

Ethernet Switch

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Invented for life



- ▶ Power supply/signalling contact 1 and 2: 1x plug-in terminal block 2-pole, 1x plug-in terminal block 2-pole
- ▶ V.24 access: 1x RJ11 socket
- ▶ USB interface: 1x USB to connect the auto configuration adapter ACA21-USB

The 8 Port Fast Ethernet Switch is managed, for DIN rail store-and-forward-switching and has a fanless design.

Functions

Network size – length of cable

Twisted Pair (TP)	0 m – 100 m
Multimode fibre (MM) 50/125 µm	0 - 5000 m, 8 dB Link Budget with 1300 nm, A = 1 dB/km, 3 dB Reserve, B = 800 MHz x km
Multimode fibre (MM) 32.5/125 µm	0 - 4000 m, 8 dB Link Budget with 1300 nm, A = 1 dB/km, 3 dB Reserve, B = 500 MHz x km
Singlemode fibre (SM) 9/125 µm	0 – 32,5 km, 16 dB Link Budget with 1300 nm, A = 0.4 dB/km, 3 dB Reserve, D = 3.5 ps/(nm x km)
Singlemode fibre (LH) 9/125 µm (Long Haul-Transceiver)	-

Network size – cascading

Line-/star topology	Any
Ring structure (HIPER-Ring) quantity switches	> 100
Reconfiguration time	< 10ms (10 switches), < 30ms (50 switches), < 40ms (100 switches), < 60ms (200 switches)

Certifications and approvals

Security for Industrial Control Equipment	cUL 508
Hazardous areas	cUL 1604 Class1 Div 2
Shipbuilding	Germanischer Lloyd
Rail standard	EN50121-4
Substation	IEC 61850-3, IEEE 1613
Transportation	NEMA TS2

Technical specifications**Electrical**

Operating voltage	
• Power supply 1	20 to 30 V DC
• Power supply 2	20 to 30 V DC
Power consumption	14 W

Mechanics

Dimensions	120 x 137 x 115 mm
Weight	1.0 kg
Protection category	IP30
Stability	
• IEC 60068-2-27 shock	15 g, 11 ms durations, 18 shocks
• IEC 60068-2-6 vibration	1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min

Environmental conditions

Permissible operating temperature	-40°C – 85°C
Permissible storage temperature	-40°C – 85°C
Ambient Relative Humidity	10% - 95%

Software

Management	Serial Interface, Web-Interface, SNMP V1/V2, HiVision Filetransfer SW http/TFTP
Diagnostic	LEDs, Log-File, Syslog, Relais Contact, RMON, Port Mirroring 1:1 nad n:1, Topology Discovery 802.1AB
Configuration	Comand Line Interface (CLI), TELNET, BootP, DHCP, DHCP option 82, HIDiscovery
Security	Port Security (IP und MAC) with several addresses, SNMP V3, SSH, Authentication (IEEE802.1x), Radius Authentication for SNMPv3 (Web)
Redundancy functions	HIPER-Ring, Fast HIPER-Ring, MRP, MSTP, RSTP - IEEE802.1D-2004, MRP and RSTP simultaneously, Link Aggregation, multiple Rings
Filter	QoS 4 Classes, Portpriority (IEEE 802.1D/p), VLAN (IEEE 802.1Q), shared VLAN learning, Multicast (IGMP Snooping/ Querier), Multicast Detection

unknown Multicast, Broadcastlimiter, Fast Aging, Multicast GMRP IEEE 802.1D

Industrial profiles	EtherNet/IP und PROFINET (2.2 PDEV, GSDML Stand-alone Generator, automatic device exchange) Profile inclusive, configuration and diagnostic via automation software, e.g. STEP7, or Control Logix
Time synchronization	SNTP Server, Realtime Clock with energy storage
Flow control	Flow Control 802.3x, Port Priority 802.1D/p, Priority (TOS/DIFFSERV), Prio (MAC/IP), Prio Mapping (TOS Layer2), Traffic Shaping (Unicast, Multicast, Broadcast) Ingress / Egress

EMC interference immunity

EN 61000-4-2 electrostatic discharge	8 kV contact discharge, 15 kV air discharge
EN 61000-4-3 electrostatic field	35 V/m (80-2700 MHz); 1 kHz, 80% AM
EN 61000-4-4 fast transienten (burst)	4 kV power line, 4 kV data line
EN 61000-4-5 surge voltages	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 low-frequency transiens	30 V, 50 Hz consistently; 300 V, 50 Hz 1 s

EMC emitted immunity

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

Ordering information**Ethernet Switch MM**

Order number **BPA-ESWEX-RSR20**

Ethernet Switch SM

Order number **RSR20-0800S2S2T**

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