

# FR-9T4400 10G Managed Chassis Series

L3 Managed 10/100/1000Based & 10G,  
28 ports Industrial Ethernet Switch



## Brief introduction

Industrial grade L3 core layer switch is a layer 3 network management Ethernet Switch independently developed by Fiberroad that is positioned at the convergence layer and core layer applications. It is a large-port and high-specification product in the industrial control field. This product adopts the industry's leading Technical standards, can provide stable and reliable Ethernet transmission, with high-quality design and reliability. It can provide users with high-efficiency bandwidth and reliable optical fiber network solutions for Ethernet data exchange, convergence and remote optical transmission. The product has the characteristics of no fan, low power consumption, high reliability, good stability, and easy maintenance.

Industrial Ethernet Switch adopt mature technology and open network standards, adapt to low temperature and high temperature, strong anti-electromagnetic interference, anti-salt fog, anti-vibration and anti-shake, equipped with redundant dual power supply (AC/DC), which can offer redundant mechanisms for critical applications that need always-on connections. It can also operate either at standard operating temperature range -40 to 75°C. Industrial switches support standard 19" rack mounts with IP40 protection and are perfect choices for harsh environments, such as industrial networking, intelligent transportation systems (ITS) and are also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications.

## Features

- > Cache up to 12Mbit for smooth transfer of 4K video
- > Support IEEE802.3/802.3u/802.3ab/802.3z/802.3x store and forward mode
- > Support large backplane bandwidth, large swap cache, ensure line-speed forwarding for all ports
- > Support ERPS ring network protocol of ITU G.8032 standard, self-healing time less than 20ms
- > Support STP/RSTP/MSTP protocol of international standard IEEE 802.3D/W/S
- > Redundant dual power supply DC or AC power supply specifications are optional, anti-reverse connection, overcurrent protection function
- > -40 °C ~ 75 °C wide temperature design to ensure that the equipment adapts to a variety of harsh on-site environments
- > IP40 grade protection, high strength metal case, fanless, low power design

## Specification

Ethernet Standards	IEEE802.3 IEEE802.3u IEEE802.3z IEEE802.3ab IEEE802.3x IEEE802.3az IEEE802.3ah IEEE802.1X IEEE802.1Q
Packet Buffer	12Mbits
Maximum Frame	10K Bytes
MAC Address	16K
Forward Mode	Store-and-forward and pass-through (full/half duplex mode)
Switching Performance	Delay: < 7μs Backplane bandwidth: 128Gbps Packet forwarding rate: 95.232M

Transmission Distance	
SFP Port	Depends on optical module
RJ45 Port Transmission Distance	100m (using standard CAT5/CAT5e cable)
Power Information	
Working Voltage	DC15-56V/AC 100-240V 50-60HZ
Overload Protection	Yes
Power Reverse	Support
Power Consumption	Full load<30W
POE (optional)	
POE Standard	IEEE 802.3af/at, PSE
POE Power	Single port Maximum 30W
POE Line Sequence	1/2(+), 3/6(-)end-end bridging method
Physical Characteristics	
Material	Metallic aluminum alloy
Cooling Mode	Natural cooling, no fan design
Dimensions	440mm*305mm*44mm
Installation Mode	1U Chassis Installation
Weight	3.5kg
Environmental Requirements	
Operating Temperature	-40°C~75°C
Operating Humidity	5%~90% (no condensation)

Storage Temperature	-40°C~85°C
<b>Protection</b>	
MTBF	500,000 hours
Warranty	5 years warranty, lifetime technical support
<b>Certification Standard</b>	
EMI	FCC Part 15 B Class A, EN 55022 Class A
EMS	EN61000-4-2(ESD), EN61000-4-3(RS), EN61000-4-4(EFT), EN61000-4-5(Surge), EN61000-4-6(CS), EN61000-4-8, EN61000-4-11
Impact	IEC60068-2-27
Drop	IEC60068-2-32
Vibration	IEC60068-2-6
Safety Level	EN60950-1
<b>Layer 2 Function</b>	
Redundant Network	Support STP/RSTP, support EAPS、ERPS
Multicast Support	Support IGMP Snooping V1/V2/V3, support GMRP
VLAN	Support IEEE 802.1Q 4K VLAN, support QinQ
Link Aggregation	Support manual aggregation, support static/dynamic LACP
QOS	Support COS、DSCP, 8 queues, support WRR、SP、WFQ, QOS
POE Management	Support total power control, POE on/ off, port power sequencing, POE timing
Diagnostic Maintenance	Support port mirroring, Syslog, Ping
Management Function	Support CLI、WEB、SNMP, Telnet server for management
Alarm Management	Support 1 way relay alarm output, RMON, TRAP
Security	Support DHCP Snooping, Option 82, 802.1X security access, Support user hierarchical management, ACL access control list, Support DDOS, port-based MAC filtering / binding, MAC whitelist



Port Management	Support port startup and disabling, support rate setting, Support 802.3x flow control, port name modification
<b>Layer 3 function</b>	
Static routing function	Routing function IPV4 / IPV6 static routing 1024 (IPv4), 512 (IPv6)
Routing function	RIP OSPF VRRP ARP ND full routing
<b>Login account</b>	
Login IP	192.168.1.6
User Name / Password	Admin/admin

\*Note: The SFP model does not contain optical modules by default. If you find any shortage or damage, please contact us in time.

## Precautions

To avoid damage to the equipment and personal injury caused by improper use, please observe the following precautions:

- > Keep the power off during installation, wear an anti-static wrist, and ensure that the anti-static wrist is in good contact with the skin to avoid potential safety hazards.
- > The switch can work normally under the correct power supply. Please confirm that the power supply voltage matches the voltage indicated by the switch.
- > Before powering on the switch, please make sure that the power circuit is not overloaded, so as not to affect the normal operation of the switch and even cause unnecessary damage.
- > To avoid the risk of electric shock, do not open the case while the switch is working, even if it is not charged, do not open it yourself.
- > Before cleaning the switch, pull out the power plug of the switch. Do not wipe with a wet cloth. Do not use liquid to clean it.
- > The equipment installed in the rack is generally from bottom to top to avoid overload installation.
- > Avoid placing other heavy objects on the surface of the switch to avoid accidents.

## Order Information

FR-9T448F	1U Rack, Layer 3 Managed Industrial Switch;4*10G SFP + 8*Gigabit COMBO(TP+SFP) + 16*10/100/1000M Base-TX, DC9-56V Redundant power (AC220V power supply option, FR-9T448FA)
FR-9T44F8	1U Rack, Layer 3 Managed Industrial Switch;4*10G SFP+8*Gigabit COMBO(TP+SFP) +16*100/1000M Base-FX SFP, DC9-56V Redundant power (AC220V power supply optional, FR-9T44FA)
FR-9T448F/16P	1U Rack, Layer 3 Managed Industrial Switch, 4*10G SFP + 8*Gigabit COMBO(TP+SFP) + 16*10/100/1000M Base-T 802.3AT PoE, DC48-56V Redundant power

\*Fiber port can add SFP module. RJ45 port with PoE optional.