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# DCRS-5980 Dual Stack 10G Ethernet Routing Switch Datasheet



DCRS-5980-28T-DC



DCRS-5980-52T-DC



DCRS-5980-28T-POE



DCRS-5980-52T-POE

## ■ Product Overview

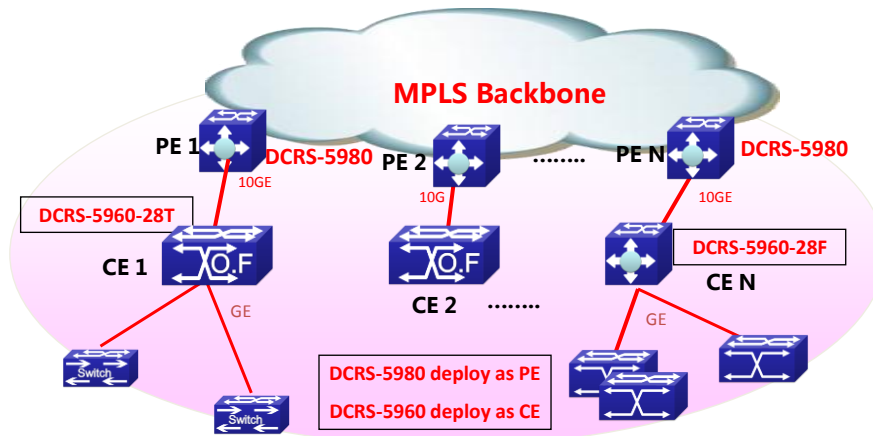
The DCRS-5980 series is Gigabit Ethernet Layer 3 switches with 20/44 Gigabit Ethernet ports, 4 combo Gigabit Ethernet RJ-45/SFP ports and dual slots for optional 10G modules with max 4 10G Ethernet ports.

The DCRS-5980 series is ideal for aggregating servers or for aggregating access switches in the distribution layer of three-tier networks. It is also an excellent choice as a core switch for enterprise customers.

All ports of the DCRS-5980-28T-POE and DCRS-5980-52T-POE can support max 15.4W power supply for IP Phone, WIFI AP, IP camera etc with RPS/PSU support.

■ **Target Market**

## DCRS-5980 Series application



■ **Key Features and Benefits**

**Performance and Scalability**

- With 128Gbps/176Gbps switching capacity, the DCRS-5980 series delivers high performance IPv4 and IPv6 IP routing.
- The SFP-based Gigabit ports support various optional Gigabit Ethernet mini GBIC transceivers, available by Edge-Core, for different distance fiber connections.
- The 10 Gigabit Ethernet connectivity of DCRS-5980 series 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 depend the optical module chosen ) .
- The DCRS-5980 series supports both AC and DC power supplies for different environment applications.

**Continuous Availability**

- IEEE 802.3ad Link Aggregation Control Protocol (LACP) increases bandwidth by automatically aggregating several physical links together as a logical trunk and providing load balancing and fault tolerance for uplink connections.
- MRPP (Multi-layer Ring Protection Protocol), is a link layer protocol applied on Ethernet loop protection which reduces network convergence time to 50ms-60ms.

**Rich L3 Features**

- The DCRS-5980 series switch delivers high-performance, hardware based IP routing with 16K IP forwarding items.
- RIP, OSPF, BGP provide dynamic routing by exchanging routing information with other Layer 3 switches and routers.
- Policy based Route is important for customer when they need multi exit application.

### **Strong Multicast**

- IGMP snooping prevents flooding of IP multicast traffic, and limits bandwidth intensive video traffic to only the subscribers.
- PIM-DM, PIM-SM, PIM-SSM, DVMRP multicast routing protocols, IGMP proxy and MVR (Multicast VLAN Register) make multicast application disposed easily and flexibly.

### **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**

- Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on L2/L3/L4 headers information. DCRS-5980 series supports ingress and egress ACL with max 4K rules.
- RADIUS and TACACS Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.
- MAC-in-MAC as IEEE 802.1ah-2008 offers complete separation of customer and provider domains.

### **MPLS Support**

- MPLS technique is very popular and widely applied in carrier user. As a result the DCRS-5980 supports Hardware-based forwarding of MPLS and MPLS VPN with max 255 VRF instances to help customer construct more security network.
- Hierarchical VPLS (H-VPLS), Virtual Private LAN Service (VPLS)

### **IPv6 Support**

- The DCRS-5980 series supports IPv6 routing in hardware and full-scale IPv6 protocols. As IPv4 addresses become exhausted, the DCRS-5980 series will be an excellent product to meet the requirement.

## **■ Specification**

Attributes	DCRS-5980-28T-P	DCRS-5980-52T-P	DCRS-5980-28T-DC	DCRS-5980-52T-DC
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	OE	OE		
<b>Ports</b>	20 10/100 /1000 Ethernet Ports 4 COMBO (SFP/GT) 2 slots and max 4 10GE,	44 10/100/1000 Ethernet Ports 4 COMBO (SFP/GT) 2 slots and max 4 10GE	20 10/100 /1000 Ethernet Ports , 4 COMBO (SFP/GT) 2 slots and max 4 10GE	44 10/100/1000 Ethernet Ports 4 COMBO (SFP/GT) 2 slots and max 4 10GE
<b>Performance</b>				
<b>Switching Capability</b>	128Gbps	176Gbps	128Gbps	176Gbps
<b>Throughput</b>	96Mpps	131Mpps	96Mpps	131Mpps
<b>MAC Address</b>	32K	32K	32K	32K
<b>VLAN Table</b>	4K	4K	4K	4K
<b>ACL TABLE</b>	Max 4k	Max 4k	Max 4k	Max 4k
<b>Routing forwarding Table</b>	16k	16k	16k	16k
<b>L3 Interface</b>	1K	1K	1K	1K
<b>VRF interface</b>	252	252	252	252
<b>Port Queues</b>	8	8	8	8
<b>Physical</b>				
<b>Dimension (WHD)</b>	440mm×44mm×325mm	440mm×44mm×325mm	440mm×44mm×325mm	440mm×44mm×325mm
<b>Relative Humidity</b>	5% ~ 90%, non-condensing	5% ~ 90%, non-condensing	5% ~ 90%, non-condensing	5% ~ 90%, non-condensing
<b>Operating Temperature</b>	0℃ ~ 50℃	0℃ ~ 50℃	0℃ ~ 50℃	0℃ ~ 50℃
<b>Storage Temperature</b>	-40℃ ~ 70℃	-40℃ ~ 70℃	-40℃ ~ 70℃	-40℃ ~ 70℃
<b>Power</b>	AC: 100V ~ 240V, 50-60Hz DC: -48V POE: -52V	AC: 100V-240V, 50-60Hz DC: -48V POE: -52V	AC: 100- 240V, 50-60Hz DC: -48V	AC: 100- 240V, 50-60Hz DC: -48V
<b>Power Consumption</b>	130W for device 15.4W per port	180W for device 15.4W per port	130W	180W
<b>MTBF</b>	>80,000 hours	>80,000 hours	>80,000 hours	>80,000 hours
<b>MEF Comply</b>	Comply MEF 9,14	Comply MEF 9,14	Comply MEF 9,14	Comply MEF 9,14
<b>EMC safety</b>	FCC, CE, RoHS,	FCC, CE, RoHS	FCC, CE, RoHS	FCC, CE, RoHS
<b>Features</b>				
<b>Forwarding Mode</b>	■ Storage and forwarding			

<b>L2 Features</b>	<ul style="list-style-type: none"> <li>■ IEEE802.3(10Base-T)</li> <li>■ IEEE802.3u(100Base-TX)</li> <li>■ IEEE802.3z ( 1000BASE-X )</li> <li>■ IEEE802.3ab ( 1000Base-T )</li> <li>■ IEEE802.3ae ( 10GBase )</li> <li>■ 9k Jumbo Frame</li> <li>■ Port loopback detect</li> <li>■ LLDP and LLDP-MED</li> <li>■ UDLD</li> </ul>	
	<ul style="list-style-type: none"> <li>■ Support LACP 802.3ad, max 128 group trunk with max 8 ports for each trunk,</li> <li>■ Support load balance</li> </ul>	
	<ul style="list-style-type: none"> <li>■ IEEE802.1d(STP)</li> <li>■ IEEE802.1W(RSTP)</li> <li>■ IEEE802.1S(MSTP) Max 48 instance</li> <li>■ Root Guard</li> <li>■ Bpdu Guard</li> <li>■ BPDU forwarding</li> </ul>	
	<ul style="list-style-type: none"> <li>■ Support one to one or any to one port mirror</li> <li>■ RSPAN</li> <li>■ ERSPAN</li> </ul>	
	<ul style="list-style-type: none"> <li>■ IGMP v1/v2/v3 Snooping and L2 query</li> <li>■ ND snooping</li> <li>■ MLDv1/v2 snooping</li> </ul>	
	<ul style="list-style-type: none"> <li>■ QinQ, GVRP, Broadcast / Multicast / Unicast Storm Control</li> <li>■ Port/ MAC/ IP segment/ Portocol/ Voice/ Private/ Vlan support</li> <li>■ Multicast Vlan register/MVR for IPv4 and IPv6 service</li> </ul>	
	<ul style="list-style-type: none"> <li>■ Support port-based 802.1Q, 4096 VLAN</li> </ul>	
	<ul style="list-style-type: none"> <li>■ MAC filter, MAC limit</li> </ul>	
	<b>L3 Features</b>	<ul style="list-style-type: none"> <li>■ IP Protocol ( IP support both of IPv4 and IPv6 )</li> <li>■ Support manual configure IPv4/IPv6 tunnel</li> <li>■ Support 6to4 tunnel</li> <li>■ Support ISATAP tunnel</li> </ul>
		<ul style="list-style-type: none"> <li>■ Default Routing, Static Routing, Black hole route, VLSM and CIDR,</li> </ul>
		<ul style="list-style-type: none"> <li>■ RIPv1/V2, OSPFv2, BGP4, support MD5 authentication LPM Routing</li> </ul>
		<ul style="list-style-type: none"> <li>■ OSPFv3, BGP4+</li> </ul>
		<ul style="list-style-type: none"> <li>■ Policy based Routing(PBR) for IPv4 and IPv6</li> </ul>
<ul style="list-style-type: none"> <li>■ VRRP, VRRP v3</li> </ul>		
<ul style="list-style-type: none"> <li>■ VRRP, VRRP v3</li> </ul>		

	<ul style="list-style-type: none"> <li>■ PIM-DM, PIM-SM, PIM-SSM, MSDP</li> <li>■ Static Multicast route</li> <li>■ PIM-SM/DM/SSM for IPv6, 6 to 4 Tunnels, configured Tunnels, ISATAP</li> <li>■ Multicast receive control</li> <li>■ Illegal multicast source detect</li> <li>■ Any cast RP for Ipv4 and Ipv6</li> </ul>
	<ul style="list-style-type: none"> <li>■ Support ECMP (Equal Cost Multi-Path) with maxim 8 groups</li> </ul>
	<ul style="list-style-type: none"> <li>■ URPF for IPv4 and IPv6</li> </ul>
	<ul style="list-style-type: none"> <li>■ Support BFD</li> </ul>
	<ul style="list-style-type: none"> <li>■ ARP guard, Local ARP proxy, Proxy ARP, ARP binding, Gratuitous ARP, ARP limit</li> </ul>
<b>QoS</b>	<ul style="list-style-type: none"> <li>■ 8 queues per port</li> <li>■ Support traffic classification based on IEEE 802.1p, ToS, port and DiffServ</li> <li>■ Support SP, WRR, SWRR</li> <li>■ Support Traffic Shaping</li> <li>■ Support PRI Mark/Remark</li> </ul>
<b>ACL</b>	<ul style="list-style-type: none"> <li>■ Support standard and expanded ACL</li> <li>■ Support IP ACL and MAC ACL</li> <li>■ Support ACL based on source/definition IP, MAC, L3 IP, TCP/UDP port number, IP PRI(DSCP, ToS, Precedence), Time</li> <li>■ Support time-based security auto-negotiation</li> <li>■ ACL rules can be configured to port, VLAN, VLAN routing interfaces</li> <li>■ Can be used for QoS classification</li> </ul>
<b>Reliability</b>	<ul style="list-style-type: none"> <li>■ Support MSTP(802.1s)</li> <li>■ Support VRRP, LACP load balance</li> <li>■ MRPP - Multi-layer Ring Protection Protocol</li> <li>■ Redundant power supply, power load balancing</li> <li>■ Support Firmware &amp; Configure dual fault tolerance backup</li> </ul>
<b>DHCP</b>	<ul style="list-style-type: none"> <li>■ DHCP Client, Relay, Snooping, Option 82</li> <li>■ DHCP Server for IPv4 and IPv6</li> <li>■ DHCP v6 and DHCP snooping V6</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>■ 802.1X</li> <li>■ Support guest vlan and auto vlan</li> <li>■ MAB</li> <li>■ GRE tunnel</li> <li>■ BPDU tunnel</li> <li>■ Mac-in-Mac</li> </ul>

<p><b>POE*</b></p>	<ul style="list-style-type: none"> <li>■ Support max 15.4W per port and full 10/100/1000 Base-T port can support POE</li> <li>*The feature need RPS/PSU support</li> </ul>	<p>NA</p>	<p>NA</p>
<p><b>Management</b></p>	<ul style="list-style-type: none"> <li>■ CLI, Console ( RS-232 ) , Telnet (Ipv4/Ipv6), SSH(Ipv4/Ipv6),SSL connection</li> <li>■ Support WEB based NMS</li> <li>■ Support SNMPv1/v2c/v3 for IPv4, SNMPv1/v2c for IPv6</li> <li>■ Strict management hosts by ACL</li> <li>■ AAA or Local Authentication</li> <li>■ SNTP and NTP, Daylight Saving time</li> <li>■ Configuration file backup</li> <li>■ Multiple configuration files</li> <li>■ Support FTP/TFTP server or client upgrade</li> <li>■ Support X-modem protocol upgrade</li> <li>■ Support max 24 units cluster with 10GE ports and managed by single IP</li> </ul>		
<p><b>Supervision and Trouble Shooting</b></p>	<ul style="list-style-type: none"> <li>■ Supervise abnormality of task, memory, CPU, stack, switch chip, temperature and raise alarm</li> <li>■ Mirror based on port and flow, RSPAN</li> <li>■ Syslog</li> <li>■ Sflow for IPv4 and IPv6</li> <li>■ RMON 1, 2, 3, 9</li> <li>■ Ping and trace route command</li> </ul>		

■ **Warranty**

Limited lifetime warranty

■ **Order Information**

Product	Description
<p><b>DCRS-5980-52T-DC</b></p>	<p>10G IPv6 Routing Switch, 44 10/100/1000Base-T + 4 Gigabit Combo ( SFP/GT ) ports+2 slot, AC+DC redundant power supply</p>
<p><b>DCRS-5980-28T-DC</b></p>	<p>10G IPv6 Routing Switch, 20 10/100/1000Base-T + 4 Gigabit Combo ( SFP/GT ) ports+2 slot, AC+DC redundant power supply</p>
<p><b>DCRS-5980-52T-POE</b></p>	<p>10G IPv6 Routing Switch, 44 10/100/1000Base-T + 4 Gigabit Combo ( SFP/GT ) ports+2 slot, AC+DC+POE redundant power supply</p>

<b>DCRS-5980-28T-POE</b>	10G IPv6 Routing Switch, 20 10/100/1000Base-T + include 4 Gigabit Combo (SFP/GT) ports + 2 slot, AC+DC+POE redundant power supply
<b>DC-PSU-650</b>	PSU power 650W, Supply DC(-48V) and 12V RPS
<b>MRS-2XFP</b>	DCRS-5980 series 2 10G module(XFP interface) for DCRS-5980 series
<b>MRS-2GB</b>	DCRS-5980 series 2 1G module(SFP interface) for DCRS-5980 series
<b>MRS-2SFP+</b>	PSU power 650W, Supply DC(-48V) and 12V RPS

■ **Connect us**

For more detail information about DCN product, contact:

URL: <http://dcnglobal.com>

Email: [dcn\\_service@digitalchina.com](mailto:dcn_service@digitalchina.com)

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