

S2600 SERIES LAYER 3 SWITCH



S2624-4X: 24*10/100/1000M Base-T, 4*1000M Base-X SFP/10GE SFP+, Single power supply



S2648-6X: 48*10/100/1000M Base-T, 6*1000M Base-X SFP/10GE SFP+, Dual Non pluggable Power

OVERVIEW

The S2600 series switch is a layer 3 Ethernet switch, which can meet the needs of cost-effective Gigabit access and 10 Gigabit uplink for enterprise networks and operator customers. S2600 uses a high-performance low-power network processor, provides Gigabit line-speed forwarding performance, supports green Ethernet line sleep capability, has the lowest power consumption of the same-level equipment in the industry, supports powerful QoS and ACL functions, and supports IP+MAC+ Security features such as port binding support service flow classification and packet priority marking. Support static data packet sampling, SFLOW function, support multi-port mirroring analysis function, support static and flexible QinQ function, support Ethernet OAM 802.3ag (CFM), 802.3ah (EFM), support strategy-based IPV4/6 unicast routing, support Flexible forwarding strategy.

Product Feature:

Carrier-level equipment stability

Based on Linux operating system, support IPv4/IPv6 dual protocol stack platform

Support multiple link redundancy and network redundancy protocols such as STP/RSTP/MSTP/ERPS/LACP

Perfect safety mechanism

Support ACL security filtering mechanism, which can provide security control functions based on MAC, IP, L4 port

Support ARP attack automatic protection and user blocking functions

Support DHCP attack automatic protection based on Mac Address and user blocking functions

Support DDOS and virus attack protection

Support DHCP-snooping/IP-source-Guard/802.1X and other security features

Support link protection functions such as BFD, FlexLink, LACP and ERRP

Support remote loop detection function

Support CFM、 EFM

Support remote user authentication based on Tacacs+, Radius, and Local user authentication

Powerful QoS capabilities

Support port speed and flow speed limit function

Support classification based on service flow and Qos flow control function

Support queue scheduling algorithms such as SP/WRR/SP+WRR

Support port-based and service flow-based mirroring functions

Enhanced multi-service capabilities

Support DHCP Server and DHCP Relay

Support L2-Tunnel

Support Ethernet OAM protocol such as CFM、 EFM

Rich routing protocol

Support static route

Support dynamic route such as RIP, OSPF,BGP, ISIS

Support IPV4/IPV6 dual protocol stack, Support RIPng、 OSPFv3

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

CHARACTERISTICS

1. Basic			
Product Name		S2648-6X	S2624-4X
Product Positioning		Enterprise / Metro / HCI (Hyper-Converged Infrastructure) network access or aggregation	
Switching Method		Store and Forwarding / Cut Through	
Packet Buffer		16Mbit	12Mbit
CPU Model/ Frequency		SOC(MIPS-Dual Core Up to 1GHz)	SOC(MIPS-34Kc Up to 800MHz)
Flash		32MB(FLASH)	
Memory		512MB(DDR3)	
Hardware Configuration	Main Board Spec	48*10/100/1000M Base-T 6*1000M Base-X SFP/10GE SFP+	24*10/100/1000M Base-T 4*1000M Base-X SFP/10GE SFP+
	Console Type	RJ45	
	Outband Eth Management Port	Support	
	Inband Eth Management Port	Support	
2. Performance Spec			
Switching Capacity	Switching Capability	216 Gbps	128 Gbps
	Throughput	160.704 Mpps	95.232 Mpps
	Latency	Min: 660ns	
3. Hardware and Software Description			
Hardware Summary		Standard 1U 19" Rack	Standard 1U 19" Rack Mountable

	Mountable 48*10/100/1000M Base-T 6*1000M Base-X SFP/10GE SFP+	24*10/100/1000M Base-T 4*1000M Base-X SFP/10GE SFP+
Software Upgrade Method	TFTP/FTP	
Service interruption time when reboot system for software update	Less Than 120s	
4. The Power Supply and Power Requirements		
Type of Power Supply	AC	Support
	DC	Support
Power Supply Range	AC	Operating Voltage: 100 ~ 240V; 50/60Hz Maximum Voltage: 90 ~ 264V; 47~63Hz
	DC	Operating Voltage: -48V ~ -75V
Double Power Input	Support(Fixed)	NO Support
Max Power Draw	53W	22W
5. Overcurrent and overvoltage protection		
Overcurrent/Overvoltage Protection	Yes	
Surge Protection Level	2 KV	
6. Others		
Hardware Size (H×W×D) in.	440 x 290 x 44mm	440 x 210 x 44mm
Weight (kg)	5kg	3kg
Cooling Mode	Fan Cooling (Front-to-Rear Airflow)	
Quantity of Fans	2	1
Fan Module Pluggable	Not support (Fixed fan) Not Support (Fixed Fan)	
Fan Module Intelligent Speed Control	NO Support Support	
Operating Temperature Range	-10°C ~ 55°C	

SOFTWARE FEATURE LIST

Tips : ● Support ○ Unsupport

Feature List					
Feature			Description	S2624-4X	S2648-6X
Type	Sub Type	Feature			
Ethernet basic features	Ethernet	Interface	Ethernet interface operating modes(full duplex, half duplex, and auto-negotiation)	●	●
			Ethernet interface operating rates	●	●
			Jumbo Frame	●	●
			Port enable/disable	●	●
		Flow-control	Flow-control tx/rx	●	●
		Storm-control	Port based storm-control	●	●
			Unknow-unicast/unknow-multicast/broadcast storm-control	●	●
		Port-isolate	Port-isolate	●	●
		Forward mode	Store-and-forward	●	●
			Cut-through	●	●
	VLAN	VLAN Access mode	Access/Trunk/Hybrid	●	●
			Default VLAN	●	●
		VLAN Classification	VLAN Classification(port based/mac based/ip based/protocol based)	●	●
		QinQ	Basic QinQ	●	●
			Flexible QinQ	●	●
VLAN Swap	●		●		

	MAC	MAC Address Table	Automatic learning and aging of MAC addresses	•	•
			Hardware Learning	•	•
			Static and dynamic MAC address entries	•	•
			blackhole MAC	•	•
	LAG	Link aggregation	Static-LAG & LACP	•	•
			LAG load balance (SIP/DIP/SMAC/DMAC)	•	•
Ethernet Ring protection features	STP	STP	Spanning-Tree Protocol	•	•
		RSTP	Rapid Spanning-Tree Protocol	•	•
		MSTP	Multi-instance Spanning-Tree Protocol	•	•
		Spanning-Tree Protocol Protection	BPDU Filter/Guard	•	•
			Root Guard	•	•
			Loop Guard	•	•
	ERPS	ERPS	Single Ring	•	•
			Sub Ring	•	•
Loopback Detect	Loopback Detect	Loopback-detection	•	•	
Layer2 Multicast	Layer2 Multicast	IGMP Snooping	IGMPv1/v2/v3 Snooping	•	•
			Fast leave	•	•
			Static IGMP snooping group	•	•
		MVR	MVR (Multicast VLAN Registration)	•	•
IPv4 Forwarding	ARP	ARP	Static and dynamic ARP entries	•	•
			Aging of ARP entries	•	•
			Gratuitous ARP	•	•

		ARP proxy	basic ARP-Proxy	•	•	
			local ARP-Proxy	•	•	
	IPv4 Unicast Routing	IPv4 Static Routes	IPv4 Static Routes	•	•	
			uRPF	uRPF check	•	•
			RIP	RIPv1/v2	○	•
			OSPFv2	OSPFv2	○	•
			IS-IS	IS-IS	○	•
			BGP	BGP	•	•
			ICMP	ICMP redirect	•	•
				ICMP unreachable	•	•
			ECMP	ECMP	•	•
	IPv4 Multicast Routing	IGMP	IGMPv1/v2/v3	•	•	
			IGMP-Proxy	•	•	
			IGMP SSM Mapping	•	•	
PIM		PIM-SM	•	•		
		PIM-SSM	•	•		
		PIM-DM	•	•		
IPv6 Forwarding	IPv6 Basic Protocol	ICMPv6	ICMPv6	•	•	
		NDP	NDP	•	•	
		PMTU	PMTU	•	•	
	IPv6 Unicast Routing	IPv6 Static Routes	IPv6 Static Routes	•	•	
			RIPng	RIPng	•	•
			BGP4+	BGP4+	•	•
			OSPFv3	OSPFv3	•	•
			IS-IS	IS-IS	•	•
	IPv6 Multicast Routing	MLD v1/v2 Snooping	MLD v1/v2	•	•	
MLD v1/v2 Snooping			•	•		

Reliability	BFD	BFD	BFD for OSPFv2	•	•
	VRRP	VRRP	VRRP	•	•
			Track for VRRP	•	•
	Smart Link	FlexLink	FlexLink	•	•
		Monitorlink	Monitorlink	•	•
ethernet OAM	EFM	EFM (802.3ah)	Auto detection	•	•
			Network fault detetion	•	•
			Network fault handle	•	•
			remote loopback	•	•
	CFM	CFM (802.1ag)	Hardware CCM detect	•	•
			MAC Ping	•	•
			MAC Trace	•	•
	Y.1731	Y.1731	Latency and jitter measure	•	•
QoS features	QoS	Traffic classification	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	•	•
		Traffic behaviors	Queue scheduling	•	•
			Remark the priority fields(COS/DSCP) of the packet based on ACL	•	•
			Flow redirection	•	•
			Flow mirror	•	•
		Traffic policing	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	•	•	
		Traffic shaping		Queue based traffic shaping	•	•
				Port based traffic shaping	•	•
		Congestion management		SP (Strict Priority) scheduling	•	•
				WRR (Weighted Round Robin) scheduling	•	•
				SP + WRR mixed scheduling	•	•
		Traffic statistics		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	•	•
		Security and management	System Security	SSH	SSHv1/v2	•
RADIUS	RADIUS			•	•	
TACACS+	TACACS+			•	•	
AAA	Authentication			•	•	
	Accounting			•	•	
Dot1x	Port based dot1x			•	•	
	MAC based dot1x			•	•	
ACL	MAC/IP ACL	•	•			

			Basic Mode ACL	•	•	
			Port/VLAN/L4-Port ACL	•	•	
			Time Range	•	•	
		ARP Inspection	ARP Inspection	•	•	
		IP Source Guard	IP Source Guard	•	•	
		Port Security	Limitation on MAC address learning on interface	•	•	
		VLAN Security	Limitation on MAC address learning on VLAN	•	•	
		Rate limit	Rate limit	•	•	
		CPU Traffic Limit	CPU Traffic Limit	•	•	
		Prevent DDOS attack	Prevent DDOS attack (ICMP Flood/Smurf/Fraggle/LAND/SYN Flood)	•	•	
		Login filter	CLI/WEB/SNMP/Telnet/SSH filtering	•	•	
		Network Management	DHCP		DHCP Server	•
				DHCP Relay	•	•
				DHCP Snooping	•	•
				DHCP Option60	•	•
	DHCP Option82			•	•	
RMON	RMON		•	•		
sFlow	RFC3176 sFlow		•	•		
SNTP	SNTP (Simple Network Time Protocol)	•	•			
LLDP	LLDP	•	•			

Configuration and maintenance	Terminal Services	Command Line Interface	Configurations through CLI (Command Line Interface)	•	•
		Help information	Help information in English	•	•
		Terminal service	Vty Terminal service	•	•
	Console Terminal service		•	•	
	Configuration Management	Management interface	Inband management interface and configuration	•	•
			Outband management interface and configuration	•	•
		User privilege management	privileged user priority and privileged commands	•	•
		SNMP	Network management based on SNMPv1/v2c/v3	•	•
			Public and private MIB	•	•
			Public and private Trap	•	•
		WEB	Configuration and management based on WEB UI	•	•
	Restore factory default configuration	Restore factory default configuration	•	•	
	File System	File system	File system	•	•
		Upload and download	Upload and download files through FTP or TFTP	•	•
			Upload and download files through Xmodem	•	•
	Debugging And	Debug	per-module Debug features	•	•
			ICMP Debug	•	•

	Maintenance	Log & Alarm	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	VCT (Virtual Cable Test)	•	•
		system diagnostics	Detailed Diagnostic-information collection	•	•
		Reboot	Manual reboot	•	•
			Schedule Reboot	•	•
			Reboot Information logging	•	•
		Network diagnostics	Ping	•	•
			IPv6 Ping	•	•
			Traceroute	•	•
		Mirror	Port mirror	•	•
			Flow mirror	•	•
			Remote mirror	•	•
			Multi-destination mirror (m:n)	•	•
		CPU statistics	To CPU/From CPU packets statistics	•	•
		Loopback	port loopback	•	•
			hardware loopback	•	•

			(internal/external)		
		System time	Time configuration	●	●
	Timezone		●	●	
	Version Upgrade	System software upgrade	upgrade with the local image file	●	●
			upgrade with the remote TFTP server	●	●
		Uboot upgrade	Online upgrade Uboot	●	●

Performance & Spec Table

Class	Feature	Sub Spec	S2624-4X	S2648-6X
Ethernet Basic	Jumbo frame	Maximum Jumbo frame size	12288	
	Switching Capacity	Switching Capability	128 Gbps	216 Gbps
		Throughput	95.232 Mpps	160.704 Mpps
		Latency	Min: 660ns	
	MAC	MAC address Capacity	16K	32K
		MAC Learning Rate (HW)	Line Rate	Line Rate
	Multicast MAC	Multicast MAC address Capacity	1023	4095
	VLAN	VLAN IDs	4094	
		MAC-VLAN Capacity	1K	2K
		IP-subnet-vlan Capacity	1K	2K
		Protocol-VLAN Capacity	8	
		VLAN Swap Capacity	1K	2K
	Link Aggregation (Static&LACP)	Maximum Member Num per group	8	
		Maximum Group Num	64	128
		Load balance policy	Dst-ip/Src-IP/Dst-MAC/Src-MA C	

		Convergence time	< 50ms	
	Port-isolate	Port-isolate Group Num	4	
Ethernet Ring protection	STP	Convergence time	< 30s	
	RSTP	Convergence time	< 1s	
	MSTP	Instance Num	16	
		Convergence time	< 1s	
	ERPS(G.8032)	Rings	239	
		Switchover time	< 50 ms	
Ethernet OAM	CFM(802.1ag)	Maximum Session Num	48	
		Maximum domain Num	8	
		CCM Interval Types	4	
		Maximum Down MEP Num	8191	
		Maximum Up MEP Num	8191	
IPv4 unicast	ARP	ARP Capacity	6K	12K
	IPv4	LPM	512	12K
IPv4 multicast	IGMP Snooping	Maximum Groups Num	1K	4K
IPv6 unicast	Host Route	NDP Capacity	3K	12K
	IPv6	LPMv6	128	12K
QACL	Per-port Queue Num	Queue Num	8	
	Packet Buffer	System Packet Buffer Capacity	12M	16M
	ACL	ACL Capacity	2K	4K
Security	IP Source Guard	IPv4 IP-Source-Guard Capacity	1K	
		IPv6 IP-Source-Guard Capacity	1K	
	802.1x base MAC	Maximum Entries	1K	
	DHCP-Snooping	Maximum bound entry	1K	
Reliability	VRRP	Maximum Group Num	255	

	Smart Link	Flexlink Num	128
		MonitorLink Num	5