

**Product:** MSP40-00280SCY9MRHHE3A

**Configurator:** MSP40-00280SCY9MRHHE3A



## Configurator Description

The MSP switch product range offers complete modularity and various high-speed port options with up to 10 Gbit/s. Optional Layer 3 software packages for dynamic unicast routing (UR) and dynamic multicast routing (MR) offer you an attractive cost benefit – "Just pay for what you need." Thanks to Power over Ethernet Plus (PoE+) support, terminal equipment can also be powered cost-effectively.

## Technical Specifications

### Product description

Type	MSP40-28-3A (Product Code: MSP40-00280SCY9MRHHE3AAX.X.XX)
Description	Modular Full Gigabit Ethernet Industrial Switch for DIN Rail, Fanless design , Software HiOS Layer 3 Advanced
Software Version	HiOS 09.0.10
Part Number	942076015
Configurator Part Number	942076998
Port Type and Quantity	Gigabit Ethernet ports in total: 24; 2.5 Gigabit Ethernet ports: 4 (Gigabit Ethernet ports in total: 24; 10 Gigabit Ethernet ports: 2)

### More Interfaces

Power supply/signaling contact	2 x plug-in terminal block, 4-pin
V.24 interface	1 x RJ45 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 ACA21-USB

### Network size - cascability

Line - / star topology	any
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### Power requirements

Operating Voltage	24 V DC (18-32 ) V
Power consumption	21.5 W
Power output in BTU (IT)/h	73

### Software

Switching	CoS Queue Management, Double VLAN Tagging (QinQ), Egress Interface Shaping, Fast Aging, Flow Control (802.3X), Forward unknown multicast to query ports, GARP Multicast Registration Protocol (GMRP), GARP VLAN Registration Protocol (GVRP), IGMP Snooping/Querier per VLAN (v1/v2/v3), Independent VLAN Learning, Ingress Storm Protection, Interface Trust Mode, IP Egress DiffServ Classification and Policing, IP Ingress DiffServ Classification and Policing, IP subnet-based VLAN, Jumbo Frames, MAC-based VLAN, Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP), Multiple VLAN Registration Protocol (MVRP), Private VLAN, Protocol-based VLAN, 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
Redundancy	HIPER-Ring (Ring Switch), HIPER-Ring over Link Aggregation, HiVRRP (VRRP enhancements), Link Aggregation with LACP, Link Backup, Media Redundancy Protocol (MRP) (IEC62439-2) - Redundancy Client, Media Redundancy Protocol (MRP) (IEC62439-2) - Redundancy Manager, MRP over Link Aggregation, MSTP (802.1Q), Redundant Network Coupling, RSTP 802.1D-2004 (IEC62439-1), RSTP Guards, Sub Ring Manager, VRRP, VRRP Ping Answer, VRRP Tracking
Management	DNS Client, Dual Software Image Support, HTTP, HTTPS, LLDP (802.1AB), LLDP-MED, OPC-UA Server, SCP, SFTP, SNMP v1/v2/v3, SNMPv1/v2 Read-Only, SNMPv3 Traps, SSHv2, Telnet, TFTP, Traps, V.24
Diagnostics	Address Conflict Detection for routing interfaces, Configuration Check Dialog, Copper Cable Test, Device Status Indication, Duplex Mismatch Detection, Email Notification, LEDs, Link Flap Detection, Link Speed and Duplex Monitoring, Loop Protection, 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 Mirroring N:2, Port Monitoring with Auto-Disable, RMON (1,2,3,9), RSPAN, Self-Tests on Cold Start, SFLOW, SFP Management, Signal Contact, Snapshot Configuration Feature, Switch Dump, Syslog, System Information, TCPDump, 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
Security	Access to Management restricted by VLAN, ACL Flow-based Limiting, Appropriate Use Banner, Audit Trail, CLI Logging, Configurable Number of Login Attempts, Configurable Password Policy, Denial-of-Service Prevention, Device Security Indication, DHCP Snooping, Dynamic ARP Inspection, Egress IPv4-based ACL, Egress MAC-based ACL, Egress VLAN-based ACL, Format options for MAC authentication bypass, Guest/unauthenticated VLAN, HTTPS Certificate Management, Ingress IPv4-based ACL, Ingress MAC-based ACL, Ingress VLAN-based ACL, Integrated Authentication Server (IAS), IP Source Guard, LDAP, Local User Management, MAC Authentication Bypass, MAC-based Port Security, Multi-Client Authentication per Port, Multiple Privilege Levels, Password change on first login, Port-based Access Control with 802.1X, RADIUS Client, RADIUS Policy Assignment, RADIUS VLAN Assignment, Remote Authentication via RADIUS, Restricted Management Access, Signed Firmware Images, SNMP Logging, TACACS+ Client, Time-based ACL, User Account Locking, VLAN-based ACL
Time synchronisation	BC with Up to 8 Sync / s, Buffered RTC, PTPv2 BC, PTPv2 TC two-step, SNTP client, SNTP server
Industrial Profiles	EtherNet/IP Protocol, IEC61850 Protocol (MMS Server, Switch Model), Modbus TCP, PROFINET Protocol
Miscellaneous	Digital IO Management, Manual Cable Crossing, Port Power Down
Routing	Equal Cost Multiple Path (ECMP), Full Wire-Speed Routing, ICMP Filter, ICMP Router Discovery (IRDP), IP/UDP Helper, Loopback Interface, Net-directed Broadcasts, OSPFv2, Port-based Router Interfaces, Proxy ARP, RIP v1/v2, Static Route Tracking, Static Unicast Routing, VLAN-based Router Interfaces
Multicast routing	DVMRP, IGMP Proxy (Multicast Routing), IGMP v1/v2/v3, PIM-DM (RFC3973), PIM-SM / SSM (RFC4601)

## Ambient conditions

MTBF (Telcordia SR-332 Issue 3) @ 25°C	997 525 h
Operating temperature	0-+60
Minimum Storage Temperature	-40-+70 °C
Relative humidity (non-condensing)	5-95 %

## Mechanical construction

Dimensions (WxHxD)	391 x 148 x 142 mm
Weight	2.65 kg
Mount Type	DIN rail
Protection class	IP20

## Mechanical stability

IEC 60068-2-6 vibration	5 Hz - 8.4 Hz with 3.5 mm amplitude; 8.4 Hz-150 Hz with 1 g
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks

## EMC interference immunity

EN 61000-4-2 electrostatic discharge (ESD)	± 4 kV contact discharge; ± 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 MHz-3000 MHz)
EN 61000-4-4 fast transients (burst)	± 2 kV power line; ± 4 kV data line
EN 61000-4-5 surge voltage	power line: ± 2 kV (line/earth), ± 1 kV (line/line); data line: ± 1 kV (line/earth)
EN 61000-4-6 Conducted Immunity	10 V (150 kHz-80 MHz)

## EMC emitted immunity

EN 55022	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	EN 60950, cUL508, UL60950
Transportation	NEMA TS2

## Reliability

Guarantee	60 months (please refer to the <a href="https://assets.belden.com/m/1424ddb7a3280e7a/original/Hirschmann-Automation-and-Control-GmbH-Terms-of-Guarantee.pdf">https://assets.belden.com/m/1424ddb7a3280e7a/original/Hirschmann-Automation-and-Control-GmbH-Terms-of-Guarantee.pdf</a> terms of guarantee & it/a for detailed information)
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## Scope of delivery and accessories

Accessories	MICE Switch Power Media Modules MSM; Rail Power Supply RPS 30, RPS 60/48V EEC, RPS 80, RPS90/48V HV, RPS90/48V LV, RPS 120 EEC; USB to RJ45 Terminal cable; Sub-D to RJ45 Terminal Cable Auto Configuration Adapter (ACA21, ACA31); Industrial HiVision Network Management System; 19" Installation frame
Scope of delivery	Device (backplane and power module), 2 x terminal block, General safety instructions

## Further Instructions

Product Documentation	<a href="https://www.doc.hirschmann.com">https://www.doc.hirschmann.com</a>
Certificates	<a href="https://www.doc.hirschmann.com/certificates">https://www.doc.hirschmann.com/certificates</a>
Software Download	<a href="https://my.belden.com/s/downloads">https://my.belden.com/s/downloads</a>

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