

Product Highlights

Feature-Rich Software

An integrated software image provides powerful L2 and L3 features to fulfill different applications' requirements, capable of building solid, reliable networks

Embedded 25G Ports

Four embedded high-speed 25G ports simplify the network deployment by providing versatile options for uplink connections

Scalability and High Availability

Physical stacking provides agile expansion and redundancy while reliability through fault tolerant topologies ensures rock-solid connectivity



DXS-3410 Series

10G Layer 3 Stackable Managed Switches

Features

High Availability and Flexibility

- Variety of high-speed interface combinations to meet different network requirements
- 24 Multi-Gigabit 100M/1/2.5/5/10GBASE-T ports
- 28 SFP+ ports
- 4 10/25G SFP28 ports

Reliability

- Redundant power supply (RPS) support
- Ethernet Ring Protection Switching (ERPS)
- IEEE 802.1D/802.1w/802.1s Spanning Tree
- Loopback Detection (LBD)
- Smart fan with Quiet mode design

L3 Features

- Static Route
- RIP/RIPng
- · OSPFv2/v3

Lossless Ethernet via Data Center Bridging (DCB)

• IEEE 802.1Qbb Priority-based Flow Control (PFC)

Operations, Administration and Maintenance

- IEEE 802.3ah Ethernet Link OAM
- IEEE 802.1ag/ITU-T Y.1731 Service OAM

High Bandwidth Stacking

- Physical stack of up to 9 units via four 25G ports
- Supports long-distance stacking over fiber
- 200 Gbps per device physical stacking bandwidth

The DXS-3410 Series is a range of 10G Layer 3 Stackable Managed Switches designed to connect end-users in a secure enterprise or metro Ethernet access network. These switches support both multicasting and enhanced security, making them an ideal multi-Gigabit access layer solution. The DXS-3410 Series is equipped with multi-Gigabit Ethernet and SFP+ network connection options and includes models equipped with multi-Gigabit Ethernet and SFP28 network connection capabilities. Each model boasts 10G fiber ports and four 10/25G SFP28 ports to provide versatility and speed. This series is also equipped with a USB 2.0 port, allowing users to boot images and upload configuration files directly from, as well as conveniently save syslog files to a USB 2.0 storage device

Enhanced Network Reliability

The DXS-3410 Series is designed for enterprise and metro Ethernet applications, and customers who require a high level of network security and maximum uptime. The DXS-3410 supports an external redundant power supply to ensure continued operation. In addition, these switches incorporate essential reliability features to enhance network resilience, including 802.1D Spanning Tree (STP), 802.1w Rapid Spanning Tree (RSTP), 802.1s Multiple Spanning Tree (MSTP), Loopback Detection (LBD), and Broadcast Storm Control. The G.8032 Ethernet Ring Protection Switching (ERPS) minimizes recovery time to 50 ms. For load sharing and redundancy backup in a switch cascading/server attachment configuration, the DXS-3410 Series provides dynamic 802.3ad Link Aggregation Port Trunking.

Comprehensive Security

The DXS-3410 Series provides users with the latest security features such as Multi-layer and Packet Content Access Control Lists (ACL), Storm Control, and IP-MAC-Port Binding (IMPB) with DHCP Snooping. The IP-MAC-Port Binding feature allows administrators to bind a source IP address with an associated MAC and define the port number to enhance user access control. With the DHCP Snooping feature, the switch automatically learns IP/MAC pairs by snooping DHCP packets and saving them to the IMPB white list.

Versatile Traffic Management

The DXS-3410 Series implements a rich set of multi-layer QoS/CoS features to ensure that critical network services such as VoIP, video conferences, IPTV, and IP surveillance are always given high priority. Traffic Shaping features guarantee bandwidth for these services when the network is busy. L2 Multicast support enables the DXS-3410 Series to handle growing IPTV applications.

Host-based IGMP/MLD Snooping allows multiple multicast subscribers per physical interface while ISM VLAN allows the switches to send multicast streams in a multicast VLAN to save bandwidth and to provide better security to the backbone network. The ISM VLAN profiles allow administrators to bind or replace the pre-defined multicast registration information to subscriber ports quickly and easily.

High Availability and Flexibility

The DXS-3410 Series allows multiple switches to be combined to form a single physical or virtual stack. This increases redundancy over multiple physical units, simplifies management, and provides a single IP address to manage all members in the stack. Up to 9 switches can be combined using DACs/Fibers to make up to 200 Gigabit Ethernet ports available, allowing switching capacity to be increased with demand.

Easy Access Control Policies

The DXS-3410 Series supports authentication mechanisms such as 802.1X, Web-based Access Control (WAC), and MAC-based Access Control (MAC) for strict access control and easy deployment. After authentication, individual policies such as VLAN membership, QoS policies, and ACL rules can be assigned to each host.

| Technical Specifications | | |
|------------------------------------|---|---|
| Interfaces | DXS-3410-32XY | DXS-3410-32SY |
| Ports | 24 x 100M/1/2.5/5/10GBASE-T ports 4 x 10G SFP+ ports 4 x 10/25G SFP28 ports | • 28 x 10G SFP+ ports • 4 x 10/25G SFP28 ports |
| Optional Redundant Power Supply | • DPS-500A • DPS-500DC | • DPS-500A • DPS-500DC |
| Console Port | RJ-45 por | t for out-of-band CLI management |
| Management Port | 10/100/1000BASE-T RJ-45 port for out-of-band IP management | |
| Stacking Ports | 4 | |
| USB Ports | | 1 x USB 2.0 Type A port |
| Performance | | |
| Switching Capacity | 760 Gbps | |
| 64-Byte Packet Forwarding Rate | 565.44 Mpps | |
| Packet Buffer Memory | 4 MB | |
| Physical | | |
| MTBF (Hours) | 434,433.88 hours | 437,675.04 hours |
| Acoustics | • Max: 53.0 dB • Min: 28.8 dB | • Max: 53.3 dB • Min: 24.8 dB |
| Heat Dissipation | 371.92 BTU/h | 354.86 BTU/h |
| Power Input | 100 to 240 VAC, 50 to 60 Hz | |
| Max Power Consumption | • Max.: 109.0 W • Standby: 41.8 W | • Max.: 104.0 W • Standby: 29.3 W |
| Dimensions (W x D x H) | • 441.0 x 250 x 44.0 mm • (17.36 x 9.84 x 1.73 in) | • 441.0 x 250 x 44.0 mm • (17.36 x 9.84 x 1.73 in) |
| Weight | 3.67 kg (8.09 lbs) | 3.8 kg (8.38 lbs) |
| Ventilation | 3 x Smart fans | |
| Operation Temperature | 0 to 50 °C (32 to 122 °F) | |
| Storage Temperature | -40 to 70 °C (-40 to 158 °F) | |
| Operating Humidity | 10% to 90% RH | |
| Storage Humidity | 5% to 90% RH | |
| Emission (EMI) | FCC Class A, CE Class A, VCCI Class A, IC, RCM, BSMI | |
| Safety | CB, cUL, BSMI | |

| Technical Specifications Software Features | | |
|---|--|--|
| | | |
| L2 Features | MAC Address Table: 32K entries Flow Control 802.3x Flow Control HOL Blocking Prevention Jumbo Frames up to 10 Kbytes 802.1AX/802.3ad Link Aggregation Max. 32 groups per device, 8 ports per group Spanning Tree Protocols 802.1D STP 802.1w RSTP 802.1s MSTP 802.1s MSTP BPDU Filtering Root Guard Loop Guard IGMP Snooping Supports 1024 IGMP groups IGMP Snooping Fast Leave | Loopback Detection Port Mirroring Supports One-to-One, Many-to-One Supports Mirroring for both Tx/Rx Supports 4 mirroring groups Flow mirroring Supports Mirroring for Tx/Rx VLAN Mirroring RSPAN L2 Protocol Tunneling Ethernet Ring Protection Switching (ERPS) v1/v2 Loopback Detection (LBD) iSCSI Awareness Multi-Chassis Link Aggregation Group (MLAG)¹ Report Suppression MLD Snooping MLD v1/v2 Snooping Support 1024 MLD Groups |
| | Supports 1024 static IGMP groups Per VLAN IGMP Snooping Data Driven Learning IGMP Snooping Querier IGMP Authentication IGMP Accounting | MLD Snooping Fast Leave Supports 1024 static MLD groups MLD Snooping Querier Per VLAN MLD Snooping MLD Proxy Reporting |
| L3 Multicasting | • IGMP v1/v2/v3 | • PIM-SM for IPv4 |
| VLAN | VLAN Group Max. 4K VLAN groups Max. 1~4094 VIDs GVRP Max. 4K dynamic VLAN groups Double VLAN (Q-in-Q) Port-based Q-in-Q Selective Q-in-Q 802.1Q Auto Surveillance VLAN Port-based VLAN | 802.1v Protocol-based VLAN Voice VLAN MAC-based VLAN VLAN translation Multicast VLAN (ISM VLAN for IPv4/IPv6) Asymmetric VLAN Private VLAN VLAN Trunking Super VLAN |

| Quality of Service | 802.1p 8 queues per port Queue Handling Strict Priority Weighted Round Robin (WRR) | Bandwidth Control Port-based (ingress/egress, min. granularity 64 Kbps) Flow-based (ingress/egress, min. granularity 64 Kbps) Per queue bandwidth control (min. granularity 64 Kbps) Three Color Marker |
|------------------------------|---|---|
| | Strict + WRR Weighted Deficit Round Robin (WDRR) Policy Map Remark 802.1p priority Remark IP precedence/DSCP Congestion Control Weighted Random Early Detection (WRED) | CIR/PIR minimum granularity: 8 kbps trTCM srTCM |
| | CoS based on Switch port Inner/Outer VID Inner/Outer 802.1p Priority MAC address IP address DSCP Protocol type | |
| | • TCP/UDP port • IPv6 flow label | |
| Data Center Bridging | 802.1Qbb Priority-based Flow Control (PFC) | |
| Access Control List (ACL) | ACL based on 802.1p priority VID MAC address Ether Type LLC VLAN IP address IP preference/ToS DSCP mask Protocol type TCP/UDP port number IPv6 Flow Label | Time-based ACL CPU Interface Filtering Max. ACL entries: Ingress IPv4: 2560 IPv6: 640 Egress IPv4: 1024 IPv6: 512 2048 VLAN access map |
| Security | Port Security Supports up to 12K MAC addresses per port Broadcast/Multicast/Unicast Storm Control D-Link Safeguard Engine DHCP Server Screening IP Source Guard DHCP Snooping IPv6 Snooping Dynamic ARP Inspection (DAI) DHCPv6 Guard IPv6 Route Advertisement (RA) Guard IPv6 ND Inspection Duplicate Address Detection (DAD) ARP Spoofing Prevention Max. 128 entries | L3 Control Packet Filtering Traffic Segmentation SSL Supports TLS 1.0/1.1/1.2 Supports IPv4/IPv6 access SSH Supports SSH v2 Supports IPv4/IPv6 access BPDU Attack Protection DOS Attack Prevention |

| | 1 entry consumed by each IPv4 route 2 entries consumed by each IPv6 route IPv4/IPv6 Static Route Max. 256 IPv4 entries Max. 128 IPv6 entries Support Equal-Cost Multi-Path Route (ECMP) IPv4/IPv6 Default Route | OSPF OSPF v2/v3 OSPF passive interface Stub/NSSA area Support Equal-Cost Multi-Path Route (ECMP) Text/MD5 |
|--|---|--|
| L3 Routing | Supports 12K hardware routing entries shared by IPv4/IPv6 1 entry consumed by each IPv4 route 2 entries consumed by each IPv6 route Supports up to 16K IPv4 / 8K IPv6 hardware L3 forwarding entries | PBR (Policy-based Route) Null Route Route Preference Route Redistribution RIPv1/v2/ng |
| L3 Features | IPv4 ARP Entries: 16128 512 Static ARP IPv6 ND Entries: 7680 256 Static ND Entries IP Interface Supports 256 interfaces | Gratuitous ARP Loopback Interface Proxy ARP Support local ARP proxy VRRP v2/v3 IP Helper |
| | RMON v2: Supports ProbeConfig group LLDP/LLDP-MED DHCP Client | |
| | sFlow Multiple images/ Multiple Configurations RMON v1: Supports 1, 2, 3, 9 groups | DHCPv6 Prefix Delegation (PD) Ping/ Traceroute for IPv4/IPv6 Microsoft® Network Load Balancing (NLB) Zero Touch Provisioning (ZTP) |
| | SNMP Support v1/v2c/v3 Support for IPv4/IPv6 access SNMP Traps System Log for IPv4/IPv6 Syslog Server | Password recovery/ encryption DHCP server Support for IPv4/IPv6 address assignment Command Logging SMTP |
| | TFTP Client for IPv4/IPv6 DNS Client for IPv4/IPv6 Secure FTP Server for IPv4/IPv6 | Debug commandSupport IPv4/v6 SNTP ServerNTPv3/v4 |
| | Command Line Interface (CLI) Telnet Server for IPv4/IPv6 Telnet Client for IPv4/IPv6 | Flash File System PPPoE Circuit-ID Tag Insertion D-Link Discover Protocol (DDP) |
| Management | Web-based GUI Support IPv4/IPv6 access Support SSL (HTTPS) | DHCP Auto-Configuration DHCP/DHCPv6 Local Relay DHCP Relay Option 60/61/82/125 |
| OAM (Operations, Administration and Maintenance) | 802.3ah Ethernet Link OAM D-Link Unidirectional Link Detection (DULD) Dying Gasp | 802.1ag Connectivity Fault Management (CFM) Y.1731 OAM Optical Transceiver Digital Diagnostic Monitoring (DDM) |
| Green Features | Energy-Efficient Ethernet (EEE) Power saving by link status Power saving by LED shut-off | Power saving by port shut-offPower saving by system hibernation |
| | Web-based Access Control (WAC) Supports port/host-based access control Identity-driven Policy Assignment Dynamic VLAN Assignment Support IPv4 access Ingress/Egress Bandwidth Control ACL Assignment | |
| | Privilege Level for Management Access Trusted Host RADIUS/TACACS+ Accounting | Ingress/Egress Bandwidth Control ACL Assignment |
| | Supports port/host-based access control Identity-driven Policy Assignment Dynamic VLAN Assignment Ingress/Egress Bandwidth Control ACL Assignment | Compound Authentication MAC-based Access Control (MAC) Supports port/host-based access control Identity-driven Policy Assignment Dynamic VLAN Assignment |
| AAA | Guest VLAN 802.1X Authentication | RADIUS and TACACS+ Authentication Authentication Database Failover |

| MIB | RFC1065, RFC1066, RFC1155, RFC1156, RFC2578 MIB Structure RFC1212 Concise MIB Definitions RFC1213 MIBII RFC1215 MIB Traps Convention RFC1493, RFC4188 Bridge MIB RFC1157, RFC2571, RFC2572, RFC2573, RFC2574, RFC2575, RFC2576 SNMP MIB RFC1442, RFC1901, RFC1902, RFC1903, RFC1904, RFC1905, RFC1906, RFC1907, RFC1908, RFC2578, RFC3418, RFC3636 SNMPv2 MIB RFC2819 RMON MIB RFC2021 RMONv2 MIB RFC1398, RFC1643, RFC1650, RFC2358, RFC2665, RFC3635 Ether-like MIB RFC4836 802.3 MAU MIB RFC2674, RFC4363 802.1p MIB Interface Group MIB | RFC4113 MIB for UDP RFC2620 RADIUS Accounting Client MIB RFC2925 Ping & TRACEROUTE MIB TFTP uploads and downloads (D-Link MIB) Trap MIB (D-Link MIB) RFC4293 IPv6 MIB RFC4133 Entity MIB RFC4133 Entity MIB RFC1724 RIPv2 MIB RFC1724 RIPv2 MIB RFC1850 OSPF MIB RFC4293 IPv6 SNMP Mgmt Interface MIB DDM MIB (D-Link MIB) Private MIB MIB for D-Link Zone Defense RFC3621 Power Ethernet MIB DDP MIB LLDP-MED MIB IPv4 Multicast Routing MIB |
|----------------------------|---|---|
| | RFC2618 RADIUS Authentication Client MIB RFC4022 MIB for TCP | PIM MIB for IPv4 IP Forwarding Table MIB |
| RFC Standard Compliance | RFC791 IP RFC768 UDP RFC793 TCP RFC792 ICMPv4 RFC2463, RFC4443 ICMPv6 RFC4884 Extended ICMP to Support Multi-Part Messages RFC826 ARP RFC1338, RFC1519 CIDR RFC2474, RFC3168, RFC3260 Definition of the DS Field in the IPv4 and IPv6 headers RFC1321, RFC2284, RFC2865, RFC2716, RFC1759, RFC3580, RFC3748 Extensible Authentication Protocol (EAP) RFC2571 SNMP Framework RFC3246 Expedited Forwarding PHB (Per-Hop Behavior) | RFC1886 DNS extension support for IPv6 RFC1981 Path MTU Discovery for IPv6 RFC2460 IPv6 RFC2461, RFC4861 Neighbor Discovery for IPv6 RFC2462, RFC4862 IPv6 Stateless Address Autoconfiguration (SLAAC) RFC2464 IPv6 over Ethernet and definition RFC3513, RFC4291 IPv6 Addressing Architecture RFC2893, RFC4213 IPv4/IPv6 dual stack function RFC2068, RFC2616 RFC2866 RADIUS Accounting RFC2574 User-based Security Model for SNMPv3 RFC854 Telnet RFC2131 DHCP Client |
| Order Information | | |
| DXS-3410-32XY | 24 x 100M/1/2.5/5/10GBASE-T ports, 4 x SFP+ ports, and 4 x 10 | 0/25G SFP28 ports 10G L3 Stackable Managed Switch |
| DXS-3410-32SY | 28 x SFP+ ports, and 4 x 10/25G SFP28 ports 10G L3 Stackable | Managed Switch |
| Optional Accessori | es | |
| DEM-CB100S | 1 m 10G SFP+ Direct Attach Cable (DAC) | |
| DEM-CB300S | 3 m 10G SFP+ Direct Attach Cable (DAC) | |
| DEM-CB700S | 7 m 10G SFP+ Direct Attach Cable (DAC) | |
| DEM-CB100Q28-4S28 | 1 m 100G QSFP28 to 4x 25G SFP28 Direct Attach Cable (DAC) | |
| DEM-CB100S28 | 1 m 25G SFP28 Direct Attach Cable (DAC) | |
| Optional Redunda | nt Power Supplies | |
| DPS-500A | AC Redundant Power Supply | |
| DPS-500DC | DC Redundant Power Supply | |

| Optional 1G Transceivers | |
|---|---|
| DEM-310GT | 1000Base-LX Single-Mode, 10KM (w/o DDM) |
| DEM-311GT | 1000Base-SX Multi-mode, 550M (w/o DDM) |
| DEM-312GT2 | 1000Base-SX Multi-mode, 2KM (w/o DDM) |
| DEM-314GT | 1000BASE-LHX Single-mode, 50KM (w/o DDM) |
| DEM-315GT | 1000BASE-ZX Single-mode, 80KM (w/o DDM) |
| DEM-330T | 1000BASE-BX-D Single-Mode, 10KM(TX-1550/RX-1310 nm) (w/o DDM) |
| DEM-330R | 1000BASE-BX-U Single-Mode, 10KM(TX-1310/RX-1550 nm) (w/o DDM) |
| DEM-331T | 1000BASE-BX-D Single-Mode, 40KM(TX-1550/RX-1310 nm) (w/o DDM) |
| DEM-331R | 1000BASE-BX-U Single-Mode, 40KM(TX-1310/RX-1550 nm) (w/o DDM) |
| Optional SFP+ Transceivers | |
| DEM-410T ² | 10GBASE-T Copper SFP+ transceiver, 30M (w/o DDM) |
| DEM-431XT | 10GBASE-SR Multi-Mode, OM1:33M/OM2:82M/OM3:300M (w/o DDM) |
| DEM-432XT | 10GBASE-LR Single-Mode, 10 km (w/o DDM) |
| DEM-433XT | 10GBASE-ER Single-Mode, 40 km (w/o DDM) |
| DEM-434XT | 10GBASE-ZR Single-Mode, 80 km (w/o DDM) |
| DEM-436XT-BXD | 10GBASE-LR Single-Mode, 20 km (TX-1330/RX-1270 nm) (w/o DDM) |
| DEM-436XT-BXU | 10GBASE-LR Single-Mode, 20 km (TX-1270/RX-1310 nm) (w/o DDM) |
| Optional 25 Gigabit Ethernet SFP28 Transceivers | |
| DEM-S2801SR | 25G SFP28 Multi-Mode, 100 m Transceiver |
| DEM-S2810LR | 25G SFP28 Single-Mode 10 km Transceiver |

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¹ D-Link MLAG Switch does not support L3 features and L2 feature only supports LACP. For management, you can use the management interface (OOB interface) directly or establish a separate VLAN and use the port as a management interface.

² Only HW version A2 DEM-410T transceivers are compatible with the DXS-3410 Series switches, and can only be installed in ports 25 through 32 within environments not exceeding an ambient temperature of 40 °C (104 °F).