DCS-4500 Series L2 Gigabits Dual Stack Intelligent Switch Datasheet

DCS-4500-10C

DCS-4500-28T/28T-POE


DCS-4500-52T

■ Product Overview

DCS-4500 Series switch is L2 Gigabits intelligent security switch for the access layer and aggregation layer of enterprise, datacenter, MAN and carrier networks. It supports comprehensive QoS, enhanced VLAN functions (Vlan VPN, Voice Vlan, Flexible QinQ, etc), classified bandwidth control, multilink aggregation, intelligent security control, static route, which fulfill the network requirements for Gigabits to desktop, server farm connection, MAN security access, and so on.

The 4500 series GE intelligent switch has 4 types including DCS-4500-10C, DCS-4500-28T, DCS-4500-52T, DCS-4500-28T-POE. The product designed for ipv4 and ipv6 dual stack network. With the abundant ipv6 features and full Gigabits rate, the product can still work for next generation network.

■ **Application**
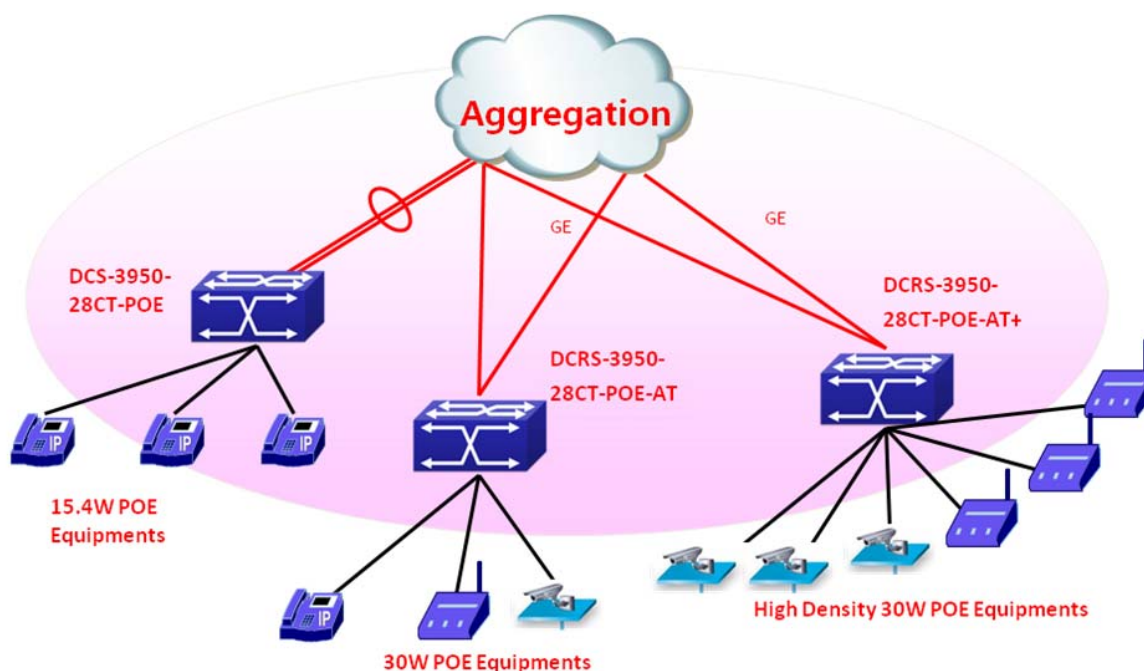
■ **Main Features**

➤ **High adaptability VLAN Features**

- DCS-4500 series support 802.1q and port based VLAN, as well as MAC based VLAN. When user move from one port to another, system can still record it as the same user through identified MAC and then keep the same VLAN for the user.

- DCS-4500 series has unique Stacking Vlan technology, supporting up to 16 million VLAN, thus can provide one VLAN to each user. The advantages are: most small broadcast domain, with high efficiency; separate data between users on L2 with high security; unique VLAN for each user to identify the user; and VLAN for each user improves the management and operation level.

- DCS-4500 series Vlan VPN（QinQ）technique provide low cost, easy operation, manageable L2 VPN function, and differentiate data packets by its service and area to support more and more business.

- Voice Vlan function enables to add IP Phone to voice VLAN to ensure effective QoS.

➤ **High Reliability**

- DCS-4500 series support large number as 2~4 combo Gigabit uplink ports, which could be designed in various ring protection applications, effectively raised the expansibility and performance of network

- DCS-4500 series support VCT & DDM(Digital Diagnostic Monitoring), help to locate the error places in the link, make it fast to solve relative problems for network management

- DCS-4500 series support STP, RSTP, MSTP based on 802.1D, 802.1W, 802.1S, to avoid loop link and configure abundant backup link in network. 802.3ad port aggregation supported, to add link bandwidth and abundant connection between equipments

- With Lightning Protection supported, DCS-4500 series could ensure the network stability in physical aspect.

➢ Enhanced Security

- 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.

- One thousand large number of Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets and forward by different policies.

- The DCS-4500 series support DHCP snooping, which prevents DHCP attacks and illegal DHCP SERVER by setting trust ports and untrust ports. With DHCP Snooping binding and option82 enabled, it can combine modules like dot1x and ARP, or implement user-access-control independently

- The DCS-4500 product support much more L2 security features such as ARP guard, Anti-ARP scanning, and other ARP and MAC security technology to protect network security and reliability.

➢ Comprehensive QoS

- DCS-4500 series switch can classify stream by port, 802.1p, TOS, DSCP, TCP/UDP ports and assign different level of service, supports DWRR/SWRR/WRR/SP to provide QOS for voice/data/video.

- With QinQ, Selective QinQ, Flexible QinQ supported, DCS-4500 series can also differentiate data packets effectively by its service, vlan and area

➢ Abundant Multicast Features

- DCS-4500 series also support MVR(Multicast VLAN Register), selectively allows traffic to cross between different VLANs for bandwidth and security reasons. With MVR Trunk function, which could associate multicast Vlan to trunk port, DCS-4500 series combine the Vlan data into the same link, saving lots of resources for users.

- The DCS-4500 series could prevent multicast traffic from flooding through IGMP Snooping, while multicast traffic is forwarded to ports associated to multicast devices only

➢ POE+ support

- The DCS-4500-28T-POE can support POE (Power Over Ethernet) technical and connect to wireless AP, IP phone and Network Camera. The network can help administrators to easily deploy cable.

- With both 802.3af and 802.3at support, the DCS-4500-28T-POE can support 24 port POE at same time and the MAX power of each port up to 15.4W or 12 ports up to 30W . The product can define the power of each port to save the power and set port priority for each port.

➢ Simple management

- DCS-4500 supports Simple Network Management Protocol （SNMP）, in-band and out-of-band. Supports Command Line Interface（CLI） and WEB, supports Security IP function to prevent illegal users log in or change the configuration.

- As an important feature of carrier network, OAM can help the user to monitor and manage the network across different protocols and equipments.

- DCS-4500 supports Secure Shell（SSH）, which will ensure the security of switch management and configuration.

- DCS-4500 can be managed by general network management platform with 3rd management software.

➢ Abundant IPv6 Support

- The DCS-4500 series switch supports IPv6 in hardware for maximum performance. As more network devices growing and the need for larger addressing and higher security become critical, the DCS-4500 series switch will be a right product to meet the requirement. DCN passed IPv6 form Phase II certificate is the best proof of the application.

- The DCS-4500 series switch also supports DHCPv6, based on IPv6, including DHCPv6 server, client, relay and snooping, etc.

➢ Integrated authentication and billing solution

- DCS-4500 support DCN enhanced 802.1x authentication and billing solution, and authentication by port and MAC address. Working with DCN DCBI3000 and 802.1x client, it can bill by time/flow, and strict bundle for account, password, IP, MAC, VLAN, port, and switches. It support anti spam, internet time control. With user based dynamic VLAN and bandwidth authorization, it can allocate IP address based on group policy without DHCP server.

■ Specifications

Item	DCS-4500-10C	DCS-4500-28T	DCS-4500-28T-POE	DCS-4500-52T
Ports	8x10/100/1000 Base-T with 2x1000M/Gigabits Combo(SFP/GT)	24x10/100/1000 Base-T with 2x1000M/Gigabits Combo(SFP/GT) + 2 Gigabits SFP	24x10/100/1000 Base-T POE with 2x1000M/Gigabits Combo(SFP/GT) + 2 Gigabits SFP	48x10/100/1000 Base-T with 4 Gigabits SFP
Performance				
Switching Capacity	20Gbps	56Gbps	56Gbps	104Gbps
Forwarding Rate	15Mpps	42Mpps	42Mpps	78Mpps
MAC ADDRESS	16K	16K	16K	16K
ACL TABLE	1K	1K	1K	1K
Queues per port	8	8	8	8
VLAN TABLE	4k	4k	4k	4k
Dimension（W×H×D）	330 x 44 x 204mm	440 x 44 x 230mm	440 x 44 x 410mm	442 x 44 x 220mm
Power Supply	Input AC: 100 V～240 V	Input AC: 100V～240 V	Input AC: 100V～240 V	InputAC:100V～240V
Power Consumption	24W	30W	400W	40W
MTBF	>80,000 hours			
Temperature	Working 0°C～50°C, storage -40°C～70°C			
Relative Humidity	5%～95%，non-condensing			
EMC safety	FCC, CE, RoHS,			
Physical protection	Lightning Protection Level: 10/700 4KV			
Main Features				
Forwarding	Storage and forwarding			
L1,L2 Features	VLAN Type	802.1Q based Vlan and support upto 4K vlan id		
		Support QinQ， selective QinQ, Flexibe QinQ		
		Support Voice vlan		
		Port based Vlan		
		MAC based Vlan		
		IP subnet Vlan		
		Protocol based Vlan		
		Private VLAN		
		Support GVRP		
	Spanning Tree	802.1D STP, 802.1W RSTP, 802.1S MSTP		
		Support Root guard, BPDU guard, BPDU forwarding		
	Link	Support LACP 802.3ad, max 128 groups trunk with max 8 ports for each trunk,		

	Aggregation	Support src-mac/dst-mac/src-dst-mac/src-ip/dst-ip/src-dst-ip based load balance				
	MAC Operation	Support MAC binding				
		Support black hole MAC				
		Support MAC limit per port				
	Broadcast storm control	Support Broadcast / Multicast / Unicast Storm Control				
		Supports control and can set rate for broadcast				
	Port	Support VCT & DDM				
		Support UDLD, LLDP, LLDP-MED				
		Support RSPAN, ERSPAN				
		Support 1:1 and N:1 port mirror				
		Jumbo Frame				
		Loopback interface				
		Port loop detection				
		Bandwidth control: At least 64Kbps step				
		Support HOL preventing first packet jam, semi-duplex backpressure, duplex IEEE802.3x				
		GE combo ports could be compatible with FE SFP module				
		Port Protection				
	POE+	NA	NA	Support IEEE 802.3af POE	NA	
				Support IEEE 802.3at POE+ (30W)		
				Support global / port POE function control		
	L3 Lite	Support 8 static routes and route summarization				
QOS Features		8 queues per port				
		Support QinQ, Selective QinQ, Flexible QinQ				
		Traffic classification based on IEEE 802.1p CoS, IP Precedence, DSCP, TCP/UDP port number, Access Control List				
		Supports SP, WRR, SWRR, DWRR for scheduling				
		Support flow shaping				
Security	IEEE 802.1x	Port, MAC based authentication				
		Support guest vlan and auto vlan				
	AAA	RADIUS for Ipv4 and Ipv6				
		TACACS+ for Ipv4				
	ACL	Support 1K Access Control Lists(ACL) based on source/destination IP address, source/destination MAC address, IP type, TCP/UDP port number, IP precedence, time range, ToS.				
		ACL on VLAN interface				
		Flow redirect based on ACL				

	Enhanced	Monitor pingSweep, and anti illegal multicast, controlled traffic
		Ip source guard
		Prevent illegal multicast source and limited multicast.
Multicast		Support IGMP v1/v2/v3 snooping
		Support Multicast Vlan Register (MVR) based on port
		Support Multicast receive control
		Support illegal multicast source detect
		Support multicast policy configuration
IPv6		ICMPv6, NDP, SNMP over IPv6, HTTP over Ipv6, Ipv6 Ping/tracer, Ipv6 Telnet, Ipv6 RADIUS+, Ipv6 Syslog, IPv6 SNTP, IPv6 FTP/TFTP
		Support DHCPv6 Server, Relay, Snooping
		Support MLD Snooping
		Support IPv6 MVR
Management	**Switch Management**	CLI, WEB, Telnet, SNMPv1/v2c/v3 through IPv4 and IPv6
		RMON 1,2,3,9
		SSHv1,v2 & SSL support
		RJ45 Console
		Support Public & Private MIB interface
		Supports SNTP/NTP, Summer Saving Time
		Support Multiple sys-log servers
		Support OAM 802.3ah
		Support NMS software management
		Support MAX 24 unites cluster
		Supports IPv4 and IPv6 Security IP management
	Firmware & Configuration	Multiple firmware images/ configuration files
		Firmware upgrade via TFTP/FTP server
		Configuration file upload/download via TFTP/FTP server
	DHCP	Supports BOOTP, DHCP server/client for IP address assignment
		Support DHCP relay, DHCP relay option 82, DHCP Snooping, and DHCP Snooping option 82

■ **Warranty**

Limited Life Time

■ **Ordering information**

Product	Description

DCS-4500-10C	L2 1000M copper switch, 8*10/100/1000M ports + 2 gigabits combo(SFP/GT) ports
DCS-4500-52T	L2 1000M copper switch, 48*10/100/1000M ports + 4 gigabits SFP ports
DCS-4500-28T	L2 1000M copper switch, 24*10/100/1000M ports + 2 gigabits combo(SFP/GT) ports + 2 gigabits SFP ports
DCS-4500-28T-POE	L2 1000M copper switch, 24*10/100/1000M POE ports +2 gigabits combo(SFP/GT) ports + 2 gigabits SFP ports

■ Connect us

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