

CS6500X 10G&25G&100G Datacenter Switch

Product Overview

CS6500X data center 100G switch uses advanced hardware and software architecture design. CS6500X is ideal for cloud computing data center TOR or spine switches of datacenter. For campus or other large network, CS6500X could also be deployed at aggregation or core layer as its high performance and reliability.

Appearance	Description
 <p>CS6510X-48X8C-HI</p>	<ul style="list-style-type: none"> ● 48 x 10G SFP+ + 8 x 100G QSFP28 ● Modular AC (1+1 redundant, standard with 2 ACs) ● 1 x console, 1 x USB, 1 x 100/1000Base-T MGMT ● Forwarding performance: 2000Mpps ● Switching capacity: 2.56Tbps
 <p>CS6580X-48Y8C-HI</p>	<ul style="list-style-type: none"> ● 48 x 25G SFP28 + 8 x 100G QSFP28 ● Modular AC (1+1 redundant, standard with 2 ACs) ● 1 x console, 1 x USB, 1 x 100/1000Base-T MGMT ● Forwarding performance: 2000Mpps ● Switching capacity: 4Tbps
 <p>CS6580X-32C-HI</p>	<ul style="list-style-type: none"> ● 32 x 100G QSFP28 + 2 x 10G SFP+ ● Modular AC (1+1 redundant, standard with 2 ACs) ● 1 x console, 1 x USB, 1 x 100/1000Base-T MGMT ● Forwarding performance: 2000Mpps ● Switching capacity: 6.4Tbps

Key Features and Highlights

High Performance and scalability

With high switching capacity, CS6500X supports wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.

The 25G/10G Ethernet connectivity of CS6500X is accomplished via a hot-pluggable 25G/10G SFP28/SFP+ transceiver which supports distance up to 300 meters over multi-mode fiber and 10 to 40km over single-mode fiber (The distance depends the optical module chosen).

High Reliability

CS6500X series support modular 1+1 redundant power supplies and 5+1 redundant fans. Business won't be interrupted in case replacing power supplies and fans. System supports dual images. Even though the primary image was destroyed, system will still boot via backup image normally.

VSF (Virtual Switch Framework)

As new generation data center switch, CS6500X support VSF which not only guarantees the flexibility, but also enhanced the scalability of datacenter network.

Flex Resource

Flex Resource is able to allocate, recover and reallocate hardware resource dynamically according to demand. It can increase the utilization of the hardware resource.

Rich L3 Features

CS6500X delivers high-performance, hardware-based IP routing.

RIP, OSPF and BGP provide dynamic routing by exchanging routing information with other Layer 3 switches and routers.

With CS6500X, customers could easily achieve Policy based Route (PBR), which is important when they need multi exit application.

MPLS/VPLS

CS6500X supports MPLS L3 VPN/MPLS L2 VPN(VPLS) and helps customer to construct more secure/extendable network. With max 1023 VRF instances, CS6500X series could be deployed as P & PE devices, guarantees the variety of services.

Abundant IPv6 Support

CS6500X supports IPv6 switching and routing based on hardware for maximum performance. With increased network devices growing and the need for larger addressing and higher security becomes critical, CS6500X will be a right product to meet the requirement. CS6500X passed IPv6 form Phase II certification, which is the best proof of the application.

Rich Data Center Features

The CS6500X series switches support a wide range of data center features, such as VxLAN, virtualized VSF, ROCE (PFC&ECN)*, Netconf, Telemetry, and more.

Specifications

Item	CS6510X-48X8C-HI	CS6580X-48Y8C-HI	CS6580X-32C-HI
Physical port	48 x 10G SFP+ + 8 x 100G QSFP28	48 x 25G SFP28 + 8 x 100G QSFP28	32 x 100G QSFP28 + 2 x 10G SFP+
Management port	Console port RJ45 100/1000Mbps RJ45 Ethernet Management port USB2.0 Management port		
Performance			
Switching Capacity	2.56Tbps	4Tbps	6.4Tbps
Forwarding Rate	1001.7Mpps	2003.4Mpps	2003.4Mpps
RAM	8G		
FLASH	64G SSD		
MAC Address	128k(standard)/96k(routee)/256k(bridgee)/224k(legacy), standard mode by default		
ARP Table	48k(standard)/48k(routee)/48k(bridgee)/48k(legacy), default with standard mode		

Routing Table	64k(standard)/128k(routee)/16k(bridgee)/32k(legacy), default with standard mode		
Physical			
Dimension(W*H*D)	442mm*44mm*510mm		
Relative Humidity	5%~95% non-condensing		
Temperature	Working 0°C~45°C		
Power Input	AC: 100~240V,50~60 Hz		
Power Supply	1+1 Modular Redundant AC		
Power consumption	<300w	<350w	<400w
Main Features			
L1, L2 Features	9K Jumbo Frame Port Loopback Detect LLDP and LLDP-MED UDLD 802.3ad LACP, 16 groups LACP Load Balance		
	N:1 Port Mirroring RSPAN ERSPAN		
	IEEE802.1d(STP) IEEE802.1w(RSTP) IEEE802.1s(MSTP) Root Guard BPDU Guard BPDU Tunnel ERPS(ITU-T G.8032)		
	802.1Q, 4096 VLAN MAC VLAN, VOICE VLAN, Private VLAN, Protocol VLAN, Multicast VLAN QinQ, Selective QinQ, Flexible QinQ GVRP N:1 VLAN Translation Broadcast / Multicast / Unicast Storm Control		
	IGMP v1/v2/v3 Snooping and L2 Query ND Snooping MLDv1/v2 Snooping		
	Port Security		
	Flow control: HOL, IEEE802.3x		
	Bandwidth Control		

L3 Features	Static Routing, RIPv1/v2, OSPFv2, IS-ISv4, BGP4 OSPFv3, IS-ISv6, BGP4+ OSPF Multiple Process LPM Routing Policy-based Routing (PBR) for IPv4 and IPv6 VRRP URPF, ECMP BFD
	IGMP v1/v2/v3, IGMP Proxy, DVMRP, PIM-DM, PIM-SM, PIM-SSM, any cast RP, MSDP Static Multicast Route Multicast Receive Control Illegal Multicast Source Detection
	ARP Guard, Local ARP Proxy, Proxy ARP, ARP Binding, Gratuitous ARP, ARP Limit Anti ARP Cheat, Anti ARP Scan
	DNS Client
	GRE Tunnel
IPv6	6to4 Tunnel, Configured Tunnel, ISATAP Tunnel, GRE Tunnel ICMPv6, ND, DNSv6 IPv6 LPM Routing, IPv6 Policy-Based Routing (PBR) IPv6 VRRPv3, IPv6 URPF, IPv6 RA RIPng, OSPFv3, IS-ISv6, BGP4+ MLD Snooping, IPv6 multicast VLAN MLDv1/v2, PIM-SM/DM for IPv6, IPv6 Anycast RP, IPv6 ACL, IPv6 QOS
MPLS*	MPLS*, VRF*, LDP*
	MPLS L3 VPN*, MPLS L2 VPN(VPLS) *, VPWS*
QoS	8 Queues SWRR, SP, WRR, DWRR, SDWRR, WRED Traffic Classification Based on 802.1p CoS, ToS, DiffServ DSCP, ACL, port number Traffic Shaping PRI Mark/Remark
ACL	IP ACL, MAC ACL, IP-MAC ACL Standard and Expanded ACL Based on source/destination IP or MAC, IP protocol, TCP/UDP port, DSCP, ToS, IP Precedence), VLAN, Tag/Untag, CoS REDIRECT and accounting-based ACL Rules can be configured to port, VLAN Time ranged ACL
Security	802.1x AAA Port, MAC based authentication Accounting based on time length and traffic Guest VLAN and Auto VLAN
	RADIUS for IPv4 and IPv6
	TACACS+ for IPv4 and IPv6

	MAB
DHCPv4/v6	DHCP Server/Client for IPv4/IPv6 DHCP Relay/Option 82 DHCP Snooping/Option 82
Traffic Monitor	sFlow Traffic Analysis
Security Network Management	CLI, WEB, Telnet, SNMPv1/v2c/v3 through IPv4 and IPv6 Syslog and external Syslog server HTTP SSL SNMP MIB, SNMP TRAP FTP/TFTP SNTP/NTP RMOM 1,2,3,9 Authentication by radius SSH v1/v2 Dual firmware images/ Configuration files 802.3ah OAM, 802.1ag OAM
Data Center Features	VXLAN EVPN MLAG Telemetry Netconf PFC & ECN VSF (Virtual Switch Framework, support mixed stacking among models CS6510X-48X8C-HI, CS6580X-48Y8C-HI and CS6580X-32C-HI)

Order Information

Product	Description
CS6510X-48X8C-HI	100G Datacenter Switch (48*10GbE (SFP+) + 8*100GbE (QSFP28)), default with 1+1 hot-swap AC power supply and 4+1 fans
CS6580X-48Y8C-HI	100G Datacenter Switch (48*25G (SFP28) + 8*100GbE (QSFP28)), default with 1+1 hot-swap AC power supply and 4+1 fans
CS6580X-32C-HI	100G Datacenter Switch (32*100GbE (QSFP28) + 2*10G(SFP+)), default with two hot-swap AC power supply and 5+1 fans