



Electronic Design Automation (EDA)



Design automation systems reduce risks and speed time to market by enabling engineers to collect vital information about how products will perform. EDA simulations often involve 3D modeling, fluid dynamics, and other compute-intensive processes that require high-performance computing (HPC) data center solutions.

HPC data centers now include clusters of multi-core, multi-processor servers and high-speed, high-capacity storage systems. In these environments, moving data rapidly among servers and from servers to storage and back is a crucial element in delivering the highest performance and productivity. Mellanox InfiniBand products maximize data center performance and productivity by delivering industry-leading bandwidth and the lowest latency.

The Mellanox Solution

Mellanox I/O adapters, switches, and gateways enable data center managers to gain maximum leverage from server and storage investments by delivering up to 100Gb/s per port of reliable, lossless

connectivity with sub 600nsec of latency. With this level of performance, models and simulations can be processed at top speed to ensure that design engineers have minimal wait times.

For IT managers, Mellanox solutions reduce costs by slashing the number of required I/O adapters, reducing management overhead by simplifying the infrastructure, and cutting power consumption. Using Mellanox products, IT managers can consolidate storage and server traffic on a single unified fabric to further reduce costs, complexity, and power requirements.

Mellanox solutions are built on open standards with a proven track record of delivering exceptional performance and business value for over a decade. Only Mellanox offers backwards and forwards compatibility, which future proofs your networking investment. What's more, Mellanox is the only interconnect that is built on offload architecture, freeing more CPU cycles for application processing with no CPU frequency sensitivity. MPI collectives are managed and executed from the network fabric and is the only interconnect that offers in-network co-processing capabilities.

KEY ADVANTAGES

- The world's fastest interconnect, supporting up to 100Gb/s per port
- In-network co-processing capabilities and advanced offload engines
- Latency as low as 600nsec
- Lossless packet transmission
- Converged data center fabric reduces costs and power requirements
- Support for GPUDirect RDMA and GPUDirect ASYNC

Ordering Part #	Description
MCX455A-ECAT	ConnectX-4 Single-port EDR 100Gb/s Adapter Card with PCIe 3.0 x16
MCX-456A-ECAT	ConnectX-4 Dual-port EDR 100Gb/s Adapter Card with PCIe 3.0 x16
MCX555A-ECAT	Connect-4 Single-port FDR 100Gb/s Adapter Card with PCIe 3.0 x16
MCX556A-ECAT	Connect-4 Dual-port EDR 100Gb/s Adapter Card with PCIe 3.0 x16
MCX556A-EDAT	Connect-4 Dual-port EDR 100Gb/s Adapter Card with PCIe 4.0 x16
SB7800	36 Port Non-Blocking Managed EDR 100Gb/s InfiniBand Smart Switch
SB7890	36 Port Non-Blocking Externally Managed EDR 100Gb/s InfiniBand Smart Switch
SB7780	36 Port Non-Blocking Managed EDR 100Gb/s InfiniBand Router
CS7500	648 Port EDR (28U) 100Gbs/ InfiniBand Director Smart Switch
CS7510	324 Port EDR (16U) 100Gb/s InfiniBand Director Smart Switch
CS7520	216 Port EDR (12U) 100Gb/s InfiniBand Director Smart Switch



350 Oakmead Parkway, Suite 100, Sunnyvale, CA 94085

Tel: 408-970-3400 • Fax: 408-970-3403

www.mellanox.com