



FEATURES

- 48 10/100/1000 Base-T PoE, 4 Combo 1000 Base-T/SFP Port.
- 2 open slots for optional single-port 10G modules.
- Stackable through 10-Gigabit extension modules.

HIGH RESILIENCY

- 802.1D/w/s Spanning Tree, 802.3ad -Link Aggregation.
- Rapid Ether Ring Protection (RERP).
- Virtual Router Redundancy Protocol (VRRP).

QUALITY OF SERVICE

- 8 Hardware Queues.
- 802.1p Priority Queues/
- Multi-Layer CoS.
- IP Multicast support for Bandwidth-Intensive Applications.
- Flow-Based Bandwidth Control

ROBUST SECURITY

- Advanced L2/L3/L4 ACL.
- IP-MAC-Port Binding.
- Virus/Malicious Traffic Flooding Prevention.
- CPU Protection Policy (CPP).

L3 ROUTING

- RIP/OSPF/BGP.
- Policy Based Routing (PBR).
- ECMP/WCMP.
- PIM-DM/SM/SSM.
- BGP.

IPv6 READY

- ICMPv6.
- IPv6 Neighbor Discovery.
- IPv6/v4 Tunneling.
- RIP/OSPFv3.
- PIM v6*.



L3 MANAGED STACKABLE GIGABIT SWITCH

The DGS-3610-50P switch is the new-generation Layer 3 switch launched by D-Link that features high performance, high security, and multi-services. It provides flexible interface forms to meet various connection needs of different media in a network construction.

With full Gigabit interface form, scalable high-density 10G ports, and all ports wire speed forwarding, the DGS-3610-50P switch is ideally suitable for the aggregation layer of a large network requiring high bandwidth, high performance, and flexible expansion, the core layer of a medium-sized network, and access of the server cluster in data center.

The DGS-3610-50P switch provides hardware support for IPv4/IPv6 switching at line rates and also rich tunnel technologies for communication between IPv4 and IPv6 networks. This series can be used in pure IPv4 networks, IPv6 networks, IPv4/IPv6 dual-stack networks and fully meet the requirement of campus network for the transition from IPv4 to IPv6.

The DGS-3610-50P switch provides multi-layers traffic classification, perfect Quality of Service (QoS) policies and processes different service flows according to different applications, so to ensure that critical data are transmitted without delay.

The DGS-3610-50P switch provides high performance and perfect end-to-end QoS, flexible and rich security settings, and policy-based network management with an attractive price/performance ratio to meet the needs of intranets for high speed, security, and intelligence to the maximum extent possible.

HIGH RELIABILITY

The DGS-3610-50P switches support a number of link reliability technologies including Rapid Ether Ring Protocol (RERP). RERP is a network protection mechanism which ensures normal operations without impacting network convergence time. It can rapidly start up the backup link when a node or link on the Ethernet ring is disconnected. Other network resiliency features include Spanning Tree, Rapid Spanning Tree and Multiple Spanning Tree protocol.

COMPREHENSIVE IPv6 SUPPORT

To ensure compatibility and interoperability with the latest Internet standards, the switch supports emerging applications such as Internet-enabled wireless devices, home and industrial appliances, Internet-connected transportations, integrated telephony services, sensors networks, and distributed computing or gaming requirements. The use of globally unique IPv6 addresses simplifies the mechanisms used for reachability and end-to-end security for network devices. This functionality is crucial for applications and services that drive the demand for IP addresses.

ENTERPRISE WIDE SECURITY

Access security is provided through comprehensive Policy-Based ACL, Port Security, IP-MAC-Port Binding

features, and Defeat IP Scan. Meanwhile malicious attacks hidden behind control protocols can be thwarted to prevent the switch's CPU from being overwhelmed with redundant tasks which would cause performance degradation. The DGS-3610-50P also supports SSH v2 and SNMP v3 functions to ensure secure management access to switches with authentication and encryption in network management traffic.

QOS & BANDWIDTH MANAGEMENT

The DGS-3610-50P supports numerous advanced traffic management options including Flow-Based Bandwidth Control and Broadcast/Multicast Storm Control. It also supports Egress Traffic Bandwidth Control with minimum granularity of 64 Kbits. With a combination of Rate Limiting function (applicable to CPE subscribers) and Access Control-Based Accounting, the DGS-3610-50P provides useful functions for carriers that offer services to home users in a Metropolitan Ethernet Network.

COMPREHENSIVE MANAGEMENT

A comprehensive set of management features is provided to ensure enterprise wide visibility and control for configuration, access/traffic monitoring and troubleshooting to network administrators. These features are accessible through CLI, Telnet or the SNMP console. RMON monitoring, complete system debug data, alert information, and interface management are also supported.

EASE OF USE AND EASE OF MANAGEMENT

Multiple types of Gigabit interfaces meet the needs of connections requiring multiple Gigabit copper links and multiple Gigabit fiber links, facilitating users to select cables flexibly.

For environments where external power supplies are not suited to be deployed, the DGS-3610-50P switch supports PoE, which can provide power through twisted pairs to PoE devices remotely attached, such as wireless APs, IP phones, and video monitoring devices. In this manner, it facilitates the access of any terminal device compliant with IEEE 802.3af to realize Ethernet centralized power supply, meeting the requirements of financial institutions, enterprises, schools, hospitals, and factories for implementing network applications such as VoIP, remote monitoring, and wireless APs.

The Network Time Protocol (NTP) ensures the accuracy of the switch time and makes the switch time consistent with the time of the network, which facilitates analysis of log information and traffic information and fault diagnosis. Syslog facilitates unified collection, maintenance, analysis, and backup of various log information and fault location, making it convenient for administrators to conduct network maintenance and management. Data flows of multiple ports can be monitored at the same time through one port. You can monitor input frames or output frames or both, with maintenance efficiency improved greatly. The CLI interface provides convenience for advanced users in configuration and use.

SECURITY FEATURES

- Supports the binding of the IP address, MAC address, and port address.
- Supports the binding of the IPv6, MAC address, and port address.
- Supports security channels.
- Supports anti-gateway frauds.
- Limits the number of MAC addresses learned by a port.
- Filters illegal MAC addresses.
- Supports ARP check under both dynamic address allocation policy and static address allocation policy.
- Supports DAI.
- Supports the prevention of setting a DHCP server without permission.
- Supports hierarchical management by administrators and password protection.
- Supports AAA security authentication (IPv4/IPv6) in device login management.
- Supports IP source alarm.
- Supports control plane protection.
- Supports 802.1x (port-based authentication, MAC-based authentication, dynamic delivery of VLANs, dynamic delivery of ACLs, Guest VLAN, bypass MAC authentication, and failed port going to a specified VLAN)
- Supports DoS protection.
- Supports the restriction on the rate of ARP packets.
- Supports the suppression of broadcast storms and of multicast storms.
- Supports SSH v2.0.
- Supports TACACS+ and specifying of source IP addresses.
- Supports Radius (Radius, EXEC authorization, and specified source IP address).
- Supports BPDU Guard.

MPLS* (fully supported as of next firmware version, Q2-2011)

- Supports MPLS L3VPN.
- PE functions.
- MCE function.

DIMENSIONS (LENGTH x WIDTH x HEIGHT)

- 440 x 420x 44 mm.

POWER SUPPLY

- 90 VAC–264 VAC, 50 Hz–60 Hz.

POWER CONSUMPTION

- 90W (without extension module)
- 105W (with extension module)

TEMPERATURE

- Operating temperature: 0°–50°
- Storage temperature: –20° to 50°

HUMIDITY

- Operating humidity: 10%–90%RH
- Storage humidity: 5%–95%RH

TECHNICAL SPECIFICATIONS**PORTS**

- 48 Ports 10/100/1000BASE-T (RJ45)
- 4 Combo Ports 1000BASE-X (SFP, LC)
- 2 Extension Slots (stack or uplink)
- AC

SWITCHING CAPACITY

- 240G

FORWARDING RATE

- L2: line rate (102Mpps)
- L3: line rate (102Mpps)

VLAN

- Supports 4K 802.1q VLANs.
- Supports Super VLAN.
- Supports Protocol VLAN.
- Supports Private VLAN.
- Supports MAC-address-based VLAN.
- Supports QinQ.

LINK AGGREGATION

- Supports LACP (802.3ad).

PORT MIRRORING

- Supports many-to-one mirroring.
- Supports flow-based mirroring.

SPANNING TREE PROTOCOL

- Supports STP, RSTP, and MSTP.

DHCP

- DHCP/BOOTP Client.
- DHCP Server.
- DHCP Relay.
- DHCP Snooping.
- DHCP Snooping Trust.
- DHCPv6 Server.
- DHCPv6 Snooping.

IPv6 BASIC PROTOCOLS

- Supports IPv6 addressing.
- Neighbor Discovery Protocol (NDP).
- ND-Snooping.
- ICMPv6 stateless automatic configuration.
- Path MTU Discovery.

IP ROUTE

- Supports static routes.
- Supports RIP and RIPng.
- Supports OSPF and OSPFv3.
- Supports BGP and BGP4+.
- Supports equal-cost routes (ECMP).
- Supports packet-based load balancing and flow-based load balancing.

MULTICAST

- Supports IGMPv1, IGMP v2, IGMPv3, and IGMP proxy.
- Supports IGMPv1 Snooping, IGMP v2 Snooping, and IGMPv3 Snooping.
- Supports IGMP filter and IGMP fast leave.
- Supports PIM-DM, PIM-SM, and PIM-SSM.
- Supports MLD Snooping and MLD.
- Supports PIM for IPv6.

IPv6 TUNNEL

- Supports manual tunnel
- ISATAP tunnel
- 6to4 tunnel
- IPv6 over IPv4 tunnel
- IPv4 over IPv6 tunnel.

ACL & QoS

- **ACL:**
 - Supports various hardware ACLs:
 - Standard IP ACL (hardware ACL based on IP addresses).
 - Extended IP ACL (hardware ACL based on the IP address and TCP/UDP port number).
 - Extended MAC ACL (optional Ethernet-type hardware ACL based on the source MAC address and destination MAC address).
 - Expert-level ACL (hardware ACL based on random combination of the VLAN number, Ethernet type, MAC address, IP address, TCP/UDP port number and protocol type).
 - VLAN-based ACL.
- **QoS:**
 - Supports traffic identification of ports.
 - Support 802.1p/DSCP/TOS traffic classification.
 - Supports eight queues with different priorities for each port.
 - Supports PQ, RR, PQ+RR.
 - Supports traffic shaping.
 - Supports rate limiting.
 - Supports hierarchical QoS.

MANAGEMENT FEATURES

- SNMPv1/v2c/v3
- CLI (Telnet/Console)
- RMON (1,2,4,9)
- SSH
- Syslog
- NTP/SNTP
- SNMP over IPv6
- IPv6 MIB support for SNMP
- SSHv6
- Telnetv6
- FTP/TFTv6
- DNS v6
- NTP for v6
- Traceroute v6

HIGH RELIABILITY

- Upgrades software during running.
- Accelerates the restart process.
- BFD cooperates with OSPF.
- BFD cooperates with LDP.
- BFD cooperates with PBR.

OTHER PROTOCOLS

- FTP.
- TFTP.
- DNS Client.
- DNS static.