# D-Link®
## Building Networks for People

## DXS-F3500-32S

# High Port Density Data Center TOR Switch

## Features

### High availability & Flexibility

- Two AC/DC hot-swappable power modules for 1+1 redundancy and load sharing.
- Redundant fan modules.
- Supports Virtual Switching Unit (VSU) by leveraging Multi Chassis Trunking (MCT) to avoid single point of failure.
- Ethernet Ring Protection Switching (ERPS) / Ethernet Automatic Protection Switching (EAPS)

### Traffic Monitoring & Bandwidth Control

- Port mirroring/Bandwidth Control
- Broadcast/Multicast/Unicast storm control
- Single Rate Three Color Marker (srTCM)
- Two Rate Three Color Marker (trTCM)

D-Link's new generation DXS-F3500-32S switch delivers versatile feature set, High density port count in 1U rack mount size; suitable for Data Center TOR or Enterprise & campus environments CORE/Aggregation requirements. The DXS-F3500-32S high-performance switches feature wire-speed 10/40/100 Gigabit Ethernet switching, routing at ultra-low latency. DXS-F3500-32S provides 24x10-Gig & 4x100G/40G ports in compact 1U size.

## High Availability & Flexibility

The DXS-F3500-32S switch feature a modular fan and power supply design for a high availability architecture. The hot-swappable power supply design means that power supplies can be replaced without affecting switch operation. The Multi Chassis Trunking enables multiple DXS-F3500-32S switch to be configure in a Virtual chassis and can provide non-stop layer-3 routing forwarding even in case of failure of any switch in the virtual chassis.

## Technical Specifications

| General | DXS-F3500-32S |
|---|---|
| Interfaces | 24 10-Gig SFP+  & 4 100G/40G QSFP28 Ports |
| Hardware Version | B1 |
| Console Port | RJ-45 and Mini USB console ports for out-of-band CLI management |
| Management Port | 10/100/1000BASE-T RJ-45 Ethernet for out-of-band IP management |
| USB Port | A-Type Port |

| Performance | |
|---|---|
| Switching Capacity | 800 Gbps |
| Max. Forwarding Rate | 600 Mpps |
| Packet Buffer Memory | 4M |
| MAC Address Table | 32K |

| Physical | |
|---|---|
| Power input | Dual Redundant AC Power supplies (100 to 230 V AC)<br>Dual Redundant DC Power supply 36V ~ 72V (Available on request) |
| Dimensions | 440×350×44 mm (W x D x H)<br>1U |
| Operating Temperature | 0° to 50° C |
| Storage Temperature | -20° to 70° C |
| Operating Humidity | 10%-90% non-condensing |
| Storage Humidity | 5%-95% non-condensing |

| Certifications | |
|---|---|
| Safety | RoHS |

| Software Features | |
|---|---|
| Virtual Switching Unit (VSU) | Multi Chassis Trunking |
| VSU devices | Up to 4 Devices |
| Layer 2 Features | • MAC Address Table<br>  •Up to 32K entries<br>• Flow Control<br>  • 802.3x Flow Control when using full-duplex<br>  • Back Pressure when using half-duplex<br>  • HOL Blocking Prevention<br>•  Spanning Tree Protocol<br>  •  802.1D STP<br>  •  802.1w RSTP<br>  •  802.1s MSTP<br>  •  Root Guard<br>  •  Loop Guard<br>•  Jumbo Frame<br>  •  Up to 16K<br><br>• 802.1AX Link Aggregation<br>  • Max. 8 groups per device<br>• ERPS (Ethernet Ring Protection Switching)<br>• Port mirroring<br>  • Supports one-to-one, many-to-one<br>  • Supports mirroring for Tx/Rx/both<br>  • Supports 4 mirroring groups<br>• Flow mirroring<br>  • Supports mirroring for Rx<br>• VLAN mirroring<br>• L2 protocol tunnelling<br>• Loopback Detection (LBD) |
| L2 Multicast Features | • IGMP Snooping<br>  • IGMP v1/v2<br>  • Supports 8K IGMP groups<br>  • Supports 64 static IGMP groups<br>  • Per VLAN IGMP Snooping<br>  • IGMP Snooping Querier<br>  • Host-based IGMP Snooping Fast Leave<br>• PIM Snooping |

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| Layer 3 Multicast | • IGMP v1/v2/v3<br>• IGMP/MLD Proxy<br>• DVMRP v3<br>• PIM-SM/SM v6/SSM/SDM<br>• Multicast Source Discovery Protocol (MSDP) |
| L3 Features | • ARP<br>  • 512 static ARP<br>  • Supports Gratuitous ARP<br>  • ARP Proxy<br>• Loopback interface<br>• UDP helper<br>• IPv6 tunneling<br>  • Static<br>  • ISATAP<br>  • GRE<br>  • 6to4<br><br>• IPv6 Neighbor Discovery (ND)<br>• IGMP Proxy Reporting<br>• VRRP v2/v3<br>• IPv6 Tunneling<br>  • Static<br>  • ISATAP<br>  • GRE<br>  • 6to4<br>• IP Interface<br>  • Supports 256 interfaces |
| L3 Routing | • Static routing<br>  • IPv4: 16K<br>  • IPv6: 8K<br>  • Supports Route Redistribution<br>  • Supports secondary route<br>• Supports hardware routing entries shared by IPv4/IPv6<br>  • IPv4: 16K<br>  • IPv6: 8K<br>• Supports hardware L3 forwarding entries shared by IPv4/ IPv6<br>  • IPv6: 4K<br>  • IPv6: 2K<br>• Default routing<br>• Policy-based Route (PBR)<br>• Null route<br>• Bidirectional Forwarding Detection (BFD)<br>  • IPv4/IPv6 static route<br>  • RIP<br>  • VRRP<br>• RIP<br>  • RIP v1/v2<br>  • RIPng<br><br>• Graceful Restart (GR) Helper for RIP<br>• Route Redistribution<br>  • Default route<br>  • Static route<br>  • RIP<br>  • RIPng<br>  • Null route<br>OSPF<br>  • OSPF v2/v3<br>  • OSPF Passive Interface<br>  • Stub/NSSA Area<br>• Graceful Restart (GR) Helper for OSPF<br>• Route Preference<br>  • OSPF v2/v3<br>• Route Redistribution<br>  • OSPF v2/v3<br>• Bidirectional Forwarding Detection (BFD)<br>  • OSPF<br>• BGP4+ |
| VLAN | • 802.1Q<br>• 802.1v<br>• Double VLAN (Q-in-Q)<br>  • Port-based Q-in-Q<br>• Selective Q-in-Q<br>• Port-based VLAN<br>• MAC-based VLAN<br>• Subnet-based VLAN<br>• Private VLAN<br><br>• VLAN group<br>  • Max. 4K static VLAN groups<br>  • Max. 4094 VIDs<br>• ISM VLAN (multicast VLAN)<br>• Voice VLAN<br>• Auto Surveillance VLAN<br>• VLAN trunking<br>• GVRP<br>  • Up to 227 dynamic VLANs |

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| AAA | • 802.1X authentication<br>  • Supports port-based access control<br>  • Supports host-based access control<br>  • Identity-driven policy assignment<br>    • Dynamic VLAN assignment<br>    • QoS assignment<br>    • ACL assignment<br><br>• Supports port-based access control<br>• Supports host-based access control | • MAC-based Access Control (MAC)<br>  • Identity-driven policy assignment<br>    • QoS assignment<br>    • ACL assignment<br>  • Supports port-based access control<br>  • Supports host-based access control<br>• Compound Authentication<br><br>• RAIDUS and TACACS+ authentication<br>• Authentication Database Failover<br>• Guest VLAN |
| Quality of Service (QoS) | • 802.1p Quality of Service<br>  • 8 queues per port<br>• QoS based on<br>  • 802.1p Priority Queues<br>  • DSCP<br>  • IP address<br>  • MAC address<br>  • VLAN<br>  • IPv6 traffic class<br>  • IPv6 Flow Label<br>  • TCP/UDP port<br>  • Switch port<br>  • EtherType<br>  • ToS/IP Preference<br>  • Protocol type<br>• Congestion Control<br>  • WRED | • Queue handling<br>  • Strict<br>  • Weighted Round Robin (WRR)<br>  • Strict + WRR<br>  • Deficit Round Robin (DRR)<br>• Bandwidth control<br>  • Port-based (ingress/egress, min. granularity 64 Kb/s)<br>  • Flow-based (ingress/egress, min. granularity 64 Kb/s)<br>  • Per queue bandwidth control (min. granularity 64 Kb/s)<br>• Support for following actions:<br>  • Remark 802.1p priority tag<br>  • Remark ToS/DSCP tag |
| Access Control List (ACL) | • ACL based on:<br>  • 802.1p priority<br>  • VLAN<br>  • MAC address<br>  • Ether Type<br>  • IP address<br>  • DSCP<br>  • Protocol type<br>  • TCP/UDP port number<br>  • IPv6 traffic class<br>  • IPv6 Flow Label | • Max. ACL entries:<br>  • Ingress<br>    • IPv4: 2K<br>    • IPv6: 1K<br>  • Egress<br>    • IPv4: 2K<br>    • IPv6: 1K<br>  • 3K VLAN access map<br>• Time-based ACL |

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| Security | • Port Security<br>  • Supports up to 12K MAC addresses per port/system<br>• Broadcast/multicast/unicast storm control<br>• D-Link Safeguard Engine<br>• DHCP server screening<br>• IP-MAC-Port Binding<br>• Dynamic ARP Inspection<br>• IP Source Guard<br>• DHCP Snooping<br>• IPv6 Snooping<br>• DHCPv6 Guard<br>• IPv6 Route Advertisement (RA) Guard<br>• IPv6 ND Inspection<br><br>• ARP Spoofing Prevention<br>  • Max. 64 entries<br>• Duplicate Address Detection (DAD)<br>• L3 Control Packet Filtering<br>• Traffic Segmentation<br>• SSL<br>  • Supports v1/v2/v3<br>  • Supports IPv4/IPv6 access<br>• SSH<br>  • Supports SSH v2<br>  • Supports IPv4/IPv6 access<br>• BPDU attack protection |
| Management | • Web-based GUI<br>• CLI<br>• Telnet server<br>• Telnet client<br>• TFTP client<br>• FTP client<br>• Secure FTP (SFTP) server<br>• Traffic monitoring<br>• SNMP<br>  • Supports v1/v2c/v3<br>• SNMP Trap<br>• System log<br>• DHCP client<br>• DHCP server<br>• DHCP Relay options 60, 61, 82<br>• Multiple images<br>• Multiple configurations<br>• Flash file system<br>• DNS client<br><br>• CPU monitoring<br>• MTU setting<br>• ICMP tools<br>  • Ping<br>  • Traceroute<br>• LLDP & LLDP-MED<br>• DNS Relay<br>• SMTP<br>• DHCP Auto Configuration<br>• NTP<br>• RCP (Remote Copy Protocol)<br>• RMON v1/v2<br>• Trusted host<br>• Password encryption<br>• Debug command<br>• Switch Resource Management (SRM)<br>• Microsoft Network Load Balancing (NLB) |

| Ordering Information | |
|---|---|
| DXS-F3500-32S | 24 10G SFP+ Ports & 4 100G/40G QSFP28 Ports, Two AC modular power supplies and four fan modules with front-to-back airflow. |
| **Optional SFP Transceivers** | |
| DEM-310GT | 1000BASE-LX, single-mode, 10 km |
| DEM-311GT | 1000BASE-SX, multi-mode, 550 m |
| DEM-312GT2 | 1000BASE-SX, multi-mode, 2 km |
| DEM-314GT | 1000BASE-LHX, single-mode, 50 km |
| DEM-315GT | 1000BASE-ZX, single-mode, 80 km |
| DEM-410T | 10GBASE-T SFP+ Transceiver |
| **Optional SFP+ Transceivers** | |
| DEM-431XT | 10GBASE-SR SFP+ Transceiver (without DDM), 33 m: OM1 MMF, 82 m: OM2 MMF, 300 m: OM3 MMF |
| DEM-431XT-DD | 10GBASE-SR SFP+ Transceiver (with DDM), 33 m: OM1 MMF, 82 m: OM2 MMF, 300 m: OM3 MMF |
| DEM-432XT | 10GBASE-LR SFP+ Transceiver (without DDM), 10 km |
| DEM-432XT-DD | 10GBASE-LR SFP+ Transceiver (with DDM), 10 km |
| DEM-433XT | 10GBASE-ER SFP+ Transceiver (without DDM), 40 km |
| DEM-433XT-DD | 10GBASE-ER SFP+ Transceiver (with DDM), 40 km |
| DEM-434XT | 10GBASE-ZR SFP+ Transceiver (without DDM), 80 km |
| DEM-436XT-BXD | 10GBASE-LR BiDi SFP+ Transceiver (without DDM), Wavelength Tx 1330 nm, Rx: 1270 nm, 20 km |
| DEM-436XT-BXU | 10GBASE-LR BiDi SFP+ Transceiver (without DDM), Wavelength Tx 1270 nm, Rx: 1330 nm, 20 km |
| **Optional 40 Gbps QSFP+ Transceivers** | |
| DEM-QX10Q-LR4 | 40GBASE-LR4 transceiver, single-mode, 10 km |
| DEM-QX01Q-SR4 | 40GBASE-SR4 transceiver, multi-mode, OM3: 100 m/OM4: 150 m |
| **Optional 100 Gbps QSFP28 Transceivers** | |
| DEM-Q2801Q-SR4 | 100GBASE-SR4 QSFP28 Transceiver, multimode-mode, 100m |
| DEM-Q2810Q-LR4 | 100GBASE-LR4 QSFP28 Transceiver, single-mode, 10km |
| **Optional 40/100 Gbps QSFP+/QSFP28 Direct attached cable** | |
| DEM-CB100QXS | 40G QSFP+ to QSFP+ 1m Direct attach cable |
| DEM-CB300QXS | 40G QSFP+ to QSFP+ 3m Direct attach cable |
| DEM-CB100QXS-4XS | 40G QSFP+ to 4* 10G SFP+ 1m Direct attach cable |
| DEM-CB100Q28 | 100G QSFP28 to QSFP28 1m Direct attach Cable |

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