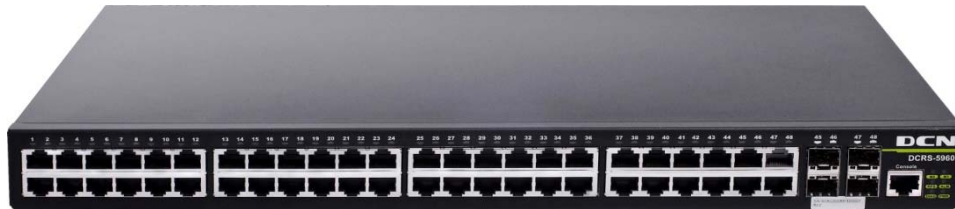


DCRS-5960 Dual Stack 10G Routing Switch Datasheet



DCRS-5960-28T/28T-R/28T-DC/28T-POE



DCRS-5960-52T/52T-R/52T-DC/52T-POE

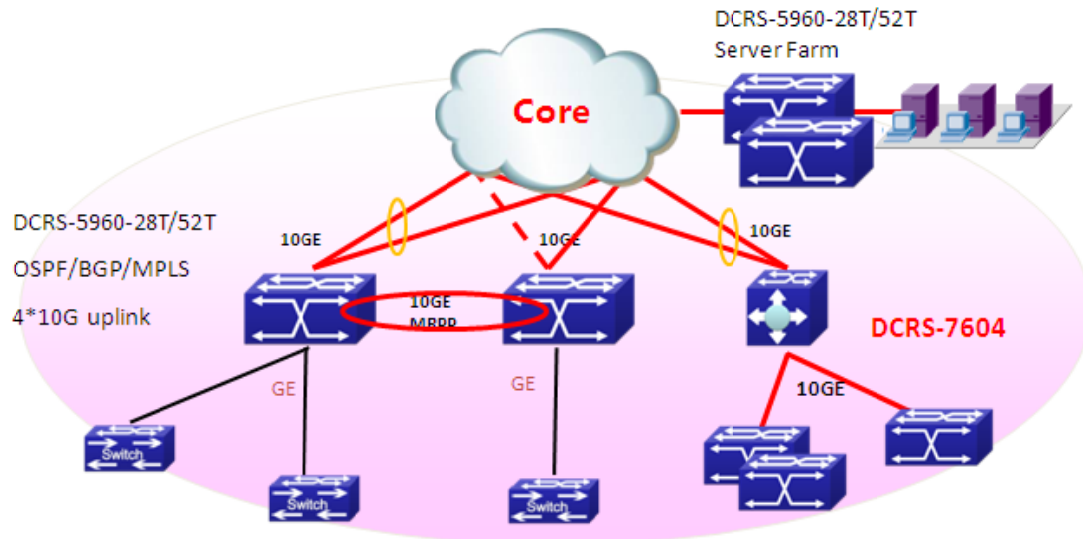
■ Product Overview

The DCRS-5960 series is a Gigabit Ethernet Layer 3 switch 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-5960 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-5960-28T-POE and DCRS-5960-52T-POE can support max 15.4W power supply for IP Phone, WIFI AP, IP camera etc with RPS/PSU support.

■ Application



■ Key Features

Performance and Scalability

- With 128Gbps/176Gbps switching capacity, the DCRS-5960 series delivers high performance IPv4 and IPv6* IP routing.
- 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-5960 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-5960 series switch supports redundant AC and DC power supplies for different environment applications.

Continuous Availability

- IEEE 802.1s Multiple Spanning Tree Protocol runs STP per VLAN base, providing Layer 2 load sharing on redundant links.
- 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 and MPLS Features

- The DCRS-5960 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.
- MPLS and MPLS VPN technology to build metro network.

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-5960 series supports ingress and egress ACL with max 3K rules.
- Secure Shell (SSH) encrypts network management information via Telnet providing secure network management.
- RADIUS and TACACS Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.

IPv6 Support

- The DCRS-5960 series supports IPv6 routing in hardware and full-scale IPv6 protocols. As IPv4 addresses become exhausted, the DCRS-5960 series will be an excellent product to meet the requirement.

■ Specification

| Attributes | DCRS-5960-28T-POE/52T-POE | DCRS-5960-28T/52T | DCRS-5960-28T-R/28T-DC DCRS-5960-52T-R/52T-DC |
|--------------------|--|--|--|
| Ports | 20/44 10/100/1000 Ethernet ports 4 COMBO (SFP/GT) 2 slots (max 4 10GE) | 20/44 10/100/1000 Ethernet Ports , 4 COMBO (SFP/GT) 2 slots (max 4 10GE) | 20/44 10/100/1000 Ethernet Ports , 4 COMBO (SFP/GT) 2 slots (max 4 10GE) |
| Performance | | | |

| | | | |
|------------------------------|--|--------------------------|--|
| Switching Capability | 128Gbps/196bps | 128Gbps/196bps | 128Gbps/196bps |
| Forwarding rate | 95Mpps/131pps | 95Mpps/131pps | 95Mpps/131pps |
| MAC Address | 16K | 16K | 16K |
| VLAN Table | 4K | 4K | 4K |
| ACL TABLE | Max 3k | Max 3k | Max 3k |
| Routing Table | Max 13K | Max 13K | Max 13K |
| VRF | 252 | 252 | 252 |
| L3 Interface | Max 1K | Max 1K | Max 1K |
| Port Queues | 8 | 8 | 8 |
| Physical | | | |
| Dimension (WHD) | 440mm×44mm×325mm | 440mm×44mm×325mm | 440mm×44mm×325mm |
| Relative Humidity | 5% ~ 90%, non-condensing | 5% ~ 90%, non-condensing | 5% ~ 90%, non-condensing |
| Operating Temperature | 0°C ~ 50°C | 0°C ~ 50°C | 0°C ~ 50°C |
| Storage Temperature | -40°C ~ 70°C | -40°C ~ 70°C | -40°C ~ 70°C |
| Power | AC: 100V ~ 240V, 50-60Hz DC: -48V POE: -48V | AC: 100V ~ 240V, 50-60Hz | AC: 100V ~ 240V, 50-60Hz DC version: -48V RPS version: 12V |
| Power Consumption | 35W/65W 15.4W per port for POE | 35W/65W | 35W/65W |
| MTBF | >80,000 hours | >80,000 hours | >80,000 hours |
| MEF Comply | Comply MEF 9,14 | Comply MEF 9,14 | Comply MEF 9,14 |
| EMC safety | FCC, CE, RoHS, | FCC, CE, RoHS | FCC, CE, RoHS |
| Features | | | |
| Forwarding Mode | <ul style="list-style-type: none"> ■ Storage and forwarding | | |
| L2 Features | <ul style="list-style-type: none"> ■ IEEE802.3(10Base-T) ■ IEEE802.3u(100Base-TX) ■ IEEE802.3z (1000BASE-X) ■ IEEE802.3ab (1000Base-T) ■ IEEE802.3ae (10GBase) ■ 9k Jumbo Frame ■ Port loopback detect ■ LLDP and LLDP-MED ■ UDLD | | |

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| | <ul style="list-style-type: none"> ■ Support LACP 802.3ad, max 128 group trunk with max 8 ports for each trunk, ■ Support load balance |
| | <ul style="list-style-type: none"> ■ IEEE802.1d(STP) ■ IEEE802.1W(RSTP) ■ IEEE802.1S(MSTP) Max 48 instance ■ Root Guard ■ Bpdu Guard ■ BPDU forwarding |
| | <ul style="list-style-type: none"> ■ Support one to one or any to one port mirror ■ RSPAN |
| | <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"> ■ QinQ, GVRP, Broadcast / Multicast / Unicast Storm Control ■ Port/ MAC/ IP segment/ Portocol/ Voice/ Private/ Vlan support ■ Multicast Vlan register/MVR for IPv4 and IPv6 service |
| | <ul style="list-style-type: none"> ■ Support port-based 802.1Q, 4096 VLAN |
| | <ul style="list-style-type: none"> ■ MAC filter, MAC limit |
| MPLS | <ul style="list-style-type: none"> ■ MPLS, VRF, LDP |
| | <ul style="list-style-type: none"> ■ MPLS L3 VPN, MPLS L2 VPN(VPWS) |
| L3 Features | <ul style="list-style-type: none"> ■ IP Protocol (IP support both of IPv4 and IPv6) ■ Support manual configure IPv4/IPv6 tunnel ■ Support 6to4 tunnel ■ Support ISATAP tunnel |
| | <ul style="list-style-type: none"> ■ Default Routing, Static Routing, Black hole route, VLSM and CIDR, |
| | <ul style="list-style-type: none"> ■ RIPv1/V2, OSPFv2, BGP4, support MD5 authentication LPM Routing |
| | <ul style="list-style-type: none"> ■ OSPFv3, BGP4+ |
| | <ul style="list-style-type: none"> ■ Policy based Routing(PBR) for IPv4 and IPv6 |
| | <ul style="list-style-type: none"> ■ VRRP, VRRP v3 |
| | <ul style="list-style-type: none"> ■ PIM-DM, PIM-SM, PIM-SSM, MSDP |
| | <ul style="list-style-type: none"> ■ Static Multicast route |
| | <ul style="list-style-type: none"> ■ PIM-SM/DM/SSM for IPv6, 6 to 4 Tunnels, configured Tunnels, ISATAP |
| | <ul style="list-style-type: none"> ■ Multicast receive control |
| | <ul style="list-style-type: none"> ■ Illegal multicast source detect |
| | <ul style="list-style-type: none"> ■ Any cast RP for Ipv4 and Ipv6 |
| | <ul style="list-style-type: none"> ■ Support ECMP (Equal Cost Multi-Path) with maxim 8 groups |
| | <ul style="list-style-type: none"> ■ URPF for IPv4 and IPv6 |
| | <ul style="list-style-type: none"> ■ Support BFD |
| | <ul style="list-style-type: none"> ■ ARP guard, Local ARP proxy, Proxy ARP, ARP binding, Gratuitous ARP, ARP limit |
| QoS | <ul style="list-style-type: none"> ■ 8 queues per port |

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| | <ul style="list-style-type: none"> ■ Support traffic classification based on IEEE 802.1p, ToS, port and DiffServ ■ Support SP, WRR, SWRR ■ Support Traffic Shaping ■ Support PRI Mark/Remark | | |
| ACL | <ul style="list-style-type: none"> ■ Support standard and expanded ACL ■ Support IP ACL and MAC ACL ■ Support ACL based on source/destination IP, MAC, L3 IP, TCP/UDP port number, IP PRI(DSCP, 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 | | |
| Reliability | <ul style="list-style-type: none"> ■ Support MSTP(802.1s) ■ Support VRRP, LACP load balance ■ MRPP - Multi-layer Ring Protection Protocol ■ Redundant power supply, power load balancing ■ Support Firmware & Configure dual fault tolerance backup | | |
| DHCP | <ul style="list-style-type: none"> ■ DHCP Client, Relay, Snooping, Option 82 ■ DHCP Server for IPv4 and IPv6 ■ DHCP v6 and DHCP snooping V6 | | |
| Security | <ul style="list-style-type: none"> ■ 802.1X ■ Support guest vlan and auto vlan ■ MAB ■ GRE tunnel ■ BPDU tunnel | | |
| POE | <ul style="list-style-type: none"> ■ Support max 15.4W per port and full 10/100/1000 Base-T port can support POE <p>*The feature need RPS/PSU support</p> | NA | NA |

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| <p>Management</p> | <ul style="list-style-type: none"> ■ CLI, Console (RS-232) , Telnet (IPv4/IPv6), SSH(IPv4/IPv6),SSL connection ■ Support WEB based NMS ■ 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 |
| <p>Supervision and Trouble Shooting</p> | <ul style="list-style-type: none"> ■ Supervise abnormality 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-5960-52T | 10G IPv6 Routing Switch, 44 10/100/1000Base-T + 4 Gigabit Combo (SFP/GT) ports+2 slot, AC power supply |
| DCRS-5960-28T | 10G IPv6 Routing Switch, 20 10/100/1000Base-T + 4 Gigabit Combo (SFP/GT) ports+2 slot, AC power supply |
| DCRS-5960-52T-R | 10G IPv6 Routing Switch, 44 10/100/1000Base-T + 4 Gigabit Combo (SFP/GT) ports+2 slot, AC+12VDC redundant power supply |
| DCRS-5960-28T-R | 10G IPv6 Routing Switch, 20 10/100/1000Base-T + 4 Gigabit Combo (SFP/GT) ports+2 slot, AC+12VDC redundant power supply |

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|--------------------------|---|
| DCRS-5960-52T-DC | 10G IPv6 Routing Switch, 44 10/100/1000Base-T + 4 Gigabit Combo (SFP/GT) ports+2 slot, AC+DC redundant power supply |
| DCRS-5960-28T-DC | 10G IPv6 Routing Switch, 20 10/100/1000Base-T + 4 Gigabit Combo (SFP/GT) ports+2 slot, AC+DC redundant power supply |
| DCRS-5960-52T-POE | 10G IPv6 Routing Switch, 44 10/100/1000Base-T + 4 Gigabit Combo (SFP/GT) ports+2 slot, AC+DC+POE redundant power supply |
| DCRS-5960-28T-POE | 10G IPv6 Routing Switch, 20 10/100/1000Base-T + include 4 Gigabit Combo (SFP/GT) ports + 2 slot, AC+DC+POE redundant power supply |
| DC-PSU-650 | PSU power 650W, Supply DC(-48V) and 12V RPS |
| 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 |
| MRS-2SFP+ | 2* 10G module(SFP+ interface) for DCRS-5750, DCRS-5960, DCRS-5980 series |

■ **Connect us**

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