





## CS6200X-HI Series L3+ 10G Routing Switch

### Product Overview

DCN CS6200X-HI series switches are next-generation 10G stackable routing switches that provide fixed gigabit access and 10GE uplink ports. CS6200X-HI switch has advanced hardware and software architecture design. These switches provide high availability, scalability, security, energy efficiency, and ease of operation with rich features such as **VSF (Virtual Switch Framework)** and redundant power supplies. It is ideal for high-density aggregation or core layer in campus networks.

The following models are available in the CS6200X-HI series.

| Appearance  | Description  |
|---|--|
|  <p>CS6200X-24T6X-HI</p> | <ul style="list-style-type: none"> <li>● 24*10/100/1000Base-T + 6*10GbE(SFP+) + 1 extended module slot</li> <li>● 1 console, 1 USB, 1 RJ45 management port</li> <li>● AC power + optional modular AC</li> <li>● Switching capacity: 168Gbps</li> <li>● Forwarding rate: 125Mpps</li> </ul>   |
|  <p>CS6200X-48T6X-HI</p> | <ul style="list-style-type: none"> <li>● 24*10/100/1000Base-T + 6*10GbE(SFP+) + 1 extended module slot</li> <li>● 1 console, 1 USB, 1 RJ45 management port</li> <li>● AC power + optional modular AC</li> <li>● Switching capacity: 216Gbps</li> <li>● Forwarding rate: 161Mpps</li> </ul>   |
|  <p>CS6200X-24S6X-HI</p> | <ul style="list-style-type: none"> <li>● 24*100/1000Base-X(SFP) + 6*10GbE(SFP+) + 1 extended module slot</li> <li>● 1 console, 1 USB, 1 RJ45 management port</li> <li>● AC power + optional modular AC</li> <li>● Switching capacity: 168Gbps</li> <li>● Forwarding rate: 125Mpps</li> </ul> |
|  <p>CS6200X-48S6X-HI</p> | <ul style="list-style-type: none"> <li>● 48*100/1000Base-X(SFP) + 6*10GbE(SFP+) + 1 extended module slot</li> <li>● 1 console, 1 USB, 1 RJ45 management port</li> <li>● AC power + optional modular AC</li> <li>● Switching capacity: 216Gbps</li> <li>● Forwarding rate: 161Mpps</li> </ul> |

## Key Features and Highlights

### Performance and Scalability

With high switching capacity, CS6200X-HI series support wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.

The 10 Gigabit Ethernet connectivity of CS6200X-HI is accomplished via a hot-pluggable 10 Gigabit SFP+ transceiver which supports distance up to 300 meters over multimode fiber and 10 to 40km over single-mode fiber (The distance depends on the optical module chosen).

### VSF (Virtual Switch Framework)

Virtual Switch Framework can virtualize multiple DCN switches into one logical device, achieving the sharing of information and data tables between different switches. The performance and ports density of the virtualized device is greatly enlarged by times under VSF. VSF also simplifies management work for the network administrator and provides more reliability.

### Rich L3 Features

CS6200X-HI series delivers high-performance, hardware-based IP routing. RIP, OSPF, ISIS and BGP provide dynamic routing by exchanging routing information with other Layer 3 switches and routers. With the CS6200X-HI series, customers could easily achieve a Policy-based Route (PBR), which is important when they need a multi exit application.

### Strong Multicast

CS6200X-HI series supports abundant multicast features. In Layer 2, such as IGMPv1/v2/v3 snooping and fast leave. L3 multicast protocols such as 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 detect functions; the CS6200X-HI series provides a great application experience for the customer.

### Easy High-Reliability network

MRPP is a Multi-layer Ring Protection Protocol, which is DCN's private fast Ethernet ring protocol. Comparing to spanning tree protocol, it has the advantages of fast convergence, simple protocol calculation, fewer system resources cost, and so on, which can improve the reliability of Ethernet network operation.

### Comprehensive QoS

With 8 queues per port, the CS6200X-HI series enable differentiated management of up to 8 traffic types. The traffic is prioritized according to IEEE802.1p, DSCP, IP precedence, and TCP/UDP port number, giving optimal performance to real-time applications such as voice and video.

CS6200X-HI series also supports Bi-directional rate-limiting, per port or traffic class preserves network bandwidth, and allows full control of network resources.

### Enhanced Security

IEEE 802.1X port-based access control and MAC-based access control ensure all users are authorized before being granted access to the network. Ingress/Egress Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on L2/L3/L4 headers information. And for some services that are based on time, the product can support time-based ACL to match the requirement.

Secure Shell (SSH) encrypts network management information via Telnet providing secure network management.

RADIUS Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.

## Specifications

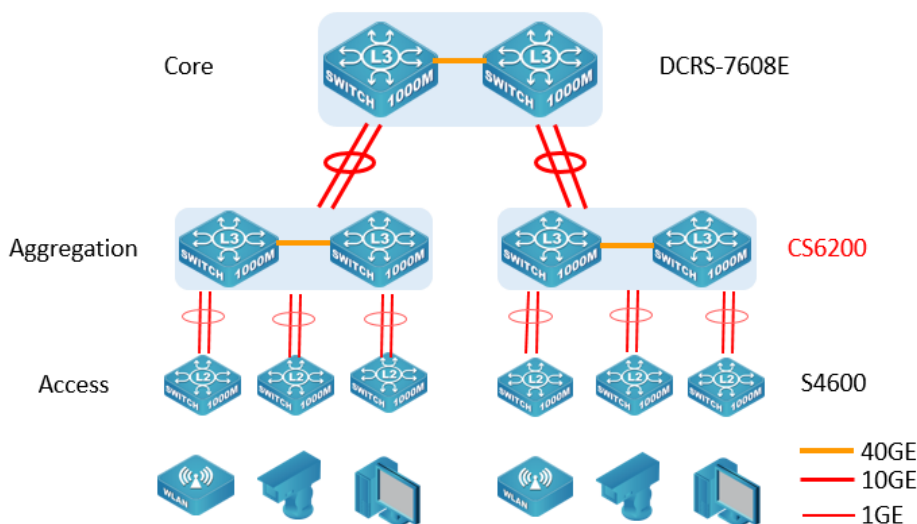
| Item                      | CS6200X-24T6X-HI   | CS6200X-48T6X-HI   | CS6200X-24S6X-HI                                | CS6200X-48S6X-HI                                |
|---------------------------|--|--|---|---|
| <b>Physical port</b>      | 24*10/100/1000Base-T + 6*10GbE(SFP+) + 1*slot<br>Auto-MIDX   | 48*10/100/1000Base-T + 6*10GbE(SFP+) + 1*slot<br>Auto-MIDX | 24*100/1000Base-X(SFP) + 6*10GbE(SFP+) + 1*slot | 48*100/1000Base-X(SFP) + 6*10GbE(SFP+) + 1*slot |
| <b>Management port</b>    | 1 x RJ45 Ethernet Management port<br>1x Console port<br>1x USB2.0 interface  |  |   |   |
| <b>Performance</b>        |  |  |   |   |
| <b>Switching Capacity</b> | 168Gbps  | 216Gbps  | 168Gbps   | 216Gbps   |
| <b>Forwarding rate</b>    | 125Mpps  | 161Mpps  | 125Mpps   | 161Mpps   |
| <b>Jumbo Frame</b>        | 12K  | 12K  | 12K   | 12K   |
| <b>MAC Address</b>        | 32K  | 32K  | 32K   | 32K   |
| <b>ARP Table</b>          | 8K   | 8K   | 8K  | 8K  |
| <b>Routing Table</b>      | 12K  | 12K  | 12K   | 12K   |
| <b>ACL Table</b>          | 3K   | 3K   | 3K  | 3K  |
| <b>Physical</b>           |  |  |   |   |
| <b>Dimension (W*H*D)</b>  | 440mm x 44mm x 380mm   | 440mm x 44mm x 380mm                                       | 440mm x 44mm x 380mm                            | 440mm x 44mm x 380mm                            |
| <b>Relative Humidity</b>  | 5%~95%, non-condensing   |  |   |   |
| <b>Temperature</b>        | Working 0°C~50°C, storage -40°C~70°C   |  |   |   |
| <b>Power Supply</b>       | Modular AC:100~240VAC, 50~60Hz<br>Standard with AC + optional modular AC   |  |   |   |
| <b>Power Consumption</b>  | <65W   | <80W   | <75W  | <100W   |
| <b>Main Features</b>      |  |  |   |   |
| <b>L1, L2 Features</b>    | IEEE802.3(10Base-T), IEEE802.3u(100Base-TX), IEEE802.3z(1000BASE-X), IEEE802.3ab(1000Base-T), IEEE802.3ae(10GBase), IEEE802.3x, IEEE802.3ak(10GBASE-CX4)         |  |   |   |
|                           | Port loopback detection<br>LLDP and LLDP-MED<br>UDLD<br>802.3ad LACP, max 128 group trunks with max 8 ports for each trunk<br>LACP load balance<br>ERPS (G.8032) |  |   |   |
|                           | N:1 Port Mirroring<br>RSPAN  |  |   |   |
|                           | IEEE802.1d(STP)<br>IEEE802.1w(RSTP)<br>IEEE802.1s(MSTP)<br>Root Guard<br>BPDU Guard<br>BPDU Tunnel   |  |   |   |

|                    |   |
|--------------------|---|
|                    | <p>802.1Q, 4K VLAN<br/> MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN<br/> QinQ, Selective QinQ<br/> GVRP<br/> N:1 VLAN Translation<br/> Broadcast / Multicast / Unicast Storm Control<br/> IGMP v1/v2/v3 Snooping and L2 Query<br/> ND Snooping<br/> MLDv1/v2 Snooping<br/> Port Security<br/> Flow Control: HOL, IEEE802.3x<br/> Bandwidth Control</p> |
| <b>L3 Features</b> | <p>Static Routing, RIPv1/v2, ISIS, OSPFv2, BGP4<br/> OSPFv3, BGP4+<br/> OSPF multiple processes<br/> VRF-Lite<br/> LPM Routing<br/> Policy-based routing (PBR) for IPv4 and IPv6<br/> VRRP<br/> URPF,<br/> ECMP<br/> BFD</p>  |
|                    | <p>IGMP v1/v2/v3, IGMP Proxy,<br/> Static Multicast Route<br/> Multicast Receive Control<br/> Illegal Multicast Source Detect</p>   |
|                    | <p>ARP Guard, Local ARP proxy, Proxy ARP, ARP Binding, Gratuitous ARP, ARP Limit<br/> Anti ARP Cheat, Anti ARP Scan</p>   |
|                    | <p>DNS Client, DNS Relay</p>  |
|                    | <p>GRE Tunnel</p>   |
| <b>IPv6</b>        | <p>6to4 Tunnel, Configured Tunnel, ISATAP Tunnel, GRE Tunnel<br/> ICMPv6, ND, DNSv6<br/> IPv6 LPM Routing, IPv6 Policy-based Routing (PBR)<br/> IPv6 VRRPv3, IPv6 URPF, IPv6 RA<br/> RIPng, OSPFv3, BGP4+<br/> MLD Snooping, IPv6 Multicast VLAN<br/> MLDv1/v2, IPv6 Anycast RP, IPv6 ACL, IPv6 QoS</p>   |
| <b>MPLS</b>        | <p>MPLS, VRF, LDP</p>   |
|                    | <p>MPLS L3 VPN</p>  |
| <b>QoS</b>         | <p>8 Queues<br/> SP, WRR, SP+WRR<br/> WRED<br/> Traffic Classification Based on 802.1p COS, ToS, DiffServ DSCP, ACL, port number<br/> Traffic Policing<br/> PRI Mark/Remark</p>   |
| <b>ACL</b>         | <p>IP ACL, MAC ACL, IP-MAC ACL<br/> Standard and Expanded ACL Based on source/destination IP or MAC, IP Protocol, TCP/UDP port, DSCP, ToS, IP Precedence), VLAN, Tag/Untag, CoS<br/> Redirect and statistics<br/> Rules can be configured to port, VLAN, VLAN routing interfaces<br/> Time Ranged ACL<br/> ACL rules can be configured to port, VLAN</p>              |
| <b>Security</b>    | <p>802.1x AAA<br/> Port, MAC-based authentication<br/> Accounting based on time length and traffic<br/> Guest VLAN and auto VLAN</p>  |

|                                    |  |
|------------------------------------|--|
|                                    | RADIUS for IPv4 and IPv6   |
|                                    | TACACS+ for IPv4 and IPv6  |
|                                    | MAB  |
| <b>DHCPv4/v6 Traffic Monitor</b>   | DHCP Server/Client for IPv4/IPv6<br>DHCP Relay/Option 82<br>DHCP Snooping/Option 82  |
| <b>Traffic Monitor</b>             | sFlow Traffic Analysis   |
| <b>Security Network Management</b> | CLI, WEB, Telnet, SNMPv1/v2c/v3 through IPv4 and IPv6<br>Syslog and external Syslog Server<br>HTTP SSL<br>SNMP MIB, SNMP TRAP<br>FTP/TFTP<br>SNTP/NTP<br>RMON 1,2,3,9<br>Authentication by Radius/TACACS<br>SSH v1/v2<br>Dual firmware images/ Configuration files<br>802.3ah OAM, 802.1ag OAM |
| <b>Data Center Features</b>        | MC-LAG,<br>Netconf,<br>VSF (Virtual Switch Framework, support mixed stacking among models CS6200X-48T6X-HI, CS6200X-24T6X-HI, CS6200X-48S6X-HI and CS6200X-24S6X-HI)   |

## Application

Deployed as aggregation switches that provide gigabit downlink and 10G uplink in a campus or enterprise network



## Order Information

| Product | Description |
|---------|-------------|
|---------|-------------|

|                  |  |
|------------------|--|
| CS6200X-24T6X-HI | 10G L3 Switch (24*10/100/1000Base-T + 6*10GbE(SFP+) + 1*slot) , Default with 1 modular AC Power and 1 optional AC Power <b>M6200X-AC-150</b> for 1+1 redundancy (not support other power modules)  |
| CS6200X-48T6X-HI | 10G L3 Switch (48*10/100/1000Base-T + 6*10GbE(SFP+) + 1*slot) , Default with 1 modular AC Power and 1 optional AC Power <b>M6200X-AC-150</b> for 1+1 redundancy (not support other power modules)  |
| CS6200X-24S6X-HI | 10G L3 Switch (24*100/1000Base-X(SFP) + 6*10GbE(SFP+) + 1*slot), Default with 1 modular AC Power and 1 optional AC Power <b>M6200X-AC-150</b> for 1+1 redundancy (not support other power modules) |
| CS6200X-48S6X-HI | 10G L3 Switch (48*100/1000Base-X(SFP) + 6*10GbE(SFP+) + 1*slot), Default with 1 modular AC Power and 1 optional AC Power <b>M6200X-AC-150</b> for 1+1 redundancy (not support other power modules) |
| M6200X-AC-150    | AC Power Supply Module (150W) (100V-240VAC & 240VDC) for CS6200X-24T6X-HI, CS6200X-48T6X-HI, CS6200X-24S6X-HI, CS6200X-48S6X-HI. Could be purchased alone as accessory                             |
| MS-6200X-8X      | Optional extended cards for CS6200X-HI series, 8*10GbE(SFP+)   |