 10 cycles, 1 octave/min
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks

EMC interference immunity

EN 61000-4-2 electrostatic discharge (ESD)	8 kV contact discharge, 15 kV air discharge
EN 61000-4-3 electromagnetic field	35 V/m (80-2700 MHz); 1 kHz, 80% AM
EN 61000-4-4 fast transients (burst)	4 kV power line, 4 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line IEEE1613: power line 5 kV (line/earth)
EN 61000-4-6 Conducted Immunity	3 V (10 kHz-150 kHz), 10 V (150 kHz-80 MHz)
EN 61000-4-16 mains frequency voltage	30 V, 50 Hz continous; 300 V, 50 Hz 1 s

EMC emitted immunity

EN 55022	EN 55032 Class A
FCC CFR47 Part 15	FCC 47CFR Part 15, Class A

Approvals

Basis Standard	CE, FCC, RCM, EN61131
Substation	IEC61850-3, IEEE1613

Reliability

Guarantee	60 months (please refer to the <a href="#">terms of guarantee</a> for detailed information)"
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Scope of delivery and accessories

Accessories to Order Separately	RSPM -Rail Switch Power Module, Rail Power Supply RPS 80/120, Terminal Cable, Network management Industrial HiVision, ACA22, ACA31, SFP
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Scope of delivery	Device, terminal blocks , General safety instructions
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Further Instructions

Product Documentation	<a href="https://www.doc.hirschmann.com/index.html">https://www.doc.hirschmann.com/index.html</a>
Certificates	<a href="https://www.doc.hirschmann.com/certificates.html">https://www.doc.hirschmann.com/certificates.html</a>

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