S5700 SERIES

Supports 48-Port 2.5G RJ45, 4-Port 10G SFP+ and 2-Port 40G QSFP+

Advanced Hardware Architecture and Industry-leading Port Density

Carrier-Level High Reliability
Full Layer-3 Functions

Varied Service Characteristics
Versatile IPv6 Solution
Complete Security Mechanism

Overview

Vivio S5700 Series is a Vivio-developed multi-gigabit Ethernet switch oriented for the next-generation IP metropolitan area network, large campus network, and enterprise network.

Vivio S5700 Series adopts the cutting edge hardware architecture and is equipped with the BDROS operating system with Vivio's independent intellectual property rights.

On the basis of providing high-performance L2/L3/L4 wire-speed switching services, S5700 Series further integrates various network services such as IPv6 and network security.

S5700 Series has a variety of product specifications, it has 3 models: S5700-8ET4Xv1, S5700-24ET6Xv1 and S5700-48ET4X2Q.

S5700 Series is widely used in high-end cyber cafes, E-sports hotels, and high-speed enterprise network.

Highlights

Advanced hardware architecture, cutting edge processing capability

S5700 Series 1U pizza-box switch realizes the ultra-high port density of 48 2.5G RJ45 ports, 4 10G SFP+ ports, and 2 40G QSFP+ ports. Equipped with high-performance ASIC switch chips, S5700 Series can meet the application requirements of various complex scenarios.

Doubled performance: The virtualized system makes full use of every link between physical devices, avoiding the link congestion of the traditional networking model Spanning Tree Protocol, making the best use of devices, doubling the performance, and protecting the original link investment to the greatest extent.

High reliability: Based on advanced distributed processing technology, the efficient cross-physical device link aggregation function separates the logical control plane, service control plane and service data plane, providing uninterrupted Layer 3 routing and forwarding and avoiding business interruption caused by the single failure.

Highlights

Therefore, the reliability of the virtual system is greatly improved.

Easy management: The entire virtual system realizes unified management of a single IP, and physical devices are visible to users, which simplifies the management of network devices and network topology, greatly improves operation efficiency, and effectively reduces operation and maintenance costs.

Carrier-level high reliability

Based on Hitless Protection System (HPS), the key components of the S5700 Series, such as power supply modules, are redundant backup and hot-swappable, which supports seamless switchover in case of failure without manual intervention.

S5700 Series supports STP/RSTP/MSTP, VRRP, ring network protection, dual uplink active/standby link protection, LACP and other simple and efficient redundancy protection mechanisms.

S5700 Series supports In-Service Software Upgrade (ISSU), ensuring the unremitting data forwarding during system upgrade.

The ultra-high-precision BFD mechanism, through linkage with Layer 2 and Layer 3 protocols, realizes millisecond-level fault detection and service recovery, which greatly improves the reliability of the network system.

Perfect Ethernet OAM mechanism, supporting 802.3ah and 802.1ag, realizes rapid detection and location of faults through real-time monitoring of network operation status.

The high reliability hardware and software of the S5700 Series meet the fault recovery time requirement of 50ms for carrier-level services, and truly achieve the high reliability (99.999%) of carrier-class core devices.

Innovative BVSS

The Vivio S5700 Series supports innovative Vivio Virtual Switch System (BVSS), which can virtualize multiple physical devices into one logical device with unparalleled performance, reliability, and management compared to stand-alone physical devices.

Rich service features

Perfect Layer 2 and Layer 3 multicast routing protocols meet the access requirements of IPTV, multi-terminal high-definition video surveillance and video conferencing;

Complete Layer 3 routing protocols and large routing table capacity meet the needs of various network interconnection, and can built up ultra-large campus network, enterprise network and industry private network.

Comprehensive IPv6 solutions

Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc.

Supports Ping, Traceroute, Telnet, SSH, ACL and so on, meeting IPv6 networks' device management and service control requirements.

Supports IPv6 multicast features such as MLD, MLD Snooping, IPv6 static routing, IPv6 Layer 3 routing protocols such as RIPng, OSPFv3, BGP4+, providing complete IPv6 Layer 2 and Layer 3 solutions.

Supports a wealth of IPv4 to IPv6 transition technologies, including: IPv6 manual tunnel, automatic tunnel, 6to4 tunnel, and ISATAP tunnel to ensure the smooth transition from IPv4 network to IPv6 network.

Perfect security mechanisms

Equipment-level security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP-related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions.

Perfect security authentication mechanisms: IEEE 802.1x, Radius and TACACS+.

Enhanced service security mechanism: Supports clear text or MD5 authentication of related routing protocols, and Unicast Reverse Path Forwarding (uRPF), which can effectively control illegal services; supports in-depth detection and filtering of control packets and data packets, thereby effectively isolating illegal data packets and improving the security of the network system.

Innovative eco-friendly design

Intelligent power management system: S5700 series adopts advanced power system architecture design to achieve efficient power conversion, unique power monitoring, slow start function, real-time monitoring of the running status, intelligent adjustment, and deep energy saving.

Intelligent fan management system: Intelligent fan design supports automatic speed regulation, effectively reduces the speed, reduces noise, and prolongs the service life of the fan.

Supports energy efficient Ethernet function and complies with the international standard IEEE 802.3az EEE, effectively reducing energy consumption.

Model

S5700-8ET4Xv1

- 8-Port 2.5G/GE RJ45
- 4-Port 10G/GE SFP+

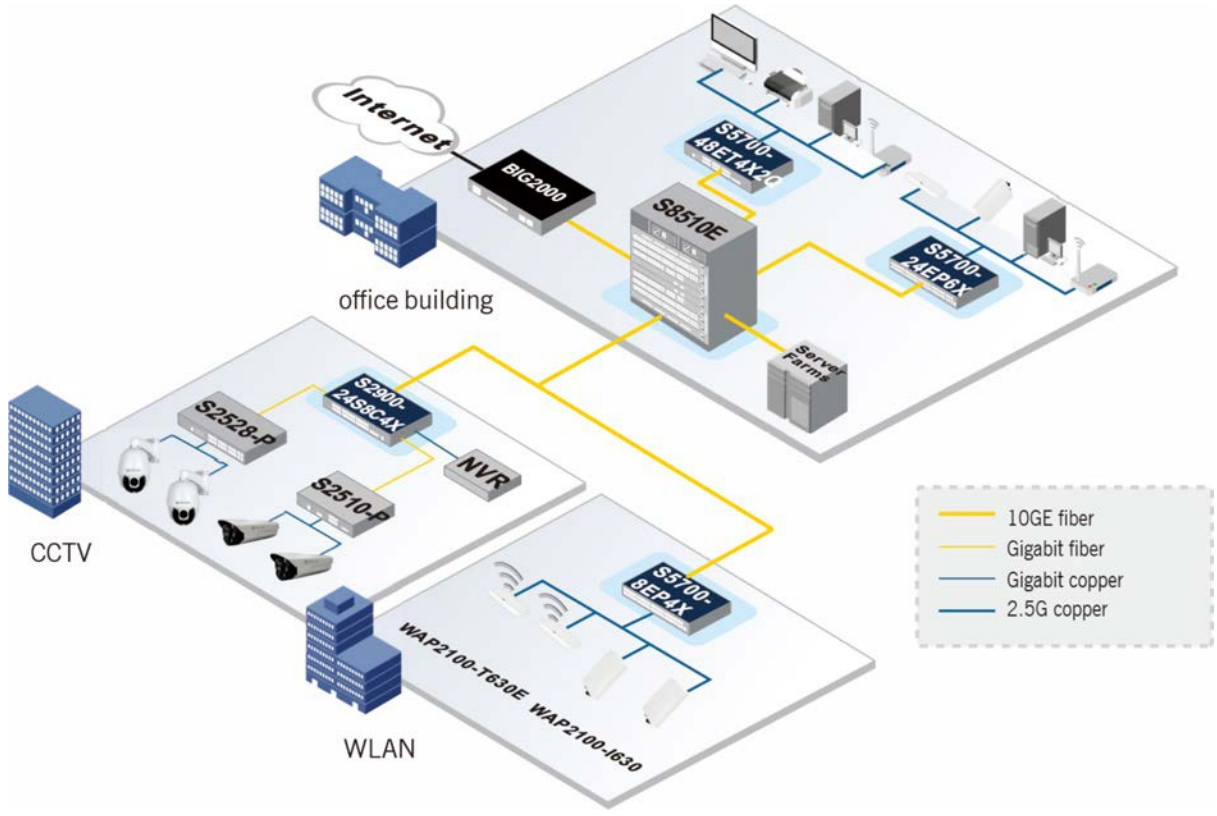
S5700-24ET6Xv1

- 24-Port 2.5G/GE RJ45
- 6-Port 10G/GE SFP+

S5700-48ET4X2Q

- 48-Port 2.5G/GE RJ45
- 4-Port 10G/GE SFP+
- 2-Port 40G QSFP+

Application Diagram



VIVIO

Specifications

Item		S5700-8ET4Xv1	S5700-24ET6Xv1	S5700-48ET4X2Q
Interface	RJ45	8-Port 2.5G/GE	24-Port 2.5G/GE	48-Port 2.5G/GE
	SFP+	4-Port 10G/GE	6-Port 10G/GE	4-Port 10G/GE
	QSFP+	/	/	2-Port 40G
Console		1-Port RJ45	1-Port RJ45	1-Port RJ45
Switching Capacity		120Gbps	240 Gbps	480 Gbps
Forwarding rate		90 Mpps	180 Mpps	360 Mpps
Physical Specifications				
Chassis	Dimensions (WxDxH)(mm)	280×180×44	440×280×44	440×300×44
Package	Dimensions (WxDxH)(mm)	350×268×94	576x448x94	576x448x94
Power				
Power supply		AC: 100V-240V, 50/60Hz DC: 36~72V	AC: 100V-240V, 50/60Hz DC: 36~72V	AC: 100V-240V, 50/60Hz DC: 36~72V
Power consumption		<35W	<48W	<100W
Total output BTU (1000BTU/H=293W)		119.45	163.82	341.30
Noise@25°C(dBA)		45	45	55
MTBF(H)		>200,000	>200,000	>200,000
Forwarding mode		Store-forward	Store-forward	Store-forward
Flash		16MB	16MB	4GB
DRAM		256MB	512MB	2GB
MAC		16K	32K	64K
Buffer size(MB)		1.5	2	4.5
Jumbo frame		9K	9K	16K
Routing table	IPv4	512	8K	16K
	IPv6	128	4K	8K
ARP table	IPv4	2K	12K	16K
	IPv6	2K	2K	8K
Total SVI		63	1K	1K

Features

Multicast

- IGMP v1/v2c/v3
- IGMP Snooping
- IGMP Fast Leave
- Multicast group policy and multicast number limit
- Multicast filtering
- MVR
- IGMP snooping in certain port and VLAN
- Support for transparent passing of multicast traffic without IGMP
- snooping in certain port and VLAN
- PIM-DM/SM/SSM

IPv4

- Static routing, RIP v1/v2, OSPF, BGP
- Policy Based Routing(PBR)
- ECMP
- BFD for static routing, RIP, OSPF, BGP

DHCP

- DHCP server, client, relay, snooping

IPv6

- IPv4/v6 dual stack
- ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet
- IPv6 neighbor discovery
- Path MTU discovery
- MLD V1
- MLD snooping
- IPv6 Static Routing, RIPng, OSPFv3, BGP4+
- Manual tunnel, ISATAP tunnel, 6-to-4 tunnel

QoS

- Traffic classification of port/ L2~4 protocol headers/VLAN/ CoS/DSCP
- CAR traffic control
- 802.1P/DSCP priority mapping and remark
- Multiple queuing algorithms such as SP, WRR or SP+WRR
- Tail-Drop, WRED
- Traffic supervision and traffic shaping
- 8 queues per port

Security

- DDoS attack prevention, TCP-SYN/UDP/ARP Flood attack prevention
- IEEE 802.1x authentication, multiple-user authentication, guest vlan
- L2~L4 ACL
- Anti-DOS/IP spoofing/TCP/ping/ SYN/ICMP flood attacks
- Broadcast/multicast/unknown-unicast storm-control
- Port isolation
- Port Security, MAC address limitation, IP+MAC+port binding
- DHCP Snooping, DHCP Option 82
- DAI(Dynamic ARP Inspection)
- IPSG(IP Source Guard)
- IEEE 802.1x certification
- MAC-based authentication
- AAA
- Radius, TACACS+
- Multiple user privileges

Reliability

- Power 1+1 backup
- 802.3ad Static/LACP link aggregation,
- EAPS
- G.8032 ERPS
- ISSU
- VRRP
- GR for OSPF and BGP
- BFD for OSPF and BGP
- BVSS virtual stacking system

Management

- CLI: Console, Telnet, SSHv1/2
- Web-GUI: HTTP, HTTPS/SSL
- SNMP v1/v2c/v3, RMON, SNMP alarm/inform/traps
- Upload and download of FTP/TFTP/SFTP files
- Debugging
- Syslog for alarm/notification/ command/debug
- Web-GUI: HTTP, HTTPS/SSL
- NTP
- SPAN, RSPAN (1:1 and N:1 mirror)
- LLDP, LLDP-MED
- sFLOW
- ZTP(Zero Touch Provisioning)
- Optical DDM
- Ethernet cable diagnosis
- 802.3ah, 802.1ag

Environment

- Operating temperature/humidity: 0℃ -50℃ ,10%-90% non-condensing
- Storage temperature/humidity: -20℃ -70℃ , 5%-95% non-condensing

Ordering Information

Item	Description
S5700 series switches	
S5700-8ET4Xv1	8-Port 2.5G RJ45 + 4-Port 10G SFP+ L3-lite Managed Switch (built-in single AC-220V power supply; with cooling fan, 1U, standard 19-inch rack-mounted installation)
S5700-24ET6Xv1	24-Port 2.5G RJ45 + 6-Port 10G SFP+ L3 Managed Switch (built-in single AC-220V power supply; with cooling fan, 1U, standard 19-inch rack-mounted installation)
S5700-48ET4X2Q	48-Port 2.5G RJ45 + 4-Port 10G SFP+ 2-Port 40G QSFP+ L3 Managed Switch (dual hot-swap power slots with single AC-220V power supply; with cooling fan, 1U, standard 19-inch rack-mounted installation)
Hot-swappable Power Modules	
PWR-100-SLIAC	S5700-48ET4X2Q hot-swappable AC power supply (maximum power 100W, AC100~240V input)
PWR-100-SLIDC	S5700-48ET4X2Q hot-swappable DC power supply (maximum power 100W, DC36~72V input)
Optical Modules	
Gigabit Optical Modules	
GSFP-TX-B	GE SFP-to-RJ45 module
GSFP-SX-D	GE SFP multi-mode (500m, 850nm, LC, DDM)
GSFP-LX-10-D	GE SFP single-mode (10Km, 1310nm, LC, DDM)
GSFP-LX-20-D	GE SFP single-mode (20Km, 1310nm, LC, DDM)
GSFP-LX-40-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-ZX-80-D	GE SFP single-mode (80Km, 1550nm, LC, DDM)
GSFP-ZX-120-D	Gigabit SFP single-mode (120Km, 1550nm, LC, DDM)
GSFP-LX-SM1310-10-BIDI	GE SFP single-mode, single-chip and two-way (10Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-10-BIDI	GE SFP single-mode, single-chip and two-way (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI	GE SFP single-mode, single-chip and two-way (20Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-20-BIDI	GE SFP single-mode, single-chip and two-way (20Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-40-BIDI	GE SFP single-mode, single-chip and two-way (20Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1490-80-BIDI	GE SFP single-mode, single-chip and two-way (80Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-80-BIDI	GE SFP single-mode, single-chip and two-way (80Km, TX1550/RX1490, LC, DDM)
GSFP-LX-SM1490-120	GE SFP single-mode, single-chip and two-way (120Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1490-120	GE SFP single-mode, single-chip and two-way (120Km, TX1550/RX1490, LC, DDM)
Optical Modules	
10G Optical Modules	
SFP+TX	10GE SFP+ to RJ45 port module (10M/100M/1000M/2.5G/5G/10G)
SFP+SX	TE SFP+ multi-mode (300m, 850nm, LC)
SFP+LX-10	TE SFP+ single-mode (10Km, 1310nm, LC, DDM)
SFP+LX-20	TE SFP+ single-mode (20Km, 1310nm, LC, DDM)
SFP+LX-40-1310	TE SFP+ single-mode (40Km, 1310nm, LC, DDM)
SFP+LX-40	TE SFP+ single-mode (40Km, 1550nm, LC, DDM)
SFP+LX-80	TE SFP+ single-mode (80Km, 1550nm, LC, DDM)
SFP+AOC-1M	10GE SFP+, 850nm, AOC, 1m, 3.3V, DDM
SFP+LX-SM-1270-10	10GE SFP+ single-mode, single-chip and two-way (10Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-10	10GE SFP+ single-mode, single-chip and two-way (10Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-20	10GE SFP+ single-mode, single-chip and two-way (20Km TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-20	10GE SFP+ sinlge-mode, single-chip and two-way (20Km, TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-40	10GE SFP+ single-mode, single-chip and two-way (40Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-40	10GE SFP+ single-mode, single-chip and and two-way (40Km,TX1330/RX1270, LC, DDM)