



Switch to a New Generation

# ETHERNET SWITCHES

S4600 SERIES



S4600-10P-SI

S4600-10P-P-SI (R2)

S4600-28P-SI (R3)

\$4600-28P-P-\$I (R3.5)

S4600-52P-SI (R2)



Network Security



Advanced Management



Network Protection



IPTV Support







#### **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 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 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.

## **NETWORK PROTECTION**

- The S4600 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 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.

## **IPTV SUPPORT**

- Multicast VLAN Register (MVR) enables efficient distribution of multicast streams for IPTV Layer 2 and reduces the bandwidth consumed by this traffic. If hosts in multiple VLANs request the same multicast stream, it is distributed to specific VLANs.
- The S4600 series offers use of the IGMP Snooping function, which prevents flooding, thus transmitting multicast traffic only to the associated ports.
- By using IGMP Proxy configuration cooperating with IGMP Snooping, IGMP communication in the network is reduced.



S4600	10P-SI	10P-P-SI(R2)	28P-SI (R3)	28P-P-SI (R3.5)	52P-SI(R2)
Switch classification				(110.0)	
Layer 2	<b>√</b>	✓	✓	<b>√</b>	<b>√</b>
Connectivity		·	·		
10/100/1000Base-T (RJ45)	8	-	24	=	48
10/100/1000Base-T (RJ45) with PoE	-	8	-	24	-
100/1000Base-X (SFP) (1)	2	2	4	4	4
Console port – RS-232 (RJ45)	√	√	<u>√</u>	√	✓
Port USB	-	-	√	√	-
Performance	00.01./	00.01./	56.01.4	56.01.6	10101/
Switch fabric speed Forwarding rate	20 Gb/s 14,88 Mp/s	20 Gb/s 14,88 Mp/s	56 Gb/s 41,66 Mp/s	56 Gb/s 41,66 Mp/s	104 Gb/s 77,38 Mp/s
Packet buffer	0,5 MB	0,5 MB	1,5 MB	1,5 MB	1,5 MB
Jumbo frame	10 K	10 K	12 K	12 K	12 K
Mac address table (2)	8 K	8 K	16 K	16 K	16 K
Multicast MAC address table	500	500	4 K	4 K	2 K
ACL table	1,4 K	1,4 K	512	512	2 K
Nomber of vlan interfaces (IP)  CPU clock	16 500 MHz	16 500 MHz	16 800 MHz	16 800 MHz	16 700 MHz
Flash memory	32 MB				
RAM memory	128 MB	128 MB	256 MB	256 MB	128 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	<b>√</b>	√	<u>√</u>	<b>√</b>	<u>√</u>
ULPP	√	√	✓	√	✓
Traffic control					
IEEE 802.3x Full duplex & Flow control	√ 4 K	√ 4 K	 4 K	√ 4 K	√ 4 K
802.1Q VLANs Port-based VLAN		4 K √		4 K √	4 K √
Protocol-based VLAN		√ ✓	✓	<b>√</b>	<b>√</b>
IP subnet based VLAN	<b>√</b>	√ ·		<b>√</b>	√ ·
Voice VLAN		· √	<u> </u>	· √	· √
Mac VLAN	√	✓	✓	√	✓
LACP algorithm of source/destination IP (load	√	✓	✓	<b>√</b>	√
balance)					
GVRP	<b>√</b>	√	<u>√</u>	<b>√</b>	<b>√</b>
802.1ad Vlan Stacking (QinQ)	<b>√</b>	√	✓	√ -	√
Selective QinQ Flexible QinQ	<u>√</u>	√ √	<u>-</u> √	<u>-</u> √	✓ ✓
Security	V	V	V	V	V
Layer 2 MAC filtering	√	√	✓	<b>√</b>	<b>√</b>
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	<b>√</b>	√	<u>√</u>	<b>√</b>	<b>√</b>
IEEE 802.1x port-based / mac-based	√	√	√	√	√
QoS	0	^	C		•
802.1p Priority Queues per Port	8 🗸	8	8	8	8
802.1p Queuing method Trusted COS/TOS/IP Precedence/DSCP/Port number	<u>√</u>	√ √	<u>√</u>	√ √	√ √
Broadcast Storm Control	<u>√</u>	√ √	<u>√</u>	√ √	✓ ✓
Rate Limiting, port based	✓	√ √	✓	✓ ✓	√ √
Strict priority	✓	√ √		√ √	√ √
Weighted Round Robin	<b>√</b>	<b>√</b>		√ √	√ ·
Weighted Deficit Round Robin	<b>√</b>	· √		√	· √
Strict priority in Weighted Round Robin	✓	✓	✓	✓	✓

 $<sup>^{(1)}</sup>$  - For 28P-SI (R3), 28P-P-SI (R3) models, 100Mbps bandwidth cannot be set  $^{(2)}$  - MAC address Table shared for unicast and multicast (in 1:1 ratio)



S4600	10P-SI	10P-P-SI (R2)	28P-SI (R3)	28P-P-SI (R3.5)	52P-SI(R2)
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	✓	✓	√	✓	✓
Routing					
Static routing IPv4 / IPv6	-	-	✓	<b>√</b>	-
Layer 3 IPv6			·	·	
IPv4/IPv6 Dual Protocol Stack	<b>√</b>	<b>√</b>	√	√	√
Pv6 address	✓	√ √		√ √	✓
	V	V	V	V	V
Manageability					
GUI (Web)	√	<b>√</b>	<u>√</u>	√	<b>√</b>
Telnet / SSH	√	√ .	<u>√</u>	√	<b>√</b>
SNMP v1/V2c/v3	√	<b>√</b>		√	<b>√</b>
TFTP/FTP	√	√	<u>√</u>	√	√
Configuration backup and restore	✓	✓	✓	√	√
Multilevel CLI	√	√	✓	√	√
OHCP Client/Relay/Server	✓	√	√	√	✓
OHCP relay per VLAN	✓	✓	✓	✓	✓
OHCP option 43/60/82	✓	√	√	✓	√
DHCPv6 option 37/38	✓	√	√	✓	✓
DHCPv6 Relay/Server	✓	✓	✓	✓	✓
SNTP / NTP	✓	✓	✓	✓	✓
sFlow	-	-	✓	✓	✓
Port Mirroring per IP/TCP/UDP	✓	✓	✓	✓	✓
RSPAN	✓	✓	√	✓	✓
EEE 802.3ah EFM	✓	✓	✓	✓	✓
EEE 802.1ag CFM	✓	✓	✓	√	✓
MIB					
RFC1066 - TCP/IP-based MIB	✓	✓	√	√	✓
RFC1213, 1157 - SNMPv2c/v3 MIB	✓	<b>√</b>	✓	✓	✓
RFC1493 – bridge MIB	✓	<b>√</b>	√	√	✓
RFC2674 – bridge MIB extension		<i>√</i>			
RFC1643 – ethernet MIB	✓	<b>√</b>	✓	√	✓
RFC1757 - RMON group 1,2,3,9	✓	<b>√</b>	√	✓	✓
RFC2925 - Remote Management MIB	✓	<b>√</b>	√	√	√
RFC2233 - SMIv2 MIB		<i>√</i>		·	<u> </u>
Physical	·	·	·	·	·
Trysical	250 mm	340 mm	440 mm	440 mm	440 mm
Dimensions (Width x Height x Depth)	x 44 mm	x 44 mm	x 44 mm	x 44 mm	x 44 mm
- · · · · · · · · · · · · · · · · · · ·	x 180 mm	x 200 mm	x 220 mm	x 300 mm	x 240 mm
				0.00 50.00	0 °C ~ 50 °C
Operating temperature	0 °C ~ 50 °C	0 °C ~ 50 °C	0 °C ~ 50 °C	0 °C ~ 50 °C	0 *6 ~ 50 *6
· · · · · · · · · · · · · · · · · · ·	0 °C ~ 50 °C 10% - 90%	10% - 90%	10% - 90%	10% - 90%	10% - 90%
· · · · · · · · · · · · · · · · · · ·	0 °C ~ 50 °C			10% - 90% (no condensation)	10% - 90% (no condensation)
Vorking humidity	0 °C ~ 50 °C 10% - 90%	10% - 90%	10% - 90%	10% - 90% (no condensation) active	10% - 90% (no condensation) active
Working humidity	0 °C ~ 50 °C 10% - 90% (no condensation)	10% - 90% (no condensation)	10% - 90% (no condensation)	10% - 90% (no condensation)	10% - 90% (no condensation)
Operating temperature Working humidity Cooling Electrical	0 °C ~ 50 °C 10% - 90% (no condensation) passive	10% - 90% (no condensation) passive	10% - 90% (no condensation) passive	10% - 90% (no condensation) active FAN's: 3	10% - 90% (no condensation) active FAN's: 1
Working humidity Cooling Electrical PoE standards	0 °C ~ 50 °C 10% - 90% (no condensation) passive	10% - 90% (no condensation) passive IEEE 802.3at IEEE 802.3af	10% - 90% (no condensation) passive –	10% - 90% (no condensation) active FAN's: 3 IEEE 802.3at IEEE 802.3af	10% - 90% (no condensation) active FAN's: 1
Working humidity Cooling Electrical	0 °C ~ 50 °C 10% - 90% (no condensation) passive	10% - 90% (no condensation) passive	10% - 90% (no condensation) passive	10% - 90% (no condensation) active FAN's: 3	10% - 90% (no condensation) active FAN's: 1



Zapraszamy do kontaktu! Więcej informacji: <u>www.kreski.pl</u>