TOM1000 Full Gigabit POE Industrial Switches

Since the turn of last century, MRD™ industrial communication products have been deployed all around the world. TOM1000 series can be seen in the harsh environment of each and every industrial sector. As one of the low cost and high reliability solutions to connect terminal devices to network, TOM1000 full Gigabit POE series industrial Ethernet switches show remarkable features such as high electromagnetic immunity and anti-shock & anti-vibration ability based on the extended industrial design. TOM1000 full Gigabit POE supports up to 8 POE ports and each POE port provides up to 30W output power. TOM1000 POE can effectively solve the centralized power supply for IP phones, wireless APs, security cameras and other terminal devices, thus TOM1000 full Gigabit POE has been widely used in the corporate and industrial applications. Most models of TOM product line support plug & play, you simply plug in power & cable, and you are ready to go. TOM1000 series utilize FPGA and CPLD dynamic reconfiguration and replicate programming technology for high stability and reliability, Advanced solution, extended industrial design, and patented technologies make TOM1000 one of the top choices for harsh industrial environments. Conformal coating can also be requested for extra humidity, dust, and corrosion protection.

Features and Benefits

- Layer 2 linear switch with high performance and flexible configuration

- Support up to 52Gbps backplane bandwidth

- Support MRD-RING® Media Redundancy Protocol (compliant with IEC62439)

- Support up to 8 POE ports

- Support 802.3af/at compliant POE

- Each POE port provides up to 30W output power

- POE management: POE device detection, POE power management

- Managed models support Web/ssh/snmp management interface to display the status and detailed statistics of 10 Gigabit ports in full load

- Support the firewall function based on MAC, IP or port ID

- Support storm control

- Support port-based CoS

- Built-in unified ATLANTIS embedded real-time system

- Dual redundant power inputs design for DC models

- Fanless, -40 to 75°C wide operating temperature range

- MTBF >400, 000 hours

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Technical Specifications

- IEEE 802.3 CSMA/CD method and physical layer specifications
- IEEE 802.1p Priority Queuing
- IEEE 802.1q VLAN tagging
- IEEE 802.1d Spanning Tree Algorithm
- IEEE 802.1w Rapid Spanning Tree
- IEEE 802.3ac VLAN Tagging
- IEEE 802.3ad Link Aggregation
- IEEE 802.3x Flow Control
- IEEE 802.3 Ethernet
- IEEE 802.3u Fast Ethernet
- IEEE 802 Networks

- RFC 768 UDP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 2068 HTTP
- RFC 2474 DiffServ Precedence
- RFC 2597 DiffServ Assured Forwarding
- RFC 2598 DiffServ Expedited Forwarding
- IGMP snooping
- SNMPv1/v2/v3

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Hardware Description

Backplane Bandwidth:	52Gbps
CPU:	MIPS32
Switch Architecture:	Store-and-Forward
MAC Table Size:	8K
Memory:	128M
Exchange Rate:	1, 488, 000 pps/1000M ports

Software Functions

Management Mode:	Web, STD-17 MIB-II, STD-58 SMIv2, STD-59 RMON, STD-62 SNMPv3, SNMPv2c, SNMPv1, RFC2668 MAU, RFC2925 Ping MIB, MRD Private MIBs, SSH, HTTPS, Telnet
Diagnosis Mode:	Indicator light, journal file, RMON, port mirroring, TRAP
Redundancy:	RSTP, STP, MSTP, MRD-Ring[R], port trunking
Time Synchronization:	NTP
Others:	4K VLANS, IPv4/IPv6 multicast, storm control, support Jumbo Frame

Physical Performance

MTBF:	> 400, 000 hours
Storage Temperature:	-40°C~ 85°C
Operating Temperature:	-40°C~ 75°C
Ambient Relative Humidity:	5% ~ 95% (non-condensing)
Dimensions (W x H x L):	8 Gigabit POE ports: 156mm x 42mm x 170mm 4 Gigabit POE ports: 130mm x 42mm x 155mm
Protection Grade:	IP40
Weight:	0.6KG (Maximum)
Power Consumption:	10W (Maximum)

Mechanical Characteristics	
Vibration:	IEC 60068-2-6
Shock:	IEC 60068-2-27
Freefall:	IEC 60068-2-32
Circuit Board:	Approved by IPC

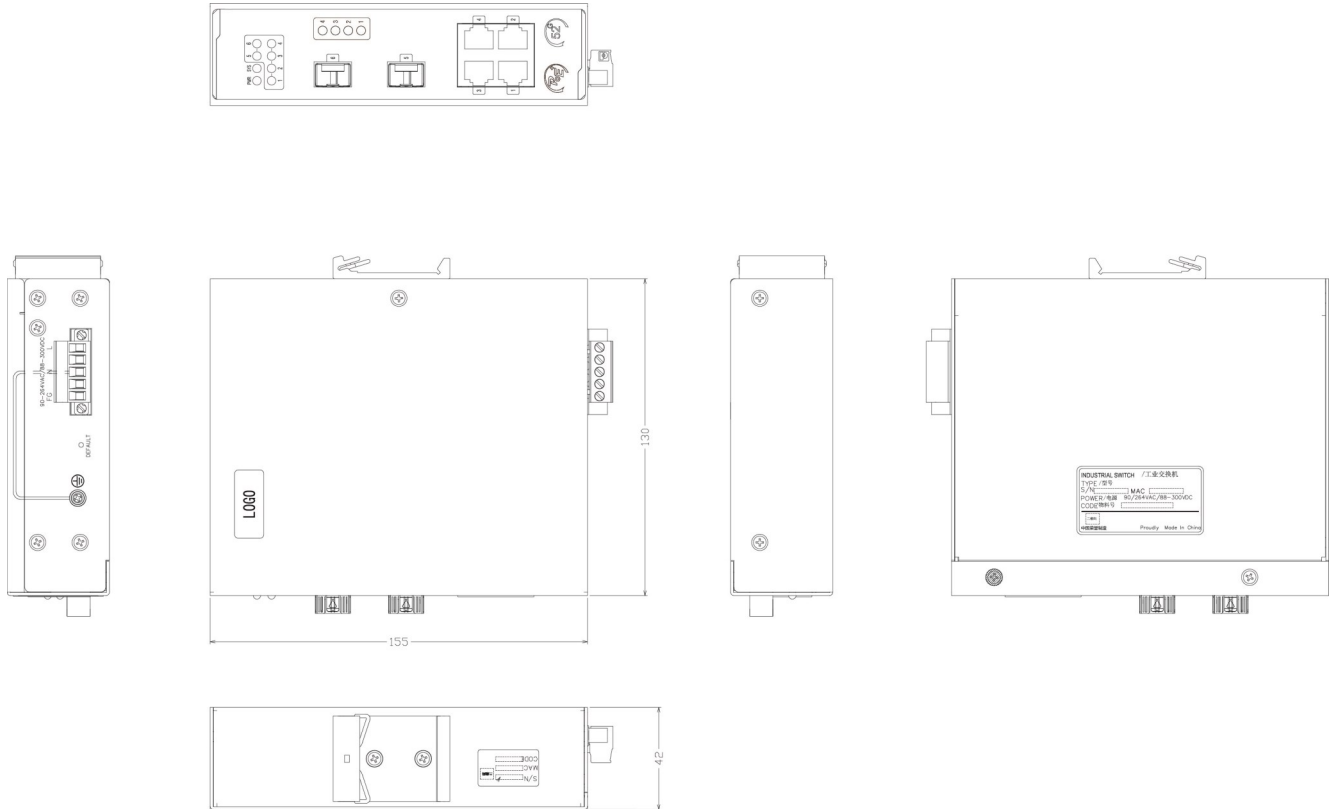| Electromagnetic Characteristics	
EMI:	FCC 47 CFR Part 15 Class A EN55022 Class A
EMS:	IEC (EN)61000-4-2, Class 4 IEC (EN)61000-4-3, Class 4 IEC (EN)61000-4-4, Class 4 IEC (EN)61000-4-5, Class 4 IEC (EN)61000-4-6, Class 4 IEC (EN)61000-4-9, Class 4

Industrial Certification and Testing	
Product Safety:	CE.CB.IEC.IECEE IEC/EN60950-1 FCC Part 15 Subpart B Class A IEC/EN55022 Class A IEC60825-1
Hazardous Area:	UL/cUL1604 Class 1 Div 2 (pending)
Transportation Industry:	JT/T817-2011; NEMA-TS2 (pending)
Rail Industry:	EN50121-4
Power Industry:	IEC61850-3 IEEE1613 (C37.90.x)
Industrial Control Industry:	UL/cUL61010 (pending)
Shipbuilding Industry:	GL (pending)
Security Industry:	Testing for Security & Safety Alarm System Products (under the Ministry of Public Security of P. R. CHINA)

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Dimensions - 5 -

4 Gigabit POE+ Ports+2 100/1000M SFP Slots

Dimensions

8 Gigabit POE+ Ports+2 100/1000M SFP Slots

Ordering Information   - 7 -

TOM1000– DPLS1S2S3S4TY

D	Network Management
A	Unmanaged
B	Layer 2 managed

P	Power Supply Option
F	Dual inputs; 44-57VDC

L	Installation
D	DIN Mount

S1 ~ S4	Port Type & QTY
S1	Gigabit FX port (0, 1, 2)
S2	100M FX port (0)
S3	Gigabit TX port (4, 8)
S4	100M TX port (0)

T	Description
P	POE type

Recommended Models

P/N	Description
TOM1000-AFD0040P	Unmanaged switch, 4 Gigabit POE+ ports (802.3af/at), isolated power supply (44-57VDC), IP40 protection grade.
TOM1000-AFD0080P	Unmanaged switch, 8 Gigabit POE+ ports (802.3af/at), isolated power supply (44-57VDC), IP40 protection grade.
TOM1000-AFD1040P	Unmanaged switch, 4 Gigabit POE+ ports (802.3af/at)+1 Gigabit SFP slot, isolated power supply (44-57VDC), IP40 protection grade.
TOM1000-AFD1080P	Unmanaged switch, 8 Gigabit POE+ ports (802.3af/at)+1 Gigabit SFP slot, isolated power supply (44-57VDC), IP40 protection grade.
TOM1000-AFD2040P	Unmanaged switch, 4 Gigabit POE+ ports (802.3af/at)+2 Gigabit SFP slots, isolated power supply (44-57VDC), IP40 protection grade.
TOM1000-AFD2080P	Unmanaged switch, 8 Gigabit POE+ ports (802.3af/at)+2 Gigabit SFP slots, isolated power supply (44-57VDC), IP40 protection grade.
TOM1000-BFD0040P	Managed switch, 4 Gigabit POE+ ports (802.3af/at), isolated power supply (44-57VDC), IP40 protection grade.
TOM1000-BFD0080P	Managed switch, 8 Gigabit POE+ ports (802.3af/at), isolated power supply (44-57VDC), IP40 protection grade.
TOM1000-BFD1040P	Managed switch, 4 Gigabit POE+ ports (802.3af/at)+1 Gigabit SFP slot, isolated power supply (44-57VDC), IP40 protection grade.
TOM1000-BFD1080P	Managed switch, 8 Gigabit POE+ ports (802.3af/at)+1 Gigabit SFP slot, isolated power supply (44-57VDC), IP40 protection grade.
TOM1000-BFD2040P	Managed switch, 4 Gigabit POE+ ports (802.3af/at)+2 Gigabit SFP slots, isolated power supply (44-57VDC), IP40 protection grade.
TOM1000-BFD2080P	Managed switch, 8 Gigabit POE+ ports (802.3af/at)+2 Gigabit SFP slots, isolated power supply (44-57VDC), IP40 protection grade.

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Accessories

Cable Option	Description
PCORDAC-CN-15	1.5m three-core AC power cord, GB plug, 6A rated current
PCORDDC-CN-15	1.5m three-core DC power cable, 200W rated power

For More Information

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MRDcom reserves the right to change specifications without prior notice.