CLR-NIC-STG-2SFP

PCI-E*8 Fiber NIC 2 x 10G SFP+ slots - Server type

Overview

CLR-NIC-STG-2SFP is a Dual-Port 10 Gigabit SFP+ Server Ethernet Network Adapter which provides flexibility and scalability in mission-critical Virtual and Unified Storage Environments.

The speed limits of networks in data centers are never enough. Especially the deployments of servers with multi-core processors, and high performance demanding applications such as HPC, database clusters, and video-on-demand are driving the need for 10 Gigabit connections.

With more Virtual Machines (VMs) running on each multi-core server, networking traffic is dramatically increased with each VM competing for available I/O bandwidth. CLR-NIC-STG-2SFP 10G NICs address networking bottlenecks in virtualized environments. These adapters enable network-intensive applications to achieve the performance expected in a virtualized environment. CLR-NIC-STG-2SFP server adapter card provides the best networking performance available in the industry, whether the physical port is configured in an emulation mode using the virtual switch in the Virtual Machine Monitor (VMM), or is directly assigned to a virtual machine.

Datasheet | 10G Fiber NIC PCI-E*8 Server Type

Features

- Plug and play
- PCI-E X 8 compliant
- 10G SFP+ module with LC connector, MM and SM available
- Supports PCI-SIG SR-IOV mechanism which provides devices to advertise their ability to be directly assigned to multiple virtual machines.
- Unified Networking and Storage - lovers data center Total Cost of Ownership (TCO) by providing the ability to route LAN and SAN traffic over a single fabric.
- Supports Fiber Channel over Ethernet (FCoE) which encapsulates Fiber Channel frames over standard Ethernet networks, enabling Fiber Channel to take advantage of 10 GbE networks while preserving its native protocol.
- Supports iSCSI. Provides complete support for native OS and VMM iSCSI initiators as well as iSCSI boot.
- Advanced features for reliable performance
- Supports IPsec offload for Microsofts Network Access Protection (NAP), Active Directory, and future security capabilities in Windows7
- PCIe v2.0 (5GT/s) support enables customers to take full advantage of 10GbE by providing a maximum of 20Gbps bidirectional throughput per port on a single dual port card.
- Supports technologies such as multiple queues, receive-side scaling, multiple MSI-X vectors, and Low Latency Interrupts which distribute network processing across multiple CPU cores.

Specifications

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General Specs
Intel 82599 10 Gigabit Ethernet Controller
SFP+ Connectivity
Low-profile
Load balancing on multiple CPUs
iSCSI remote boot support
Fibre Channel over Ethernet (FCoE) Support
Support for most network operating systems (NOS)
RoHS-compliant2
Intel PROSet Utility for Windows- Device Manager
Time Sync (IEEE 1588, 802.1as)

I/O Features for Multi-core Processor Servers
Intel Direct Cache Access (DCA)
MSI-X support
Low Latency Interrupts
Header Splits and Replication in Receive
Multiple Queues: 128 Tx and Rx queues per port
Tx/Rx IP, SCTP, TCP, and UDP checksum offloading (IPv4, IPv6) capabilities
Tx TCP segmentation offload (IPv4, IPv6)

Receive and Transmit Side Scaling for Windows environment and Scalable I/O for Linux- environments (IPv4, IPv6, TCP/UDP)
IPsec Offload
MacSec
Virtualization Features
VMDq
Next-Generation VMDq1 (64 queues per port)
PC-SIG SR-IOV Implementation (64 virtual functions per port)
Virtual Machine Load Balancing (VLMB)
Advanced Packet Filtering
VLAN support with VLAN tag insertion, stripping and packet filtering for up to 4096 VLAN tags
Manageability Features
Preboot eXecution Environment (PXE) Support
Simple Network Management Protocol (SNMP) and Remote Network Monitoring (RMON) Statistic Counters
iSCSI Boot
Watchdog Timer
Adapter Product Features
Intel PROSet Utility
Plug and play specification support
Receive Side Scaling
Direct Cache Access (DCA)
Advanced Software Features
Adapter fault tolerance (AFT)
Switch fault tolerance (SFT)
Adaptive load balancing (ALB)
Teaming support
IEEE 802.3ad (link aggregation control protocol)
PCIe Hot Plug-/Active periphera; component interconnect (PCI)
IEEE 802.1Q- VLANs
IEEE 802.3 2005- flow control support
Tx/Rx IP, TCP, & UDP checksum offloading (IPv4, IPv6) capabilities (Transmission control protocol(TCP), user datagram protocol
(UDP), Internet protocol (IP)
IEEE 802.1p-
TCP segmentation large send offload
MSI-X supports Multiple Independent Queues
Interrupt moderation
IPv6 offloading Checksum and segmentation capability extendedto new standard packet type
Network Operating Systems (NOS) Software Support
Windows 7 32-bit(64-bit)
Windows 8 32-bit(64-bit)

Windows 8.1 32-bit(64-bit)
Windows Vista 32-bit(64-bit)
Windows Server 2003 32-bit(64-bit)
Windows Server 2008 32-bit(64-bit)
Windows Server 2008 R2 32-bit(64-bit)
Windows Server 2012 32-bit(64-bit)
Windows Server 2012 R2 32-bit(64-bit)
Linux kernel 2.6.30 or greater (x86_64) (w/ SR-IOV support)
FreeBSD 7.2 or laster
Linux RHEL 5.6
Linux RHEL 6.x
Linux SLES 11 SP1
Linux SLES 10 SP4
OS Independent
DOS NDIS 2
DOS ODI
EFI 1.1
UEFI 2.1
Vmware ESX 4.02
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