

# DCRS-5650 Dual Stack Ethernet Switch Datasheet



DCRS-5650-28C

## ■ Product Overview





DCRS-5650 series switch is L3 Fast Ethernet switch which meets the requirements of security and intelligent networks for education institutes, governments, carriers, enterprises, and industries. It can be the access device for large networks, as well as the collective layer device for buildings or core switch for small and medium networks.

The products include the following types:

- DCRS-5650-28C provides 24 \*10/100M RJ45 ports, 4 Gigabits Combo (SFP/GT) ports.

## ■ Target Market

With the rich features and high performance and flexible ports, the products can be deployed to the following networks:

	 MAN	 Campus	 LAN	 Dual Stack
<b>Core</b>	N	N	Y	Y
<b>Aggregation</b>	N	Y	Y	Y
<b>Access</b>	Y	Y	Y	Y

## ■ Key features

### ➤ High reliability

- IEEE 802.1w Rapid Spanning Tree Protocol provides a loop-free network and redundant links to the core network with rapid convergence.
- 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

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automatically aggregating several physical links together as a logical trunk and providing load balancing and fault tolerance for uplink connections.

- IGMP snooping prevents flooding of IP multicast traffic and limits bandwidth intensive video traffic to only the subscribers.

➤ **Rich L3 Features**

- The DCRS-5650 series switch delivers high-performance, hardware based IP routing.
- RIP v1/v2 and OSPF v2 provide dynamic routing by exchanging routing information with other Layer 3 switches and routers.
- VRRP prevents your system from failing by dynamically backing up multiple L3 switches for routing.

➤ **Comprehensive QoS**

- 8 egress queues per port enable differentiated management of up to 8 traffic types
- Traffic is prioritized according to 802.1p, DSCP, IP precedence and TCP/UDP port number, giving optimal performance to real-time applications such as voice and video.
- Asymmetric bidirectional rate-limiting, per port or per traffic class, preserves network bandwidth and allows maximum control of network resources.

➤ **Enhanced Security**

- Port Security ensures access to a switch port based on MAC address.
- IEEE 802.1X port-based access control ensures all users are authorized before being granted access to the network. User authentication is carried out using any standard-based RADIUS server.
- Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on source and destination MAC addresses, IP addresses, TCP/UDP ports.
- SSL, Web Management Encryption, RADIUS and TACACS+ protect data communication and ensure data privacy.
- Private VLAN isolates edge ports to ensure user privacy

➤ **Easy high reliability network**

- MRPP is Multi-layer Ring Protection Protocol. It introduced Layer concept for loop at the basis of traditional loop protect protocol. Each loop layer has multi same level Ethernet loop network. 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.

➤ **Simple Management**

- Industry standard Command Line Interface (CLI) via console port or Telnet provides a common user interface and command set for users to manipulate the switch.
- Embedded user friendly web interface helps users quickly and simply configure switches.
- Four groups of RMON are supported.
- Backup and restore firmware and configuration files via TFTP.

➤ **Abundant IPv6 Support**

- The DCRS-5650 series switch 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-5650 series switch will be a right product to meet the requirement.

■ **Specifications**

Attributes	DCRS-5650-28C
Ports	24*10/100Base-TX + 4*Gigabits Combo(SFP/GT)
<b>Performance</b>	
Switching Capacity	12.8Gbps
Forwarding Rate	9.6Mpps
MAC ADDRESS	8k
ACL TABLE	1k
Routing Table	256
Vlan Table	4K
Queues per port	8
L3 Interface	256
<b>Physical</b>	
Dimension (WHD)	440mm×44mm×230mm
Relative Humidity	5% ~ 90%, non-condensing
Operating Temperature	0℃ ~ 50℃
Storage Temperature	-40℃ ~ 70℃
Power	AC: 100- 240V DC: -48V
Power Consumption	MAX 30W
EMC safety	FCC, CE, RoHS
MTBF	>80,000 hours

Features		
<b>Forwarding</b>	<ul style="list-style-type: none"> <li>■ Storage and forwarding</li> </ul>	
<b>L2 Features</b>	<ul style="list-style-type: none"> <li>■ IEEE802.3u(100Base-TX)</li> <li>■ IEEE802.3z ( 1000BASE-X)</li> <li>■ IEEE802.3ab ( 1000Base-T)</li> <li>■ Loopback interface</li> <li>■ UDLD</li> <li>■ LLDP</li> </ul>	
	<ul style="list-style-type: none"> <li>■ Support LACP 802.3ad, max 8 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> </ul>	
	<ul style="list-style-type: none"> <li>■ Support one to one or any to one mirror</li> </ul>	
	<ul style="list-style-type: none"> <li>■ IGMP v1/v2/v3, IGMP v1/v2/v3 Snooping,</li> <li>■ MLD v1/v2, MLD v1/v2 snooping</li> </ul>	
	<ul style="list-style-type: none"> <li>■ QinQ, GVRP, Broadcast / Multicast / Unicast Storm Control</li> <li>■ Port/ MAC/ 802.1Q based Vlan support</li> <li>■ Support Private Vlan and protect port</li> <li>■ Multicast Vlan register/MVR for IPv4 and IPv6 service</li> <li>■ Support Vlan translation</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 binding(Ipv4 /Ipv6), black hole mac setting</li> <li>■ Vlan or Port based MAC limit</li> <li>■ Port binding(Ipv4 /Ipv6)</li> </ul>	
	<b>L3 Features</b>	<ul style="list-style-type: none"> <li>■ IP Protocol ( IP support both of IPv4 and IPv6 )</li> </ul>
		<ul style="list-style-type: none"> <li>■ Default Routing, Static Routing, Black hole route, VLSM and CIDR, L3 loopback interface</li> </ul>
		<ul style="list-style-type: none"> <li>■ RIPv1/V2, OSPFv2 support MD5 authentication LPM Routing</li> </ul>
		<ul style="list-style-type: none"> <li>■ OSPFv3 support</li> </ul>
		<ul style="list-style-type: none"> <li>■ VRRP, VRRP v3</li> </ul>
<ul style="list-style-type: none"> <li>■ Multicast receive control</li> <li>■ Illegal multicast source detect</li> </ul>		
<ul style="list-style-type: none"> <li>■ ARP guard, Local ARP proxy, Proxy ARP, ARP binding,</li> </ul>		
<b>QoS for IPv4 and IPv6</b>	<ul style="list-style-type: none"> <li>■ 8 hardware queues per port</li> <li>■ Support traffic classification based on IEEE 802.1p, ToS, port and DiffServ</li> </ul>	
	<ul style="list-style-type: none"> <li>■ Support SP, WRR.SWRR</li> </ul>	
	<ul style="list-style-type: none"> <li>■ Support Traffic Shaping</li> </ul>	
	<ul style="list-style-type: none"> <li>■ Support PRI Mark/Remark</li> </ul>	
<b>ACL for IPv4 and IPv6</b>	<ul style="list-style-type: none"> <li>■ Support standard and expanded ACL</li> </ul>	
	<ul style="list-style-type: none"> <li>■ Support IP ACL and ACL,</li> </ul>	
	<ul style="list-style-type: none"> <li>■ Support ACL based on source/definition IP, MAC, L3 IP, TCP/UDP port number, IP PRI(DSCP, ToS, Precedence), Time</li> </ul>	

<b>Anti-attack and Security</b>	■ S-ARP: ARP inspection, defense ARP-DOS attack and address clone
	■ Anti-Sweep: prevent pingSweep
	■ S-ICMP: resist PING-DOS attack, ICMP unreachable attack
	■ S-Buffer: prevent DDOS attack
	■ Switch engine CPU protection
	■ Key message priority: secure processing of key legal messages
	■ Port credit: inspect illegal DHCP Server, Radius Server. Connection via credit port only
	■ Advanced LPM: filter "Bluster", "zero day" and "SQL slammer worm"
	■ All the above technologies efficiently prevent various DOS attack (e.g. ARP, Synflood, Smurf, ICMP attack), support ARP monitoring, defense Worm, Bluster, check sweep and raise alarm
<b>Reliability and Redundancy Balance</b>	■ Support MSTP(802.1s)
	■ Support VRRP, LACP load balance
	■ MRPP - Multi-layer Ring Protection Protocol
<b>DHCP</b>	■ DHCP snooping
	■ DHCP Client, Relay and relay option 82
	■ DHCP Server for IPv4
<b>DNS</b>	■ DNS client
	■ DNS proxy
<b>IEEE 802.1X</b>	■ Port, MAC, Based authentication
	■ Support account based on time length and traffic
	■ Work with private client can manage P2P traffic
	■ Auto Vlan and Guest Vlan
<b>AAA</b>	■ Support RADIUS for IPv4 and IPv6
	■ TACACS+ for IPv4 and IPv6
<b>Stack and Cluster</b>	■ Support max 24 units cluster with GE ports and managed by single IP
<b>Configuration and Management</b>	■ Support CLI, support Console ( RS-232 ) , support Telnet (Ipv4/Ipv6), SSH,SSL
	■ Support SNMPv1/v2c/v3 for IPv4, SNMPv1/v2c for IPv6
	■ Support MIB
	■ Support RMON 1, 2, 3, 9
<b>SysLog</b>	■ Support, RAM, Telnet, SSH Console, Syslog server
<b>NMS</b>	■ Strict access control by ACL
	■ Access Switch through AAA or Local Authentication
<b>Configuration Management</b>	■ Configuration file storage
	■ Command operation log

## ■ Warranty

3 years

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■ **Ordering information**

<b>Products</b>	<b>Description</b>
DCRS-5650-28C	24 ports 10/100Base-TX, 4 fixed gigabits Combo(SFP/GT), ASIC based hardware line speed IPv6

■ **Connect us**

For more detail information about DCN product, contact:

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