

## Data sheet

### MACH104-20TX-F - MACH104-20TX-F

| Industrial Ethernet:Workgroup Switches:24 port Fast/Gigabit Ethernet Workgroup switch :MACH104-20TX-F |  |
|---|--|
| Name  | MACH104-20TX-F   |
|   |   |
| <b>Delivery informations</b>  |  |
| Document created at   | 09-04-2010   |
| Availability  | available  |
| <b>Product description</b>  |  |
| 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, 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  |
| <b>More Interfaces</b>  |  |
| 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   |
| <b>Network size - length of cable</b>   |  |
| 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) 9/125 µm   | see SFP LWL-Module M-FAST SFP-SM/LC und SFP LWL-Module M-SFP-LX/LC   |
| Single mode fiber (LH) 9/125 µm (long haul transceiver)   | see SFP LWL-Module M-FAST SFP-SM+/LC   |
| <b>Network size - cascading</b>   |  |
| Line - / star topology  | any  |
| Ring structure (HIPER-Ring) quantity switches   | 50 (reconfiguration time < 0.3 sec.)   |
| <b>Power requirements</b>   |  |
| Operating voltage   | 100-240 VAC, 47-63 Hz  |
| Heat dissipation  | 119 Btu (IT) h   |
| Rated current   | n/a  |
| Power consumption   | 35 W   |
| <b>Software</b>   |  |
| Management  | serial interface, Web-Interface, SNMP V1/V2, HiVision File transfer SW HTTP/TFTP   |
| Diagnostics   | LEDs, Log-File, Syslog, signal contact, RMON (Statistic, History, Alarms, Events), Port mirroring, Topology Discovery 802.1AB, Cable tester  |
| Configuration   | Command Line Interface (CLI), TELNET, BootP, DHCP, DHCP Option 82, HIDiscovery, AutoConfiguration Adapter (ACA11, ACA21-USB), Watchdog Configuration, integrated DHCP server         |
| Security  | Port Security (IP und MAC), SNMP V3, SSH, Authentication (802.1x)  |
| Redundancy functions  | HIPER-ring (Ring structure), MRP (IEC-Ring function), RSTP 802.1D-2004, redundant Net/Ring coupling, Dual Homing, Link Aggregation   |
| Filter  | n/a  |
| Industrial Profiles   | n/a  |
| Realtime  | n/a  |
| Flow control  | n/a  |
| <b>Ambient conditions</b>   |  |
| Operating temperature   | 0 °C - 50 °C   |
| Storage/transport temperature   | -20 °C - 85 °C   |
| Relative humidity (non-condensing)  | 10 % - 95 %  |
| MTBF  | n/a  |

| Industrial Ethernet:Workgroup Switches:24 port Fast/Gigabit Ethernet Workgroup switch :MACH104-20TX-F |  |
|---|--|
| <b>Mechanical construction</b>  |  |
| Dimensions (W x H x D)  | 448 mm x 44 mm x 345 mm  |
| Mounting  | 19" control cabinet  |
| Weight  | 4200 gram  |
| Protection class  | IP20   |
| <b>Mechanical stability</b>   |  |
| 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  |
| <b>EMC interference immunity</b>  |  |
| 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)  |
| <b>EMC emitted immunity</b>   |  |
| FCC CFR47 Part 15   | FCC 47 CFR Part 15 Class A   |
| EN 55022  | EN 55022 Class A   |
| <b>Approvals</b>  |  |
| Safety of industrial control equipment  | cUL 508 (pending)  |
| Safety of information technology equipment  | cUL 60950-1 (pending)  |
| <b>Scope of delivery and accessories</b>  |  |
| 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, CD-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  |