



Product Highlights

DGS-9600E is a high-performance cloud computing, data centers, and high-end campus networks. The DGS-9600E series features an advanced hardware architecture, delivering the industry's highest switching performance and a rich array of data center business features.

DGS-9600E series supports up to 576 10G ports, 72 40G ports, and 72 100G ports.



DGS-9600E SERIES

CHASSIS SWITCHES

DGS-9600E Series is a new generation highperformance core switch oriented for high performance computing, data center and highend campus networks. DGS-9600E Series adopts advanced hardware architecture design. DGS-9600E supports a maximum of 576 10G ports, 72 40G ports, and 72 100G ports.. DGS-9600E Series provides high-performance L2/L3/L4 wire speed switching capacity by integrating services such as IPv6, network security, flow analysis, virtualization, with high reliable techniques including continuous forwarding, graceful restarting and loop network protection, the work efficiency of DGS-9600E Series and its maximum running time are guaranteed. DGS-9600E Series supports Green architecture. DGS-9600E Series has two models: DGS-9608E and DGS-9614E.

Advanced Hardware Architecture and & Industry-Leading Processing Capacity

Designed for 100G Platforms: Features an industryleading distributed multi-stage switching matrix architecture, equipped with high-performance ASIC switching chips and multi-core processors, meeting the requirements for high performance, high capacity,high density, and scalability of carrier-grade core devices.

Supports High-Density 10G line cards: Enables full linerate,non-blocking Layer 3 switching across cards.

Port Capacity: Supports up to 576 10G ports, 72 40G ports, and 72 100G ports

Rich Business Features

Complete Layer 2 and Layer 3 multicast routing protocols meet the access needs of IPTV, multiterminal HD video surveillance, and HD video conferencing. Comprehensive Layer 3 routing protocols with large routing table capacity meet various network interconnection needs, enabling the construction of ultra-large campus networks, enterprise networks, and industry-specific private networks.Enhanced service security mechanism: Supports plaintext or MD5 authentication for related routing protocols, supports uRPF reverse path forwarding technology for effective illegal service control; hardware-level deep packet inspection and filtering technology supports deep inspection of control and data packets, effectively isolating illegal data packets, and improving network system security.

Innovative VSS Technique

Supports Innovative Virtual Switch System: Enables virtualization of multiple physical devices into a single logical device. Compared to standalone physical devices,the virtual system offers unparalleled advantages in performance, reliability, flexibility, and management.

Performance Boost: The virtualization system fully utilizes every link between physical devices, eliminating the link blocking caused by the Spanning Tree Protocol in traditional network models. This maximizes the use of existing links, doubling performance and protecting original link investments to the greatest extent.

High Reliability: Based on advanced distributed processing technology, the system leverages efficient cross-device link aggregation to achieve three-plane separation: logical control plane, service control plane, and service data plane. This ensures uninterrupted Layer 3 routing and forwarding, avoiding service interruptions caused by single-point failures and significantly enhancing system reliability.

Ease of Management: The entire virtual system is managed through a single unified IP, making the underlying physical devices transparent to the user. This simplifies the management of network devices and topologies, greatly improving network operational efficiency and effectively reducing operational and maintenance costs.

Carrier-Grade Reliability

HPS (Hitless Protection System): Ensures redundancy for key components (system control unit, power system, fan system) and hot-swappable system modules, allowing seamless switching during failures without manual intervention.

Supports STP/RSTP/MSTP protocols, VRRP protocol, ring network protection, dual uplink master-slave link protection, and LACP link aggregation for efficient redundancy protection mechanisms.

Supports ISSU (In-Service Software Upgrade) for nonstop system upgrades, and GR (Graceful Restart) for OSPF/BGP routing protocols, ensuring uninterrupted user data forwarding during system upgrades and master control switching.

High-precision BFD bi-directional link detection mechanism provides millisecond-level fault detection and service recovery, greatly improving network system reliability.

High-reliability design meets telecom-grade service recovery time requirements of 50ms, achieving carriergrade core equipment's 99.999% high reliability.

Innovative Green Environmental Design

Intelligent power management system: Adopts an advanced power system architecture design for efficient power conversion, unique power monitoring, soft start, sequential power-on, and other functions, real-time monitoring of the whole machine operation status, intelligent adjustment, deep energy saving.

Intelligent fan management system: Intelligent fan design supports automatic speed adjustment and independent partition control, effectively reducing speed, noise, and extending fan life.

Supports Energy Efficient Ethernet function, compliant with international standard IEEE 802.3az, effectively reducing energy consumption.

Comprehensive IPv6 Solutions

Fully supports IPv6 protocol suite, including IPv6 neighbor discovery, ICMPv6, Path MTU discovery, DHCPv6, and other IPv6 features.

Supports IPv6-based Ping, Traceroute, Telnet, SSH, ACL, and other management and service control needs for pure IPv6 network equipment.

Supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3, BGP4+, and other IPv6 Layer 3 routing protocols, providing comprehensive IPv6 Layer 2 and Layer 3 solutions.

Comprehensive Security Mechanisms

Device-level security protection: Advanced hardware architecture design provides hierarchical scheduling and protection for packets, supports DoS, TCP SYN Flood, UDP Flood, broadcast storm, large traffic, and other attack prevention; supports 6KV port lightning protection; supports command line hierarchical protection with different management permissions for different level users.

Comprehensive security authentication mechanism: Supports IEEE 802.1x, Radius, Tacacs+, providing a complete security authentication mechanism for users.

Features

MAC Switching Capacity

- Static configuration and dynamically learning of MAC address
- Check and clear MAC address
- Configuring of MAC address aging time
- Limit on MAC address learning number
- MAC address filtering function
- Black-hole MAC items
- IEEE 802.1AE MacSec SecurityControl

VLAN

- 4K VLAN entries
- GVRP
- 1:1 and N:1 VLAN Mapping
- Basic QinQ and selective QinQ
- Private VLAN

STP

- 802.1D (STP), 802.1W (RSTP), 802.1S (MSTP)
- BPDU protection, root protection and ring protection

Multicast

- IGMP v1/v2/v3
- IGMP Snooping
- IGMP Fast Leave
- Multicast group policy and multicast number limit
- Multicast traffic cross VLAN duplication
- PIM-SM and PIM-DM

Management and maintenance

- Console, Telnet and SSH
- SNMP v1/v2/v3
- Upload and download of TFTP files
- Remote Network Monitoring (RMON)
- Statistics analysis of sFLOW

IPv4

- Static routing, RIP v1/v2, OSPF and BGP
- Policy routing
- Load balance through equal-cost routing
- Graceful Restart of OSPF and BGP
- BFD for OSPF and BGP

IPv6

- ICMPv6, DHCPv6, ACLv6, IPv6 Telnet
- IPv6 Neighbor Discovery
- Path MTU Discovery
- MLD and MLD Snooping
- IPv6 static routing, RIPng, OSPFv3 and BGP4+
- Manual tunnel, ISATAP tunnel and 6-to-4 tunnel

QoS

- Traffic classification of each field of L2/L3/L4 protocol headers
- CAR traffic control
- 802.1P/DSCP priority remark
- Multiple queuing algorithms such as SP, WRR or SP+WRR
- Tail-Drop, WRED
- Traffic supervision and traffic shaping
- Ingress and Egress ACL, and matching L2, L3, L4 and IP quintuples for copying, forwarding and discarding
- Hash algorithms and load balancing

Environment

- Operating temperature/humidity: 0°C-40°C; 10%-90% non-condensing
- Storage temperature/ humidity: -20°C-70°C; 5%-95% non-condensing

Security Features

- Identification and filtering of L2/L3/L4 based ACL
- Defend against DOS or TCP attacks
- Suppression of broadcast, multicast and unknown unicast packet
- Port isolation
- Port security, IP+MAC+port binding
- DHCP Snooping, DHC Option 82
- IEEE 802.1x authentication
- Radius and Tacacs+ authentication
- uRPF
- Command line authority control based on user levels

Reliability

- Dual Master Control Redundancy
- Power M+N backup
- Master control, service card hot swap and service automatic recovery
- Static/LACP link aggregation and cross service card link aggregation Ring network protection including EAPS
- VRRP
- GR for OSPF and BGP
- BFD for OSPF and BGP

Energy saving

- IEEE 802.3az green Efficient Ethernet

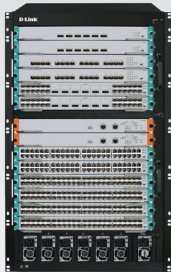
Value-added services

- IEEE 802.3az green Efficient Ethernet



DGS-9608E

· 1 fan tray, 6 standard power supply slots, 1 PoE power slot, excluding a power supply by default; features 2 main control slots and 6 line card slots.



DGS-9614E

· 2 fan trays, 6 standard power supply slots, 1 PoE power slot, excluding a power supply by default; features 2 main control slots and 12 line card slots.

Technical Specification		
Items	DGS-9608E	DGS-9614E
Switching capacity	32Tbps	42Tbps
Forwarding rate	5357Mpps	10714Mpps
Slot number	8	14
Line card slot	6	12
Power supply	AC:100V-240V	AC:100V-240V
Power slots	7	7
Overall Weight (Empty)	30.2Kg	43Kg
Dimensions	485.7×482.6×370mm	755×482.6×370mm

Ordering Information

Item	Description
Chassis	
DGS-9608E	Chassis of DGS-9608E with fan tray included, 6 standard power supply slots without power module and 1 PoE power supply slot without power module, 2 control module slots and 6 service slots
DGS-9614E	Chassis of DGS-9614E with fan trays included, 6 standard power supply slots without power module and 1 PoE power supply slot without power module, 2 control module slots and 12 service slots
9600E-PWR-AC	1300W AC power module for DGS-9600E Series
9600E-PWR-POE	1200W PoE AC power module for DGS-9600E Series
9608E-CM	Control module for DGS-9608E
9614E-CM	Control module for DGS-9614E

Ordering Information

Item	Description
Chassis	
9600E-24T24S	24 10/100/1000Base-T Ports and 24 SFP ports line card module
9600E-48T	48 10/100/1000Base-T Ports line card module
9600E-48S	48 SFP Ports line card module
9600E-48P	48 10/100/1000Base-T PoE line card module (802.3af/at)
9600E-24S8XS	24 SFP Ports and 8 x 10G SFP+ ports line card module
9600E-24T8XS	24 10/100/1000Base-T Ports and 8 x 10G SFP+ ports line card module
9600E-16XS	16 Ports 10G SFP+ line card module
9600E-48XS	48 Ports 10G SFP+ line card module
9600E-4QS	4 Ports 40G QSFP+ line card module
9600E-24XS6QS	24 Ports 10G SFP+ and 6 Ports 40G QSFP+ line card module
9600E-6QS28	6 Ports 100G QSFP28 line card module

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