



L3 Managed Ethernet Switches

FR-5T4624

L3 Managed 24-port 10/100/1000Base-TX + 6-port 1000M/10GBase-SFP
Access Switch with AC Power Input

Ver. 2.0

A decorative graphic consisting of multiple thin, parallel orange lines that curve and flow across the bottom right portion of the page, creating a sense of motion and connectivity.

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Main Features

- These series of Layer 3 Switch supports Fiberroad's innovative FVSS (Fiberroad Virtual Switch System) virtualized cluster switching technology, which can virtualize multiple physical devices into one logical device. The performance, reliability, and management of its virtual system are compared to It has unparalleled advantages over independent physical devices.
- Double the performance: The virtualization system can make full use of every link between physical devices, avoid the blocking of links by the traditional networking model spanning tree protocol, make the best use of the resources, double the performance, and protect the original links to the greatest extent invest.
- High reliability: Based on advanced distributed processing technology, through efficient cross-physical device link aggregation function, it realizes three-plane separation of logical control plane, business control plane and services data plane, and provides uninterrupted three-layer routing and forwarding. This avoids services interruption caused by a single point of failure and greatly improves the reliability of the virtual system.
- Easy management: The entire virtual system realizes unified management of a single IP, and the actual physical equipment is transparent to users, simplifying the management of network equipment and network topology, greatly improving network operation efficiency, thereby effectively reducing operation and maintenance costs.

Overview

The 10G Layer 3 Network Switch offers unparalleled support with its 24/48x10/100/1000BASE-T RJ45 slots and 6x10G SFP+ slots, making it the ideal choice for handling high-demand enterprise networks applications such as multi-terminal HD video surveillance, and HD video conferencing. This advanced switch is equipped with Layer 2 and Layer 3 multicast routing protocols that ensure seamless access for all users. Whether you're streaming live events or conducting virtual meetings, this switch guarantees reliable performance and efficient data transfer. With its cutting-edge technology and robust design, the 10G Layer 3 Network Switch is a powerhouse solution for any network infrastructure requiring top-of-the-line capabilities.

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Service Features

- Complete Layer 2 and Layer 3 multicast routing protocols to meet the access needs of IPTV, multi-terminal HD video surveillance and HD video conferencing;
- Complete three-layer routing protocols and large routing table capacity meet various types of network interconnection needs. It can build ultra-large data center networks, campus networks, enterprise networks and industry user private networks.
- Fully supports layer 2 and layer 3 MPLS VPN, and can build a large-scale MPLS VPN core network to meet the access needs of industry private network VPN users and enterprise network VPN users.

Comprehensive IPv6 Solution

- Fully supports the IPv6 protocol suite and supports IPv6 neighbor discovery, ICMPv6, Path MTU discovery, DHCPv6 and other IPv6 features.
- Supports IPv6-based Ping, Traceroute, Telnet, SSH, ACL, etc., meeting the needs of pure IPv6 network equipment management and business control.
- Supports IPv6 multicast features such as MLD and MLD Snooping, supports IPv6 static routing, RIPng, OSPFv3, BGP4+ and other IPv6 layer three routing protocols, providing users with complete IPv6 layer two and three solutions.
- Supports a variety of IPv4 to IPv6 transition technologies, including: IPv6 manual tunnel, automatic tunnel, 6to4 tunnel, ISATAP tunnel and other tunnel technologies to ensure smooth transition from IPv4 network to IPv6 network.

Complete Security Mechanism

- Device-level security protection: Advanced hardware architecture design, hardware realizes hierarchical scheduling and protection of messages, supports defense against DoS, TCP SYN Flood, UDP Flood, broadcast storm, large traffic and other attacks on the device; supports command line hierarchical Protection, users at different levels have different management rights;
- Complete security authentication mechanism: Supports IEEE 802.1x, Radius, Tacacs+, etc., which can provide users with a complete security authentication mechanism.
- Enhanced business security mechanism : supports plain text or MD5 authentication of related routing protocols, supports uRPF reverse route lookup technology, which can effectively control illegal services; hardware-level packet in-depth detection and filtering technology, supports control packets and data packets In-depth detection can effectively isolate illegal data packets and improve the security of network systems.

Ethernet Interface

Model	FR-5T4624
Ports	24×100/100/1000BASE-T RJ45 6x1/10G SFP Slots 1xRJ45 Console Port
Backplane	216G
MAC Address Table	32K
Forwarding Rate	126M
Jumbo Frame	9K
Buffer Size	2MB
Flash	16MB
DRAM	512MB
Routing Table	12K(IPv4) 6K(IPv6)
ARP Table	12K(IPv4) 2K(IPv6)

Physical Characteristics

Housing	Metal Case
IP Rating	IP30
Dimensions	440mmx280mmx44mm (Chassis) 576mmx448mmx94mm(Package)
Installation	Rack Mounting
Item Weight	4.6KG

Environmental

Operating Temperature	-10°C to 50°C
Operating Humidity	5%~95% (non-condensing)
Storage Temperature	-20°C to 70°C
MTBF	>200,000 Hours
Heat Dissipation	255.97 BTU/h (1000BTU/H=293W)

Power Supply

Power Consumption	75W (Full Load)
Input Voltage	AC: 110-240VAC, 50Hz±10%

Software Features

Management	<p>Console, Telnet, SSHv1/v2, HTTP/HTTPS</p> <p>SNMP v1/v2/v3, RMON</p> <p>TFTP, FTP, SFTP</p>
Data Center Features	Supports the FVSS virtualization technology (Up to 8 units stacking)
MAC	<p>Supports static configuration and dynamic learning of MAC addresses</p> <p>View and clear MAC addresses</p> <p>The MAC address aging time can be configured</p> <p>Limit the number of MAC addresses to be learned</p> <p>Supports MAC address filtering</p> <p>Supports black hole MAC entries</p> <p>Support IEEE 802.1AE MacSec security control</p>
VLAN	<p>Supports 4K VLAN entries</p> <p>GVRP is supported</p> <p>Supports 1:1 and N: 1 VLAN Mapping</p> <p>Supports basic QinQ and flexible QinQ functions</p> <p>Private VLAN support</p>
STP	<p>Support 802.1D (STP), 802.1W (RSTP), 802.1S (MSTP)</p> <p>Supports BPDU protection, root protection, and loop protection</p>
Multicast	<p>IGMP v1/v2/v3 is supported</p> <p>IGMP Snooping is supported</p> <p>IGMP Fast Leave is supported</p> <p>Supports multicast group policies and limits the number of multicast groups</p> <p>Supports cross-VLAN replication of multicast traffic</p> <p>Supports PIM-SM、 PIM-DM</p>
IPv4	<p>Supports static routes, RIP v1/v2, OSPF, BGP, IS-IS, and EIGRP</p> <p>Support policy routing</p> <p>Supports equal-cost routes for load balancing</p> <p>Supports BFD for OSPF and BGP</p>
IPv6	<p>Supports ICMPv6, DHCPv6, ACLv6, and IPv6 Telnet</p> <p>Supports IPv6 neighbor discovery</p> <p>Supports Path MTU discovery</p> <p>Support MLD v1/v2Support MLD Snooping</p> <p>Supports IPv6 static routes, RIPng, OSPFv3, and BGP4+</p> <p>Supports manual tunnels, ISATAP tunnels, and 6to4 tunnels</p>
MPLS VPN	<p>Support LDP, MCE</p> <p>Supports the P/PE function requirements of MPLS VPN</p> <p>Support MPLS TE</p> <p>Supports MPLS OAM</p>

Software Features

QoS	<p>Supports traffic classification based on each field of the L2/L3/L4 protocol header</p> <p>Supports CAR traffic limiting</p> <p>802.1P/DSCP priority re-marking is supported</p> <p>Supports SP, WRR, and SP+WRR queue scheduling modes</p> <p>Supports congestion avoidance mechanisms such as Tail-Drop and WRED</p> <p>Supports traffic monitoring and traffic shaping</p> <p>Ingress and Egress ACLs match L2, L3, L4, and IP quintuples for replication, forwarding, and discard</p> <p>Supports Hash same-source load balancing to ensure session integrity of traffic output</p>
Security	<p>Supports the security mechanism of ACL traffic identification and filtering based on L2, L3, and L4</p> <p>Defend against DDoS attacks, TCP SYN Flood attacks, and UDP Flood attacks</p> <p>Supports suppression of multicast, broadcast, and unknown unicast packets</p> <p>Support port isolation</p> <p>Supports port security and IP+MAC+ port bonding</p> <p>DHCP Snooping and DHCP Option 82 are supported</p> <p>Supports IEEE 802.1x authentication</p> <p>Supports Radius and Tacacs+ authentication</p> <p>Support uRPF</p> <p>Supports hierarchical command line protection</p>
Reliability	<p>Optional Support 1+1 power backup</p> <p>Link aggregation in static or LACP mode, and link aggregation across service cards</p> <p>Supports EAPS and ERPS ring network protection</p> <p>Supports HSRP and VRRP hot backup</p> <p>GR for OSPF and BGP are supported</p> <p>Supports FD for OSPF and BGP</p> <p>Supports ISSU service uninterrupted system upgrade</p>
Maintenance	<p>Supports Console, Telnet, and SSH 2.0</p> <p>Supports browser-based WEB management</p> <p>SNMP v1, v2, and v3 are supported</p> <p>Supports file upload and download management in TFTP mode</p> <p>Supports RMON event history</p> <p>Supports statistical analysis of traffic such as sFLOW</p>

Ordering Information

Available Model	Description	Input Voltage	Operating Temp.
FR-5T4624	L3 Managed 24-port 10/100/1000Base-TX + 6-port 1000M/10GBase-SFP Access Switch with AC Power Input	AC 110-240V	-10 to +50°C

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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