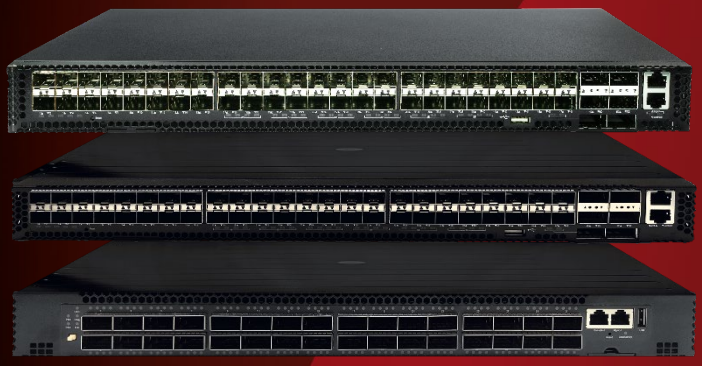
DCN Europe

Switch to
a New Generation

ETHERNET DATA CENTRE SWITCHES
CS6500 SERIES



- CS6510-48S6Q-HI (R3)
- CS6580-48S6CQ-HI
- CS6580-32CQ-HI

Full Layer 3

10Gb and 40Gb ports

Modular power supply

OpenFlow networks

Features without hiding costs

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FULL LAYER 3

- The CS6500 series provides powerful switches working in Layer 2 and Layer 3 offering up to 128,000 routing table entries.
- RIP, OSPF and BGP provide dynamic routing by exchanging route information with other layer 3 switches or routers.
- CS6500 series is equipped with a wide range of Protocol Independent Multicast (PIM) functions, including PIM-DM, PIM-SM, PIM-SSM and MSDP.

40/100 GIGABIT PORTS

- The CS6500 series offers up to 32 ports 100 Gigabit which can work as a redundant link working with various ring protection functions, effectively increasing scalability and network performance.
- Through the ability to split streams on QSFP and QSFP28 ports, this series devices allow 4x 10Gb transmission per each QSFP port or 4x 25Gb each port 100Gb.

MODULAR POWER SUPPLY

- The CS6500 series switches are equipped with redundant Hot-Swap power supplies and Hot-Swap fans to maintain continuous, uninterrupted network operation when replacing one of them.

SOFTWARE DEFINED NETWORK/OPENFLOW

- OpenFlow standard available in the CS6500 family switches, enables implementation of networks in the SDN (Software Defined Networking) architecture.
- OpenFlow is one of the most important projects in software-controlled networks.
- In the SDN concept, network management is transferred from the device to the central node - the network controller. CS6500 series switches using OpenFlow enable the built of efficient and flexibly managed networks.

FEATURES WITHOUT HIDING COSTS

- With using switches of the CS6500 series you can be sure that the equipment which you are using has all available functionalities without the needs to purchase additional licenses.

	CS6510-48S6Q-HI (R3)	CS6580-48S6CQ-HI	CS6580-32CQ-HI
Switch Classification			
Layer 3	✓	✓	✓
Connectivity			
1000/10GBase-X (SFP+)	48	-	-
1000/10G/25GBase-X (SFP28)	-	48	-
40GBase-X (QSFP)	6	-	-
40G/100GBase-X (QSFP28)	-	6	32
(10/100/1000Base-T RJ45) – Mgmt OOB port	1	1	1
Console port – RS-232 (RJ45)	1	1	1
USB port	1	1	1
Performance			
Switch fabric speed	1440 Gb/s	3600 Gb/s	6400 Gb/s
Forwarding rate	1071,42 Mp/s	2678,57 Mp/s	4761,90 Mp/s
Packet buffer	16 MB	16 MB	16 MB
Jumbo frames	12 K	9 K	9 K
MAC address table [1]	96 K (standard) 32 K (routee) 288 K (bridgee) [4]	40 K (standard) 8 K (routee) 104 K (bridgee) 72 K (legacy) [4]	40 K (standard) 8 K (routee) 104 K (bridgee) 72 K (legacy) [4]
Multcast MAC address table	8 K	8 K	8 K
ACL table	4 K Ingress 1 K Egress	768 Ingress 512 Egress	768 Ingress 512 Egress
Routing table [2]	8 K (standard) 16 K (routee) 8 K (bridgee) [4]	32 K (standard) 128 K (routee) 8 K (brdigee) 16 K (legacy) [4]	32 K (standard) 128 K (routee) 8 K (brdigee) 16 K (legacy) [4]
Multicast routing table [3]	4 K	4 K	4 K
ARP table	16 K	32 K (standard) 8 K (routee) 32 K (bridge) 32 K (legacy) [4]	32 K (standard) 8 K (routee) 32 K (bridgee) 32 K (legacy) [4]
Number of VLAN interfaces (IP)	1 K	1 K	1 K
CPU clock	Quad-core – 2.4 GHz	Quad-core – 2,4 GHz	Quad-core – 2.4 GHz
Flash memory	32 GB SSD	32 GB SSD	64 GB SSD
RAM memory	4 GB	16 GB	16 GB
Resilience and availability			
IEEE 802.1D STP/802.1w RSTP/802.1s MSTP	✓	✓	✓
IEEE 802.3ad LACP	✓	✓	✓
Virtual Cable Testing	✓	✓	✓
DDM	✓	✓	✓
LLDP / LLDP-MED	✓	✓	✓
VRRP	✓	✓	✓
Loop guard	✓	✓	✓
ERPS (ITU-T G.8032)	✓	✓	✓
MRPP	✓	✓	✓
ULPP	✓	✓	✓
VxLAN	-	✓	✓
Traffic control			
IEEE 802.3x Full duplex & Flow control	✓	✓	✓
802.1Q VLANs	4 K	4 K	4 K
Port-based VLAN	✓	✓	✓
Protocol-based VLAN	✓	✓	✓
IP subnet based VLAN	✓	✓	✓
Voice VLAN	✓	✓	✓
Mac VLAN	✓	✓	✓
Super VLAN	✓	✓	✓
LACP algorithm of source/destination IP (load balance)	✓	✓	✓
GVRP	✓	✓	✓
802.1ad Vlan Stacking (QinQ)	✓	✓	✓
Flexible QinQ	✓	✓	✓
Security			
Layer 2 MAC filtering	✓	✓	✓
BPDU Tunnel	✓	✓	✓
BPDU Guard	✓	✓	✓
Login authentication and authorization by Radius and Tacacs+	✓	✓	✓
TACACS+ accounting/ auditing	✓	✓	✓
SSH v1/v2	✓	✓	✓
DHCP/DHCPv6 snooping	✓	✓	✓
IP/IPv6 Source Guard	✓	✓	✓
Port security	✓	✓	✓
IEEE 802.1x port-based / mac-based	✓	✓	✓
QoS			
802.1p Priority Queues per Port	8	8	8
802.1p Queuing method	✓	✓	✓
Trusted COS/TOS/IP Precedence/DSCP/Port number	✓	✓	✓
Broadcast Storm Control	✓	✓	✓
Rate Limiting, port based	✓	✓	✓
Strict priority	✓	✓	✓
Weighted Round Robin	✓	✓	✓
Weighted Deficit Round Robin	✓	✓	✓
Weighted Random Early Detection	✓	✓	✓
Strict priority in Weighted Round Robin	✓	✓	✓
Strict priority in Weighted Deficit Round Robin	✓	✓	✓

[1] MAC address table shared for unicast and multicast (in 1:1 ratio)
[2] Routing Table for IPv4 shared with IPv6 (in 4:1 ratio)
[3] Routing Table shared for unicast and multicast (in 1:1 ratio)
[4] MAC address table and routing table assigned depending on the selected operating mode (standard, routee ,bridgee or legancy)

	CS6510-48S6Q-HI (R3)	CS6580-48S6CQ-HI	CS6580-32CQ-HI
L2/L3 - Multicast			
Multicast VLAN	✓	✓	✓
IGMP v1,v2, v3	✓	✓	✓
IGMP Query	✓	✓	✓
IGMP Snooping (v1,v2,v3)	✓	✓	✓
IGMP Snooping Fast Leave(v2,v3)	✓	✓	✓
PIM-DM/SM/SSM	✓	✓	✓
anycast RP	✓	✓	✓
IPv6 MLD v1/v2 Snooping	✓	✓	✓
Routing			
Static routing IPv4 / IPv6	✓	✓	✓
RIP v1,v2 / RIPng	✓	✓	✓
OSPF v2 / OSPF v3	✓	✓	✓
BGP / BGP4+	✓	✓	✓
Layer 3 IPv6			
IPv4/IPv6 Dual Protocol Stack	✓	✓	✓
IPv6 address	✓	✓	✓
IPv6 Tunneling	✓	✓	✓
Manageability			
GUI (Web)	✓	✓	✓
Telnet	✓	✓	✓
SNMP v1/v2c/v3	✓	✓	✓
TFTP/FTP	✓	✓	✓
Configuration backup and restore	✓	✓	✓
Wielopoziomowy CLI	✓	✓	✓
DNS Client	✓	✓	✓
DHCP Client/Relay/Server	✓	✓	✓
DHCP option 43/60/82	✓	✓	✓
DHCPv6 option 37/38	✓	✓	✓
DHCPv6 Relay/Server	✓	✓	✓
SNTP / NTP	✓	✓	✓
sFlow	✓	✓	✓
Port Mirroring per IP/TCP/UDP	✓	✓	✓
RSPAN	✓	✓	✓
ERSPAN	✓	✓	✓
Cluster	✓	✓	✓
OpenFlow 1.0	✓	✓	✓
Stack (VSF)	✓	✓	✓
Stack (VSF-HA)	✓	-	-
IEEE 802.3ah EFM	✓	✓	✓
IEEE 802.1ag CFM	✓	✓	✓
MIB			
RFC1066 – TCP/IP-based MIB	✓	✓	✓
RFC1213, 1157 – SNMPv2c/v3 MIB	✓	✓	✓
RFC1493 – bridge MIB	✓	✓	✓
RFC2674 – bridge MIB extension	✓	✓	✓
RFC1643 – ethernet MIB	✓	✓	✓
RFC1757 – RMON group 1,2,3,9	✓	✓	✓
RFC 2925 – Remote Management MIB	✓	✓	✓
RFC2233 – SMIv2 MIB	✓	✓	✓
Physical			
Dimensions (Width x Height x Depth)	443 mm x 44 mm x 503 mm	438 mm x 44 mm x 473 mm	438 mm x 44 mm x 515 mm
Operating temperature	0 °C ~ 45 °C	0 °C ~ 45 °C	0 °C ~ 45 °C
Humidity	10% - 90% (no condensation)	10% - 90% (no condensation)	10% - 90% (no condensation)
Cooling	active	active	active
Fans	5x Hot Swap	6x Hot Swap	6x Hot Swap
Electrical			
Power supply	230V AC, Hot Swap	230V AC, Hot Swap	230V AC, Hot Swap
Redundant power supply	230V AC, Hot Swap	230V AC, Hot Swap	230V AC, Hot Swap
Power consumption	≤ 305W	≤ 511W	≤ 550W