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SS5860-48M4X2Q

Layer3 48-port 2.5G Ethernet Switch

Product Overview

The SS5860-48M4X2Q is a high-performance Layer 3 core routing switch designed to meet the high-density and high-bandwidth needs of next-generation enterprise networks, data centers, and metropolitan area networks. It also serves the requirements of telecom network operators and can be used in the aggregation or access layers of campus Ethernet networks.

This versatile switch can function as a connection layer, entry layer, or core layer in small and medium-sized enterprises, offering comprehensive server access solutions for data centers. It supports a wide range of service features, including Layer 2, Layer 3, VXLAN, OAM/APS, and security and flow control features, along with hardware-based NetFlow.

The SS5860-48M4X2Q includes VSF (Virtual Switch Framework) stacking, allowing multiple devices to be virtualized into a single logical entity. This feature facilitates the expansion of ports and switching capacity while enabling unified management, upgrades, and maintenance of multiple devices.

Product Interface

SS5860-48M4X2Q

- 48* 100/1000M/2.5G Base-T RJ45 port
- 4*10G/25G SFP+
- 2*40G QSFP
- 880Gbps switching capacity
- 16K MAC address
- AC input: 100~240V,47/63 Hz

Key Features

High density 2.5 Gigabit access

- The switch supports high-density 2.5 Gigabit Ethernet ports, providing targeted solutions for large scale 2.5G access point,2.5G PCIe card (PC & server) and NAS storage station etc. access, simplifying the network structure and reducing network maintenance costs.

High availability

- Support IPv4/IPv6 dual protocol stack platform based on Linux operating system
- Support multiple link redundancy and network redundancy protocols such as STP/RSTP/MSTP/ERPS/LACP

Layer3 routing and enhanced multi-service

- Support static route
- Support dynamic route such as RIP, OSPF, BGP, IS-IS
- Support IPV4/IPV6 dual protocol stack，Support RIPng, OSPFv3
- Support DHCP Server and DHCP Relay, L2-Tunnel
- Support Ethernet OAM protocol such as CFM、EFM

VSF stacking technology

- Virtual Switch Framework (VSF) can virtualize multiple switches into one logical device, achieving sharing of information boards and data between different switches. By using this functionality, the devices in the stack have increased performance and the number of ports. VSF technology is also characterized by simplified management and greater operational reliability.

Simple and easy-to-use network management function

- Support CLI based on RS232 serial port, Telnet and SSHv2
- Support WEB-based configure operation management
- Support SNMP V1/V2/V3
- Support remote upgrade or equipment through FTP and TFTP

Full QoS policy and Q-in-Q for campus or carrier network

- The switch fully implements the DIFFSERV model, provides up to 8 QoS queues, supports DSCP/TOS/802.1P and other QoS methods, SP, SRR, WRR, WFQ and hybrid scheduling and other priority queue scheduling algorithms, which can achieve port speed limit QoS functions such as traffic shaping to meet customer network requirements for data processing priority; support port trust, configurable trust CoS, DSCP, IP priority, port priority, and modify the DSCP and CoS values of data packets; according to the port , VLAN, DSCP, IP priority, ACL table to classify the traffic, modify the DSCP and IP priority of the data packet, and specify different bandwidths to provide different service quality for voice/data/video transmission in the same network. Support QinQ function, encapsulate the user's private network VLAN tag in the public network VLAN tag, so that the message will pass through the backbone network with two layers of VLAN tag to realize the intercommunication of the user's private network.

Hardware based ACL control

- The hardware based on ACL processing mechanism is adopted to ensure the control requirements of Gigabit high-speed forwarding; it supports ACL access control from the second to the seventh layer, which can be based on the source and destination MAC addresses, source and destination IP addresses, UDP/TCP port numbers, and IP addresses. The protocol type and other information classify the data flow, and set the access control rules according to the data classification. You can set permit or deny, and then apply the rules to VLANs or physical ports; support the global ACL function, which expands the number of effective ACL entries, which is convenient the use and maintenance of customers.

Hardware Specification

Attributes	SS5860-48M4X2Q
Ethernet Port	48*10/100/1000M/2.5G Base-T; 4*10G/25G SFP+; 2*40G QSFP
Management Port	1*Console, 1*MGMT port
Exchange Capacity	600Gbps
Packet Forwarding Rate	446.4Mpps
MAC Address	128K
ACL Table	11.5K (8 Slices)
Routing Table	64K/16K (IPv4/IPv6)
DRAM/Flash	DRAM: 1GB; Flash:8GB
Power	AC: 100 ~ 240V; 47/63Hz (optional dual-fixed AC)
Power Consumption	≤125W
Cooling System	4x smart speed fan (Fixed)
Dimensions	440X330X44mm (W * D * H)
Environment Temperature	Working Temperature: -10℃~55℃ Storage temperature: -40℃~70℃

Software Specification

Attributes	SS5860-48M4X2Q
Ethernet	Ethernet interface operating modes (full duplex, half duplex, and auto-negotiation) Ethernet interface operating rates Jumbo Frame Port enable/disable Flow-control TX/RX Port based storm-control Unknow-unicast/unknow-multicast/broadcast storm-control Port-isolate Cut-through
VLAN	Access/Trunk/Hybrid 4K VLAN Default VLAN VLAN Classification (port based/mac based/ip based/protocal based) Basic QinQ Flexible QinQ VLAN Swap
MAC	Automatic learning and aging of MAC addresses Hardware Learning Static and dynamic MAC address entries Blackhole MAC
LAG	Static-LAG & LACP LAG load balance（SIP/DIP/SMAC/DMAC）
STP	Spanning-Tree Protocol Rapid Spanning-Tree Protocol Multi-instance Spanning-Tree Protocol BPDU Filter/Guard Root Guard Loop Guard
ERPS	Single Ring Sub Ring
Loopback Detect	Loopback-detection
Layer2 Multicast	IGMPv1/v2/v3 Snooping Fast leave

	Static IGMP snooping group MVR（Multicast VLAN Registration）
ARP	Static and dynamic ARP entries Aging of ARP entries Gratuitous ARP basic ARP-Proxy local ARP-Proxy
IPv4 Unicast Routing	IPv4 Static Routes uRPF check RIPv1/v2 OSPFv2 IS-IS BGP ICMP redirect ICMP unreachable ECMP
IPv4 Multicast Routing	IGMPv1/v2/v3 IGMP-Proxy IGMP SSM Mapping PIM-SM PIM-SSM PIM-DM
IPv6 Basic Protocol	ICMPv6 NDP PMTU
IPv6 Unicast Routing	IPv6 Static Routes RIPng BGP4+ OSPFv3 IS-IS
IPv6 Multicast Routing	MLD v1/v2 MLD v1/v2 Snooping
High Availability	Virtual Stacking Technology (VST) BFD for OSPFv2 VRRP Smart link (FlexLink, Monitorlink) EFM (Auto detection, Network fault detection, Network fault handle, remote loopback)

CFM	Hardware CCM detect MAC Ping MAC Trace
VxLAN	IPv4 vxlan tunnel, Static Distributed, Centralized Gateway
Y.1731	Latency and jitter measure
Qos	Traffic classification based on COS/DSCP (simple classification) Traffic classification based on ACL (complex classification) Traffic classification based on inner header of the tunnel packets Queue scheduling Remark the priority fields (COS/DSCP) of the packet based on ACL Flow redirection Flow mirror Traffic policing based on direction (in/out) of Port Traffic policing based on direction(in/out) of VLAN Traffic policing based on direction(in/out) of flow Traffic policing based on direction(in/out) of aggregated flow Queue based traffic shaping Port based traffic shaping SP（Strict Priority）scheduling WRR（Weighted Round Robin）scheduling SP + WRR mixed scheduling Packet counts and bytes statistics based on traffic classification Packet counts and bytes statistics based on the color after traffic policing Forwarded and discarded packet counts and bytes statistics
System Security	SSHv1/v2 RADIUS TACACS+ Authentication Accounting Port based dot1x MAC based dot1x MAC/IP ACL Basic Mode ACL Port/VLAN/L4-Port ACL Time Range ARP Inspection IP Source Guard Limitation on MAC address learning on interface

	Limitation on MAC address learning on VLAN Rate limit CPU Traffic Limit Prevent DDOS attack (ICMP Flood/Smurf/Fraggle/LAND/SYN Flood) CLI/WEB/SNMP/Telnet/SSH filtering
Network Management	DHCP Server DHCP Relay DHCP Snooping DHCP Option60 DHCP Option82 RMON RFC3176 sFlow SNTP（Simple Network Time Protocol） LLDP
Terminal Services	Configurations through CLI (Command Line Interface) Vty Terminal service Console Terminal service
Configuration Management	Inband management interface and configuration Outband management interface and configuration privileged user priority and privileged commands Network management based on SNMPv1/v2c/v3 Public and private MIB Public and private Trap Configuration and management based on WEB Restore factory default configuration
File System	File system Upload and download files through FTP or TFTP Upload and download files through Xmodem
Debugging & Maintenance	per-module Debug features ICMP Debug CPU usage display and alarm Memory usage display and alarm Device temperature、PSU、FAN、status display and alarm User operation logs Management of logs, alarms, and debugging information VCT（Virtual Cable Test） Detailed Diagnostic-information collection Manual reboot； Schedule Reboot

	Reboot Information logging Ping； IPv6 Ping Traceroute Port mirror；Flow mirror； Remote mirror Multi-destination mirror（m:n） To CPU/From CPU packets statistics port loopback hardware loopback（internal/external） Time configuration Time zone
Upgrade	upgrade with the local image file upgrade with the remote TFTP server Online upgrade Uboot

Purchase Info

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