HIRSCHMANN
A BELDEN BRAND

Product: MACH4002-48G+3X-L2P

48-port Gigabit Backbone Switch with 10G Uplinks, 4 media slots, L2P

Product Description

MACH4000, modular, managed Industrial Backbone-Switch, Layer 2 Switch with Software Professional.

Technical Specifications

Product description

Description:	MACH 4000, modular, managed Industrial Backbone-Switch, Layer 2 Switch with Software Professional.
Part Number:	943878101
Port type and quantity:	up to 48 Gigabit-ETHERNET and 3x 10Gigabit-ETHERNET ports, thereof up to 32 Gigabit-ETHERNET ports via media modules practicable, 3x 10Gigabit XFP sockets and 16 Gigabit TP (10/100/1000Mbit/s) ports are integral installed

Product Life Cycle

Availability:	Limited
Last Order Date:	2022-06-30
Last Delivery Date:	2023-06-30

More Interfaces

Power supply/signaling contact:	1 x plug-in terminal block, 4-pin, 2 x egresses manual or automatic switchable (1 A at max. 60 V DC or max. 30 V)
V.24 interface:	1 x RJ11 socket, serial interface for device configuration
USB interface:	1 x USB to connect auto-configuration adapter ACA21-USB

Network size - cascadibility

Line - / star topology:	any
Ring structure (HIPER-Ring) quantity switches:	ring recovery time 50 ms typ. at LWL

Power requirements

Operating Voltage:	power supply unit M4-S-xx or M4-Power Chassis with power supply unit please order separately
Power consumption:	125 W (without media modules)
Redundancy functions:	redundant 24 V power supply by M4-Power basic device, redundant signal contact

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), HIPER-Ring over Link Aggregation, Fast HIPER-Ring, Link Aggregation with LACP, Media Redundancy Protocol (MRP) (IEC62439-2), Redundant Network Coupling, Sub Ring Manager, 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, 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
Time synchronisation:	Buffered Real Time Clock, SNTP Client, SNTP Server
Industrial Profiles:	EtherNet/IP Protocol, PROFINET IO Protocol
Miscellaneous:	PoE (802.3AF), Manual Cable Crossing

Ambient conditions

Operating temperature:	0-+60 °C
Relative humidity (non-condensing):	10-95 %

Mechanical construction

Dimensions (WxHxD):	480 mm x 88 mm x 435 mm
Weight:	7.5 kg
Mounting:	19" control cabinet
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

Safety of industrial control equipment:	cUL 508
Safety of information technology equipment:	cUL 60950-1
Shipbuilding:	DNV
Railway norm:	EN 50121-4

Reliability

Guarantee:	60 months (please refer to the terms of guarantee for detailed information)

Scope of delivery and accessories

Accessories to Order Separately:	SFP transceiver (100/1000MBit/s), Power supply unit, auto-configuration adapter (ACA21-USB), network management with Industrial HiVision
Scope of delivery:	device, terminal block, operating manual, fan M4-AIR installed

Further Instructions

Product Documentation:	https://www.doc.hirschmann.com
Certificates:	https://www.doc.hirschmann.com/certificates.html

History

Update and Revision:	Revision Number: 0.151 Revision Date: 07-05-2023

Variants

Item #	Type
943878101	MACH4002-48G+3X-L2P

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