

High Performance and Flexibility

- Fast performance with up to 960 Gbps switching capacity
- 24 fixed SFP+ 10G ports with one expansion module
- Up to four devices can be stacked together to function as one switch¹
- Selectable airflow direction
- Selectable software image license
- Two AC/DC hot-swappable power modules support 1+1 power redundancy and load sharing
- Three hot-swappable fan trays provide N+1 cooling redundancy

Trusted Security

- Access Control List
- Port Security
- Traffic Segmentation
- ARP Spoofing Prevention¹
- Broadcast/Multicast/Unicast Storm Control
- D-Link Safeguard Engine¹
- DoS Attack Prevention

Data Center Features

- IEEE 802.1Qbb¹
- IEEE 802.1Qaz¹
- IEEE 802.1Qau¹

Advanced Features

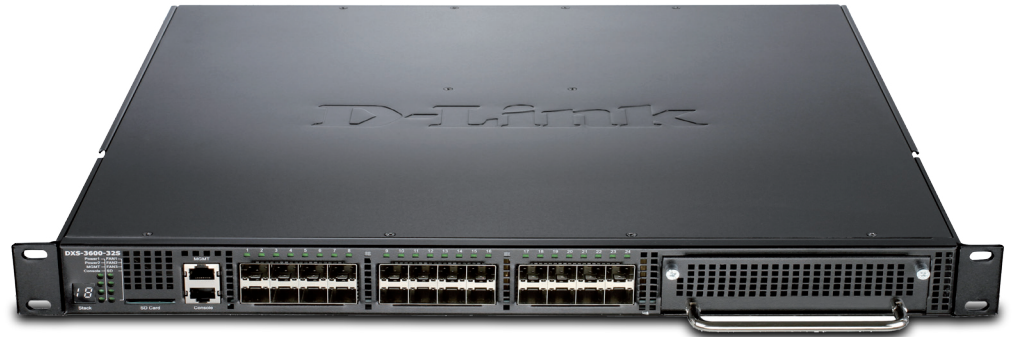
- MPLS¹
- OSPF/BGP
- ERPS¹
- NLB¹
- Three Color Marker
- Congestion Control¹

Easy Management

- Web-based GUI
- Telnet
- Command Line Interface (CLI)
- SSH, SSL¹
- SNMP & RMON
- RADIUS/TACACS+
- LLDP/LLDP-MED

¹ These features will be supported in a future version.

Data Center 10GbE Top-of-Rack Switch



D-Link's DXS-3600 10GbE L2/L3 Switch family consist of new compact, high-performance switches that feature wired-speed 10-Gigabit Ethernet switching, routing, and very low latency. The 1U height and selectable front-to-back or back-to-front air flow make the DXS-3600 series suitable for top-of-rack (ToR) deployment in data centers or enterprise and campus aggregation network environments. The DXS-3600 switches have 24 fixed 10 GbE SFP+ ports and can feature more ports with the addition of an expansion module. The expansion modules not only provide extra 10G SFP+ ports, but also increase the flexibility of 120G stacking, 40G uplinks or low cost inter-rack 10G Base-T connections for different applications.

The DXS-3600 switches deliver high-performance 10-Gigabit Ethernet switching capacity of up to 960 Gbps and forwarding rates of up to 595.2 Mpps. The switches feature hot-swappable power supplies and fan trays, which enable the switches to be a redundant, high availability architecture. The modular power design allows users to select AC or DC power according to where the switch is deployed. When inserting two power modules, the two power modules share the loading and help to extend the lifetime of the other. The DXS-3600 series also features a modular fan design. Three fans can back up each other, providing N+1 redundancy for the system. If one of the fans fails, the other fans will increase their speed by automatically detecting the system temperature. Both power and fan modules are hot-swappable, which minimizes the downtime of the DXS-3600 series.

Standard and Enhanced Images

The DXS-3600 switches provides two different software images. The Standard Image (SI) features a wide range of Layer 2, VLAN, multicasting, Quality of Service (QoS), security, data center, and static

routing functions. The Enhanced Image (EI) features comprehensive IPv4/v6 routing including RIP, VRRP, OSPF, BGP, and L3 multicasting like IGMP, MLD, PIM-DM, SM, SDM, SSM, and DVMRP. The EI also supports L2/L3 MPLS VPN that enables the DXS-3600 series switches to also be deployed as the core router of an enterprise environment or an edge router of a MPLS environment.

Data Center Features

Data Center Bridging (DCB) is an essential set of enhancements to Ethernet for networking in data center environments. The DXS-3600 switches support several core components of Data Center Bridging (DCB) such as IEEE 802.1Qbb¹, IEEE 802.1Qaz¹, and IEEE 802.1Qau.¹ IEEE 802.1Qbb (Priority Based Flow Control) provides flow control to ensure there is no data loss during network congestion. IEEE 802.1Qaz (Enhanced Transmission Selection) manages the allocation of bandwidth amongst different traffic classes. IEEE 802.1Qau (Congestion Notification) provides congestion management for data flows within network domains to avoid congestion. The DXS-3600 switches also support cut-through switching, which reduces latency in transmitting data in a network.

Energy Efficient

The DXS-3600 switches allow users to change the airflow by using different power and fan module sets. Selectable front-to-back or back-to-front airflow maximizes air cooling to provide more effective cooling throughout rack systems in data centers, where the switches are used, compared to side-to-side airflow. The switches also feature built-in smart fans; internal heat sensors monitor and detect temperature change, and react accordingly by utilizing different fan speeds for different temperatures. At lower temperatures, the fans will run slower and reduce the switch's power consumption and noise.



Data Center 10GbE Top-of-Rack Switch

Technical Specifications

General	Interfaces	24 fixed SFP+ 10G ports with one expansion module
	Console Port	RJ-45 console port for out-of-band management
	Management Port	10/100/1000 Base-T RJ-45 Ethernet for out-of-band remote management
	SD Card Slot	1
Performance	Switching Capacity	960 Gbps
	Max. Forwarding Rate	595.2 Mpps
	Packet Buffer Memory	9 MB
	MAC Address Table	128K
Physical Environment	Power Input	100 to 240 V AC, 50/60 Hz
	Power Consumption	Maximum: 115.3 W (without expansion module) Standby: 85.9 W
	Heat Dissipation	Maximum: 393.4 BTU/hr Standby: 293.1 BTU/hr
	Dimension (W x D x H)	440 x 506 x 44 mm (17.32 x 19.92 x 1.73 inches)
	Weight	Without expansion module: 9.84 kg (21.70 pounds)
	Operating Temperature	0 to 45 °C (32 to 113 °F)
	Storage Temperature	40 to 70 °C (104 to 158 °F)
	Operating Humidity	0% to 95% RH
	Storage Humidity	0% to 95% RH
Diagnostic LEDs	Per device: Power 1, Power 2, Fan 1, Fan 2, Fan 3, Console, MGMT, SD Card, Stacking ID Per SFP+ Port: Link/Activity/Speed	
Certifications	Safety	CB, cUL, LVD
	EMI/EMC	FCC, CE, C-Tick, IC, VCCI



Data Center 10GbE Top-of-Rack Switch

Software Features

- Stackability**
 - Virtual Stacking/Clustering of up to 32 units²
 - Supports D-Link Single IP Management
 - L2 Features**
 - MAC Address Table
 - 128K entries
 - Flow Control
 - 802.3x Flow Control when Full Duplex
 - Back Pressure when Half Duplex
 - HOL Blocking Prevention
 - Spanning Tree Protocol
 - 802.1D STP
 - 802.1w RSTP
 - 802.1s MSTP
 - Support Root Restriction
 - Loopback Diagnostics²
 - 802.1AX Link Aggregation
 - Max. 16 groups per device, 12 ports per group
 - ERPS² (Ethernet Ring Protection Switching)
 - Port Mirroring
 - Supports One-to-One, Many-to-One
 - Supports Mirroring for Tx/Rx/Both
 - Supports 4 mirroring groups
 - Flow Mirroring
 - Supports One-to-One, Many-to-One
 - Supports Mirroring for Rx
 - Supports 4 mirroring groups
 - Jumbo Frame
 - Up to 12,000 bytes
 - L2 Multicast Features**
 - IGMP Snooping
 - IGMP v1/v2/v3 Snooping
 - Supports 4K IGMP groups
 - Supports 1K static multicast addresses
 - IGMP per VLAN
 - L2 Multicast Filtering
 - Forwards all groups
 - Forwards all unregistered groups
 - Filters all unregistered groups
 - MLD Snooping²
 - MLD v1/v2 Snooping
 - Support 4K groups
 - Host-based MLD Snooping Fast Leave
 - VLAN**
 - 802.1Q
 - 802.1v
 - Double VLAN (Q-in-Q)
 - Port-based Q-in-Q
 - Selective Q-in-Q
 - Port-based VLAN
 - MAC-based VLAN
 - Subnet-based VLAN
 - Private VLAN²
 - VLAN Group
 - Max. 4K static VLAN groups
 - Max. 4094 VIDs
 - GVRP
 - Up to 4K dynamic VLANs
- QoS (Quality of Service)**
 - 802.1p Quality of Service
 - 8 queues per port
 - Queue Handling
 - Strict
 - Weighted Round Robin (WRR)
 - Strict + WRR
 - Round Robin (RR)
 - Weighted Elastic Round Robin (WERR)
 - CoS based on
 - 802.1p Priority Queues
 - DSCP
 - IP address
 - MAC address
 - VLAN
 - IPv6 Traffic Class
 - IPv6 flow label
 - TCP/UDP port
 - Bandwidth Control
 - Port-based (Ingress/Egress, min. granularity 8 Kb/s)
 - Flow-based (Ingress/Egress, min. granularity 8 Kb/s)
 - Per queue bandwidth control (min. granularity 8 Kb/s)
 - Three Color Marker
 - trTCM
 - srTCM
 - Congestion Control
 - WRED
 - Support for following actions:
 - Remark 802.1p priority tag
 - Remark TOS/DSCP tag
 - Bandwidth Control
 - Committed Information Rate (CIR)
- L3 Features (SI version)**
 - ARP
 - 512 Static ARP
 - Supports Gratuitous ARP²
 - IP Interface
 - Supports 256 interfaces
 - Loopback Interface²
- L3 Routing (SI version)**
 - Default Routing
 - Static Routing
 - Max. 1K IPv4 entries
 - Max. 512 IPv6 entries²
 - Support route distribution
 - Support secondary route
 - Support Equal Cost/Weighted Cost multi-path route
- Access Control List (ACL)**
 - Max. ACL entries:
 - 1792 ingress ACL rule
 - 1K egress ACL rules
 - 1K VLAN ACL rules
 - Time-based ACL
 - ACL based on:
 - 802.1p priority
 - VLAN
 - MAC address
 - Ether type
 - IP address
 - DSCP
 - Protocol type
 - TCP/UDP port number
 - IPv6 Traffic Class
 - IPv6 flow label
- Security**
 - Port Security
 - Supports up to 12K MAC addresses per port/system
 - Broadcast/Multicast/Unicast Storm Control
 - D-Link Safeguard Engine²
 - DHCP Server Screening²
 - IP-MAC-Port Binding²
 - ARP inspection
 - IP inspection
 - DHCP Snooping
 - ARP Spoofing Prevention²
 - Max. 64 entries
 - Traffic Segmentation
 - SSL²
 - Supports v1/v2/v3
 - Supports IPv4/v6 access
 - SSH
 - BPDU Attack Prevention
 - DOS Attack Prevention
- AAA**
 - 802.1X Authentication
 - Supports Port-based access control
 - Supports Host-based access control
 - Dynamic VLAN Assignment
 - Identity-driven Policy (VLAN/ACL/QoS) Assignment
 - Web-based Access Control (WAC)²
 - MAC-based Access Control (MAC)²
 - Guest VLAN
- MIB & RFC Standards**
 - RFC1213 MIB II
 - RFC1907 SNMP v2 MIB
 - RFC5519 IGMP v3 MIB
 - RFC1724 RIP v2 MIB
 - RFC2021 RMONv2 MIB
 - RFC1643, RFC2358, RFC2665 Ether-like MIB
 - RFC2668 802.3 MAU MIB
 - RFC2674 802.1p MIB
 - RFC2618 RADIUS Authentication Client MIB
 - RFC2096 IP Forwarding Table MIB
 - RFC2932 IPv4 Multicast Routing MIB
 - RFC2934 PIM MIB for IPv4
 - RFC2620 RADIUS Accounting Client MIB
 - RFC2925 Trace Out MIB
 - RFC2925 Ping MIB
 - RFC1850 OSPF MIB
 - Private MIB
 - RFC1112, RFC2236, RFC3376, RFC4541 IGMP Snooping
 - RFC4363 802.1v
 - RFC2338 VRRP
 - RFC1058, RFC1388, RFC1723, RFC2453, RFC2080 RIP
 - RFC1370, RFC1765, RFC2328, RFC2740, RFC3101 makes RFC1587 obsolete, RFC2328 makes RFC1583, RFC2178 OSPF v2,v3
 - RFC1771, RFC1997, RFC2439, RFC2796, RFC2842, RFC2918 BGP
 - RFC3973 PIM-DM
 - RFC5059 PIM-SM
 - RFC3569, RFC4601, RFC4608, RFC4607, RFC4604 PIM SSM
 - RFC3376 IGMP
 - RFC2475 Priority Queue Mapping
 - RFC2475, RFC2598 Class of Service (CoS)
 - RFC2597, RFC2598 QoS Flow Actions
 - RFC2697, RFC2698 Three Color Marker
 - RFC2093, RFC2904, RFC2095, RFC2906 AAA
 - RFC1321, RFC2144, RFC2313, RFC2420, RFC2841, RFC3394 Encryption
 - RFC2289 One-Time
 - RFC3580 802.1X
 - RFC2866 RADIUS Accounting
 - RFC2138, RFC2139, RFC2865, RFC2618 RADIUS Author. for Management Access
 - RFC1492 TACACS+ Auth. for Management Access



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- RFC2068, RFC2616 Web-based GUI
- RFC854 Telnet Server
- RFC783, RFC1350 TFTP Client
- RFC1157, RFC1901, RFC1908, RFC2570, RFC2574, RFC2575, RFC3411-17 SNMP
- RFC3164 System Log
- RFC2819 RMON v1
- RFC951, RFC1542, RFC2131, RFC3046 BootP/DHCP Client
- RFC1769 Time Setting
- RFC2131 DHCP Server
- RFC1191 MTU Setting
- RFC1065, RFC1066, RFC1155, RFC1156, RFC2578 MIB Structure
- RFC1215 MIB Traps Convention
- RFC4188 Bridge MIB
- RFC1157, RFC2571-2576, RFC3411-3415,

- RFC3418 SNMP MIB
- RFC1901-1908, RFC1442, RFC2578 SNMP v2 MIB
- RFC2737 Entity MIB
- RFC768 UDP
- RFC791 IP
- RFC792 ICMP
- RFC793 TCP
- RFC826 ARP
- RFC1338, RFC1519 CIDR
- RFC2716, RFC3748 EAP
- RFC2571, RFC2572, RFC2573, RFC2574 SNMP

- Management**
- Web-based GUI
- CLI
- Telnet
- TFTP Client
- FTP Client
- Traffic Monitoring
- SNMP
 - Supports v1/v2/v3
- SNMP Trap
- System Log
- DHCP Client
- DHCP Server
- DHCP Relay
- Multiple Image
- Multiple Configuration

- Flash File System
- DNS Resolver
- CPU Monitoring
- MTU Setting
- Traceroute
- LLDP
- DNS Relay
- SMTP²
- DHCP Auto Configuration²
- SNT²
- RCP²
- RMONv1
- RMONv2
- Trusted Host²
- Password Encryption
- Debug Command

Enhanced Image (EI) Features

L3 Features

- VRRP
- IPv6 Tunneling²
 - Static
 - ISATAP
 - GRE
 - 6to4

L3 Routing

- Supports 16K hardware routing entries shared by IPv4/IPv6
 - Max. 16K IPv4 entries
 - Max. 8K IPv6 entries
- Supports 8K hardware L3 forwarding entries shared by IPv4/IPv6

- Max. 8K IPv4 entries
- Max. 4K IPv6 entries
- RIP
 - RIP v1/v2
 - RIPng²
- OSPF
 - OSPF v2
 - OSPF v3²
 - OSPF Passive Interface
 - Stub/NSSA Area
 - OSPF Equal Cost Route
- BGPv4
- Route Redistribution
- IP Directed Broadcast
- Policy Based Route

L3 Multicasting

- Multicast Table Size: 2K
- IGMP v1, v2, v3
- PIM-SM
- PIM-DM
- PIM-Sparse-Dense Mode
- PIM-SSM
- DVMRP v3
- MLD v1/v2

MPLS²

- LDP
- MPLS LSP trigger filtering
- MPLS label-forwarding

MPLS QoS

- MPLS ping and traceroute
- L2 protocol tunneling through PW
- VPWS
- VPLS
- PW Redundancy

L3 VPN²

- MPLS/BGP L3 VPN
- VRF-Lite
- MP-BGP
- VRF aware application

²These features will be supported in a future version.

Optional Products

Optional Management Software

DV-600S	D-View 6.0 Network Management Software Standard Edition
DV-600P	D-View 6.0 Network Management Software Professional Edition

Optional 10 Gbps SFP+ Transceivers

DEM-431XT	10 GBASE-SR SFP+ Transceiver (w/o DDM), 80 m: OM1 & OM2 MMF, 300 m: OM3 MMF
DEM-431XT-DD	10GBASE-SR SFP+ Transceiver (with DDM), 80 m: OM1 & OM2 MMF, 300 m: OM3 MMF
DEM-432XT	10GBASE-LR SFP+ Transceiver (w/o DDM), 10 km
DEM-432XT-DD	10GBASE-LR SFP+ Transceiver (with DDM), 10 km
DEM-433XT	10GBASE-ER SFP+ Transceiver (w/o DDM), 40 km
DEM-433XT-DD	10GBASE-ER SFP+ Transceiver (with DDM), 40 km
DEM-434XT	10GBASE-ZR SFP+ Transceiver, (w/o DDM), 80 km
DEM-435XT	10GBASE-LRM SFP+ Transceiver (w/o DDM), 220 m: OM1 & OM2 MMF, 300 m: OM3 MMF
DEM-435XT-DD	10GBASE-LRM SFP+ Transceiver (with DDM), 220 m: OM1 & OM2 MMF, 300 m: OM3 MMF
DEM-436XT-BXU	10GBASE-LR BiDi SFP+ Transceiver (w/o DDM) 20 km, TX: 1270 nm, RX: 1330 nm
DEM-436XT-BXD	10GBASE-LR BiDi SFP+ Transceiver (w/o DDM) 20 km, TX: 1330 nm, RX: 1270 nm

Optional 1 Gbps SFP Transceivers

DEM-310GT	SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage
DEM-311GT	SFP transceiver, 1000BASE-SX standard, multi-mode fiber, max. distance 550 m, 3.3 V operating voltage
DEM-312GT2	SFP transceiver 1000BASE-SX standard, multi-mode fiber, max. distance 2 km, 3.3 V operating voltage
DEM-314GT	SFP transceiver, 1000BASE-LHX standard, single-mode fiber, max. distance 50 km, 3.3 V operating voltage
DEM-315GT	SFP transceiver, 1000BASE-ZX standard, single-mode fiber, max. distance 80 km, 3.3 V operating voltage
DEM-330T	WDM SFP transceiver, 1000BASE-BX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage, Tx wavelength 1550 nm, Rx wavelength 1310 nm
DEM-330R	WDM SFP transceiver, 1000BASE-BX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage, Tx wavelength 1310 nm, Rx wavelength 1550 nm
DEM-331T	WDM SFP transceiver, 1000BASE-BX standard, single-mode fiber, max. distance 40 km, 3.3 V operating voltage, Tx wavelength 1550 nm, Rx wavelength 1310 nm
DEM-331R	WDM SFP transceiver 1000BASE-BX standard, single-mode fiber, max. distance 40 km, 3.3 V operating voltage, Tx wavelength 1310 nm, Rx wavelength 1550 nm
DGS-712	SFP transceiver, 1000BASE-TX standard

Optional 10 Gbps SFP+ Direct Attach Cables

DEM-CB100S	10-GbE SFP+ to SFP+ 1 m Direct Attach Cable
DEM-CB300S	10-GbE SFP+ to SFP+ 3 m Direct Attach Cable
DEM-CB700S	10-GbE SFP+ to SFP+ 7 m Direct Attach Cable

Ordering Information

DXS-3600-32S/SI	24 fixed SFP+ ports with one expansion slot with Standard Image, one AC power supply, and three fan trays (front-to-back airflow) included
DXS-3600-32S/EI	24 fixed SFP+ ports with one expansion slot with Enhanced Image, one AC power supply, and three fan trays (front-to-back airflow) included
DXS-3600-32S-SE-LIC	DXS-3600-32S Standard Image to Enhanced Imaged License
DXS-3600-EM-4XT ³	4 x 10GBase-T expansion module
DXS-3600-EM-8T ³	8 x 1000Base-T expansion module
DXS-3600-EM-4QXS ³	4 x 40G QSFP+ expansion module
DXS-3600-EM-8XS ³	8 x 10G SFP+ expansion module
DXS-3600-EM-Stack ³	2 x 120G CXP physical stacking module
DXS-3600-PWR-FB	300W AC power supply tray with front-to-back airflow
DXS-3600-PWR-BF ³	300W AC power supply tray with back-to-front airflow
DXS-3600-PWRDC-FB	300W DC power supply tray with front-to-back airflow
DXS-3600-PWRDC-BF ³	300W DC power supply tray with back-to-front airflow
DXS-3600-FAN-FB	Fan tray with front-to-back airflow
DXS-3600-FAN-BF ³	Fan tray with back-to-front airflow

³Product will be available in the future.



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