

**Product:** [MACH102-8TP-FR](#) 

Life Cycle Status: Limited Availability/Passive



Replaced by: [GRS103-6TX/4C-2HV-2A](#)

Managed 10-port Fast Ethernet 19" Switch, redundant PSU

## Product Description

10 port Fast Ethernet/Gigabit Ethernet Industrial Workgroup Switch (2 x GE, 8 x FE), managed, Software Layer 2 Professional, Store-and-Forward-Switching, fanless Design, redundant power supply

## Technical Specifications

### Product description

Description:	10 port Fast Ethernet/Gigabit Ethernet Industrial Workgroup Switch (2 x GE, 8 x FE), managed, Software Layer 2 Professional, Store-and-Forward-Switching, fanless Design, redundant power supply
Part Number:	943969301
Port type and quantity:	10 ports in total; 8x (10/100 BASE-TX, RJ45) and 2 Gigabit Combo ports

### Product Life Cycle

Life Cycle:	Limited Availability/Passive - the product is entering End of Life
Availability:	Passiv
Last Order Date:	2023-12-31
Last Delivery Date:	2024-06-30

### More Interfaces

Power supply/signaling contact:	1 x plug-in terminal block, 2-pin, output manual or automatic switchable (max. 1 A, 24 V DC bzw. 24 V AC)
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 - length of cable

Twisted pair (TP):	0-100 m
Single mode fiber (SM) 9/125 µm:	Fast Ethernet: see SFP LWL module M-FAST SFP-SM/LC and M-FAST SFP-SM+/LC; Gigabit Ethernet: see SFP LWL module M-SFP-LX/LC
Single mode fiber (LH) 9/125 µm (long haul transceiver):	Fast Ethernet: see SFP LWL module M-FAST SFP-LH/LC; Gigabit Ethernet: see SFP LWL module M-SFP-LH/LC and M-SFP-LH+/LC
Multimode fiber (MM) 50/125 µm:	Fast Ethernet: see SFP LWL module M-FAST SFP-MM/LC; Gigabit Ethernet: see SFP LWL module M-SFP-SX/LC and M-SFP-LX/LC
Multimode fiber (MM) 62.5/125 µm:	Fast Ethernet: see SFP LWL module M-FAST SFP-MM/LC; Gigabit Ethernet: see SFP LWL module M-SFP-SX/LC and M-SFP-LX/LC

### Network size - cascadiability

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

### Power requirements

Operating Voltage:	100 - 240 VAC, 47 - 63 Hz (redundant)
Power consumption:	13 W
Power output in BTU (IT)/h:	44
Redundancy functions:	HIPER-Ring, MRP, MSTP, RSTP - IEEE802.1D-2004, MRP and RSTP gleichzeitig, Link Aggregation, redundant 100 - 240 VAC power supply

## 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) - Redundancy Manager, Media Redundancy Protocol (MRP) (IEC62439-2) - Redundancy Client, Redundant Network Coupling, RSTP 802.1D-2004 (IEC62439-1), MSTP (802.1Q), RSTP Guards
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
Time synchronisation:	Buffered Real Time Clock, SNTP Client, SNTP Server
Industrial Profiles:	EtherNet/IP Protocol, PROFINET IO Protocol
Miscellaneous:	Manual Cable Crossing

## Ambient conditions

MTBF (MIL-HDBK 217F: Gb 25 °C):	18.06 Years
Operating temperature:	0+50 °C
Storage/transport temperature:	-20+85 °C
Relative humidity (non-condensing):	10-95 %

## Mechanical construction

Dimensions (WxHxD):	448 mm x 44 mm x 310 mm (without fixing bracket)
Weight:	3.85 kg
Mounting:	19" control cabinet
Protection class:	IP20

## 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 (80-2700 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), 4 kV data line
EN 61000-4-6 Conducted Immunity:	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

## Reliability

Guarantee:	60 months (please refer to the <a href="#">terms of guarantee</a> for detailed information)
------------	---

## Scope of delivery and accessories

Accessories to Order Separately:	Fast Ethernet SFP modules, Gigabit Ethernet SFP modules, autoConfiguration Adapter ACA21-USB, terminal cable, Industrial Hivision Network Management software
Scope of delivery:	MACH100 device, terminal block for signal contact, 2 brackets with fasteningscrews (pre-assembled), housing feet - stick-on, non-heating appliance cable - Euro model

## 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.html">https://www.doc.hirschmann.com/certificates.html</a>
Software Download:	<a href="https://hirschmann-support.belden.com/en-US/downloads">https://hirschmann-support.belden.com/en-US/downloads</a>

## History

Update and Revision:	Revision Number: 0.178 Revision Date: 05-15-2025
----------------------	--

## Variants

Item #	Type
943969301	MACH102-8TP-FR

© 2025 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.