



NVIDIA CONNECTX ETHERNET NETWORK INTERFACE CARDS

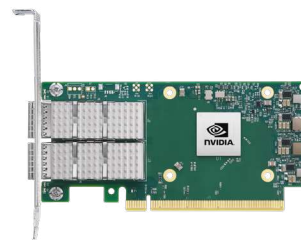
Smart, Accelerated Networking for Every Workload

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

Enterprises are now able to modernize their IT infrastructure with breakthrough performance, robust security, and improved efficiency.

For achieving optimal performance and productivity, it's essential to identify the ideal SmartNIC for a specific use case. Supporting workloads, network speeds, and server platforms, ConnectX is pretested, validated, and certified by NVIDIA and through its leading partners. Use this as a guide to the ConnectX SmartNIC portfolio, and reach out to your NVIDIA representative or OEM seller for more information.

Choose the Right Network Interface Card



PRODUCT	NVIDIA CONNECTX-6 LX	NVIDIA CONNECTX-6 DX	NVIDIA CONNECTX-7
Description	> 25Gb/s Optimized > Multi-Purpose, Enterprise-Class SmartNIC	> Extreme Security and Performance > High-Performance SmartNIC for Cloud and SDN/NFV Data Centers	> 400Gb/s Data-Centric Acceleration > High-Performance SmartNIC for Cloud and SDN/NFV Data Centers
Max. ports and max. speed	2x 25Gb/s or 1x 50Gb/s NRZ	2x 100Gb/s or 1x 200Gb/s NRZ/PAM4 (56)	2x 400Gb/s or 4x 200Gb/s NRZ/PAM4 (56/112)
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, OCP3.0 SFF/TSFF
Network interfaces	SFP28, QSFP28	SFP56, QSFP56, DSFP	QSFP-DD, QSFP112, SFP112
Platform security	Secure boot	Secure boot	Secure boot, memory encryption, device attestation
Network accelerations	SR-IOV, RoCE, DPDK, Overlay Networks, NVIDIA Accelerated Switching and Packet Processing™ (ASAP²), 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
HPC/AI acceleration	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

To learn more about the NVIDIA portfolio of smart NICs, visit [www.NVIDIA.com/connectx](https://www.nvidia.com/connectx)