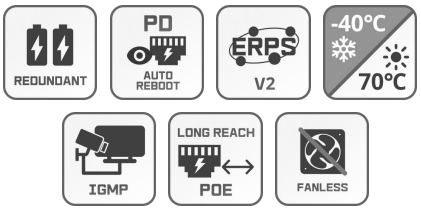
FR-7M3008P • FR-7M3008BT

Industrial L2+ Managed 8-port 10/100/1000Base-TX (PoE+/PoE++) Ethernet Switch with Redundant DC Power Inputs





Main Features

Layer 2+ Features

- ERPSv2 redundant ring (<20ms) & STP/RSTP/MSTP
- 802.1Q VLAN, QinQ, and GVRP
- Dynamic LACP and static trunking
- IGMP Snooping v1/v2/v3 and Fast Leave
- QoS rate limiting, CoS, and 802.1p priority
- IPv4 static routing & VLAN interfaces

Software Management

- WebGUI, CLI, and NMS management
- SNMPv1/v2c/v3, LLDP, and SNTP
- Port mirroring and HTTP firmware updates
- Modbus TCP/RTU & serial protocol conversion

Security

- IEEE 802.1X and RADIUS authentication
- MAC/IP-based ACL
- DHCP Snooping with Option 82
- SSHv2 and TLSv1.2 secure access

PoE Functions

- 802.3at/bt PoE (30W/90W per port)
- PoE scheduling / Auto PD reboot
- Long reach PoE 250m, data rate at 10Mbps
- PoE budget & usage threshold monitoring

Industrial Features

- Operating temperature -40°C to +75°C
- Redundant DC power inputs / Alarm relay
- High ESD/surge protection / Fanless
- DIP switch (RSTP / VLAN / SFP speed)
- NDAA & RoHS compliant

CE FC

Protected by hardware warranty
Advance replacement. Global coverage.

View policy on Fiberroad's website.

Product Specifications

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Product	FR-7M3008P	FR-7M3008BT
Interface		
RJ45 Ports	8x10/100/1000BASE-T	
Console	1x RJ45-to-RS232 Serial Port(115200)	
DIP Switch	RSTP; VLAN ; SFP speed	
Electrical and Mechanical		
Input Voltage	Dual 48-56VDC	Dual 52-56VDC
Power Consumption	10 Watts Max (without PoE load)	
PoE Ports	Port 1 to 8 IEEE802.3 af/at	Port 1 to 8 IEEE802.3 af/at/bt
PoE Power Supply Type	End-span	
Power Supply Pin	1/2(+),3/6(-)	1/2(+), 3/6(-) or 4/5(+), 7/8(-)
Max Power Per Port	30W	90W
Max. PoE Power Budget	240W	240W
Surge Protection	±6kV DC, ±4kV RJ45	±6kV DC, ±6kV RJ45
Enclosure	IP40 aluminum case	
Dimension	138 x 108 x 49mm, 0.7kg	
Standards		
IEEE 802.3	10BaseT	
IEEE 802.3u	100BaseT(X) and 100BaseFX	
IEEE 802.3ab	1000BaseT(X)	
IEEE 802.3x	Flow Control	
IEEE 802.1p	Class of Service	
IEEE 802.1Q	VLAN Tagging	
IEEE 802.1x	Authentication	
IEEE 802.3ad	Port Trunk with LACP	
IEEE 802.1D	Spanning Tree Protocol	

Product Specifications

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Standards		
IEEE 802.1w	Rapid Spanning Tree Protocol	
IEEE 802.1s	Multiple Spanning Tree Protocol	
IEEE 802.1ad	Q-in-Q tunneling	
Switching		
Switch Architecture	Store-and-Forward	
Switch Fabric	36Gbps/non-blocking	
Forwarding Rate	11.9Mpps(64-byte packet size)	
Packet Buffer Size	4 Mbits	
Maximum Packet Length	10K bytes	
MAC Address Table	8K entries, automatic source address learning and aging	
Flow Control	IEEE 802.3x pause frame for full duplex, Back pressure for half duplex	
Software Features		
Port Configuration	Port(Admin Status) disable/enable Copper Port: Auto-negotiation 10/100/1000Mbps full and half duplex mode selection Fiber Port: 100M/1000M speed selection Flow Control disable/enable Power saving(EEE) disable/enable Each port description	
Port Status	Display each ports' speed duplex mode, link status, flow control status, auto negotiation status,Fiber Port Information, Port Traffic	
Port Mirroring	Source Ingress/ Egress Port/ Both, Many-to-1 monitor	
VLAN	Up to 4K VLAN groups, out of 4094 VLAN IDs IEEE 802.1Q tag-based VLAN IEEE 802.1AD Q-in-Q tunneling(Double VLAN) GVRP(Generic VLAN Registration Protocol)	
Link Aggregation	IEEE 802.3ad LACP/Static trunk Supports 6 trunk groups with 4 ports per trunk	
Spanning Tree Protocol	IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1s Multiple Spanning Tree Protocol	

Product Specifications

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Software Features		
Multicast	Dynamic/Static Multicast groups IGMP Snooping v1,2,3 Port-based IGMP Snooping Fast Leave GMP Querier	
Rate Limitation	Per Port Rate Limitation Ingress: 16-1000000 kbps/Egress: 16-1000000 kbps	
Ring	ITU-T G.8032 ERPS, Recovery time<20ms	
QoS	Traffic classification based, strict priority and WRR 8-level priority for switching -Port number -802.1p priority -802.1Q VLAN tag -DSCP/TOS field in IP Packet	
ACL	IP-based ACL/MAC-based ACL ACL based on: -MAC Address -IP Address -Ethertype -Protocol Type -VLAN ID -DSCP -802.1p Priority	
Security	Port Security Static MAC address IEEE 802.1x port-based network access control RADIUS authentication DHCP Snooping, DHCP option 82	
PoE Management Functions (PoE Model)		
PoE System Management	PoE Port status monitoring Total PoE power budget control PoE usage threshold and temperature threshold PoE port Priority PoE mode(PoE/PoE+/PoE++) PD reboot(Zero Traffic Duration)	
PoE Schedule	Absolute/Periodic Mode	
Layer 3 Functions		
IP Interfaces	Max. 8 VLAN interfaces	
Routing Table	Max.32 routing entries	
Routing	IPv4 software static routing	

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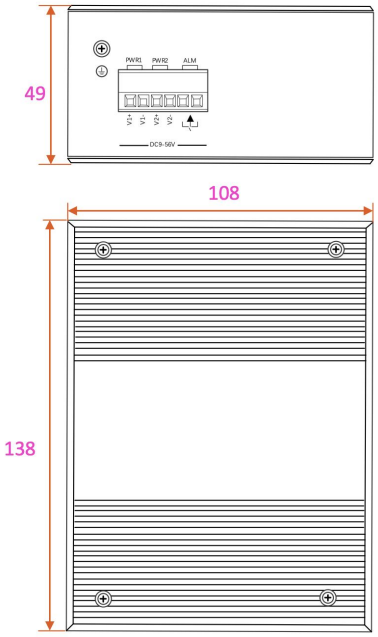
Management		
Basic Management Interface	Console; Telnet; Web browser; SNMPv1/v2c	
Secure Management Interface	SSHv2, TLSv1.2, SNMPv3	
System Management	Firmware Upgrade by HTTP protocol through Ethernet network Configuration upload/download through HTTP Remote syslog, System log LLDP protocol, SNTP PREVIEW NMS Alarm(Relay, Led, Temperature, Trap, Power)	
Environmental		
Operating Temperature	-40°Cto +75°C(-40 to 167 °F)	
Storage Temperature	-40°Cto +85°C(-40 to 185 °F)	
Operating Humidity	5%~95% (non-condensing)	
MTBF	907,476 hours @ Telcordia SR-332 Standard	
Cooling	Passive Cooling, Fanless Design	
Noise Level	0 dBA	
Regulatory & Warranty		
ISO	Manufactured in ISO-9001facility	
Safety	IEC62368-1:2020+A11:2020	
EMI	FCC Part 15B Class A, IEC 61000-3-2	
EMS	IEC61000-4-2 ESD: Contact:±8kV, Air:±15kV IEC61000-4-5 Surge: Power: ±6kV; RJ45:±4kV	
Shock	IEC 60068-2-27	
Free Fall	IEC 60068-2-32	
Vibration	IEC 60068-2-6	
Environmental	RoHS 2011/65/EU Annex II(EU)	

Product Specifications

Dimension (Unit: mm)



Ordering Information

Available Model	Description	Input Voltage	Operating Temp.
FR-7M3008P	Industrial L2+ Managed 8-port 10/100/1000Base-TX (PoE+) Ethernet Switch with Redundant DC Power Inputs	Dual DC9-56V	-40 to +75°C
FR-7M3008BT	Industrial L2+ Managed 8-port 10/100/1000Base-TX (PoE++) Ethernet Switch with Redundant DC Power Inputs	Dual DC9-56V	-40 to +75°C

Optional Accessories (to be purchased separately)	
Power Supply	Please select your power supply on our Power Supplies & Adapters page for details.
SFP Optical Transceiver	Please select your SFP on our SFP Modules page for details.

Package Contents	
Device	1 x Industrial Ethernet Switch
Cable	1 x DB9 female to RJ45
Installation Kit	1 x DIN-Rail Clip

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