Product: MS30-1602SAAP

Configurator: MS20/30 - Modular OpenRail Switch

Configurator Description

The MS20 Layer 2 switches have up to 24 Fast Ethernet ports and are available in a 2- and 4-slot version (4-slot can be expanded to a 6-slot using the MB backplane extension). They require the use of hot-swappable media modules for any combination of copper/fiber fast device replacement. The MS30 Layer 2 switches have the same functionalities as the MS20 switches, with the exception of an added slot for a Gigabit Media Module. They are available with Gigabit uplink ports; all other ports are Fast Ethernet. The ports can be any combination of copper and/or fiber.

Technical Specifications

Product description

Type	MS30-1602SAAP
Description	Modular Gigabit Ethernet Industrial Switch for DIN Rail, Fanless design , Software Layer 2 Professional
Part Number	943435008
Port type and quantity	Fast Ethernet ports in total: 16; Gigabit Ethernet ports: 2

More Interfaces

V.24 interface	1 x RJ11 socket
USB interface	1 x USB to connect auto-configuration adapter ACA21-USB
Signaling contact	2 x plug-in terminal block 4-pin

Network size - cascadibility

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

Power requirements

Current consumption at 24 V DC	525 mA
Operating Voltage	18 - 32 V DC
Power consumption	12.6 W
Power output in BTU (IT)/h	41.1

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), 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, 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, , Link Speed and Duplex Monitoring
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	PTPv2 Boundary Clock, Buffered Real Time Clock, SNTP Client, SNTP Server,
Miscellaneous	Manual Cable Crossing

Ambient conditions

Operating temperature	0-+60 °C
Storage/transport temperature	-40-+70 °C
Relative humidity (non-condensing)	10-95 %

Mechanical construction

Dimensions (WxHxD)	240 mm × 133 mm × 100 mm
Weight	1010 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 55022	EN 55022 Class A
FCC CFR47 Part 15	FCC 47CFR Part 15, Class A

Approvals

Basis Standard	CE
Safety of industrial control equipment	cUL 508
Hazardous locations	ISA 12.12.01 Class 1 Div. 2

Scope of delivery and accessories

Accessories	Rail Power Supply RPS 30, RPS 80 EEC or RPS 120 EEC, terminal cable, Network management Industrial HiVision, Auto configuration adapter (ACA21-USB), 19"-mounting frame, labels ML-MS3, Backplane extension MB-2T or MB20-2SAHH
Scope of delivery	Device, 2 x terminal block, operating manual, CD