DCN Europe

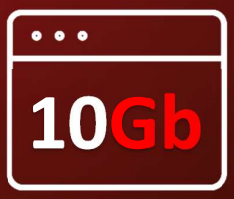
Switch to
a New Generation

ETHERNET SWITCHES
S4600 X SERIES

- S4600-12X -SI
- S4600-12X-P-SI
- S4600-28X-SI (R2)
- S4600-28X-P-SI
- S4600-52X-SI
- S4600-52X-P-SI

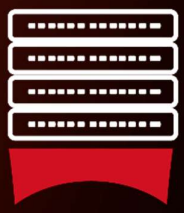
Network Security

Advanced Management



10Gb Ports

Network Protection



Stacking

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NETWORK SECURITY

- IP Source Guard provides Layer 2 source IP address filtering to prevent spoofing of an unauthorized host uses authorized hosts IP address. This feature uses dynamic DHCP Snooping and a static input of the source IP address.
- The S4600 X series support DHCP Snooping which prevent attacks with using an illegal DHCP server by setting trusted ports and unused ports. By enabling DHCP Snooping Binding and DHCP option 82, you can combine modules such as dot1x and ARP DAI or independently implement user access control.
- Access control list (ACL) can be used to restrict access to sensitive network resources by filtering packets and forwarding according to established rules. The user-defined ACL provides more flexible access control for users.
- The S4600 X series supports much more L2 security features such as ARP protection, ARP scanning and other ARP and MAC security technologies to protect network security and reliability.

ADVANCED MANAGEMENT

- Advanced administration of DCN switches. Network solutions configured via the well-known command line interface (CLI) or the easy-to-use Web-based graphical interface.
- Network traffic monitoring using sFlow or SNMP protocols.

10 GIGABIT PORTS

- The S4600 X series of access switches offers up to 4x 10 gigabit ports that can work as a redundant link working with various ring protection functions, effectively increasing scalability and network performance.
- All SFP + ports support 10 gigabit as well as 1 gigabit transmission.

NETWORK PROTECTION

- The S4600 X series supports 4 Gigabit ports as an uplink, which can work as redundant links working with various ring protection functions, effectively increasing the scalability and network performance.
- G.8032 (ERPS) with a 50ms network structure switching time provides protection in the event of a connection failure and re-recovery of L2 layer traffic in ring topology. The S4600 X series supports G.8032 v2 and can be implemented in a variety of complex network topologies, including single ring, tangential ring, and intersecting rings.
- The multiple spanning tree protocol (MSTP) allows the introduction of many logical network topologies - instances to which multiple VLANs can be assigned - resulting in redundant and stable Ethernet transmission.
- MRPP is a authorial DCN protocol offering ring protection. Compared to the STP protocol, it has faster convergence (50ms), a simple algorithm and a lower cost of system resources used, which improve network reliability.

STACKING

- Virtual Switch Framework (VSF) can connect multiple DCN 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.

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S4600 X	12X-SI	12X-P-SI	28X-SI(R2)	28X-P-SI	52X-SI	52X-P-SI
Switch classification						
Layer 2	✓	✓	✓	✓	✓	✓
Connectivity						
10/100/1000Base-T (RJ45)	8	-	24	-	48	-
10/100/1000Base-T (RJ45) with PoE	-	8	-	24	-	48
1000/10GBase-X (SFP+)	4	4	4	4	4	4
Console port – RS-232 (RJ45)	✓	✓	✓	✓	✓	✓
USB port	✓	✓	✓	✓	✓	✓
Performance						
Switch fabric speed	96 Gb/s	96 Gb/s	128 Gb/s	128 Gb/s	176 Gb/s	176 Gb/s
Forwarding rate	71,4 Mp/s	71,4 Mp/s	95 Mp/s	95 Mp/s	131 Mp/s	131 Mp/s
Packet buffer	1.5 MB	1.5 MB	1.5 MB	1.5 MB	3 MB	3 MB
Jumbo frame	10 K	10 K	10 K	10 K	10 K	10 K
Mac address table (1)	16 K	16 K	16 K	16 K	16K	16 K
Multicast MAC address table	4 K	4 K	4 K	4 K	4 K	4 K
ACL table (2)	512	512	512	512	512	512
Nomber of vlan interfaces (IP)	512	512	512	512	512	512
CPU clock	800 MHz	800 MHz	800 MHz	800 MHz	800 MHz	800 MHz
Flash memory	32 MB	32 MB	32 MB	32 MB	32 MB + 256 MB NAND	32 MB + 128 MB NAND
RAM memory	256 MB	256 MB	256 MB	256 MB	256 MB	256 MB
Resilience and avvailability						
IEEE 802.1D STP/802.1w RSTP/802.1s MSTP	✓	✓	✓	✓	✓	✓
IEEE 802.3ad LACP	✓	✓	✓	✓	✓	✓
Virtual Cable Testing	✓	✓	✓	✓	✓	✓
DDM	✓	✓	✓	✓	✓	✓
LLDP / LLDP-MED	✓	✓	✓	✓	✓	✓
Loop guard	✓	✓	✓	✓	✓	✓
ERPS (ITU-T G.8032)	✓	✓	✓	✓	✓	✓
MRPP	✓	✓	✓	✓	✓	✓
ULPP	✓	✓	✓	✓	✓	✓
Traffic control						
IEEE 802.3x Full duplex & Flow control	✓	✓	✓	✓	✓	✓
802.1Q VLANs	4 K	4 K	4 K	4 K	4 K	4 K
Port-based VLAN	✓	✓	✓	✓	✓	✓
Protocol-based VLAN	✓	✓	✓	✓	✓	✓
IP subnet based VLAN	✓	✓	✓	✓	✓	✓
Voice VLAN	✓	✓	✓	✓	✓	✓
Mac VLAN	✓	✓	✓	✓	✓	✓
LACP algorithm of source/destination IP (load balance)	✓	✓	✓	✓	✓	✓
GVRP	✓	✓	✓	✓	✓	✓
802.1ad Vlan Stacking (QinQ)	✓	✓	✓	✓	✓	✓
Flexible QinQ	✓	✓	✓	✓	✓	✓
Security						
Layer 2 MAC filtering	✓	✓	✓	✓	✓	✓
BPDU Tunnel	✓	✓	✓	✓	✓	✓
BPDU Guard	✓	✓	✓	✓	✓	✓
Login authentication and authorization by RADIUS and TACACS+	✓	✓	✓	✓	✓	✓
TACACS+ accounting/ auditing	✓	✓	✓	✓	✓	✓
SSH v1/v2	✓	✓	✓	✓	✓	✓
DHCP/DHCPv6 snooping	✓	✓	✓	✓	✓	✓
IP/IPv6 Source Guard	✓	✓	✓	✓	✓	✓
Port security	✓	✓	✓	✓	✓	✓
IEEE 802.1x port-based / mac-based	✓	✓	✓	✓	✓	✓
QoS						
802.1p Priority Queues per Port	8	8	8	8	8	8
802.1p Queuing method	✓	✓	✓	✓	✓	✓
Trusted COS/TOS/IP Precedence/DSCP/Port number	✓	✓	✓	✓	✓	✓
Broadcast Storm Control	✓	✓	✓	✓	✓	✓
Rate Limiting, port based	✓	✓	✓	✓	✓	✓
Strict priority	✓	✓	✓	✓	✓	✓
Weighted Deficit Round Robin	✓	✓	✓	✓	✓	✓
Weighted Random Early Detection	✓	✓	✓	✓	✓	✓
Strict priority in Weighted Deficit Round Robin	✓	✓	✓	✓	✓	✓

(1) - MAC address Table shared for unicast and multicast (in 1:1 ratio)

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S4600 X	12X-SI	12X-P-SI	28X-SI(R2)	28X-P-SI	52X-SI	52X-P-SI
L2/L3 - Multicast						
Multicast VLAN	✓	✓	✓	✓	✓	✓
IGMP v1,v2, v3	✓	✓	✓	✓	✓	✓
IGMP Query	✓	✓	✓	✓	✓	✓
IGMP Snooping (v1,v2,v3)	✓	✓	✓	✓	✓	✓
IGMP Snooping Fast Leave(v2,v3)	✓	✓	✓	✓	✓	✓
IPv6 MLD v1/v2 Snooping	✓	✓	✓	✓	✓	✓
Layer 3 IPv6						
IPv4/IPv6 Dual Protocol Stack	✓	✓	✓	✓	✓	✓
IPv6 address	✓	✓	✓	✓	✓	✓
Manageability						
GUI (Web)	✓	✓	✓	✓	✓	✓
Telnet / SSH	✓	✓	✓	✓	✓	✓
SNMP v1/V2c/v3	✓	✓	✓	✓	✓	✓
TFTP/FTP	✓	✓	✓	✓	✓	✓
Configuration backup and restore	✓	✓	✓	✓	✓	✓
Multilevel CLI	✓	✓	✓	✓	✓	✓
DHCP Client/Relay/Server	✓	✓	✓	✓	✓	✓
DHCP relay per VLAN	✓	✓	✓	✓	✓	✓
DHCP option 43/60/82	✓	✓	✓	✓	✓	✓
DHCPv6 option 37/38	✓	✓	✓	✓	✓	✓
DHCPv6 Relay/Server	✓	✓	✓	✓	✓	✓
SNTP / NTP	✓	✓	✓	✓	✓	✓
sFlow	✓	✓	✓	✓	✓	✓
Port Mirroring per IP/TCP/UDP	✓	✓	✓	✓	✓	✓
RSPAN	✓	✓	✓	✓	✓	✓
Stack (VSF)	✓	✓	✓	✓	✓	✓
Stack (VSF-HA)	-	-	-	-	-	-
IEEE 802.3ah EFM	✓	✓	✓	✓	✓	✓
IEEE 802.1ag CFM	✓	✓	✓	✓	✓	✓
MIB						
RFC1066 – TCP/IP-based MIB	✓	✓	✓	✓	✓	✓
RFC1213, 1157 – SNMPv2c/v3 MIB	✓	✓	✓	✓	✓	✓
RFC1493 – bridge MIB	✓	✓	✓	✓	✓	✓
RFC2674 – bridge MIB extension	✓	✓	✓	✓	✓	✓
RFC1643 – ethernet MIB	✓	✓	✓	✓	✓	✓
RFC1757 – RMON group 1,2,3,9	✓	✓	✓	✓	✓	✓
RFC 2925 – Remote Management MIB	✓	✓	✓	✓	✓	✓
RFC2233 – SMIv2 MIB	✓	✓	✓	✓	✓	✓
Physical						
Dimensions (width x height x depth)	266 mm X 44 mm X 161 mm	330 mm X 44 mm X 219 mm	440 mm X 44 mm X 170 mm	440 mm X 44 mm X 300 mm	440 mm X 44 mm X 280 mm	440 mm X 44 mm X 320 mm
Operating temperature	0 °C ~ 50 °C	0 °C ~ 50 °C	0 °C ~ 50 °C	0 °C ~ 50 °C	0 °C ~ 50 °C	0 °C ~ 50 °C
Humidity	10% - 90% (no condensation)	10% - 90% (no condensation)	10% - 90% (no condensation)	10% - 90% (no condensation)	10% - 90% (no condensation)	10% - 90% (no condensation)
Cooling	passive	passive	passive	active FAN's: 3	active FAN's: 2	active FAN's: 4
Electrical						
PoE standards	-	IEEE 802.3at IEEE 802.3af	-	IEEE 802.3at IEEE 802.3af	-	IEEE 802.3at IEEE 802.3af
PoE power budget	-	125 W	-	370W	-	740W
Power supply	230 V AC	230 V AC	230 V AC	230 V AC	230V AC	230 V AC
Power consumption	≤ 15 W	≤ 150 W	≤ 21 W	≤ 420 W	≤ 50 W	≤ 897 W

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