

DCRS-6500-52X Dual Stack 40G Ethernet Optical Routing Switch



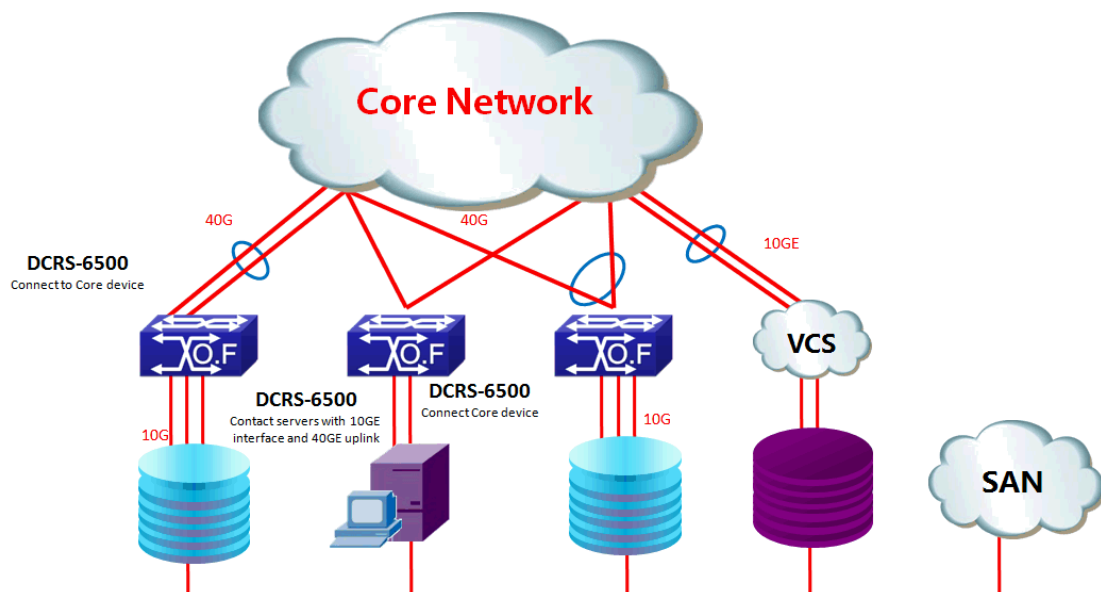
DCRS-6500-52X

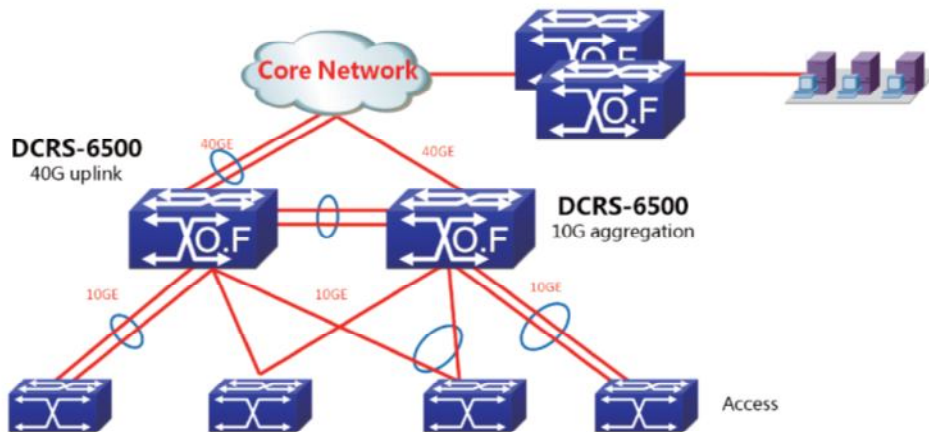
■ Product Overview

DCRS-6500-52X next-generation data center 40G switch has advanced hardware and software architecture design, built-in modular 1+1 redundant power supplies, 4+1 redundant fans, cross ventilation and wind direction adjustable. DCRS-6500-52X supports data center features such as Data Center Bridging*, FCoE*, VEPA*, Trill* fully applicable to the data center TOR (Top of Rack) application requirements of the switch.

The DCRS-6500-52X supports IPv6 with hardware and pass the IPv6 form certification Phase II. With the abundant ipv6 features, the product can also work for next generation network. DCRS-6500-52X is ideal for cloud computing data center server access, core switch of small to medium datacenter. For campus or other large network, DCRS-6500-52X could also be deployed at aggregation or core layer as its high performance and reliability.

■ Application





■ Key Features and Benefits

➤ Performance and Scalability

With high switching capacity, DCRS-6500-52X series switches support wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.

The 10 Gigabit Ethernet connectivity of DCRS-6500-52X is accomplished via a hot-pluggable 10 Gigabit XFP/SFP+ transceiver which supports distance up to 300 meters over multimode fiber and 10 to 80km over single-mode fiber(The distance depends the optical module chosen).

DCRS-6500-52X series support modular redundant AC and DC power supplies for different environment applications.

➤ Full Data Center Features*

As new generation data center switch, DCRS-6500-52X supports full data center features such as FCoE (Fiber Channel over Ethernet) , TRILL(Transparent Interconnection of Lots of Links) DCB (Data Center Bridging) , VEPA (Virtual Ethernet Port Aggregator) , which not only improves the efficiency, guarantees the flexibility, but also enhanced the scalability of datacenter network.

➤ VSF(Virtual Switch Framework)*

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

➤ Full Optical Port

DCRS-6500-52X series supports abundant optical connection ports to construct full optical network and increase the performance of networks.

The DCRS-6500-52X includes 48*10GE SFP+ ports and 4*40G QSFP+ ports

➤ **Rich L3 Features***

DCRS-6500-52X series deliver 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 DCRS-6500-52X series, customers could easily achieve Policy based Route(PBR), which is important when they need multi exit application.

➤ **Strong Multicast**

DCRS-6500-52X series support 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, DCRS-6500-52X provides great application experience for customer.

➤ **MPLS/VPLS***

DCRS-6500-52X series support MPLS L3 VPN/MPLS L2 VPN(VPLS) and help customer to construct more secure/extendable network. With max 255 VRF instances, DCRS-6500-52X series could be deployed as P & PE devices, guarantees the variety of services

➤ **Easy high reliability network**

MRPP is Multi-layer Ring Protection Protocol. It introduces Layer concept for loop at the basis of traditional loop protect protocol. Each loop layer has multiple same-level Ethernet loop networks. With multi-loop layers, it can achieve quick convergence from core to aggregation. MRPP can get fast recovery for links at different layers. Compared with spanning tree protocol, it has advantages of much faster convergence, simple protocol calculation, little system resources cost, clear networking idea and so on, which can greatly improve the reliability of Ethernet network operation.

➤ **Comprehensive QoS**

With 8 queues per port, DCRS-6500-52X 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.

DCRS-6500-52X series also support 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

service is 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.

➤ Abundant IPv6 Support

DCRS-6500-52X series support 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, DCRS-6500-52X series will be a right product to meet the requirement. DCRS-6500-52X passed IPv6 form Phase II certification, which is the best proof of the application.

■ Specification

Item	DCRS-6500-52X
Physical port	■ 48 * 10G SFP+ and 4 * 40G QSFP+
FC port*	■ First 16 ports could be configured as SFP+, SFP GE, FC ■ FC port support 1/2/4/8G mode
Management port	■ 10/100/1000Mbps RJ45 Ethernet Management port ■ RJ45 Console port ■ USB2.0 Management port*
Performance	
Switching Capacity	■ 1280Gbps
Throughput	■ 960Mpps
MAC Address	■ 128K
Routing Table	■ 16K
L3 Table	■ 16K
Physical	
Dimension	■ W*H*D: 438mm*44mm*408mm
Relative Humidity	■ 15% ~ 85% non-condensing
Temperature	■ Working 0°C~40°C, storage -40°C~75°C
Power Input	■ AC: 100~240V , 50~60 Hz
Power Supply	■ 460W (1+1 Modular Redundant)
Power Consumption	■ 281W
MTBF	■ >=200000 Hours
Main Features	
L1, L2 Features	■ 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)

	<ul style="list-style-type: none"> ■ 12k Jumbo Frame ■ Port loopback detect ■ LLDP and LLDP-MED ■ UDLD ■ 802.3ad LACP, max 128 group trunk with max 8 ports for each trunk, ■ LACP load balance
	<ul style="list-style-type: none"> ■ N:1 Port Mirroring ■ RSPAN ■ ERSPAN
	<ul style="list-style-type: none"> ■ IEEE802.1d(STP) ■ IEEE802.1W(RSTP) ■ IEEE802.1S(MSTP) ■ Root Guard ■ BPDU Guard ■ BPDU Tunnel
	<ul style="list-style-type: none"> ■ 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
	<ul style="list-style-type: none"> ■ IGMP v1/v2/v3 Snooping and L2 query ■ ND snooping ■ MLDv1/v2 snooping
	<ul style="list-style-type: none"> ■ Port Security
	<ul style="list-style-type: none"> ■ Flow control: HOL , IEEE802.3x ■ Bandwidth control
L3 Features*	<ul style="list-style-type: none"> ■ Static Routing,RIPv1/V2,OSPFv2,BGP4 ■ OSPFv3, BGP4+ ■ OSPF multiple process ■ LPM Routing ■ Policy-based Routing(PBR) for IPv4 and IPv6 ■ VRRP ■ URPF, ■ ECMP ■ BFD
	<ul style="list-style-type: none"> ■ IGMP v1/2/3, IGMP Proxy, ■ DVMRP,PIM-DM,PIM-SM,PIM-SSM, any cast, RP, MSDP ■ Static Multicast route ■ Multicast receive control ■ Illegal multicast source detect

	<ul style="list-style-type: none"> ■ ARP guard, Local ARP proxy, Proxy ARP, ARP binding, Gratuitous ARP, ARP limit ■ Anti ARP/NDP cheat, anti ARP/NDP scan
	<ul style="list-style-type: none"> ■ DNS client
	<ul style="list-style-type: none"> ■ GRE Tunnel
IPv6*	<ul style="list-style-type: none"> ■ 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,BGP4+ ■ MLD Snooping,IPv6 Multicast VLAN ■ MLDv1/v2,,PIM-SM/DM for IPv6,IPv6 anycast RP, IPv6 ACL,IPv6 QOS
MPLS*	<ul style="list-style-type: none"> ■ MPLS, VRF, LDP
	<ul style="list-style-type: none"> ■ MPLS L3 VPN, MPLS L2 VPN(VPLS), VPWS
QoS	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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, VLAN routing interfaces ■ Time ranged ACL
Security	<ul style="list-style-type: none"> ■ 802.1x AAA ■ Port, MAC based authentication ■ Accounting based on time length and traffic ■ Guest vlan and auto vlan
	<ul style="list-style-type: none"> ■ RADIUS for IPv4 and IPv6
	<ul style="list-style-type: none"> ■ TACACS+ for IPv4 and IPv6
	<ul style="list-style-type: none"> ■ MAB
DHCPv4/v6	<ul style="list-style-type: none"> ■ DHCP Server/Client for IPv4/IPv6 ■ DHCP Relay/option 82 ■ DHCP Snooping/option 82
Traffic Monitor	<ul style="list-style-type: none"> ■ IP FIX traffic monitor , 1:1 * ■ sFlow traffic analysis

<p>Security Management</p> <p>Network</p>	<ul style="list-style-type: none"> ■ 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*
<p>Data Center Features*</p>	<ul style="list-style-type: none"> ■ FCoE (Fiber Channel over Ethernet) ■ TRILL(Transparent Interconnection of Lots of Links) ■ DCB (Data Center Bridging) <ul style="list-style-type: none"> ● 802.1Qbb: Priority-based Flow Control (PFC) ● 802.1Qaz: Enhanced Transmission Selection (ETS and DCBX) ● 802.1Qau: Congestion Notification (CN/QCN) ■ IEEE VEPA (Virtual Ethernet Port Aggregator) ■ VSF (Virtual Switch Framework)

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

■ **Warranty**

3 Years

■ **Order Information**

Product	Description
DCRS-6500-52X	40G Ethernet Optical Routing Switch, 48 * 10G SFP+ and 4 * 40G QSFP+ ports (2 power modules at most, 1+1 redundancy. 5 fan modules at most, 4+1 redundancy. Standard with 1 power module, 5 fan modules)
MRS-6000-AC	AC Power Supply Module (460W) for DCRS-6500-52X.
MRS-6000-FAN	Fan module for DCRS-6500-52X. Could be purchased alone as accessory

■ **Connect us**

For more detail information about DCN product, contact:

URL: <http://www.dcn-global.com>

Email: dcn_service@digitalchina.com

Address: Digital Technology Plaza, NO.9 Shangdi 9th Street, Haidian District, Beijing, China