

Switch to a New Generation

# ETHERNET ACCESS SWITCHES

CS6200 SERIES





Full Layer 3



**PIM Router** 



Extended Network Security



**Stacking** 



Features without hiding costs





## **FULL LAYER 3**

- The CS6200 series provides powerful switches working in Layer 2 and Layer 3 offering up to 16,000 routing table entries.
- RIP, OSPF and BGP provide dynamic routing by exchanging route information with other layer 3 switches or routers.
- With the CS6200 series devices, customers can easily achieve Policy-Based Routing (PBR) functionality when multiple output applications are needed.

## **PIM ROUTER**

- The CS6200 series is equipped with a wide range of Protocol Independent Multicast (PIM) functions, including PIM-DM, PIM-SM, PIM-SSM and MSDP.
- Based on PIM router's function, the CS6200 series switch can act as a proxy server for multicast traffic. With having many television clients, we can limit the amount of traffic coming from the operator.

## **EXTENDED NETWORK SECURITY**

- The use of RADIUS / TACACS authentication prevents unauthorized logins such as harmful changes to the switch configuration.
- Ingress / Egress access control lists (ACLs) can be used to limit access to sensitive network resources
  by filtering packets based on information in the L2 / L3 / L4 headers. In addition, the CS6200 series
  products can support an Access Control List operating within a predetermined time range (Time Based
  ACL).
- Network administrators can use Unicast Reverse Path Forwarding (uRPF) to limit harmful network traffic. This functionality allows the layer 3 switch to check the reachability of the source address in forwarded packets. This allows you to limit the appearance of fake addresses on the network.

## **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.

## FEATURES WITHOUT HIDING COSTS

• With using switches of the CS6200 series you can be sure that the equipment which you are using has all available functionalities without the needs to purchase additional licenses.

CS6200	28X-EI (R2)	28X-P-EI (R2)	52X-El
Switch Classification	20% 21 (112)	20/(1 21 (1(2)	02/( E)
Layer 3	<b>√</b>	√	<b>√</b>
Connectivity	·		·
10/100/1000Base-T (RJ45)	20	-	48
10/100/1000Base-T (RJ45) with PoE COMBO	<del>-</del>	20	<del>-</del>
(10/100/1000Base-T (RJ45) or 100/1000Base-X (SFP))	4	4 (PoE)	=
1000/10GBase-X (SFP+)	4	4	4
(10/100Base-T RJ45) – Mgmt 00B port Console port – RS-232 (RJ45)	<u> </u>	1	1 1
USB port	1	1	1
Performance			
Switch fabric speed	128 Gb/s	128 Gb/s	176 Gb/s
Forwarding rate Packet buffer	95,23 Mp/s 1,5 MB	95,23 Mp/s 1,5 MB	130,95 Mp/s 1,5 MB
Jumbo frames	10 K	10 K	10 K
MAC address table (1)	16 K	16 K	16 K
Multicast MAC address table  ACL table (2)	4 K 3 K	4 K 3 K	4 K 3 K
Routing table (3)	13 K	13 K	13 K
Multicast routing table <sup>(4)</sup>	2 K	2 K	2 K
ARP table  Number of Vlan interfaces (IP)	4 K 1 K	4 K 1 K	4 K 1 K
CPU clock	800 MHz	800 MHz	800 MHz
Flash memory	32 MB SPI	32 MB SPI	32 MB SPI
RAM memory	+ 128 MB NAND 512 MB	+ 128 MB NAND 512 MB	+ 128 MB NAND 512 MB
Resilience and availability	STZ IVID	312 IVID	STZ IVID
IEEE 802.1D STP/802.1w RSTP/802.1s MSTP	<b>√</b>	V	<b>√</b>
IEEE 802.3ad LACP		√	<u> </u>
Virtual Cable Testing	√	<b>√</b>	√
DDM	√	√	√
LLDP / LLDP-MED	<u>√</u>	√	<u>√</u>
VRRP Loop guard	<u>√</u>	√ √	√ √
ERPS (ITU-T G.8032)		√ √	
MRPP	√	√	√
ULPP	√	√	√
Traffic control			
IEEE 802.3x Full duplex & Flow control	√ 4 K	√ 4 K	
802.1Q VLANs Port-based VLAN	4 K	4 K √	4 K
Protocol-based VLAN	<b>→</b>	1	<b>→</b>
IP subnet based VLAN	√	√	√
Voice VLAN	✓	√	✓
Mac VLAN	<u>√</u>	√	<u>√</u>
Super VLAN  LACP algorithm of source/destination IP	✓	<b>√</b>	✓
(load balance)	✓	√	✓
GVRP	√	√	√
802.1ad Vlan Stacking (QinQ)	<u>√</u>	√	<u>√</u>
Flexible QinQ Security		√	<b>√</b>
Security Layer 2 MAC filtering	<b>√</b>	√	√
BPDU Tunnel	✓	√ √	<u>√</u>
BPDU Guard	√ √	√ √	√ √
Login authentication and authorization by Radius and Tacacs+	√	1	√
TACACS+ accounting/ auditing		√	<u>√</u>
SSH v1/v2 DHCP/DHCPv6 snooping	<u>√</u>	√ √	√ √
IP/IPv6 Source Guard	✓	√ √	<u>√</u>
Port security	<b>√</b>	√ √	<b>√</b>
IEEE 802.1x port-based / mac-based	√	√	√
QoS			
802.1p Priority Queues per Port	8	8	8
		· · · · · · · · · · · · · · · · · · ·	
802.1p Queuing method	√	√ /	<u>√</u>
802.1p Queuing method Trusted COS/TOS/IP Precedence/DSCP/Port number	√ √	√	√
802.1p Queuing method Trusted COS/TOS/IP Precedence/DSCP/Port number Broadcast Storm Control	√		
802.1p Queuing method Trusted COS/TOS/IP Precedence/DSCP/Port number Broadcast Storm Control Rate Limiting, port based Strict priority	√ √ √	√ √	√ √
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	\frac{1}{\sqrt{1}} \frac{1}{\sqrt{1}} \frac{1}{\sqrt{1}} \frac{1}{\sqrt{1}} \frac{1}{\sqrt{1}} \frac{1}{\sqrt{1}}	\frac{}{}	\frac{}{} \frac{}{} \frac{}{}
802.1p Queuing method Trusted COS/TOS/IP Precedence/DSCP/Port number Broadcast Storm Control Rate Limiting, port based Strict priority	\frac{1}{} \frac{1}{} \frac{1}{} \frac{1}{}	√ √ √ √	\frac{1}{} \frac{1}{} \frac{1}{}

 <sup>-</sup> MAC address Table shared for unicast and multicast (in 1:1 ratio)
 - ACL Table shared for ingress and egress (in 1:1 ratio)
 - Routing Table for IPv4 shared with IPv6 (in 4:1 ratio)
 - Routing Table shared for unicast and multicast (in 1:1 ratio)

CS6200	28X-EI (R2)	28X-P-EI (R2)	52X-EI
L2/L3 - Multicast	- ( )		
Multicast VLAN	<b>√</b>	√	√
IGMP v1,v2, v3		√ √	√ √
IGMP Query		<b>√</b>	<b>√</b>
IGMP Snooping (v1,v2,v3)		<b>√</b>	<b>√</b>
IGMP Snooping Fast Leave(v2,v3)	<b>→</b>	<i>√</i>	<u> </u>
PIM-DM/SM/SSM	✓	√	<b>√</b>
anycast RP	√	√	√
IPv6 MLD v1/v2 Snooping	✓	√	√
Routing			
Static routing IPv4 / IPv6	✓	√	√
RIP v1,v2 / RIPng	✓	√	√
OSPF v2 / OSPF v3	√	√	√
BGP / BGP4+	✓	√	√
Layer 3 IPv6			
IPv4/IPv6 Dual Protocol Stack	✓	✓	✓
IPv6 address	✓	✓	✓
IPv6 Tunneling	✓	√	√
Manageability			
GUI (Web)	✓	✓	✓
Telnet / SSH	✓	✓	✓
SNMP v1/v2c/v3	✓	√	√
TFTP/FTP	✓	√	√
Configuration backup and restore	✓	√	√
Multilevel CLI	√	√	√
DNS Client	√	√	√
DHCP Client/Relay/Server	√	√	√
DHCP option 43/60/82	√	√	√
DHCPv6 option 37/38	<b>√</b>	√	<u>√</u>
DHCPv6 Relay/Server SNTP / NTP	√ √	√ √	√ √
sFlow	<b>√</b>	√ √	√ √
Port Mirroring per IP/TCP/UDP		√ √	<b>√</b>
RSPAN	<b>√</b>	<b>√</b>	<b>√</b>
Cluster	<b>√</b>	· /	· √
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	√	√	√
RFC2925 - Remote Management MIB	√	√	√
RFC2233 - SMIv2 MIB Physical	$\checkmark$	√	√ 
	440 mm	440 mm	440 mm
Dimensions (Width x Height x Depth)	x 44 mm	x 44 mm	x 44 mm
	x 320 mm	x 320 mm	x 320 mm
Operating temperature	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)
cooling	active FAN's: 2	active FAN's: 1	active FAN's: 2
Electrical			
PoE standards	-	IEEE 802.3at IEEE 802.3af	-
PoE power budget	-	370W	-
Power supply	230V AC	230V AC	230V AC
Redundant power supply	230V AC	-	230V AC
Power consumption	≤ 30W	≤ 440W	≤ 50W