



**Product:** RS20-1600M2M2TDAP

**Configurator:** RS20-1600M2M2TDAP

### Configurator Description

Fast Ethernet Ports with/without PoE The RS20 compact OpenRail managed Ethernet switches can accommodate from 4 to 25 port densities and are available with different Fast Ethernet uplink ports – all copper, or 1, 2 or 3 fiber ports. The fiber ports are available in multimode and/or singlemode. Gigabit Ethernet Ports with/without PoE The RS30 compact OpenRail managed Ethernet switches can accommodate from 8 to 24 port densities with 2 Gigabit ports and 8, 16 or 24 Fast Ethernet ports. The configuration includes 2 Gigabit ports with TX or SFP slots. The RS40 compact OpenRail managed Ethernet switches can accommodate 9 Gigabit ports. The configuration includes 4 x Combo Ports (10/100/1000BASE TX RJ45 plus FE/GE-SFP slot) and 5 x 10/100/1000BASE TX RJ45 ports

### Technical Specifications

#### Product description

Description	Managed Fast-Ethernet-Switch for DIN rail store-and-forward-switching, fanless design ; Software Layer 2 Professional
Part Number	943434073
Port type and quantity	16 ports in total: 14 x standard 10/100 BASE TX, RJ45 ; Uplink 1: 1 x 100BASE-FX, MM-SC ; Uplink 2: 1 x 100BASE-FX, MM-SC

#### More Interfaces

Power supply/signaling contact	1 x plug-in terminal block, 6-pin
V.24 interface	1 x RJ11 socket
USB interface	1 x USB to connect auto-configuration adapter ACA21-USB

#### Network size - length of cable

Twisted pair (TP)	Port 1 - 14: 0 - 100 m
Multimode fiber (MM) 50/125 µm	Uplink 1: 0-5000 m, 8 dB Link Budget at 1300 nm, A=1 dB/km, 3 dB Reserve, B = 800 MHz x km \\ Uplink 2: 0-5000 m, 8 dB Link Budget at 1300 nm, A=1 dB/km, 3 dB Reserve, B = 800 MHz x km
Multimode fiber (MM) 62.5/125 µm	Uplink 1: 0 - 4000 m, 11 dB Link Budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km \\ Uplink 2: 0 - 4000 m, 11 dB Link Budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km

#### Network size - cascading

Line - / star topology	any
Ring structure (HIPER-Ring) quantity switches	50 (reconfiguration time 0.3 sec.)

#### Power requirements

Operating Voltage	12/24/48V DC (9,6-60)V and 24V AC (18-30)V (redundant)
Power consumption	max. 11.8 W
Power output in BTU (IT)/h	max. 40.3

#### Software

Switching	Disable Learning (hub functionality), Independent VLAN Learning, Fast Aging, Static Unicast/Multicast Address Entries, QoS / Port Prioritization (802.1D/p), TOS/DSCP Prioritization, Egress Broadcast Limiter per Port, Flow Control (802.3X), VLAN (802.1Q), GARP VLAN Registration Protocol (GVRP), Double VLAN Tagging (QinQ), Voice VLAN, GARP Multicast Registration Protocol (GMRP), IGMP Snooping/Querier (v1/v2/v3)
Redundancy	Advanced Ring Configuration for MRP, HIPER-Ring (Manager), HIPER-Ring (Ring Switch), Fast HIPER-Ring, Link Aggregation with LACP, Media Redundancy Protocol (MRP) (IEC62439-2), Redundant Network Coupling, RSTP 802.1D-2004 (IEC62439-1), MSTP (802.1Q), RSTP Guards, RSTP over MRP
Management	Dual Software Image Support, TFTP, LLDP (802.1AB), LLDP-MED, SSHv1, SSHv2, V.24, HTTP, HTTPS, Traps, SNMP v1/v2/v3, Telnet
Diagnostics	Management Address Conflict Detection, Address Relearn Detection, MAC Notification, Signal Contact, Device Status Indication, TCPDump, LEDs, Syslog, 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

Configuration	AutoConfiguration Adapter ACA11 Limited Support (RS20/30/40, MS20/30), Automatic Configuration Undo (roll-back), Configuration Fingerprint, BOOTP/DHCP Client with Auto-Configuration, DHCP Server: per Port, DHCP Server: Pools per VLAN, DHCP Server: Option 43, AutoConfiguration Adapter ACA21/22 (USB), HiDiscovery, DHCP Relay with Option 82, Command Line Interface (CLI), CLI Scripting, Full-featured MIB Support, Web-based Management, Context-sensitive Help
Security	IP-based Port Security, MAC-based Port Security, Port-based Access Control with 802.1X, Guest/unauthenticated VLAN, RADIUS VLAN Assignment, Multi-Client Authentication per Port, MAC Authentication Bypass, Access to Management restricted by VLAN, HTTPS Certificate Management, Restricted Management Access, Appropriate Use Banner, SNMP Logging, Local User Management, Remote Authentication via RADIUS, Password change on first login
Time synchronisation	Buffered Real Time Clock, SNTP Client, SNTP Server
Industrial Profiles	EtherNet/IP Protocol, PROFINET IO Protocol
Miscellaneous	Manual Cable Crossing
Presettings	Standard

## Ambient conditions

Operating temperature	-40-+70 °C
Storage/transport temperature	-40-+85 °C
Relative humidity (non-condensing)	10-95 %

## Mechanical construction

Dimensions (WxHxD)	110 mm x 131 mm x 111 mm
Weight	600 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)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80-1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line
EN 61000-4-6 Conducted Immunity	3 V (10 kHz-150 kHz), 10 V (150 kHz-80 MHz)

## EMC emitted immunity

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

## Approvals

Basis Standard	CE, FCC, EN61131
Safety of industrial control equipment	cUL 508
Hazardous locations	cULus ISA12.12.01 class1 div.2 (cUL 1604 class1 div.2)

## Scope of delivery and accessories

Accessories	Rail Power Supply RPS30, RPS60, RPS90 or RPS120, Terminal Cable, Network Management Software Industrial HiVision, Auto configuration adapter (ACA21-USB), 19"-DIN rail adapter
Scope of delivery	Device, terminal block, General safety instructions

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