



Product information MACH1000, Gigabit Ethernet switch 2-28 ports - MAR1030- CCMMMMMMMMMMMMTTTTTTTTTTTTTTTTTUGGHPH08.0.

Industrial Ethernet:Ruggedized Switches:Fast/Gigabit Ethernet Control Cabinet Switches:Gigabit Ethernet Control Cabinet Switches:with Firmware Release 8:MACH1000, Gigabit Ethernet switch 2-28 ports	
http://www.e-catalog.beldensolutions.com/link/57078-24455-49846-49997-80036-373309-373312/en/MAR1030-CCMMMMMMMMMMMMTTTTTTTTTTTTTTTTTUGGHPH08.0/uistate	
Name	MACH1000, Gigabit Ethernet switch 2-28 ports
	
	Industrial managed Fast/Gigabit Ethernet Switch, 19" rack mount, fanless Design, according to IEEE 802.3, store-and-forward-switching
Delivery informations	
Availability	available
Product description	
Description	Industrial managed Fast/Gigabit Ethernet Switch, 19" rack mount, fanless Design, according to IEEE 802.3, store-and-forward-switching
Port type and quantity	Gigabit-Ethernet ports in total: 2; 2 x Combo ports (10/100/1000BASE-TX RJ 45 plus FE/GE-SFP-slot; Fast-Ethernet ports in total: 24 x ports in total; 14 x Twisted Pair, 10 x Multimode SC,
Type	MAR1030-CCMMMMMMMMMMMMTTTTTTTTTTTTTTTTTUGGHPH08.0.
Order No.	MAR1030-CCMMMMMMMMMMMMTTTTTTTTTTTTTTTTTUGGHPH08.0.
More Interfaces	
Power supply/signaling contact	Power supply 1: power supply 3-pin spring clip, signal contact 2-pin spring clip; Power supply 2: power supply 3-pin spring clip, signal contact 2-pin spring clip
V.24 interface	1 x RJ11 socket
USB interface	1 x to connect auto-configuration adapter ACA21-USB
Network size - length of cable	
Twisted pair (TP)	0 m ... 100 m
Multimode fiber (MM) 50/125 µm	0 - 5000 m, 8 dB Link Budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 800 MHz x km and cf. SFP modules M-SFPxx
Multimode fiber (MM) 62.5/125 µm	0 - 4000 m, 11 dB Link Budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km and cf. SFP modules M-SFPxx
Single mode fiber (SM) 9/125 µm	cf. SFP modules M-SFPxx
Single mode fiber (LH) 9/125 µm (long haul transceiver)	cf. SFP modules M-SFPxx
Network size - cascading	
Line - / star topology	Any
Ring structure (HIPER-Ring) quantity switches	100 switches
Power requirements	
Operating voltage	Power supply 1: 120/250 VDC, 110/230 VAC; Power supply 2: 120/250 VDC, 110/230 VAC
Current consumption at 230 V AC	Power supply 1 and 2: 150 mA (35W) max, if all ports are equipped with fiber
Software	
Management	Serial interface, web-interface, SNMP V1/V2, HiVision file transfer SW HTTP/TFTP, LLDP-MED, Voice VLAN
Diagnostics	LEDs, log-file, syslog, relay contact, RMON, port mirroring 1:1 and n:1, egress/ingress traffic configurable, 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, BootP, DHCP, DHCP option 82, HIDiscovery, 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	Port Security (IP und MAC) with multiple addresses (MAC 50 per port), SNMP V3, SSHv2, Authentication (IEEE802.1x), 802.1x Multi Client Authentication, Guest VLAN and Unauthenticated VLAN, Port based Radius VLAN assignment
Redundancy functions	HIPER-Ring, Fast HIPER-Ring, MRP, MSTP, RSTP - IEEE802.1D-2004, MRP and RSTP in parallel, link aggregation, multiple rings
Filter	QoS 4 classes, prioritisation (IEEE 802.1D/p), VLAN (IEEE 802.1Q), Voice VLAN, shared VLAN learning, Q-in-Q double VLAN tagging, multicast IGMP v1/v2/v3 (snooping/querier), multicast detection unknown multicast, broadcast-, unicast-, multicast limiter, fast aging, GMRP IEEE 802.1D, Jumbo Frame Support
Industrial Profiles	EtherNet/IP and PROFINET (2.2 PDEV, GSDML Stand-alone generator, automatic device exchange) profiles included, configuration and diagnostic via automation software tools like e.g. STEP7, or Control Logix IEC61850 protocol (MMS Server, Switch Model)



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ports

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Time synchronisation	SNTP Server, PTP / IEEE 1588, realtime clock with energy buffer
Flow control	Flow Control 802.3x, Port Priority 802.1D/p, Priority (TOS/DIFFSERV), Prio (MAC/IP), Prio Mapping (TOS Layer2), Traffic Shaping (Unicast, Multicast, Broadcast) Ingress / Egress
Ambient conditions	
Operating temperature	-40 °C ... 85 °C
Storage/transport temperature	-40 °C ... 85 °C
Relative humidity (non-condensing)	10 % ... 95 %
Protective paint on PCB	No
Mechanical construction	
Dimensions (W x H x D)	445 mm x 44 mm x 308 mm
Mounting	19" control cabinet
Weight	appr. 5 kg
Protection class	IP30
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 schocks
IEC 60068-2-6 vibration	1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min.
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	8 kV contact discharge, 15 kV air discharge
EN 61000-4-3 electromagnetic field	35 V/m (80 - 2700 MHz); 1kHz, 80% AM
EN 61000-4-4 fast transients (burst)	4 kV power line, 4 kV data line
EN 61000-4-5 surge voltage	Power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line IEC61000-4-5: power line 5kV (line/earth)
EN 61000-4-6 conducted immunity	2,5 kV (line/earth), 1 kV (line/line) (1MHz)
EN 61000-4-16 mains frequency voltage	30V, 50Hz continuous; 300V, 50Hz 1s
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of industrial control equipment	cUL 508 (pending)
Hazardous locations	cUL 1604 Class1 Div 2 (pending)
Germanischer Lloyd	Germanischer Lloyd (in preparation)
Substation	IEC 61850-3; IEEE 1613
Transportation	EN 50121-4, NEMA TS
Scope of delivery and accessories	
Scope of delivery	Device, operating manual

For more information please contact:

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