D-Link

Product Highlights

High Performance

48 × 25G SFP28 downlink ports and 8 × 100G QSFP28 uplink ports deliver high-bandwidth connectivity for servers, storage, and aggregation networks.

SONiC Network

A widely adopted, open-source network operating system enabling flexible, scalable, and disaggregated network deployments.

Data Center Applications

Advanced BGP, EVPN, VXLAN, and MC-LAG enable scalable multi-tenant connectivity, while VRF, BGPv4/v6, OSPF, and ECMP provide resilient and flexible routing for modern data center networks.



DTS-5000-56S

48-Port 25G Data Center Switch

Key Features

High Availability and Flexibility

- 48 x 25G SFP28 ports and 8 x 100G QSFP28 ports for high-density networking
- 2.0 Tbps (4.0 Tbps full duplex) of switching capacity
- 2 PSUs (1+1) redundant & hot-swappable
- 4 fans (n+1) redundant and hot-swappable
- Front-to-back airflow
- Compact 1RU, 19-inch rack-mountable design
- Optimized design for data centers

Data Center

- EVPN
- VXLAN
- MC-LAG
- VRF (virtual routing and forwarding)
- RoCEv2

Advanced L3 Features

- BGP v4/v6, OSPFv2/v3
- ECMP, BFD
- Static/default routing
- Routing Restart for OSPF, BGP

Overview

The DTS-5000-56S is a high-performance, high-density 25GbE switch designed for enterprise network expansion, high-speed server-room connectivity, data centers, and aggregation applications. Featuring 48 × 25G SFP28 ports and 8 × 100G QSFP28 ports in a compact 1RU form factor, it delivers high-bandwidth, low-latency connectivity for data-intensive applications. Ideal for in-rack, Top-of-Rack, Leaf, and aggregation deployments, the DTS-5000-56S enables efficient east-west traffic forwarding and scalable connectivity across enterprise and data center networks.

Compact and Powerful for Edge Deployments

The DTS-5000-56S delivers up to 2.0 Tbps of switching capacity (4.0 Tbps full duplex) with 48 × 25G SFP28 ports and 8 × 100G QSFP28 ports in a compact 1RU, 19-inch rack-mount design. Front-to-back airflow, dual (1+1) hot-swappable redundant PSUs, and four (N+1) hot-swappable fans provide high reliability and efficient thermal management for demanding data center environments.

SONiC OS-Ready with ONIE Pre-Installed

Pre-installed with the Open Network Install Environment (ONIE), the DTS-5000-56S enables fast and flexible deployment of network operating systems such as SONiC OS. Its disaggregated architecture supports advanced data center networking features, including BGP, EVPN, VXLAN, VRF, and MC-LAG, delivering scalable, flexible, and resilient connectivity for modern Spine-Leaf data center fabrics.

DTS-5000-56S 25G Data Center Switch

Specifications

Model	DTS-5000-56S
Hardware version	B1
General	
Interfaces	• 48 x 10G/25G SFP28 ports • 8 x 40G/100G QSFP28 ports
Port Standards	• IEEE802.3ae • IEEE802.3ba • IEEE802.3bj • IEEE802.3bm • IEEE802.3by • IEEE802.3cd
Console Port	1 x RJ-45 console port for CLI management
Management Port	1 x 10/100/1000BASE-T RJ-45
USB Port	1 x USB 2.0 Type A
Performance	
CPU	Intel x86 CPU, 4-Cores
Switch Silicon	Marvell Falcon
Memory	DDR4 8GB
Storage	M.2 SATA 128GB
Switch Capacity	2.0 Tbps (4.0 Tbps full duplex)
MAC Address Table	128K
Packet Forwarding Rate	2800 Mpps
Packet Buffer Memory	24 MB
Physical	
Power Supply Units	2 (1 + 1 redundant), hot swappable
Power Input	• AC 100-127V or 200-240V (90-264V) • DC 180-300V
Fans	4 (N + 1 redundant), hot swappable
Operating Temperature	0 to 40°C (32 to 104°F)
Storage Temperature	-40 to 70°C (-40 to 158°F)
Operating Humidity	10% to 90% relative humidity
Storage Humidity	10% to 90% relative humidity
Max Power Consumption	274 W
Acoustics	• Max: 80.6 dBA • Min: 56.6 dBA
Dimensions (W x D x H)	440 x 420 x 44 mm
Weight	11.5 kg
Physical	
Safety	CE
EMI	CE Class A

DTS-5000-56S 25G Data Center Switch

Software

Feature		
Data Center Features	• 802.1Qbb priority-based flow control (PFC) • Explicit Congestion Notification (ECN) • Multi-chassis link aggregation (MC-LAG)	• VXLAN • EVPN • RDMA over Converged Ethernet Version 2 (RoCEv2)

L2 Features	• MAC address table: Up to 128K entries
	• Spanning tree protocol (STP)
	  • 802.1D STP
	  • 802.1w RSTP
	  • 802.1s MSTP
		• Port mirroring
		  • One-to-one
		  • Many-to-one
		  • Supports Mirroring for Tx/Rx
		• Jumbo frame: Up to 9K
		• VLAN

L3 Features	• Loopback interfaces
	  • IPv4/IPv6 interfaces
	• ARP
	  • Up to 96K ARP entries
	  • Up to 96K static ARP entries
		• ARP Proxy
		  • ARP proxy between different subnets
		  • Local ARP proxy
		• IPv6 Neighbor Discovery (ND)
		  • Up to 96K ND entries
		  • Up to 96K static ND entries

L3 Routing	• Routing table
	  • Up to 288K
	• L3 forwarding table
	  • 1 entry consumed by each IPv4 route
	  • 4 entries consumed by each IPv6 route
	• Equal-cost multi-path route (ECMP)
	  • Max multi-path route: 288K
	  • Max paths per multi-path route: 64
	• IPv4/IPv6 default route
	• Static route
	  • IPv4: Up to 288K
	  • IPv6: Up to 144K
		• Bidirectional forwarding detection (BFD)
		  • For IPv4/IPv6 static route
		  • For OSPF
		  • For BGP
		• OSPF
		  • OSPF v2/v3
		  • OSPF passive interface
		  • Stub/NSSA area
		  • Announcement on loopback interface
		  • Text/MD5
		• BGP
		  • BGP4/BGP4+
		  • MD5 authentication(BGP4)

Quality of Service (QoS)	• Queue handling
	  • Strict priority
	  • Weighted Deficit Round Robin (WDRR)
	  • Dynamic Weighted Round Robin (DWRR)
	• Congestion control
	  • Weighted random early detection (WRED)
		• Bandwidth control
		  • Port-based, flow-based, queue-based
		  • Minimum granularity 8 kbps
		  • Ingress/egress bandwidth control
		• Policy map
		  • Rate limiting

Access Control List (ACL)	• Max. ACL entries:
	  • Max. ingress ACL entries: 4.5K
	  • Max. egress ACL entries: 1K
	  • Max. number of access control lists: Up to 4.5K
	• IP Access List based on:
	  • Source/destination IP address mask
	  • IP preference/ToS mask
	  • DSCP mask
	  • Protocol type mask
	  • TCP/UDP port number mask
		• IPv6 access list based on:
		  • Source/destination IPv6 address mask
		  • DSCP mask
		  • Protocol type mask
		  • TCP/UDP port number mask

Security Features	• SSH
	  • SSH v2
	  • Supports IPv4/IPv6
		• Broadcast/multicast/unicast storm control
		• Limit broadcast/multicast/unknown unicast (DLF)
		• Min granularity per port: 8k

OAM	• Non-volatile configuration and system log • Factory reset to default configuration • CPU utilization monitoring • Memory usage monitoring	• Per port traffic packet counter • Per port traffic byte counter • Port link state, duplex mode and auto negotiation state monitoring
AAA	• Authentication database failover • Trusted Hosted	

DTS-5000-56S 25G Data Center Switch

Software

Feature		

Management	• Command Line Interface
	• SNMP
	  • SNMP v1/v2c/v3
	  • IPv4/IPv6
	  • Announce on loopback interface
	• TFTP client
	  • Supports IPv4/IPv6 TFTP server
	• DHCP client
	• DHCP relay
	  • DHCPv4/DHCPv6
	• System log
	  • Number of severity levels: 8 levels
	  • Local syslog
	  • IPv4/IPv6 syslog server
	  • Announce on loopback interface
		• LLDP
		• Flash file system
		• Dual images
		• Multiple configurations
		• Editable login banner
		• Editable system prompt
		• Zero-touch provisioning (ZTP)
		• IPv4/IPv6 ping
		• sFlow

Ordering Information

Model	Description
DTS-5000-56S	48 Ports 25G SFP28 + 8 Ports 100G QSFP28 Data Center Switch

Optional Transcievers

Model	Speed	Connector	Fiber Type	Wavelength	Max.Distance
DMT-025G-SF28-SR1L-XX	25G	Duplex LC	Multi-mode	850 nm	100 m
DMT-025G-SF28-LR1L-XX	25G	Duplex LC	Single-mode	1310 nm	500 m
DEM-S2801SR	25G	Duplex LC	Multi-mode	850 nm	100 m
DEM-S2810LR	25G	Duplex LC	Single-mode	1310 nm	10 km
DMT-100G-QS28-SR41-XX	100G	MPO	Multi-mode	850 nm	100 m
DMT-100G-QS28-DR1L-XX	100G	Duplex LC	Single-mode	1311 nm	10 km
DEM-Q2801Q-SR4	100G	MPO	Multi-mode	850 nm	100 m
DEM-Q2810Q-LR4	100G	Duplex LC	Single-mode	1296 nm, 1300 nm, 1305 nm, 1309 nm	10 km
DEM-CB100Q28	100G	DAC	–	–	1 m
DEM-CB100Q28-4S28	100G	DAC	–	–	1 m

Actual performances may vary due to settings, cabling, temperature, network configuration, interface, device compatibility, environmental and on-site conditions, and other similar factors. References to power capability, signal or processing speed, signal range or distance, data encryption, storage capacity, display properties, or other performance metrics are based on optimal conditions derived from industry standards and provided for informational purposes only. Specifications may be subject to change without prior notice.

HQ | No. 289, Xinhu 3rd Road, Neihu District, Taipei 11494
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