





## CS6580-HI 100G Datacenter Switch

### Product Overview

CS6580-HI data center 100G switch uses advanced hardware and software architecture design, support built-in modular 1+1 redundant power supplies, 5+1 redundant fans, cross ventilation and wind direction adjustable.

CS6580-HI is ideal for cloud computing data center TOR or spine switches of datacenter. For campus or other large network, CS6580-HI could also be deployed at aggregation or core layer as its high performance and reliability.

Appearance	Description
  CS6580-32CQ-HI	<ul style="list-style-type: none"><li>● 32 x 100G QSFP28</li><li>● AC+AC Power Supply</li><li>● 1 x console, 1 x USB, 1 x 100/1000Base-T MGMT</li><li>● Forwarding performance: 4.7Bpps</li><li>● Switching capacity: 6.4Tbps</li></ul>
  CS6580-48S6CQ-HI	<ul style="list-style-type: none"><li>● 48 x 25G/10G SFP28 + 6 x 100G QSFP28</li><li>● AC+AC Power Supply</li><li>● 1 x console, 1 x USB, 1 x 100/1000Base-T MGMT</li><li>● Forwarding performance: 2.6Bpps</li><li>● Switching capacity: 3.6Tbps</li></ul>

## Key Features and Highlights

### High Performance and scalability

With high switching capacity, CS6580-HI supports wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.

The 25G/10G Ethernet connectivity of CS6580-HI 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

CS6580-HI 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, CS6580-HI 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.

### OpenFlow

CS6580-HI supports OpenFlow 1.0 standard protocol. OpenFlow network is increasingly becoming a trend as the core protocol of SDN network. It makes the network easier programming OpenFlow brings the high performance to datacenter users via self-defined network. With OpenFlow, this product is ideal to build SDN test-bed for research institutes and SDN Experimental Bureau for large ISP and operator.

### Rich L3 Features

CS6580-HI 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 CS6580-HI, customers could easily achieve Policy based Route (PBR), which is important when they need multi exit application.

### MPLS/VPLS

CS6580-HI supports MPLS L3 VPN/MPLS L2 VPN(VPLS) and helps customer to construct more secure/extendable network. With max.255 VRF instances, CS6580-HI series could be deployed as P & PE devices, guarantees the variety of services.

### Abundant IPv6 Support

CS6580-HI 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, CS6580-HI will be a right product to meet the requirement. CS6580-HI passed IPv6 form Phase II certification, which is the best proof of the application.

### Strong Multicast

CS6580-HI supports abundant multicast features such as IGMPv1/v2/v3 snooping and fast leave and IGMPv1/v2/v3, PIM-DM, PIM-SM, PIM-SSM and even MSDP. With Multicast VLAN Register (MVR), multicast receiver/sender control and illegal multicast source detection functions, CS6580-HI provides great application experience for customer.

## Specifications

Item	CS6580-32CQ-HI	CS6580-48S6Q-HI
<b>Physical port</b>	32 x 100G QSFP28	48 x 25G/10G (SFP28) + 6x 100G QSFP28
<b>Management port</b>	Console port RJ45 100/1000Mbps RJ45 Ethernet Management port USB2.0 Management port	
<b>Performance</b>		
<b>Switching Capacity</b>	6.4Tbps	3.6Tbps
<b>Forwarding Rate</b>	4.7Bpps	2.6Bpps
<b>MAC Address</b>	8K min./104K max.	
<b>ARP Table</b>	8K min./32K max.	
<b>Routing Table</b>	8K min./128K max.	
<b>Physical</b>		
<b>Dimension(W*H*D)</b>	438mm*44mm*515mm	438mm*44mm*473mm
<b>Relative Humidity</b>	5%~95% non-condensing	
<b>Temperature</b>	Working 0°C~45°C, storage -40°C~70°C	
<b>Power Input</b>	AC: 100~240V,50~60 Hz	
<b>Power Supply</b>	1+1 Modular Redundant AC	
<b>Main Features</b>		
<b>L1, L2 Features</b>	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	
	802.1Q, 4096 VLAN MAC VLAN, VOICE VLAN, PVLAN, 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	

	<p>Port Security</p> <p>Flow control: HOL, IEEE802.3x</p> <p>Bandwidth Control</p>	
<b>L3 Features</b>	<p>Static Routing, RIPv1/v2, OSPFv2, BGP4</p> <p>OSPFv3, BGP4+</p> <p>OSPF Multiple Process</p> <p>LPM Routing</p> <p>Policy-based Routing (PBR) for IPv4 and IPv6</p> <p>VRRP</p> <p>URPF,</p> <p>ECMP</p> <p>BFD</p>	
	<p>IGMP v1/v2/v3, IGMP Proxy,</p> <p>DVMRP, PIM-DM, PIM-SM, PIM-SSM, any cast RP, MSDP</p> <p>Static Multicast Route</p> <p>Multicast Receive Control</p> <p>Illegal Multicast Source Detection</p>	
	<p>ARP Guard, Local ARP Proxy, Proxy ARP, ARP Binding, Gratuitous ARP, ARP Limit</p> <p>Anti ARP Cheat, Anti ARP Scan</p>	
	<p>DNS Client</p>	
	<p>GRE Tunnel</p>	
<b>IPv6</b>	<p>6to4 Tunnel, Configured Tunnel, ISATAP Tunnel, GRE Tunnel</p> <p>ICMPv6, ND, DNSv6</p> <p>IPv6 LPM Routing, IPv6 Policy-Based Routing (PBR)</p> <p>IPv6 VRRPv3, IPv6 URPF, IPv6 RA</p> <p>RIPng, OSPFv3, BGP4+</p> <p>MLD Snooping, IPv6 multicast VLAN</p> <p>MLDv1/v2, PIM-SM/DM for IPv6, IPv6 Anycast RP, IPv6 ACL, IPv6 QOS</p>	
<b>MPLS</b>	<p>MPLS, VRF, LDP</p>	
	<p>MPLS L3 VPN, MPLS L2 VPN(VPLS), VPWS</p>	
<b>QoS</b>	<p>8 Queues</p> <p>SWRR, SP, WRR, DWRR, SDWRR, WRED</p> <p>Traffic Classification Based on 802.1p CoS, ToS, DiffServ DSCP, ACL, port number</p> <p>Traffic Shaping</p> <p>PRI Mark/Remark</p>	
<b>ACL</b>	<p>IP ACL, MAC ACL, IP-MAC ACL</p> <p>Standard and Expanded ACL Based on source/destination IP or MAC, IP protocol, TCP/UDP port, DSCP, ToS, IP Precedence), VLAN, Tag/Untag, CoS</p> <p>REDIRECT and accounting-based ACL</p> <p>Rules can be configured to port, VLAN</p> <p>Time ranged ACL</p>	

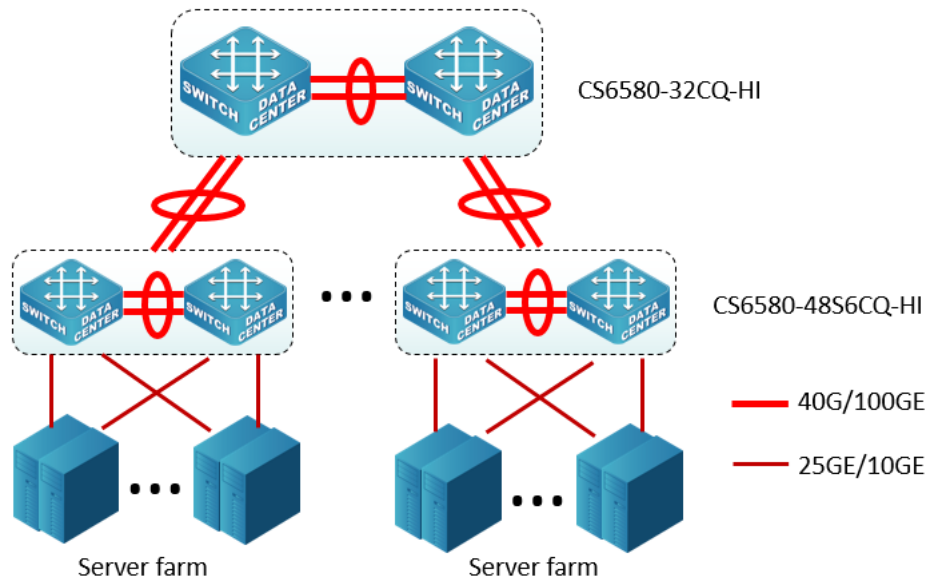
Security	802.1x AAA Port, MAC based authentication Accounting based on time length and traffic Guest VLAN and Auto VLAN
	RADIUS for IPv4 and IPv6
	TACACS+ for IPv4 and IPv6
	MAB
DHCPv4/v6	DHCP Server/Client for IPv4/IPv6 DHCP Relay/Option 82 DHCP Snooping/Option 82
Traffic Monitor	sFlow Traffic Analysis
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 OpenFlow 1.0 (support open controller OpenDaylight, Floodlight, Ryu, Pox, etc.)
Data Center Features	VXLAN MLAG * Telemetry * Netconf * VSF (Virtual Switch Framework)

The contents marked with “\*” need future upgrade or are under development

## Application

Date Center Applications

CS6580-HI work as TOR switches or spine switches for high-performance data centers.



## Order Information

Product	Description
<b>CS6580-48S6CQ-HI</b>	100G Datacenter Switch (48*25G/10GbE (SFP28) +6*100GbE (QSFP28)), redundant and modular design, high performance. Full L3 features, Default with two hot-swap AC power supply, Default with 6 (5+1) fans, Broadcom chipset
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