

DCS5503C

3 Slot Layer 3 IPv6/IPv4 Routing Chassis Switch

Highlights

- Dual hot-swappable management modules & triple power bays
- Supports up to 120 Gigabit, 40 10G SFP+, and 8 40G QSFP+ ports
- Full IPv4/IPv6 routing: RIP, OSPF, VRRP, PIM-DM/SM/SSM
- Security features include ACL, 802.1X, DHCP snooping, IP Source Guard
- Managed via Web, CLI, SNMPv3, SSHv2, TLS, with ISSU support



Specifications

Model	DCS5503C	
Hardware Specifications		
Total Number of Slots	3	
Max. Management Module	2 (slot 2 and 3) Supports dual master control redundancy and automatic recovery	
Max. Switch Module	2 (slot 1 and 2)	
Number of Power Supply Bays	3	
Number of Fan Trays	1, hot-pluggable (2 axial fans)	
Dimensions (W x D x H)	482.6 x 376.2 x 178.2 mm (with rack-mount kit) 4U high	
Weight	11kg (empty) 14.4kg (Chassis with 1 AC power module and 1 management module)	
Power Requirement	AC: Input 100-240V~, 5A Max 50~60 Hz DC: Input 36-72V , 12.7A Max	
Power Consumption	<350W	
Management Module		
Module Name	DCS55-MS24GS8X	DCS55-MS24GE8X
Management Port	One 10/100/1000BASE-TX RJ45 port	
Console	One RJ45-to-RS232 serial port (9600, 8, N, 1)	
USB	1 x USB2.0 Type A for USB Storage device use	
Button	Reset button: System reboot only	
10/100/1000 RJ45 Ports	-	24
100/1000BASE-X SFP Ports	24	-
10G SFP+ Ports	8	8
Available Switch Modules		
DCS55-MS24GS8X	24-Port 1000BASE-X SFP + 8-Port 10GBASE-X SFP+ Backward compatible with 100BASE-FX SFP transceivers	
DCS55-MS24GE8X	24-Port 10/100/1000BASE-T + 8-Port 10GBASE-X SFP+ SFP+ slot is backward compatible with 1000BASE-X SFP transceivers	
DCS55-MS48GE	48-Port 10/100/1000BASE-T	
DCS55-MS48GS	48-Port 1000BASE-X SFP Backward compatible with 100BASE-FX SFP transceivers	
DCS55-MS24GE24X	24-Port 10/100/1000BASE-T + 24-Port 1000BASE-X SFP	
DCS55-MS16TS	16-Port 10GBASE-X SFP+ Backward compatible with 1000BASE-X SFP transceivers	
DCS55-MS4QS	4-Port 40GBASE-X QSFP+ Supports 40GBASE-SR4/LR4 QSFP+ transceivers and 40G QSFP+ to 4x10G SFP+ breakout cable	

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Total Port Capacity	
Max. 10/100/1000BASE-T	120
Max. 1000BASE-X SFP Ports	120
Max. 10G SFP+ Ports	40
Max. 40G QSFP+ Ports	8
Max. GPON Ports	48
Switching Performance	
Switch Processing Scheme	Store-and-Forward
Switch Throughput	552/1104 Mpps
ACL Table	Ingress Filter: 2816 Egress Filter: 512
Routing Table	IPv4 Protocol: 16K IPv6 Protocol: 16K
MAC Address Table	32K
ARP Table	IPv4 16K \ IPv6 8K
VLAN Table	4K VLAN entries
Shared Data Buffer	32MB
Multicast Table	Layer3 2K Layer2 2K
Flow Control	IEEE 802.3x pause frame for full-duplex Back pressure for half-duplex
Jumbo Frame	9216Bytes
FLASH	64Mbytes
RAM	1Gbytes
IPv6 Layer 3 Functions	
IP Routing Protocol	RIP v1/v2, OSPFv2, BGP (Border Gateway Protocol), Static routing
Multicast Routing Protocol	PIM-DM and PIM-SM, PIM-SSM
Routing Interface	256
Routing Functions	VRRP, Policy routing, Load balance through equal-cost routing, GR (Graceful Restart) of OSPF and BGP, BFD (Bidirectional Forwarding Detection) for OSPF and BGP, IS-IS, Intermediate system to intermediate system
IPv4 Layer 3 Functions	
IP Routing Protocol	RIPng, OSPFv3, BGP4+
Multicast Routing Protocol	PIM-DM and PIM-SM, PIM-SSM
Routing Features	Manual tunnel, ISATAP tunnel, 6-to-4 tunnel
IPv6 Functions	ICMPv6, DHCPv6, ACLv6, IPv6 Telnet, IPv6 Neighbor Discovery, Path MTU Discovery
Layer 2 Functions	
Port Configuration	Port disable/enable,Auto-negotiation 10/100/1000Mbps full and half duplex mode selection, Flow control disable/enable, Bandwidth control on each port, Port loopback detect
Port Mirroring	TX/RX/Both, Many to 1
Link Aggregation	Supports link aggregation cross switch module
VLAN	IEEE 802.1Q tag-based VLAN,, IEEE 802.1ad Q-in-Q VLAN stacking/tunneling, GVRP for VLAN management, Private VLAN, Up to 4K VLAN groups
Spanning Tree Protocol	IEEE 802.1D Spanning Tree Protocol (STP), IEEE 802.1w Rapid Spanning Tree Protocol (RSTP), IEEE 802.1s Multiple Spanning Tree Protocol (MSTP), BPDU protection, root protection
IPv4 IGMP Snooping	IPv4 IGMP v1/v2/v3 snooping, IPv4 Querier mode support, IGMP Filtering and IGMP Throttling, IGMP Proxy reportin, IGMP mmulticast forwarding, Up to 8K multicast groups

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IPv6 MLD Snooping	IPv6 MLD v1/v2 snooping, Multicast VLAN Register (MVR), Up to 8K multicast groups
QoS	8 priority queues on all switch ports, Scheduling for priority queues, Weighted Round Robin (WRR), Strict priority (SP), SP+WRR, Traffic classification: IEEE 802.1p CoS, DSCP, DiffServ, Precedence, TOS, VLAN ID, IP ACL, MAC ACL, Policy-based ingress and egress QoS, 802.1p and DSCP priority remark
Storm Control	Suppression of broadcast, multicast and unknown unicast packet
Bandwidth Control	Ingress and Egress, At least 64Kbps stream
Ring	MSTP, IEEE 802.1s Multiple Spanning Tree Protocol
Security Functions	
Access Control List	Supports Standard and Expanded ACL IP-based ACL MAC-based ACL Time-based ACL ACL based on: MAC Address IPv4/IPv6 IP Address Protocol-number sport/dport ToS/Precedence Ingress Filter: 2560 entries Egress Filter: 1024 entries
Security	MAC address limitation and MAC address filtering MAC sticky (IP + MAC + Port binding) Port isolation DHCP snooping, DHCP option 82 Dynamic ARP inspection IP source guard Defined against DoS or TCP attacks
AAA	TACACS+ and IPv4/IPv6 over RADIUS
Network Access Control	IEEE 802.1x port-based network access control
Management Functions	
System Configuration	Console, Telnet and SSH Web browser SNMP v1/v2/v3
Secure Management Interfaces	SSHv2, SSLv3 Maximum 8 sessions for SSH and Telnet connection
Management Interface	CLI/MGMT/Telnet/SSH
System Management	IPv4 and IPv6 dual stack management, SNMP MIB and TRAP, SNMP RMON 1, 2, 3, 9 four groups, Firmware upgrade by TFTP protocol through Ethernet network, Configuration upload/download through TFTP protocol, Supports IEEE 802.1ab LLDP protocol, NTP and SNTP client, RADIUS authentication for IPv4/IPv6 login user name and password, Statistics analysis of sFlow and Netflow
Event Management	Remote syslog System log
SNMP MIBs	RFC 1213 MIB-II, RFC 1215 Internet Engineering Task Force, RFC 1271 RMON, RFC 1354 IP-Forwarding MIB, RFC 1493 Bridge MIB, RFC 1643 Ether-like MIB, RFC 1907 SNMPv2, RFC 2011 IP/ICMP MIB, RFC 2012 TCP MIB, RFC 2013 UDP MIB, RFC 2096 IP forward MIB, RFC 2233 if MIB, RFC 2452 TCP6 MIB, RFC 2454 UDP6 MIB, RFC 2465 IPv6 MIB, RFC 2466 ICMP6 MIB, RFC 2573 SNMPv3 notification, RFC 2574 SNMPv3 VACM, RFC 2674 Bridge MIB Extensions
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE

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Standards Compliance

IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX, IEEE 802.3z 1000BASE-SX/LX. IEEE 802.3ab Gigabit 1000T IEEE 802.3ae 10Gigabit Ethernet, IEEE 802.3ba 40Gigabit Ethernet, IEEE 802.3x Flow Control and Back Pressure, IEEE 802.3ad Port Trunk with LACP, IEEE 802.1d Spanning Tree protocol, IEEE 802.1w Rapid Spanning Tree Protocol, IEEE 802.1s Multiple Spanning Tree Protocol, IEEE 802.1p Class of Service, IEEE 802.1Q VLAN tagging, IEEE 802.1ad Double VLAN tagging (Q-in-Q), IEEE 802.1x Port Authentication Network Control, IEEE 802.1ab LLDP, IEEE 802.3az Energy Efficient Ethernet, RFC 768 UDP, RFC 783 TFTP, RFC 791 IP, RFC 792 ICMP, RFC 2068 HTTP, RFC 1112 IGMP v1, RFC 2236 IGMP v2, RFC 3376 IGMP v3, RFC 2710 MLD v1, RFC 3810 MLD v2, RFC 2328 OSPF v2, RFC 1058 RIP v1, RFC 2453 RIP v2, RFC 2080 RIPng for IPv6, RFC 2740 OSPFv3 for IPv6

Environment

Operating

Temperature: 0 ~ 50 degrees C
Relative Humidity: 10 ~ 90% (non-condensing)

Storage

Temperature: -10 ~ 70 degrees C
Relative Humidity: 5 ~ 90% (non-condensing)