D-Link

TECHNICAL BRIEF



DTS SERIES DATA CENTER SWITCHES

Open, high-density 25G, 100G and 400G switching for spine-leaf fabrics.

1U SONiC-ready switches with EVPN-VXLAN, MC-LAG and lossless RoCEv2 Ethernet, for enterprise, private-cloud and AI data centers.



DTS-5000-56S
48 × 25G SFP28 + 8 × 100G QSFP28
2.0 Tbps · 2,800 Mpps · 24 MB buffer
LEAF · TOP OF RACK



DTS-5100-32S
32 × 100G QSFP28 + 2 × 10G SFP+
3.2 Tbps · 2,800 Mpps · 24 MB buffer
SPINE · LEAF · AGGREGATION



DTS-5400-32S
32 × 400G QSFP-DD + 2 × 10G SFP+
12.8 Tbps · 5,600 Mpps · 48 MB buffer
SPINE · AI / GPU FABRIC

Overview

The D-Link DTS Series is a family of fixed 1U data center switches for spine-leaf networks. All models use the same switching architecture, the same x86 control plane and the same feature set. Each switch ships with ONIE (Open Network Install Environment), so that you can install SONiC, the open-source network operating system. Use the DTS-5000-56S as a 25G leaf, the DTS-5100-32S as a 100G spine or leaf, and the DTS-5400-32S as a 400G spine for AI and high-capacity fabrics.

FABRIC AND VIRTUALIZATION

- **BGP EVPN with VXLAN** for L2 and L3 overlays across the fabric
- **VRF** for multi-tenant routing
- **MC-LAG** to dual-home servers to two leaf switches, with no spanning tree blocking
- **ECMP** with up to 64 paths per route
- **BGP4/BGP4+, OSPFv2/v3, BFD** and routing restart for OSPF and BGP

LOSSLESS ETHERNET AND OPERATIONS

- **RoCEv2** for RDMA storage and GPU traffic
- **PFC (802.1Qbb) and ECN** for lossless traffic classes
- **Zero-touch provisioning (ZTP)**, dual images, SNMP v1/v2c/v3
- **sFlow** and port mirroring for traffic visibility
- **1+1 hot-swap PSUs** (AC or DC input) and **N+1 hot-swap fans**, front-to-back airflow

COMMON PLATFORM

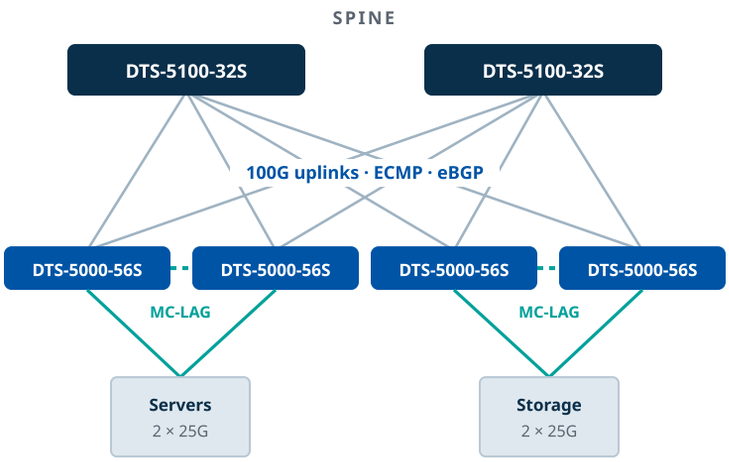
Control plane	x86 quad-core CPU, 8 GB DDR4, 128 GB M.2 SATA storage
Network OS	SONiC-ready, ONIE pre-installed (open, disaggregated)
Management ports	RJ-45 console, 10/100/1000BASE-T out-of-band management, USB 2.0 Type-A
Tables	128K MAC, 288K routes (IPv4), 144K static IPv6 routes, 96K ARP and 96K ND entries
Form factor	1U, 19-inch rack mount, 440 mm wide; 0 to 40 °C operating

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REFERENCE DESIGNS

Build a 25G / 100G spine-leaf fabric

DTS-5000-56S leaf switches with DTS-5100-32S spine switches, an EVPN-VXLAN overlay and an eBGP underlay.



VXLAN tunnels end on the leaf (VTEP) · BGP EVPN control plane

DESIGN NOTES

- Each leaf has **48 × 25G down and 8 × 100G up**: 1,200G to 800G, an oversubscription of **1.5 : 1**.
- Spread the 8 uplinks evenly across 2, 4 or 8 spines. ECMP uses all paths at the same time.
- Pair leaf switches with **MC-LAG** to dual-home servers and storage. One leaf can fail with no outage.
- Use **VRF** and **EVPN-VXLAN** to keep tenants, departments or environments apart on one fabric.
- Each spine port takes one leaf uplink, so the spine port count sets the maximum number of leaves.

Sizing: with all 8 uplinks in use

DTS-5100-32S spines	Uplinks per spine	Max. leaves	25G server ports
2	4 × 100G	8	384
4	2 × 100G	16	768
8	1 × 100G	32	1,536

Calculated from port counts at 1.5 : 1. With MC-LAG, dual-homed servers use one port on each leaf of the pair.

More ways to deploy



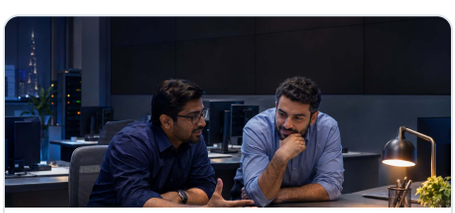
AI and GPU clusters

Use the DTS-5400-32S as a 400G spine and the DTS-5100-32S for 100G GPU servers. RoCEv2 with PFC and ECN gives lossless transport for distributed training. Sized for private clusters of about 10 to 100 GPUs.



Enterprise and private cloud

Move a server room to 25G with a DTS-5000-56S pair and MC-LAG. Add DTS-5100-32S spines when you need a second rack row. Suits hyper-converged clusters and on-premises private AI.



Service providers and monitoring

Aggregate many 25G links into 100G with the DTS-5000-56S. Use sFlow and port mirroring for a central monitoring fabric. DC power input options suit telco sites.

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SOFTWARE FEATURES

One feature set across the family

The features below apply to the DTS-5000-56S, DTS-5100-32S and DTS-5400-32S with the supported SONiC network OS.

EVPN | VXLAN | MC-LAG | VRF | RoCEv2 | PFC | ECN | BGP4/BGP4+ | OSPFv2/v3 | ECMP 64-way | BFD | ZTP | sFlow

DATA CENTER

- 802.1Qbb priority-based flow control (PFC)
- Explicit Congestion Notification (ECN)
- RDMA over Converged Ethernet v2 (RoCEv2)
- Multi-chassis link aggregation (MC-LAG)
- VXLAN and EVPN

LAYER 2

- MAC address table: up to 128K entries
- Spanning tree: 802.1D STP, 802.1w RSTP, 802.1s MSTP
- VLAN
- Jumbo frames up to 9K
- Port mirroring: one-to-one, many-to-one, Tx/Rx

LAYER 3

- IPv4/IPv6 interfaces and loopback interfaces
- ARP: up to 96K entries (96K static)
- IPv6 Neighbor Discovery: up to 96K entries (96K static)
- ARP proxy: local and between subnets

ROUTING

- Routing table up to 288K
- L3 forwarding table: 1 entry per IPv4 route, 4 per IPv6 route
- Static routes: IPv4 up to 288K, IPv6 up to 144K; IPv4/IPv6 default route
- ECMP: up to 288K multi-path routes, 64 paths per route
- OSPFv2/v3: passive interface, stub/NSSA, text/MD5 authentication
- BGP4/BGP4+ with MD5 authentication
- BFD for static routes, OSPF and BGP
- Routing restart for OSPF and BGP

QUALITY OF SERVICE

- Strict priority, WDRR and DWRR queue handling
- Weighted random early detection (WRED)
- Port-, flow- and queue-based bandwidth control, 8 kbps granularity
- Ingress and egress bandwidth control, policy maps, rate limiting

ACCESS CONTROL LISTS

- Up to 4.5K ingress and 1K egress ACL entries
- IPv4 ACL: source/destination IP, IP precedence/ToS, DSCP, protocol, TCP/UDP port
- IPv6 ACL: source/destination IPv6, DSCP, protocol, TCP/UDP port

SECURITY

- SSH v2 over IPv4/IPv6
- Broadcast, multicast and unknown-unicast storm control, 8 kbps granularity per port
- AAA with authentication database failover

MANAGEMENT AND OAM

- CLI, SNMP v1/v2c/v3 (IPv4/IPv6)
- Zero-touch provisioning (ZTP)
- DHCP client and DHCPv4/DHCPv6 relay
- TFTP client, LLDP, sFlow
- Syslog: 8 severity levels, local and remote IPv4/IPv6 servers
- Dual images and multiple configurations
- CPU, memory, port state and per-port packet/byte counters

Open by design. ONIE lets you install the network OS on the switch hardware. With SONiC, you use the same open-source software that runs in large cloud networks, with automation through standard tools. Ask D-Link for the supported SONiC release for your project.

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SPECIFICATIONS

Hardware specifications · hardware version B1

	DTS-5000-56S	DTS-5100-32S	DTS-5400-32S
INTERFACES			
Data ports	48 × 10G/25G SFP28 8 × 40G/100G QSFP28	32 × 100G QSFP28 2 × 10G SFP+	32 × 400G QSFP-DD 2 × 10G SFP+
Management	1 × RJ-45 console · 1 × 10/100/1000BASE-T out-of-band · 1 × USB 2.0 Type-A		
Standards	IEEE 802.3ae, 802.3ba, 802.3bj, 802.3bm, 802.3by, 802.3cd		
PERFORMANCE			
Switching capacity	2.0 Tbps (4.0 Tbps full duplex)	3.2 Tbps (6.4 Tbps full duplex)	12.8 Tbps (25.6 Tbps full duplex)
Forwarding rate	2,800 Mpps	2,800 Mpps	5,600 Mpps
Packet buffer	24 MB	24 MB	48 MB
MAC table	128K		
CPU / memory / storage	x86 4-core · 8 GB DDR4 · 128 GB M.2 SATA		
PHYSICAL AND POWER			
Power supplies	2 (1+1 redundant), hot-swappable		
Power input	AC 100–127 V or 200–240 V (90–264 V); DC 180–300 V	AC 100–127 V or 200–240 V; DC 180–300 V	AC 100–127 V or 200–240 V; DC 180–300 V
Max. power	274 W	300 W	940 W
Fans (front-to-back airflow)	4 (N+1), hot-swappable	4 (N+1), hot-swappable	6 (N+1), hot-swappable
Acoustics	56.6–80.6 dBA	56.6–80.6 dBA	57.3–80.5 dBA
Dimensions (W × D × H)	440 × 420 × 44 mm	440 × 420 × 44 mm	440 × 488 × 45 mm
Weight	11.5 kg	11.5 kg	13 kg
ENVIRONMENT AND CERTIFICATION			
Temperature	Operating 0 to 40 °C · storage −40 to 70 °C		
Humidity	10% to 90% RH, operating and storage		
Certifications	Safety: CE · EMI: CE Class A		

OPTIONAL TRANSCEIVERS AND CABLES

Model	Speed	Connector	Fiber	Wavelength	Reach	5000	5100	5400
DMT-025G-SF28-SR1L-XX	25G	Duplex LC	MM	850 nm	100 m	●		
DMT-025G-SF28-LR1L-XX	25G	Duplex LC	SM	1310 nm	500 m	●		
DEM-S2801SR	25G	Duplex LC	MM	850 nm	100 m	●		
DEM-S2810LR	25G	Duplex LC	SM	1310 nm	10 km	●		
DMT-100G-QS28-SR41-XX	100G	MPO	MM	850 nm	100 m	●	●	
DMT-100G-QS28-DR1L-XX	100G	Duplex LC	SM	1311 nm	10 km	●	●	
DEM-Q2801Q-SR4	100G	MPO	MM	850 nm	100 m	●	●	
DEM-Q2810Q-LR4	100G	Duplex LC	SM	1296–1309 nm	10 km	●	●	
DEM-CB100Q28	100G	DAC	–	–	1 m	●	●	
DEM-CB100Q28-4S28	100G to 4 × 25G	DAC breakout	–	–	1 m	●	●	
DMT-200G-QS56-SR41-XX	200G	MPO	MM	850 nm	100 m			●
DMT-400G-QSDD-SR81-XX	400G	MPO	MM	850 nm	100 m			●
DMT-400G-QSDD-DR41-XX	400G	MPO	SM	1310 nm	500 m			●

ORDERING INFORMATION

DTS-5000-56S 48-port 25G SFP28 + 8-port 100G QSFP28 · **DTS-5100-32S** 32-port 100G QSFP28 + 2-port 10G SFP+ · **DTS-5400-32S** 32-port 400G QSFP-DD + 2-port 10G SFP+ data center switch

Sources: D-Link datasheets DTS-5000-56S B1 v1.02, DTS-5100-32S B1 v1.02 and DTS-5400-32S B1 v1.01. Transceiver support is as each datasheet lists it. Actual performance can change with settings, cabling, temperature, network configuration and site conditions. Specifications can change without notice. D-Link and the D-Link logo are trademarks of D-Link. All other marks belong to their owners. ©2026 D-Link.

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Fabric design, sizing and optics selection for your project.

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