

# Mellanox MCX512A-ACUT Datasheet



Mellanox MCX512A-ACUT ConnectX-5 EN network interface card, 10/25GbE dual-port SFP28, PCIe3.0 x8, UEFI Enabled (x86/ARM), tall bracket

MCX512A-ACUT

NVIDIA MCX512A-ACUT ConnectX-5 EN Adapter Card 10/25GbE Dual-Port SFP28 PCIe 3.0 x8 UEFI Enabled x86 ARM Tall Bracket

Up to 10/25Gb/s Ethernet Adapter Cards

ConnectX-5 Ethernet network interface cards provide high performance and flexible solutions with up to two ports of 10/25GbE connectivity, 750ns latency, up to 200 million messages per second (Mpps), and a record setting 197Mpps when running an open source Data Path Development Kit (DPDK) PCIe (Gen 4.0). For storage workloads, ConnectX-5 delivers a range of innovative accelerations, such as Signature Handover (T10-DIF) in hardware, an embedded PCIe Switch, and NVMe over Fabric target offloads. ConnectX-5 adapter cards also bring advanced Open vSwitch offloads to telecommunications and cloud data centers to drive extremely high packet rates and throughput with reduced CPU resource consumption, thus boosting data center infrastructure efficiency.

ConnectX-5 adapter cards are available for PCIe Gen 3.0 and Gen 4.0 servers and provide support for 1, 10, 25, 40, 50

and 100 GbE speeds in stand-up PCIe cards, OCP 2.0, and OCP 3.0 form factors. ConnectX-5 cards also offer advanced Multi-Host and Socket Direct technologies.

## Features

- Tag matching and rendezvous offloads
- Adaptive routing on reliable transport
- Burst buffer offloads for background checkpointing
- NVMe over Fabric offloads
- Backend switch elimination by host chaining
- Embedded PCIe switch
- Enhanced vSwitch/vRouter offloads
- Flexible pipeline
- RoCE for overlay networks
- PCIe Gen 4.0 support
- RoHS compliant
- ODCC compatible
- Various form factors available

## Benefits

- Up to 100Gb/s connectivity per port
- Industry-leading throughput, low latency, low CPU utilization and high message rate
- Innovative rack design for storage and Machine Learning based on Host Chaining technology
- Smart interconnect for x86, Power, Arm, and GPU-based compute & storage platforms
- Advanced storage capabilities including NVMe over Fabric offloads
- Intelligent network adapter supporting flexible pipeline programmability
- Cutting-edge performance in virtualized networks including Network Function Virtualization (NFV)
- Enabler for efficient service chaining capabilities
- Efficient I/O consolidation, lowering data center costs and complexity

For more specifications of this MCX512A-ACUT, please visit below Mellanox website:

<https://docs.mellanox.com/display/ConnectX5EN/Specifications>

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