

NIC-PCIE-2SFP+-MEL-PLU

NIC-PCIE-2SFP+-MEL-PLU / (Equivalent to Mellanox MCX312B-XCCT) 10 Gigabit Dual-port Fiber Ethernet Adapter with a genuine Mellanox ConnectX-3 Chipset.



Description

NIC-PCIE-2SFP+-MEL-PLU Server Adapter support Ethernet connectivity with hardware offload engines to Overlay Networks (“Tunneling”), provide the highest performing and most flexible interconnect solution for PCI Express Gen3 servers used in public and private clouds, Enterprise Data Centers, and High Performance Computing (HPC). Public and private cloud clustered databases, parallel processing, transactional services, and high-performance embedded I/O applications will achieve significant performance improvements resulting in reduced completion time and lower cost per operation. NIC-PCIE-2SFP+-MEL-PLU also simplifies system development by serving multiple fabrics with one hardware design.

Key Features

- 1us MPI ping latency
- PCI Express 3.0 (up to 8GT/s)
- CPU offload of transport operations
- Application offload
- GPU communication acceleration
- Precision Clock Synchronization
- HW Offloads for NVGRE and VXLAN encapsulated traffic
- End-to-end QoS and congestion control
- Hardware-based I/O virtualization
- Equivalent to the Mellanox MCX312B-XCCT

Specification

Features	
Controller	Mellanox ConnectX-3
Interface	SFP LC Port
Bracket	Low Profile Bracket and Full-height Bracket
Power dissipation	6W
Operating system support	Windows Server 2016 R2
	Windows Server 2012 R2
	Windows Server 2012
	Windows Server 2008 R2
	Windows 10

	Windows 8.1
	Windows 8
	Windows 7 X64
	Linux Stable Kernel version 2.6,3.x,4.x etc
	Ubuntu 12.04 etc
	Vmware ESXi 4.x\5.x\6.x
	Citrix XenServer 6.1
Connector	2 x SFP+
PCI Express Card Type	PCI Express v3.0 (8.0GT/s) x8: x4,x16
Data Transfer Rate	10 GbE, 2000Mbit/s in full duplex mode per port
PCI Express Voltage	+12V±8%, +3.3V±8%
Technical Specification	
Ethernet Power Management	Yes
Speed	10GbE
IEEE Standard / Network topology	IEEE 802.11ae 10GBase-SR、10GBase-LR、10GBase-ER、10GBase-ZR IEEE 802.3aq 10GBase-LRM IEEE 802.3ad Link Aggregation and Failover IEEE 802.3az Energy Efficient Ethernet IEEE 802.1Q.1p VLAN tags and priority IEEE 802.1Qau Congestion Notification IEEE P802.1Qbb D1.0 Priority-based Flow Control IEEE 1588 Precision Clock Synchronization Jumbo frame support (1024B)
PXE	Yes (iPXE)
Iscsi	Yes
Power management	Yes
SR-IOV	Yes
IPv4,IPv6	Support
RSS	Support
Jumbo frame packet	Yes
DPDK	Support
NFV	Yes
VLAN	Support VXLAN, NVGRE
Operating Environment	
Operating Temperature	0°C to 50°C (32°F to 122 °F)
Storage Temperature	-40°Cto 85°C (-40°F to 185°F)
Operating Relative Humidity	35% to 90%, non condensing
LEDs	Link: Turns on link (orange) Act: 10Gb/s on activity (green)
Driver	
Drivers Download	Windows http://www.mellanox.com/page/products_dyn?product_family=32&mtag=windows_driver System: http://www.mellanox.com/page/software_overview_eth
Windows	Mellanox Connect X-3 Ethernet Adapter
Linux	Mellanox Technologies MT27520 Family [Connect X-3 pro]
Firmware Update	http://www.mellanox.com/supportdownloader/

Testing Report			
Server/Client	CPU: INTEL Xeon E5-2658 V3 @2.0GHZ		
	Motherboard: Giada JHS827-AST1400		
	RAM: SKhynix 8 GB DDR4		
	OS: Windows Server 2016 R2		
TCP bandwidth/Throughput testing	Test the topology: S-C		
	Server: IxChariot6.7		
	Client: IxChariot6.7		
Latency time	Data packet length (byte)	TCP	UDP
	32	9.8us	8.7us
PCB Size (mm)	159.50mm*68.76mm*1.6mm		

Ordering Info:

Module	Description	
NIC-PCIE-2SFP+-MEL-PLU	PCIe x8 10G Equivalent to Mellanox MCX312B-XCCT	Based on Mellanox ConnectX-3, 3U/2U Profile