

Product: RSPE35-24044O7T99-SKKV999HHPE3SXX.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) , with HiOS Release 08.7
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	2 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	2 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	Independent VLAN Learning, Fast Aging, Static Unicast/Multicast Address Entries, QoS / Port Prioritization (802.1D/p), TOS/DSCP Prioritization, Interface Trust Mode, CoS Queue Management, Queue-Shaping / Max. Queue Bandwidth, Flow Control (802.3X), Egress Interface Shaping, Ingress Storm Protection, Jumbo Frames, VLAN (802.1Q), VLAN Unaware Mode, Voice VLAN, IGMP Snooping/Querier per VLAN (v1/v2/v3), Unknown Multicast Filtering, Multiple VLAN Registration Protocol (MVRP), Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP), Password change on first login IP Ingress DiffServ Classification and Policing, Protocol-based VLAN, GARP VLAN Registration Protocol (GVRP), MAC-based VLAN, IP subnet-based VLAN, GARP Multicast Registration Protocol (GMRP) , TSN 802.1Qbv Support on interfaces 1/1 - 1/3. , Layer 2 Loop Protection , Double VLAN Tagging
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, Redundant Network Coupling, Sub Ring Manager, MSTP (802.1Q) VRRP, VRRP Tracking, HiVRRP (VRRP enhancements) Fast MRP (IEC62439-2), High Availability Seamless Redundancy Protocol (HSR) (IEC62439-3), Parallel Redundancy Protocol (PRP) (IEC62439-3)
Management	Dual Software Image Support, TFTP, SFTP. SCP. LLDP (802.1AB), LLDP-MED, SSHv2, V.24, HTTP, HTTPS, Traps, SNMP v1/v2/v3, Telnet DNS Client OPC-UA Server

Diagnostics	Management Address Conflict Detection, MAC Notification, Signal Contact, Device Status Indication, TCPDump, LEDs, Syslog, Persistent Logging on ACA, Port Monitoring with Auto-Disable, Link Flap Detection, Overload Detection, Duplex Mismatch Detection, Link Speed and Duplex Monitoring, RMON (1,2,3,9), Port Mirroring 1:1, Port Mirroring 8:1, Port Mirroring N:1, System Information, Self-Tests on Cold Start, Copper Cable Test, SFP Management, Configuration Check Dialog, Switch Dump, Snapshot Configuration Feature Email Notification, RSPAN, SFLOW, VLAN Mirroring
Configuration	Automatic Configuration Undo (roll-back), Configuration Fingerprint, Text-based Configuration File (XML), BOOTP/DHCP Client with Auto-Configuration, DHCP Server: per Port, DHCP Server: Pools per VLAN, AutoConfiguration Adapter ACA21/22 (USB), AutoConfiguration Adapter ACA31 (SD card), HiDiscovery, DHCP Relay with Option 82, Command Line Interface (CLI), CLI Scripting, Full-featured MIB Support, Web-based Management, Context-sensitive Help
Security	MAC-based Port Security, Port-based Access Control with 802.1X, Guest/unauthenticated VLAN, Integrated Authentication Server (IAS), RADIUS VLAN Assignment, Denial-of-Service Prevention, VLAN-based ACL, Ingress VLAN-based ACL, Basic ACL, Access to Management restricted by VLAN, Device Security Indication, Audit Trail, CLI Logging, HTTPS Certificate Management, Restricted Management Access, Appropriate Use Banner, Configurable Password Policy, Configurable Number of Login Attempts, SNMP Logging, Multiple Privilege Levels, Local User Management, Remote Authentication via RADIUS, User Account Locking RADIUS Policy Assignment, Multi-Client Authentication per Port, MAC Authentication Bypass, DHCP Snooping, Dynamic ARP Inspection, LDAP, Ingress MAC-based ACL, Ingress IPv4-based ACL, Time-based ACL, ACL Flow-based Limiting
Time synchronisation	PTPv2 Transparent Clock two-step, PTPv2 Boundary Clock, Buffered Real Time Clock, SNTP Client, SNTP Server , 802.1AS
Industrial Profiles	EtherNet/IP Protocol, IEC61850 Protocol (MMS Server, Switch Model), ModbusTCP, PROFINET IO Protocol
Miscellaneous	Manual Cable Crossing, Port Power Down
Routing	IP/UDP Helper, Full Wire-Speed Routing, Port-based Router Interfaces, VLAN-based Router Interfaces, Loopback Interface, ICMP Filter, Net-directed Broadcasts, OSPFv2, RIP v1/v2, ICMP Router Discovery (IRDP), Static Unicast Routing, Proxy ARP, Static Route Tracking
Multicast routing	IGMP v1/v2/v3, IGMP Proxy (Multicast Routing)

Ambient conditions

MTBF (Telecordia SR-332 Issue 3) @ 25°C	702 592 h
Operating temperature	0+60 °C
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 continuous; 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

Scope of delivery and accessories

Accessories	Rail Power Supply RPS 80/120, Terminal Cable, Network management Industrial HiVision, ACA22, ACA31, SFP
Scope of delivery	Device, terminal blocks , General safety instructions

Further Instructions

Product Documentation	https://www.doc.hirschmann.com/index.html
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