

NVIDIA ConnectX Ethernet Network Interface Cards (NICs)

Accelerated Networking for Every Workload

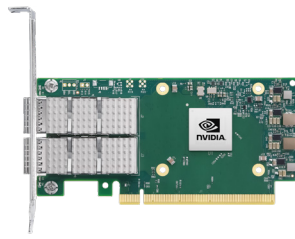
Organizations everywhere struggle to turn massive amounts of data into actionable insights. The rapid adoption of accelerated computing in the cloud, in the data center, and at the edge is fueling the demand for high-throughput, low-latency network solutions. The NVIDIA® ConnectX® line of network interface cards (NICs) has become pervasive across the data center, giving enterprises of all sizes the ability to build smart and secure IT solutions. Designed for the software-defined data center, ConnectX NICs boast a range of hardware accelerators for networking, storage, and security processing, which free up compute resources and boost infrastructure workloads.

Enterprises are now able to modernize their IT infrastructure with breakthrough performance, robust security, and improved efficiency. But to achieve optimal performance and productivity, it's essential to identify the ideal NIC for specific use cases. Supporting workloads, network speeds, and server platforms, ConnectX is pretested, validated, and certified by NVIDIA and through our leading partners. Use this as a guide to the ConnectX NIC portfolio, and reach out to your NVIDIA representative or OEM seller for more information.



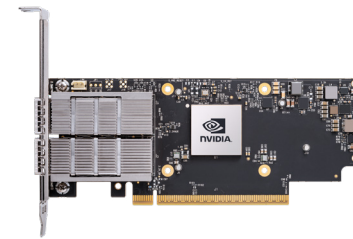
NVIDIA ConnectX-6 Lx

ConnectX-6 Lx NICs deliver advanced network and security acceleration capabilities with the best total cost of ownership for 25-gigabits-per-second (Gb/s) environments in cloud and enterprise data centers.



NVIDIA ConnectX-6 Dx

ConnectX-6 Dx NICs provide high-performance 100Gb/s connectivity solutions that accelerate mission-critical cloud, telecom, and enterprise data center applications, including security, virtualization, software-defined networking and network functions virtualization (SDN/NFV), big data, machine learning, and storage.



NVIDIA ConnectX-7

ConnectX-7 NICs offer a wide range of advanced, scalable, and secure networking solutions that address the world's most-demanding AI, scientific computing, and hyperscale cloud data center workloads with speeds up to 400Gb/s.

Product	NVIDIA ConnectX-6 Lx	NVIDIA ConnectX-6 Dx	NVIDIA ConnectX-7
Max ports and max speed	> 2x 25Gb/s or 1x 50Gb/s > NRZ	> 2x 100Gb/s or 1x 200Gb/s > NRZ / PAM4 56	> 4x 100Gb/s, 2x 200Gb/s, or 1x 400Gb/s > NRZ / PAM4 56 / PAM4 112
Total bandwidth	50Gb/s	200Gb/s	400Gb/s
Host interface	8x PCIe Gen4	16x PCIe Gen4	32x PCIe Gen5
Form factors	PCIe HHHL, OCP3.0 SFF	PCIe HHHL, OCP3.0 SFF	PCIe HHHL/FHHL, OCP3.0 SFF/TSFF
Network interfaces	SFP28, QSFP28	SFP56, QSFP56	SFP56, OSFP, QSFP112
Platform security	Secure boot	Secure boot	Secure boot, memory encryption, device attestation
Network accelerations	SR-IOV, RoCE, DPDK, overlay networks, NVIDIA ASAP2 Accelerated Switching and Packet Processing™, VirtIO	SR-IOV, RoCE, DPDK, Overlay Networks, ASAP², VirtIO	SR-IOV, DPDK, RoCE, Overlay Networks, ASAP², VirtIO
Crypto accelerations	IPsec	IPsec, TLS	IPsec, TLS, MACsec
High-performance computing (HPC) and AI acceleration	NVIDIA GPUDirect® RDMA, GPUDirect Storage	GPUDirect RDMA, GPUDirect Storage	GPUDirect RDMA, GPUDirect Storage, all-to-all
Storage accelerations	NVMe-oF	NVMe-oF	NVMe-oF, NVMe/TCP
Management interfaces	SMbus 2.0, NC-SI, PLDM	SMbus 2.0, NC-SI, PLDM	SMbus 2.0, NC-SI, PLDM
Prominent use cases	Enterprise private cloud	Enterprise private cloud, public cloud, telco core cloud, telco edge	HPC/AI cloud, data science, public cloud, telco core cloud, telco edge, edge AI

Ready to Get Started?

For more information on the NVIDIA portfolio of NICs, visit:

nvidia.com/connectx

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