

DIGISOL 100G Datacenter Switch

DG-CS5656FSQ28

Key Features:-

- 48 25G SFP+ & 8 100G QSFP28 slots
- Fully equipped with Datacenter Features
- RADIUS & TACACS+ Authentication
- Ethernet Ring Protection Switching (ERPS)
- VXLAN, EVPN, M-LAG, and NETCONF
- ZTP (Zero Touch Provisioning)
- Green Touch Energy Saving
- Priority Flow Control (PFC), DCBX, RoCEv2
- ISSU (In-Service Software Upgrade)
- IPv6 versatile protocols



Introduction:-

DIGISOL DG-CS5656FSQ28 switches is new generation of high-performance, all-10G data center TOR switches launched by Digisol system Ltd., targeting high-performance cloud computing, data centers, and high-end campus networks. The DG-CS5656FSQ28 adopts an advanced hardware architecture design, delivering industry-leading switching performance and rich data center service features.

The DG-CS5656FSQ28 provides high-density 25G/100G data center access capabilities. To meet the requirements for network resource pooling in cloud computing data centers, the DG-CS5656FSQ28 supports rich data center features such as VXLAN, EVPN, M-LAG, and NETCONF.

The switch also supports standard data center front-to-back or back-to-front airflow design, with flexible selection of airflow direction.

Key Highlights:-

Data Center Grade High Reliability

Based on the HPS (Hitless Protection System), key power systems adopt redundant design, are modular and hot-swappable, supporting seamless failover without service interruption. DG-CS5656FSQ28 supports STP/RSTP/MSTP protocols, VRRP protocol, as well as simple and efficient redundancy protection mechanisms like ring network protection, dual uplink active/standby link protection, and LACP link aggregation. Features like ISSU (In-Service Software Upgrade), ensures uninterrupted user data forwarding during system upgrades and main control unit switchovers. High-precision BFD bidirectional link detection mechanism, through interaction with Layer 2 and Layer 3 protocols, achieves millisecond-level fault detection and service recovery, greatly enhancing network system reliability. Comprehensive Ethernet OAM mechanism, supporting 802.3ah, 802.1ag, and ITU-Y.1731, enabling rapid fault detection and localization through real-time monitoring of network operational status. High-reliability design of DG-CS5656FSQ28 hardware and software meets the 50ms fault recovery time requirement, truly achieving five-nines (99.999%) high reliability for core equipment.

Comprehensive Security Mechanisms

Features multiple device-level and link-level reliability protections. The 50ms-200ms link fast failover, ensures uninterrupted transmission of critical services. Supports cross-device link aggregation, facilitating server/switch connectivity with dual-active uplinks. Employs redundant backup design for critical hardware components. Utilizes overcurrent protection, overvoltage protection, and overtemperature protection technologies.

Innovative Green Design

DG-CS5656FSQ28 inherits advanced "GreenTouch" concept, emphasizing energy saving and environmental protection. Intelligent Power Management System: DG-CS5656FSQ28 adopts an advanced power system architecture design, achieving high-efficiency power conversion, with unique features like power monitoring and soft start, real-time monitoring of the unit's operational status, intelligent adjustment, and deep energy saving. Intelligent Fan Management System: Smart fan design, supports flexible selection of front-to-back or back-to-front airflow, supports automatic fan speed adjustment, effectively reducing speed and noise, and extending fan lifespan. Supports Energy Efficient Ethernet, complying with the IEEE 802.3az international standard, effectively reducing energy consumption.

Technical Specifications:-

Hardware Features:

Item	DG-CS5656FSQ28
PORTS	48x 1/10/25G SFP28+ Ports + 8x 40/100G QSFP28 Ports
	Console port
	Management port
	USB 2.0 port
PERFORMANCE	
Switching Capacity	6.4Tbps
Forwarding Rate	3000Mpps
MAC address	210K
Jumbo Frame	9K
Packet buffer	32M
RAM	2GB
Flash	8GB
IPv4 Routing Entry	32K/4K

Software Features:

Item	DG-CS5656FSQ28
VLAN	4K VLAN entries
	GVRP
	1:1 and N:1 VLAN Mapping
	Basic QinQ and flexible QinQ
	Private VLAN
STP	802.1D (STP), 802.1W (RSTP), 802.1S (MSTP)
	BPDU protection, Root protection, Loop protection
Multicast	IGMP v1/v2/v3
	IGMP Snooping
	IGMP Fast Leave
	Multicast group policy and group number limits
	Multicast traffic cross-VLAN replication
	PIM-SM, PIM-DM
IPv4	Static routing, RIP v1/v2, OSPF, BGP, IS-IS, EIGRP
	Policy-Based Routing
	Load balancing via equal-cost routes
	BFD for OSPF, BGP
IPv6	ICMPv6, DHCPv6, ACLv6, IPv6 Telnet
	IPv6 Neighbor Discovery
	Path MTU Discovery
	MLD v1/v2
	MLD Snooping
	IPv6 static routing, RIPng, OSPFv3, BGP4+
	Manual tunnels, ISATAP tunnels, 6to4 tunnels

Technical Specifications:-

Software Features:

Item	DG-CS5656FSQ28
VXLAN	Manual VXLAN tunnel configuration
	VXLAN Distributed Gateway
	VXLAN Dual-Active Access
	VXLAN for cross-data center interconnection
	VXLAN L2 Protocol packet transparent transmission
	Modifying VXLAN outer header DSCP
	BGP EVPN
	Overlay split horizon, controllable per VNI
MLAG	basic MLAG functionality
	MLAG single-arm functionality
Intelligent Lossless Network	Priority Flow Control (PFC)
	DCBX functionality
	RoCEv2
MAC Switching	Static MAC configuration
	Dynamic learning of MAC addresses
	Viewing and clearing MAC addresses
	Configurable MAC address aging time
	limiting the number of learned MAC addresses
	MAC address filtering
	Blackhole MAC entries
	IEEE 802.1AE MacSec security control
QoS	Traffic classification based on L2/L3/L4 header fields
	CAR traffic policing
	802.1P/DSCP priority remarking
	Queue scheduling methods: SP, WRR, SP+WRR
	Congestion avoidance mechanisms: Tail-Drop, WRED
	Traffic policing and shaping
	Ingress and Egress ACL, matching L2, L3, L4, and IP quintuple for copying, forwarding, discarding
	Hash-based same-source same-destination load balancing, ensuring session integrity for traffic output
Security Features	ACL flow identification and filtering security mechanisms based on L2/L3/L4
	Protection against DDoS attacks, TCP SYN Flood attacks, UDP Flood attacks, etc.
	Suppression of multicast, broadcast, and unknown unicast packets
	Port isolation
	Port security, IP+MAC+port binding
	DHCP Snooping, DHCP Option 82
	IEEE 802.1x authentication
	Radius, Tacacs+ authentication
	uRPF
	Hierarchical CLI protection

Technical Specifications:-

Software Features:

Item	DG-CS5656FSQ28
Reliability	Optional power supply 1+1 backup
	Static/LACP link aggregation, supports cross-line card link aggregation
	EAPS, ERPS ring network protection
	HSRP, VRRP hot standby protocols
	GR for OSPF, BGP
	BFD for OSPF, BGP
	ISSU in-service system upgrade
Management & Maintenance	Console, Telnet, SSH 2.0
	ZTP (Zero Touch Provisioning)
	WEB-based management via browser
	SNMP v1/v2/v3 file upload/download management via TFTP
	RMON event history recording
	sFlow and other traffic statistical analysis
Energy Saving	IEEE 802.3az Energy Efficient Ethernet
Physical	Dimension (W×D×H) : 442.5*400*44.5mm
	Power Input : Two Power Slots AC 100~240V, 50Hz
	Operating Temperature : -10°C~50°C
	Storage Temperature : -20°C~70°C
	Relative Humidity : 10%~90%, non-condensing

Rear View



Ordering Information:-

DG-CS5656FSQ28: DIGISOL L3 Datacenter Switch with 48 10/25G SFP 28 ports + 8 40/100G QSFP28 ports Switch with 2 hot-swappable power supply slots. Default with dual AC power supplies; 1U height, 19-inch rack mountable

*Warranty shall be subject to terms and conditions specified in the DIGISOL PRODUCT WARRANTY displayed on the website of the company.

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