

DCRS-5960F Dual Stack 10G Ethernet Optical Routing Switch



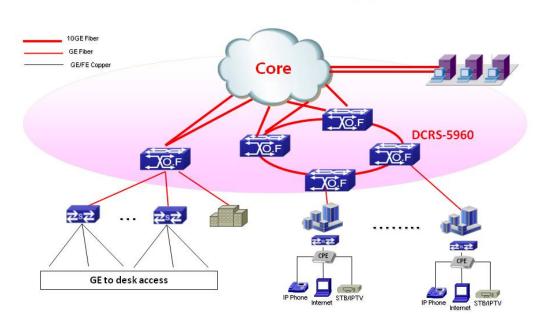
DCRS-5960-52F-DC

Product Overview

The DCS-5960F Series switches are 10G full optical Ethernet Layer 3 switches for carrier and MAN networks. They support strong IPv4/IPv6 routing, MPLS, comprehensive QoS, enhanced Vlan functions (Multicast Vlan, Voice Vlan, QinQ, etc), classified bandwidth control, multiple link aggregation, intelligent security control. It is ideal for the Metro Ethernet market, using in the aggregation layer of three-tier networks provides long distance fiber connections to aggregate access layer switches or DSLAMs. It is also an excellent choice as a core switch for enterprise customers.

The DCRS-5960F carrier level switches have 2 types: DCS-5960-28F-DC and DCS-5960-52F-DC. The switches support IPv6 with hardware and pass the IPv6 form certification Phase II. With the abundant ipv6 features, the product can still work for next generation network.





DCRS-5960F Series application

Key Features and Benefits

> Performance and Scalability

With high switching capacity, the DCRS-5960F series switches support wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.

The SFP-based Gigabit ports support various optional Gigabit Ethernet mini GBIC transceivers, for different distance fiber connections.

The 10 Gigabit Ethernet connectivity of DCRS-5960F 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).

The DCRS-5960F-DC series supports redundant AC and DC power supplies for different environment applications.

Full Optical Port

The 5960F series supports abundant optical connection ports to construct full optical network and increase the performance of networks.

The DCRS-5960-28F includes 12 GE combo and 12 10/100/1000 Base-T ports with max 4 10GE ports.

The DCRS-5960-52F includes 44 GE SFP and 4 GE combo ports with max 4 10GE ports.



Rich L3 Features

The DCRS-5960F series 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.

Policy based Route(PBR) is important for customer when they need multi exit application and DCRS-5960F series can support it.

Strong Multicast

The DCRS-5960F series supports abundant multicast features. The product supports rich L2 multicast features such as IGMPv1/v2/v3 and snooping and L3 multicast protocols such as PIM-DM, PIM-SM, PIM-SSM even MSDP. As the rich application experience, the product supports multicast Vlan Register (MVR), multicast receiver/sender control and illegal multicast source detect functions.

MPLS

The DCRS-5960F series supports MPLS/MPLS VPN and helps customer to construct more security network. The DCRS-5960F series can support max 255 VRF instance.

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 fast convergence, simple protocol calculation, little system resources cost, clear networking idea and so on, which can improve the reliability of Ethernet network operation.

VRRP is a high reliability protocol for network and the DCRS-5750F series can support also. With the protocol support the product can help customer network increase network reliability and upgrade network more smoothly.

Comprehensive QoS

8 queues per port enable differentiated management of up to 8 traffic types.

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.

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

The DCRS-5960F series supports IPv6 routing in hardware for maximum performance. As more network devices growing and the need for larger addressing and higher security become critical, the DCRS-5960F series will be a right product to meet the requirement. The DCRS-5960F passed IPv6 form Phase II certificate is the best proof of the application.

Attributes	DCRS-5960-28F-DC	DCRS-5960-52F-DC				
	12 GE SFP ports,	44 GE SFP ports,				
Ports	12 COMBO (SFP/GT)	4 COMBO (SFP/GT)				
	2 slots and max 4 10GE,	2 slots and max 4 10GE,				
Performance	nance					
Switching Capability	128Gbps	176Gbps				
Throughput	96Mpps	131Mpps				
MAC Address	Max 16K	Max 16K				
VLAN Table	Max 4K	Max 4K				
ACL TABLE	Max 3k	Max 3k				
Routing Table	Max 13k	Max 13k				
L3 Interface	Max 1K	Max 1K				
VRF interface	Max 255	Max 255				
Port Queues	8	8				
Physical						
Dimension(WH D)	440mm×44mm×325mm	440mm×44mm×325mm				
Relative	5% ~ 90%,	5% ~ 90%,				
Humidity	non-condensing	non-condensing				
Operating	0°C ~ 50°C	0°C ~ 50°C				
Temperature						
Storage	-40℃ ~ 70℃	-40°C ~70°C				
Temperature						
Power	AC: 100- 240V, 50-60Hz	AC: 100- 240V, 50-60Hz				
	DC: -48V	DC: -48V				

Specification

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All specifications are subject to change without further notice. All features with * mark will be available by firmware upgrade.



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Port/ MAC/ IP segment/ Portocol/ Voice/ Private/ Vlan support Multicast Vlan Register/MVR for IPv4 and IPv6 service Support port-based 802.1Q, 4096 VLAN MAC filter, MAC limit IP Protocol(IP support both of IPv4 and IPv6) Support manual configure IPv4/IPv6 tunnel Support 6to4 tunnel		MLDv1/v2 snooping	
Multicast Vlan Register/MVR for IPv4 and IPv6 service Support port-based 802.1Q, 4096 VLAN MAC filter, MAC limit IP Protocol(IP support both of IPv4 and IPv6) Support manual configure IPv4/IPv6 tunnel Support 6to4 tunnel		 QinQ, GVRP, Broadcast / Multicast 	/ Unicast Storm Control
Support port-based 802.1Q, 4096 VLAN MAC filter, MAC limit IP Protocol(IP support both of IPv4 and IPv6) Support manual configure IPv4/IPv6 tunnel Support 6to4 tunnel		Port/ MAC/ IP segment/ Portocol/ V	pice/ Private/ Vlan support
MAC filter, MAC limit IP Protocol(IP support both of IPv4 and IPv6) Support manual configure IPv4/IPv6 tunnel Support 6to4 tunnel		Multicast Vlan Register/MVR for IPv	4 and IPv6 service
L3 Features IP Protocol(IP support both of IPv4 and IPv6) Support manual configure IPv4/IPv6 tunnel Support 6to4 tunnel		Support port-based 802.1Q, 4096	'LAN
Support manual configure IPv4/IPv6 tunnel Support 6to4 tunnel		 MAC filter, MAC limit 	
Support manual configure IPv4/IPv6 tunnel Support 6to4 tunnel		IP Protocol(IP support both of IPv4	and IPv6)
■ Support 6to4 tunnel			
	L3 Features		
Support ISATAP tunnel			

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	 Default Routing, Static Routing, Black hole route, VLSM and CIDR,
	 RIPv1/V2, OSPFv2, BGP4, support MD5 authentication LPM Routing
	OSPFv3, BGP4+
	 Policy based Routing(PBR) for IPv4 and IPv6
	■ VRRP, VRRP v3
	PIM-DM, PIM-SM, PIM-SSM, MSDP
	Static Multicast route
	PIM-SM/DM/SSM for IPv6, 6 to 4 Tunnels, configured Tunnels, ISATAP
	 Multicast receive control
	Illegal multicast source detect
	Any cast RP for Ipv4 and Ipv6
	Support ECMP(Equal Cost Multi-Path)with maxim 8 groups
	URPF for IPv4 and IPv6
	Support BFD
	 ARP guard, Local ARP proxy, Proxy ARP, ARP binding, Gratuitous ARP, ARP limit
	8 queues per port
	 Support traffic classification based on IEEE 802.1p, ToS, port and DiffServ
QoS	■ Support SP, WRR.SWRR
	 Support Traffic Shaping
	Support PRI Mark/Remark
	 Support standard and expanded ACL
	Support IP ACL and MAC ACL
	 Support ACL based on source/definition IP, MAC, L3 IP, TCP/UDP port number, IP PRI(DSCP,
ACL	ToS, Precedence), Time
	 Support time-based security auto-negotiation
	 ACL rules can be configured to port, VLAN, VLAN routing interfaces
	Can be used for QoS classification
	■ Support MSTP(802.1s)
	 Support VRRP, LACP load balance
Reliability	MRPP - Multi-layer Ring Protection Protocol
	 Redundant power supply, power load balancing
	 Support Firmware & Configure dual fault tolerance backup
	DCHP Client, Relay, Snooping, Option 82
DHCP	DHCP Server for IPv4 and IPv6
	DHCP v6 and DHCP snooping V6
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	802.1X
Security	Support guest Vlan and auto Vlan
	MAB
	GRE tunnel
	BPDU tunnel
	CLI, Console(RS-232), Telnet (Ipv4/Ipv6), SSH(Ipv4/Ipv6),SSL connection
	Support WEB based NMS
Management	Support SNMPv1/v2c/v3 for IPv4, SNMPv1/v2c for IPv6
	Strict management hosts by ACL
	AAA or Local Authentication
	SNTP and NTP, Daylight Saving time
	Configuration file backup
	Multiple configuration files
	Support FTP/TFTP server or client upgrade
	Support X-modem protocol upgrade
	Support max 24 units cluster with 10GE ports and managed by single IP
	Support 802.1 ah OAM
Supervision and Trouble Shooting	Supervise abnormity of task, memory, CPU, stack, switch chip, temperature and raise alarm
	Mirror based on port and flow, RSPAN
	Syslog
	Sflow for IPv4 and IPv6
	RMON 1, 2, 3, 9
	Ping and trace route command

Warranty

3 years

Order Information

Product	Description
DCRS-5960-52F-DC	10G IPv6 Routing Switch, 44* GE SFP and 4 Gigabit Combo (SFP/GT) ports and 2 slot, AC+DC redundant power supply
DCRS-5960-28F-DC	10G IPv6 Routing Switch, 12* GE SFP and 12 Gigabit Combo (SFP/GT) ports and 2 slot, AC+DC redundant power supply
MRS-2XFP	2* 10G module(XFP interface) for DCRS-5750, DCRS-5960, DCRS-5980 series
MRS-2GB	2 *1G module(SFP interface) for DCRS-5750, DCRS-5960, DCRS-5980 series

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MRS-2SFP+	2* 10G module(SFP+ interface) for DCRS-5750, DCRS-5960, DCRS-5980 series

Connect us

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