S3900 Series Switches

FLEXIBLE ACCESS SWITCHES FOR CONVERGED ENTERPRISE NETWORKS

S3900 series switches are high-performance Gigabit Ethernet L2+/L3 Lite managed switches with 128Gbps/176Gbps switching capacity.

Overview

S3900 series switches are Gigabit Ethernet access switches with 24 or 48 1G downlink ports and 4 10G uplinks.
The switches are ideal for Internet Service Providers (ISPs) and Multiple System Operators (MSOs) to provide home users with triple-play services with up to Gigabit bandwidth.
They are also ideal Gigabit access switches for SMB, enterprise, and campus networks.

S3900 series switches are packed with features that bring high availability, comprehensive security, robust multicast control, and advance QoS to the network edge, while maintaining simple management.

Benefits

- Layer 2+/Layer 3 Lite
- BCM56150/BCM56151 Switch Chip
- 2 Built-in 10G SFP+ Ports for Stacking
- Industry-standard CLI & Web Management
- 1+1 Redundant Power Supply
- Green Ethernet, Low Power Consumption

Key Features

Performance and Scalability

S3900 series switches are high-performance Gigabit Ethernet L2+/L3 Lite managed switches with 128Gbps/176Gbps switching capacity. The switch delivers wire-speed switching performance on all Gigabit ports, taking full advantage of existing high-performance Gigabit CPEs, PCs,11n/ac Wi-Fi Applications, etc., significantly improving the responsiveness of applications and file transfer times.
The 4 built-in 10G SFP+ ports provide uplink flexibility, allowing the insertion of fiber or copper, Gigabit or 10G transceivers, to create up to 10G high-speed uplinks and stack links to servers or service provider, corporate, or campus networks, reducing bottlenecks and increasing the performance of the access network.

Reliability and Energy Efficiency

The fanless design of S3900-24T4S ensures noise less operation and increases the reliability of the system.
The design of the S3900 series switches incorporates high energy efficiency in order to reduce the impact on the environment. The Green Ethernet power-saving features and fanless design significantly reduce the power consumption.

Robust Multicast Control

IGMP snooping prevents the flooding of multicast traffic by dynamically configuring switch ports so that multicast traffic is forwarded to only those ports associated with an IP multicast receiver. IGMP increases the performance of networks by reducing multicast traffic flooding.

Superior Management

An industry-standard command-line interface (CLI), accessed through the console port or Telnet, provides a familiar user interface and command set for users to manage switches.
An embedded user-friendly web interface helps users to quickly and simply configure switches.

Continuous Availability

The IEEE 802.1w Rapid Spanning Tree Protocol provides a loop-free network and redundant links to the core network with rapid convergence, to ensure faster recovery from failed links, enhancing overall network stability and reliability.
The IEEE 802.1s Multiple Spanning Tree Protocol runs STP per VLAN base, providing Layer 2 load sharing on redundant links up to 64 instances.

Technical Specification

S3900 series switches come with advanced hardware architecture design and abundant L2 and L2+ features. Here's a look at the details.

CHARACTERISTICS

	S3900-24F4S	S3900-24T4S	S3900-48T4S
Ports			
Ports	20x 1G SFP, 4x 1G RJ45/SFP, 4x 10G SFP+	24x 10/100/1000BASE-T RJ45, 4x 10G SFP+	48x 10/100/1000BASE-T RJ45, 4x 10G SFP+
Max. 10G Ports	4	4	4
Max. 1G Ports	28	28	52
Combo Ports	4 (RJ45/SFP)	--	--
Management Port	1	1	1
Console Port	1	1	1
Operating System			
OS	FSOS	FSOS	FSOS
Key Components			
Switch Chip	BCM56151	BCM56150	BCM56150
Performance			
Layer Type	Layer 2+	Layer 2+	Layer 2+
Switching Capacity	128 Gbps	128 Gbps	176 Gbps
Forwarding Rate	95 Mpps	95 Mpps	130 Mpps
DDRIII Capacity	512MB	512MB	512MB
Flash Memory	64MB	64MB	64MB
RAM	128MB	128MB	128MB
Packet Buffer	1.5MB	1.5MB	1.5MB
Jumbo Frame	9KB	9KB	9KB
Stackability	Up to 6 Units (Same Models)	Up to 6 Units (Same Models)	Up to 6 Units (Same Models)
MAC Address	16K	16K	16K
Number of VLANs	4K	4K	4K
MTBF (Hours)	>100,000	>100,000	>100,000

CHARACTERISTICS

	S3900-24F4S	S3900-24T4S	S3900-48T4S
Authentication Methods	802.1X, AAA	802.1X, AAA	802.1X, AAA
Remote Management Protocol	SNMP, RMON, HTTP Telnet, SSH	SNMP, RMON, HTTP Telnet, SSH	SNMP, RMON, HTTP Telnet, SSH
Status Indicators	System, LINK activity, PWR	System, LINK activity, PWR	System, LINK activity, PWR
Auto-Negotiation	YES	YES	YES
Auto-MDI/MDIX	YES	YES	YES
Static Routes(IPv4)	256	256	256
Static Routes(IPv6)	256	256	256
Power			
Input Voltage	100-240VAC, 50-60Hz, 1.5A	100-240VAC, 50-60Hz, 0.8A	100-240VAC, 50-60Hz, 1.5A
Max. Power Consumption	43W	21W	45W
Physical and Environmental			
Dimensions (HxWxD)	1.73" x 17.32" x 11.02" (44 x 440 x 280mm)	1.73" x 17.32" x 11.02" (44 x 440 x 280mm)	1.73" x 17.32" x 12.99" (44 x 440 x 330mm)
Rack Space	1U	1U	1U
Power Device	2x Power Supplies - Internal	2x Power Supplies - Internal	2x Power Supplies - Internal
Fans	2	--	1
Airflow	Front-to-Back	Fanless	Left-to-Right
Acoustic Noise	52dB	0dB	54dB
Operating Temperature	32°F to 122 °F (0°C to 50°C)	32°F to 122 °F (0°C to 50°C)	32°F to 122 °F (0°C to 50°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Operating Humidity	5% to 90% (Non-condensing)	5% to 90% (Non-condensing)	5% to 90% (Non-condensing)
Storage Humidity	10% to 90% (Non-condensing)	10% to 90% (Non-condensing)	10% to 90% (Non-condensing)
Weight	9.41 lbs (4.27kg)	8.76 lbs (3.975kg)	10.8 lbs (4.9kg)
Warranty			
Warranty	4 Years	4 Years	4 Years

FEATURES

Functionality	Description
Physical Layer	Tri-speed (10/100/1000BASE-T) Copper Interfaces • Auto-negotiation for port speed and duplex mode • Auto MDI/MDI-X SFP+ Fiber Interface • 1G SFP/10G SFP+ transceivers Transceivers • Digital Diagnostic Monitoring DDM (The 10G SFP+ ports support)
Layer 2 Features	Flow Control • IEEE 802.3x for full duplex mode • Back-Pressure for half duplex mode DHCP • DHCP Client • DHCP Relay • DHCP Option 82 • DHCP Snooping Link Aggregation • Static Link Aggregation • 802.3ad with LACP (Up to 8 Links) • Unicast/Multicast Load Balance Over Trunk Port Spanning Tree Protocol • IEEE 802.1D Spanning Tree Protocol (STP) • IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) • IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) • BPDU Guard/filtering/transparent • Root Guard • Loopback Detection VLANs • Support 4K VLAN • Support Voice VLAN

FEATURES

Functionality	Description
Layer 2 Features	• Port-based VLAN • IEEE 802.1Q VLAN • GVRP (256 VLAN) • GVRP (256 VLAN) • IEEE 802.1v Protocol-based VLAN • IP Subnet-based VLAN • MAC-based VLAN • VLAN Translation • Traffic Segmentation • IEEE 802.1ad QinQ IGMP Snooping • IGMP Proxy Reporting • IGMP Filtering • IGMP Throttling • IGMP Immediate Leave • IGMP Querier • IGMP Mrouter-forward Mode • IGMP Router-port-expire-time • IGMP Tcn-flood • IGMP Tcn-query-solicit • IGMP Unregistered-data-flood Storm Control • Broadcast/Multicast/Unknown Unicast Storm Control Jumbo Frames • 9 KB MVR (Multicast VLAN Registration) • Support 5 Multicast VLANs Port Mirroring Remote Port Mirror (RSPAN)

FEATURES

Functionality	Description
Layer 2 Features	Stacking Links • L2/L3 supported • VLAN Membership supported • Trunking supported • IPMC supported Non-Spanning Tree Loopback Detection Port security IP Source Guard Dynamic Arp Inspection ERPS IEEE 802.1ag CFM ITU-T Y.1731 OAM UDLD
Layer 3 Features	Unicast Routing • Static Unicast Routes ARP
QoS Features	Scheduling for priority queues • WRR Priority Scheduling • Strict Pritory Scheduling • Hybrid (DRR/WRR+ Strict) IEEE 802.1p COS DiffServ • 8 Priority Queues
Security	AAA • Radius client • Tacacs+ 802.1X

FEATURES

Functionality	Description
Security	• Radius Authentication • Port-based Authentication • Mac-based Authentication HTTPS and SSL (v3) SSH V2.0 IP Source guard DoS Protection
ACL	L2/L3/L4 Ingress Egress Statistics IPv4/IPv6/MAC/ARP ACL
IPv6	IPv4/IPv6 Dual Protocol Stack IPv6 Address Type • Unicast • Multicast ICMPv6 IPv6 Neighbor Discovery IPv6 Neighbor Discovery Snooping Manual Configuration IPv6 DHCP Snooping MVR over IPv6 SNMP over IPv6 HTTP over IPv6
Management	Switch Management • CLI via console port or Telnet • Web management • SNMP v1, v2c, v3

FEATURES

Functionality	Description
Management	Firmware & Configuration • Firmware upgrade via TFTP/HTTP/FTP server • Dual images • Multiple configuration files • Configuration file upload/download via TFTP/HTTP/FTP server RMON (group 1, 2, 3 and 9) MIB II DHCP/BOOTP • Client • Relay SNTP/NTP DNS client Syslog SMTP Support LLDP (802.1ab) Ping Traceroute sFlow

Accessories


Console Cable*1


Power Cords*2


Grounding Cable*1


Screws*6


Rubber Pads*4


Rack Mount Brackets*2

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