

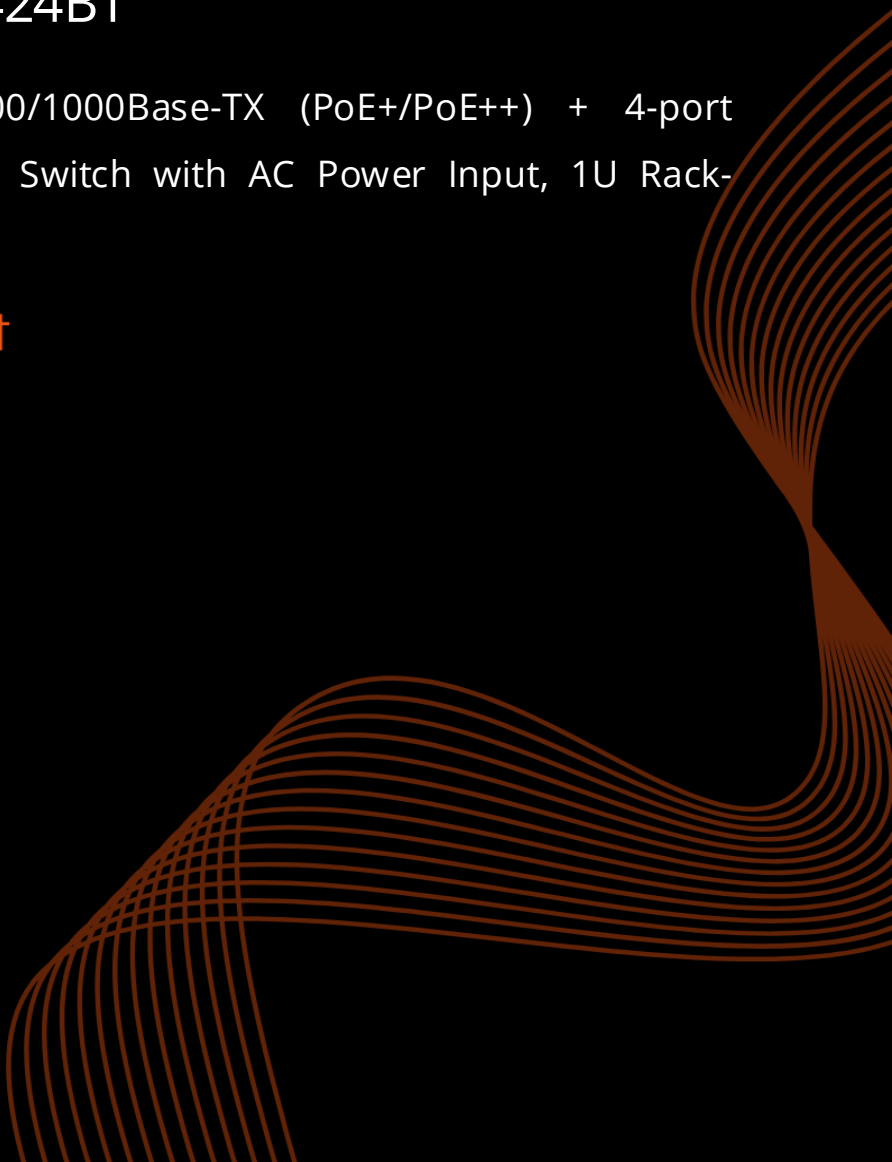


L3 Managed Ethernet Switches

FR-5T4424P • FR-5T4424BT

L3 Managed 24-port 10/100/1000Base-TX (PoE+/PoE++) + 4-port 1000M/10GBase-SFP Ethernet Switch with AC Power Input, 1U Rack-mount

Product Data Sheet



## FR-5T4424P • FR-5T4424BT



## Main Features

- IEEE 802.3af/at/bt PoE++ Standard, without damaging not-PoE devices.
- Advanced PoE management functions : PoE output setting, Smart PoE, PoE scheduling and PoE Budget Management.
- Priority system for PoE Port, it will supply power to the high priority level port first when the power budget is insufficient.
- Layer 3 Model support OSPFv2, RIPv2, Static Route.
- TACACS+, SNMPv3, IEEE 802.1X, HTTPS and SSH to enhance network security.
- Link Aggregation, STP/RSTP/MSTP/ERPS for network redundancy.
- ROMON for proactive and efficient network monitoring.

## Overview

L3 Managed PoE Switch is a multi-port, high-standard Managed PoE Ethernet Switch independently developed by Fiberroad for ethernet network. This product adopts industry-leading technical standards and can provide stable and reliable Ethernet transmission with high-quality design and reliability. They are designed in a rack mount aluminum housing and have 24 Gigabit Ethernet ports in total (depending on model). Plus an additional 4\*10Gigabit Ethernet Ports, supports Layer 3 routing functionality to facilitate the deployment of applications across networks. As a result, it can supply power to PD terminal equipment like wireless AP, webcam, VoIP, and IoT Devices intercom through network cable and meet the infrastructure requirements of a high-density PoE/PoE+/PoE++ supply.

The Layer 3 Managed PoE Switch from Fiberroad is an ideal choice for high-performance ethernet networks. This switch delivers powerful performance with 24 Gigabit Ethernet ports in a rack mount aluminum housing that is designed for reliability and stability. With industry-leading technical standards, this switch provides secure and reliable network transmission, making it a great choice for engineers looking to upgrade their networking needs. Upgrade your networking today with the Layer 3 Managed PoE Switch from Fiberroad!

<b>Ethernet Interface</b>	
Model	FR-5T4424P/FR-5T4424BT
Ports	4×10Gigabit SFP plus 24×10/100/1000M Base-TX RJ45
Port Mode(Tx)	Auto-Negotiation Full/Half Duplex Mode Auto MDI/MDI-X Connection
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseSX/LX/LHX/ZX IEEE 802.3ae for 10 Gigabit Ethernet IEEE 802.3x for flow control IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1p for Class of Service IEEE 802.1Q for VLAN Tagging IEEE 802.1X for authentication IEEE 802.3ad for Port Trunk with LACP
Packet Buffer Size	12Mbits
Maximum Packet Length	Up to 10K
MAC Address Table	16K
Transmission Mode	Store and Forward (full/half duplex mode)
Exchange Property	Delay time: < 7μs Backplane bandwidth: 128Gbps
IGMP Group	4096
Max. No. of VLAN	256
VLAN ID Range	VID 1 to 4094
<b>System</b>	
DRAM	2 GB DDR4
<b>Physical Characteristics</b>	
Housing	Metal
IP Rating	IP30
Dimensions	440mm*300mm*45mm
Installation Mode	1RU Chassis Rack-Mount Installation
Weight	4000g
<b>Working Environment</b>	
Operating Temperature	0°C~50°C (32to 122 °F)
Operating Humidity	5%~90% (non-condensing)
Storage Temperature	-20°C~70°C (-4 to 158 °F)
MTBF	100,819 Hours
MTBF Standard	Telcordia SR-332 GB 25°C
Cooling	Passive
Noise Level	0 dBA

Software Features	
Management Interface	CLI(Console/Telnet(RFC854)), WebUI(HTTPS), SNMPv3
Management	ARP, Flow Control, DDM, DHCP Server/Client, IPv4/IPv6, LLDP, LLDP-MED, UDLD, Port Mirror, RMON, SNMPv1/v2c/v3, Syslog, Telnet,
File Management	Firmware Upgrade/Backup, Dual Images, Configuration Download/Backup, Multiple Configuration, TFTP(RFC783), HTTP, UART
Management Access	Management VLAN, Management ACL(256)
Filter	802.1Q, GMRP, GVRP, IGMP Snooping v1/v2/v3, IGMP Querier V2/V3 QinQ VLAN
Redundant Network	Link Aggregation, STP/RSTP/MSTP/ERPSv2, Auto Edge Port, BPDU Filtering Self Loop Detection
VLAN	Support IEEE 802.1Q 4K VLAN, QINQ, Double VLAN, Voice LAN, Surveillance VLAN(Auto/Manual), Multicast VLAN Registration(MVR)
Time Management	Local, SNTP, NTP
Unicast Routing	OSPFv2, RIPv1/v2, Static Route
QOS	Support Queue Scheduling(WRR, WFQ, Strict Priority, Hybrid(WRR+SP or WFQ+SP); Priority Queue(8 queues/port); Class of Service(Port-based, 802.1p, IP TOS Precedence, IP DSCP), Trusted QoS, Rate Limitation
ACL Type	L2/L3/L4, MAC-based, IPv4-based, IPv6-based
Diagnostic Maintenance	Support port mirroring, Syslog Ping
POE Management	PoE working status Scheduling of PoE operation
Security	Broadcast Storm Control, HTTPS/SSLv2v3,TLSv1 RADIUS, TACACS+,AAA SSHv1/v2,Support DHCP Snooping, Option 43/82, 802.1X security access, Support user hierarchical management, ACL access control list, Support DOS, port-based MAC filtering/binding, MAC whitelist
MIB	Ethernet-like MIB, MIB-II, MIB-I, Bridge MIB, Bridge MIB extensions, RMON MIB(1,2,3 & 9 groups, RFC2737 Entity, RFC2863 Interface Group, SNMP-Community-MIB

PoE & Power Supply		
Model	FR-5T4424P	FR-5T4424BT
PoE Ports	Port 1-24	Port 1-24
Power Supply Pin	Default: 1/2(+), 3/6(-)	Default: 1/2(+), 3/6(-), 4/5(+), 7/8(-)
Max Power Per Port	IEEE802.3 af/at 30W	IEEE802.3 af/at/bt 90W
Total PWR	400W (Model dependent)	720W (Model dependent)
Power Consumption	24 Watts Max(without PoE load)	
Power Inputs	1	
Power Supply	Internal power adapter with AC100 – 240V 50-60Hz input	
Connector	AC: 3 Pin AC Socket	
Protection	Overload Current Protection, Reverse Polarity Protection	

LED	State	Description
PWR (P1&P2)	ON	Power is being supplied
	OFF	Power is not being Supplied.
RUN	Blinking	The system is running well
	OFF	The system is running unwell
FAIL(Only For PoE)	ON	PoE Status is abnormal
	OFF	PoE Status is normal
MAX(Only For PoE)	ON	Total PoE Power out of maximum power budget
	OFF	Total PoE Power under maximum power budget
R.O.	ON	Ring Owner
	OFF	Not Ring Owner
RING	ON	Ring is enabled
	OFF	Ring is disabled
Link/ACT (1-28)	ON	Port connection is active
	Blinking	Data transmitted
	OFF	Port connection is not active.
RJ45 Port Speed	ON	1000M is running
	OFF	No 1000M is running
ALM	ON	Has alarm information
	OFF	No alarm information

**Certification Standard**

EMC/EMI/EMS	FCC Part15 Class A CE-EMC/LVD RoHS EN61 000-4-2 (ESD):LEVEL 4 IEC 6100-4-2 (EFT):LEVEL 4 IEC 6100-4-2 (Surge): LEVEL 4 IEC 6100-4-2 (CS) : LEVEL 3 IEC 61000-4-2(PFMP) : LEVEL 5 EN61 000-4-3 (RS):LEVEL 4
Shock	IEC60068-2-27
Vibration	IEC60068-2-6
Freefall	IEC60068-2-31
Safety	EN 60950-1, UL 60950-1, CSA C22.2 No.60950-1, UL 508

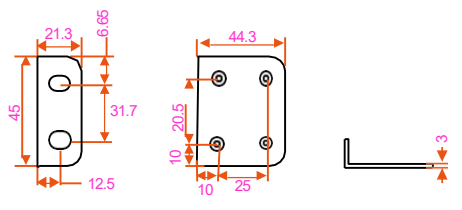
**Package Contents**

Device	1x Ethernet Switch
Cable	1xDB9 female to RJ45 10-pin
Installation Kit	2x Rack-Mount Kits
Documentation	1 x Quick Start guide 1 x Warranty card 1x Product notice

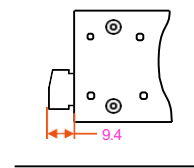
**Dimensions**      Unit: mm



Top View



Rack Mount Kit



(Side View)  
Height of projections

**Ordering Information**

Available Model	Description	Input Voltage	Operating Temp.
FR-5T4424P	L3 Managed 24-port 10/100/1000Base-TX (PoE+) + 4-port 1000M/10GBase-SFP Ethernet Switch with AC Power Input, 1U Rack-mount	AC110-240V	0 to 50°C
FR-5T4424BT	L3 Managed 24-port 10/100/1000Base-TX (PoE++) + 4-port 1000M/10GBase-SFP Ethernet Switch with AC Power Input, 1U Rack-mount	AC110-240V	0 to 50°C

## Optional Accessories (to be purchased separately)

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### SFP Optical Transceiver

(S)=SFP Option

Please select your SFP on our SFP Modules page for details.

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## Precautions

To prevent equipment damage or personal injury caused by improper operation, please observe the following precautions:

- ❖ Turn off the power before installation. Wear an anti-static wrist strap and ensure proper skin contact to prevent electrostatic discharge (ESD) damage.
- ❖ Ensure the power supply voltage matches the voltage specified on the switch.
- ❖ Before powering on the switch, verify that the power circuit is not overloaded to avoid abnormal operation or equipment damage.
- ❖ Do not open the chassis while the switch is operating. To avoid the risk of electric shock, do not disassemble the device.
- ❖ Disconnect the power before cleaning. Do not use a wet cloth or liquid cleaners.
- ❖ When installing in a rack, mount equipment from bottom to top to prevent overloading.
- ❖ Do not place heavy objects on the switch.

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