

25Gb Ethernet Networking

25GbE technology provides superior server and switch port density than 10GbE by providing higher bandwidth in a single lane along with lower costs and power consumption. 25GbE also provides a future proof path that can scale effectively well into the future, something that 10GbE falls short on.



60% lower
Cost per Gb



50% less
ToR switch port cost
and power



2.5x The
performance



10 GbE Technology	25 GbE Technology
64 half-width servers	64 half-width servers
128 x 10 GbE server ports	64 x 25 GbE server ports
128 x 10 GbE ToR switch ports	64 x 25 GbE ToR switch ports
1.2 Tb available	1.6 Tb available

Performance
For Faster Business Decisions

Reliability
For Ease of Use

Efficiency
For Total Cost Effectiveness

150% More Bandwidth

38% Lower Cabling Complexity

31% Power Savings

25GbE Overall TCO savings of 27%

Accelerate your Server & Network Infrastructure and be "First to Fast"!







**Accelerate Network Performance and Lower Costs
with 25GbE Networking from Mellanox**

Why 25Gb Ethernet?

Growth in data center traffic is driving requirements for increased bandwidth in server and storage networking. 25Gb Ethernet arrives just in time to solve the concerns that 10GbE infrastructure cannot provide the bandwidth, nor does it scale economically to meet future growth requirements. 25GbE technology provides superior server and switch port density by providing higher bandwidth in a single lane along with lower costs and power consumption. 25GbE leverages technology defined for 100 Gigabit Ethernet implemented as four 25Gbps lanes running on four fiber or copper pairs. Solutions built on 25GbE are backward and forward compatible with 10, 50/100, and future 400 GbE products, ensuring an upgrade path that future-proofs solutions. Dell offers 25GbE adapters—based on the Mellanox silicon—in both mezzanine and stand-up PCIe card form factors with the ability to support existing 10GbE infrastructure, making the migration to 25GbE a simple one.

Ethernet Adapters

Adapter	Speeds	Ports	Connector	Bus	Features	Drivers
 ConnectX-6 Dx	10/25/40/ 50/100/200 Gbe	Single and dual	SFP28, SFP56,, QSFP56, SFP-DD	PCIe 3/4 x16	An intelligent and secure cloud Ethernet network interface cards (NIC) for accelerating mission-critical data-center applications	Linux, Windows, VMWare, FreeBSD
 ConnectX-5	1/10/25/40 50/100 GbE	Single and dual	QSFP28	PCIe 4 x16 PCIe 3 x8	Out-of-order RDMA, RoCE over Overlay Networks, PeerDirect RDMA, SR-IOV, ASAP ² , Overlay Networks, Stateless Offloads, NVMeoF, MPI Tag Matching, Dynamically Connected Transport	
 ConnectX-4	1/10/25/40 50/100 GbE	Single and dual	QSFP28	PCIe 3.0 x8 or x16	RoCE(over layer2 and layer3), GPUDirect, SR-IOV, ASAP ² , Overlay Networks, Stateless Offloads, Dynamically Connected Transport	
 ConnectX-4 Lx	1/10/25/40 and 50GbE	Single and dual	SFP28 or QSFP28	PCIe 3.0 x8	RoCE(over layer2 and layer3), GPUDirect, SR-IOV, ASAP ² , Overlay Networks, Stateless Offloads, Dynamically Connected Transport	

Cables and Transceivers

Direct Attach Cables (DAC)



- Lowest Priced 25G/100G cables
- Reach: 3 – 5m
- Zero power consumption
- Near zero latency delays
- Point-to-point, splitters & port adapters

Active Optical Cables (AOC)



- Lowest Priced 25G/100G optical link
- Reach: up to 100m
- Lowest power consumption 2.2W
- Low latency delays
- Tunable CDRs - saves power, latency
- Multi-mode VCSEL & Silicon Photonics

Optical Transceivers



- Full line of 25/50/100G
- Reaches: 100m – 2Km, 10Km
- Connectorized optics: MPO & LC
- SR4 lowest power consumption (2.3W)
- Multi-mode + single-mode

Glen Sheets

Sr Director, OEM Sales, Dell
(512) 770-4996
glens@mellanox.com

Denise Cowart

Sr. Sales Account Manager, OEM Sales, Dell
(512) 853-0937
denisec@mellanox.com

Bryan Varble

Staff Architect, Dell
(512) 770-4989
bryan@mellanox.com

Raphael Chocron

European OEM Sales Manager, Dell
972-53-7081301
raphaelc@mellanox.com

Jon Moran

Manager, FAE, Dell
Manager (512) 761-1119
jonmoran@mellanox.com