Product information

MACH104-20TX-F

Industrial Ethernet Workgroup Switches
24 Port MACH104-20TX-F


Name
MACH104-20TX-F

24 port Gigabit Ethernet Industrial Workgroup switch (20 x GE TX Ports, 4 x GE SFP combo ports), managed, software Layer 2 Professional, Store-and-Forward Switching, IPv6 Ready, fanless design

Delivery informations
Availability
available

Product description

Description
24 port Gigabit Ethernet Industrial Workgroup switch (20 x GE TX Ports, 4 x GE SFP combo ports), managed, software Layer 2 Professional, Store-and-Forward Switching, IPv6 Ready, fanless design

Port type and quantity
24 ports in total: 20 x (10/100/1000 BASE-TX, RJ45) and 4 Gigabit Combo ports (10/100/1000 BASE-TX, RJ45 or 100/1000 BASE-FX, SFP)

Type
MACH104-20TX-F

Order No.
942 003-001

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 the AutoConfiguration Adapter ACA21-USB

Network size - length of cable

Twisted pair (TP)
0 m ... 100 m

Multimode fiber (MM) 50/125 µm
see SFP LWL-Module M-FAST SFP-MM/LC and SFP LWL-Module M-SFP-SX/LC

Multimode fiber (MM) 62.5/125 µm
see SFP LWL-Module M-FAST SFP-MM/LC and SFP LWL-Module M-SFP-SX/LC

Single mode fiber (SM) 50/125 µm
see SFP LWL-Module M-FAST SFP-SM/LC and SFP LWL-Module M-SFP-SX/LC

Single mode fiber (LH) 9/125 µm (long haul transmitter)
see SFP LWL-Module M-FAST SFP-SM+/LC

Network size - cascadibility
Line - / star topology
any

Ring structure (HIPER-Ring) quantity switches
50 (reconfiguration time < 0.3 sec.)

Power requirements

Operating voltage
100-240 V AC, 50-60 Hz

Heat dissipation
119 Btu (IT) h

Rated current
n/a

Power consumption
35 W

Software

Management
serial interface, web interface, SNMP V1/V2, HiVision file transfer SW HTTP/TFTP, LLDP-MED

Diagnostics
LEDs, log-file, syslog, relay contact, RMON, port mirroring 1:1 and n:1, egress/ingress configurability, topology discovery 802.1AB, cable tester (TX), address conflict detection, network error detection, SFP diagnostic [temperature, optical input and output power (μW and dBm)], Trap for configuration saving and changing, duplex mismatch detection, disable learning, Port Monitor

Configuration
Command line interface (CLI), TELNET, BonP, DHCP, DHCP option 82, HDiscovey, easy device exchange with auto-configuration adapter ACA21-USB (automatic software and/or configuration upload), automatic script load from ACA21, integrated DHCP server per port, DHCP relay, automatic invalid configuration undo, Offline Configuration, SFP Whitelist, ARC automatic ring configuration (MRP), automatic port shutdown (link flapping), configuration signature (water marking), overload detection

Security
ACL/QoS, ACL Layer 4 fragment support, Port Security (IP und MAC) with multiple support (MAC 50 per port), SNMP V3, SSH, Authentication (IEEE802.1x), 802.1x Multi Client Authentication, Guest VLAN and Unauthenticated VLAN, Port based Radius VLAN assignment, MAC authentication

Redundancy functions
HIPER-Ring, MRP, MSTP, RSTP - IEEE802.1D-2004, MRP und RSTP gleichzeitig, Link Aggregation

Filter
QoS 8 classes, prioritisation (IEEE 802.1p), VLAN (IEEE 802.1Q), Voice VLAN, shared VLAN learning, 0-m-0 double VLAN tagging, multicast ISMP e/v/l/v2/v3, (pooping/querier), multicast detection unknown multicast, broadcast, unicast - multicast limiter, fast aging, GMPP IEEE 802.1D, Jumbo Frame Support, Industrial Profiles, EtherCAT/IP und PROFINET (2.2 POE), GSDML Stand-alone generator, automatic device exchange) profiles included, configuration and diagnostic via automation, software tools like e.g. STEP7, oder Control Logix IEC61850 protocol (MMS Server, Switch Model)
Industrial Ethernet: Workgroup Switches: Gigabit Ethernet Industrial Workgroup Switches, 24 Ports: MACH104-20TX-F


Time synchronisation
PTP IEEE 1588 v1/v2 Boundary and Transparent Clock hardware time stamping with accuracies of 30ns, SNTP server, realtime clock with energy buffer

Flow control
Flow Control 802.3x, Port Priority 802.1Q/p, Priority (TOS/Diffserv), Prio (MAC/IP), Prio Mapping (TOS Layer2), Traffic Shaping (Unicast, Multicast, Broadcast), Ingress / Egress

Ambient conditions
Operating temperature
0 ºC ... 50 ºC

Storage/transport temperature
-20 ºC ... 85 ºC

Relative humidity (non-condensing)
10 % ... 95 %

MTBF
n/a

Mechanical construction
Dimensions (W x H x D)
448 mm x 44 mm x 345 mm

Mounting
19" control cabinet

Weight
4200 g

Protection class
IP20

Mechanical stability
IEC 60068-2-27 shock
15 g, 11 ms duration, 18 shocks

IEC 60068-2-6 vibration
3.5 mm, 5–8.4 Hz, 10 cycles, 1 octave/min; 1 g, 8.4–150 Hz, 10 cycles, 1 octave/min

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 (80–3000 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), 4 kV data line

EN 61000-4-6 conducted immunity
10 V (150 kHz–80 MHz)

EMC emitted immunity
FCC CFR47 Part 15
FCC 47 CFR Part 15 Class A

EN 55022
EN 55022 Class A

Approvals
Safety of industrial control equipment
cUL 508

Safety of information technology equipment
cUL 60950-1

Scope of delivery and accessories
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, CO-ROM with user manual, installation user manual

Accessories to order separately
Fast Ethernet SFP modules, Gigabit Ethernet SFP modules, autoConfiguration Adapter ACA21-USB, terminal cable, Industrial Hivision Network Management software

For more information please contact:
Hirschmann Automation and Control GmbH
Stuttgarter Strasse 45-51
72654 Neckartenzlingen
Germany
Phone: +49 7127/14-1809
E-Mail: inet-sales@belden.com

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