D-Link
Building Networks for People

Product Highlights

10 Gigabit Connectivity
High bandwidth uplinks eliminate network bottlenecks and provide low-latency connections for network servers and storage

High Performance
Get the speeds your network needs with up to 1.92Tbps switching capacity and 1440 Mpps forwarding

Reliability
The DXS-F3500-64S supports dual load sharing for AC/DC power, as well as Data Center Bridging to provide “lossless Ethernet” transmission quality

DXS-F3500-64S

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.
- Four hot-swappable fan trays provide N+1 cooling redundancy.
- 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-F3500-64S 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-F3500-64S high-performance switches feature wire-speed 10/40/100 Gigabit Ethernet switching, routing at ultra-low latency.

DXS-F3500-64S provides 48x10-Gig, 2x40-Gig ports & 4x100G/40G ports in compact 1U size.

High Availability & Flexibility

The DXS-F3500-64S switch feature a modular power supply design for a high availability architecture. The hot-swappable design means that power supplies can be replaced without affecting switch operation. The Multi Chassis Trunking enables multiple DXS-F3500-64S 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-F3500-64S**
Interfaces	48 10-Gig SFP+ , 2 40-Gig QSFP+ & 4 100G/40G QSFP28 Ports
Hardware Version	B2
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	1.92 Tbps
Max. Forwarding Rate	1440 Mpps
Packet Buffer Memory	9 MB
MAC Address Table	64K
Physical	
Power input	Dual Redundant AC Power supplies (100 to 230 V AC) Dual Redundant DC Power supply 36V ~ 72V (Available on request)
Dimensions	442.5×404×44 mm (W x D x H) 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 via 10G and 40G
Layer 2 Features	• MAC Address Table •Up to 64K entries • Flow Control • 802.3x Flow Control when using full-duplex • Back Pressure when using half-duplex • HOL Blocking Prevention • Spanning Tree Protocol • 802.1D STP • 802.1w RSTP • 802.1s MSTP • Root Guard • Loop Guard • Jumbo Frame • Up to 16K • 802.1AX Link Aggregation • Max. 8 groups per device • ERPS (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 mirroring for Rx • VLAN mirroring • L2 protocol tunnelling • Loopback Detection (LBD)
L2 Multicast Features	• MLD Snooping • MLD v1/v2 Snooping • Supports 256 groups • Host-based MLD Snooping Fast Leave • Supports 64 static MLD groups • MLD Snooping Querier • Per-VLAN MLD Snooping • MLD Proxy Reporting • IGMP Snooping • IGMP v1/v2/v3 Snooping • Supports 8K IGMP groups • Supports 64 static IGMP groups • Per VLAN IGMP Snooping • IGMP Snooping Querier • Host-based IGMP Snooping Fast Leave • PIM Snooping

Layer 3 Multicast	• IGMP v1/v2/v3 • MLD v1/v2 • IGMP/MLD Proxy • PIM-SM

L3 Features	• ARP
	  • 512 static ARP
	  • Supports Gratuitous ARP
	  • ARP Proxy
	• Loopback interface
	• UDP helper
	• IPv6 Neighbor Discovery (ND)
	• IGMP Proxy Reporting
	• VRRP v2/v3
	• IP Interface
	  • Supports 256 interfaces

L3 Routing	• Static routing
	  • Max. 8K IPv4 entries
	  • Max. 4K IPv6 entries
	  • Supports Route Redistribution
	  • Supports secondary route
	• Supports hardware routing entries shared by IPv4/IPv6
	  • Max. 8K IPv4 entries
	  • Max. 4K IPv6 entries
	• Supports hardware L3 forwarding entries shared by IPv4/ IPv6
	  • Max. 8K IPv4 entries
	  • Max. 4K IPv6 entries
	• Default routing
	• Policy-based Route (PBR)
	• Null route
	• Bidirectional Forwarding Detection (BFD)
	  • IPv4/IPv6 static route
	  • RIP
	  • VRRP
	• RIP
	  • RIP v1/v2
	  • RIPng
	• Graceful Restart (GR) Helper for RIP
	• Route Redistribution
	  • Default route
	  • Static route
	  • RIP
	  • RIPng
	  • Null route
	OSPF
	  • OSPF v2/v3
	  • OSPF Passive Interface
	  • Stub/NSSA Area
	• Graceful Restart (GR) Helper for OSPF
	• Route Preference
	  • OSPF v2/v3
	• Route Redistribution
	  • OSPF v2/v3
	• Bidirectional Forwarding Detection (BFD)
	  • OSPF
	• BGP4+

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 VLAN
	• VLAN group
	  • Max. 4K static VLAN groups
	  • Max. 4094 VIDs
	• ISM VLAN (multicast VLAN)
	• Voice VLAN
	• Auto Surveillance VLAN
	• VLAN trunking
	• GVRP
	  • Up to 227 dynamic VLANs

AAA	• 802.1X authentication
	  • Supports port-based access control
	  • Supports host-based access control
	  • Identity-driven policy assignment
	  • Dynamic VLAN assignment
	  • QoS assignment
	  • ACL assignment
	• Supports port-based access control
	• Supports host-based access control
		• MAC-based Access Control (MAC)
		  • Identity-driven policy assignment
		  • QoS assignment
		  • ACL assignment
		  • Supports port-based access control
		  • Supports host-based access control
		• Compound Authentication
		• RAIDUS and TACACS+ authentication
		• Authentication Database Failover
		• Guest VLAN

Quality of Service (QoS)	• 802.1p Quality of Service
	  • 8 queues per port
	• QoS based on
	  • 802.1p Priority Queues
	  • DSCP
	  • IP address
	  • MAC address
	  • VLAN
	  • IPv6 traffic class
	  • IPv6 Flow Label
	  • TCP/UDP port
	  • Switch port
	  • EtherType
	  • ToS/IP Preference
	  • Protocol type
	• Congestion Control
	  • WRED
		• Queue handling
		  • Strict
		  • Weighted Round Robin (WRR)
		  • Strict + WRR
		  • Deficit Round Robin (DRR)
		  • Weighted Deficit Round Robin (WDRR)
		• Bandwidth control
		  • Port-based (ingress/egress, min. granularity 64 Kb/s)
		  • Flow-based (ingress/egress, min. granularity 64 Kb/s)
		  • Per queue bandwidth control (min. granularity 64 Kb/s)
		• Support for following actions:
		  • Remark 802.1p priority tag
		  • Remark ToS/DSCP tag
		  • Committed Information Rate (CIR)
		• Three Color Marker
		  • trTCM
		  • srTCM

Access Control List (ACL)	• ACL based on:
	  • 802.1p priority
	  • VLAN
	  • MAC address
	  • Ether Type
	  • IP address
	  • Protocol type
	  • TCP/UDP port number
	  • IPv6 traffic class
	  • IPv6 Flow Label
		• Max. ACL entries:
		  • Ingress
		  • IPv4: 2K
		  • IPv6: 2K
		  • Egress
		  • IPv4: 2K
		  • IPv6: 2K
		  • 3K VLAN access map
		• Time-based ACL

Security	• Port Security
	  • Supports up to 12K MAC addresses per port/system
	• Broadcast/multicast/unicast storm control
	• DHCP server screening
	• IP-MAC-Port Binding
	• Dynamic ARP Inspection
	• IP Source Guard
	• DHCP Snooping
	• IPv6 Snooping
	• DHCPv6 Guard
	• IPv6 Route Advertisement (RA) Guard
	• IPv6 ND Inspection
		• ARP Spoofing Prevention
		  • Max. 64 entries
		• L3 Control Packet Filtering
		• Traffic Segmentation
		• SSH
		  • Supports SSH v2
		  • Supports IPv4/IPv6 access
		• BPDU attack protection

Management	• Web-based GUI
	• CLI
	• Telnet server
	• Telnet client
	• TFTP client
	• FTP client
	• Secure FTP (SFTP) server
	• Traffic monitoring
	• SNMP
	  • Supports v1/v2c/v3
	• SNMP Trap
	• System log
	• DHCP client
	• DHCP server
	• DHCP Relay options 60, 61, 82
	• Multiple images
	• Multiple configurations
	• Flash file system
	• DNS client
		• CPU monitoring
		• MTU setting
		• ICMP tools
		  • Ping
		  • Traceroute
		• LLDP & LLDP-MED
		• DNS Relay
		• SMTP
		• DHCP Auto Configuration
		• NTP
		• RCP (Remote Copy Protocol)
		• RMON v1/v2
		• Trusted host
		• Password encryption
		• Debug command

Ordering Information	
DXS-F3500-64S	48 10G SFP+ Ports , 2 40G QSFP+ 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 40/100Gbps 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