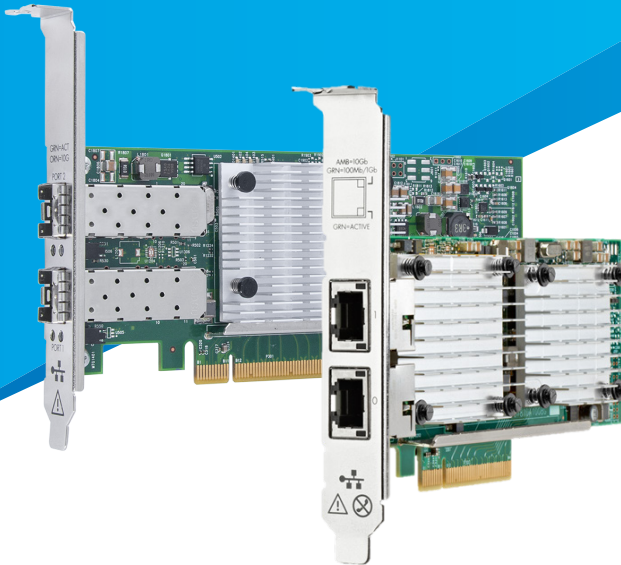


HPE StoreFabric CN1100R

Converged Network Adapters from Cavium



**Hewlett Packard
Enterprise**



- Full line-rate 10Gb Ethernet (10GbE) performance across all ports
- Consolidate network and storage traffic over converged 10GbE connections
- Boost host CPU efficiency with full hardware offload for iSCSI and Fibre Channel over Ethernet (FCoE) storage traffic
- Improve reliability and interoperability leveraging QLogic's market-proven, converged networking leadership
- Industry-leading FCoE performance of up to 2.6 million IOPS and iSCSI performance of up to 1.5 million IOPS, suitable for high-density server virtualization and large databases.

OVERVIEW

The HPE™ StoreFabric® CN1100R/CN1100R-T 10Gb BASE-T Dual Port Converged Network Adapters (CNAs) provide Ethernet, iSCSI, and Fibre Channel (FC) connectivity over 10GbE using both FCoE and Converged Enhanced Ethernet (CEE) standards. The CN1100R model has SFP+ optical connections, and the CN1100R-T 10Gb BASE-T model supports 10GBASE-T connection using RJ-45 connectors. Consolidating Ethernet, iSCSI, and FC functions into one CN1100R CNA can allow for fewer adapters and cables, thus lowering operational, power, and cooling costs, while preserving the existing Ethernet and FC infrastructure. These HPE CNAs have been thoroughly tested with HPE ProLiant®-servers and HPE Top of Rack (ToR) and End of Row (EoR) switches to ensure an optimal HPE FCoE connectivity solution.

ACCELERATE SERVER PERFORMANCE

The HPE StoreFabric CN1100R CNAs boost network performance with full line-rate 10GbE throughput across all ports. With full hardware offload for both FCoE and iSCSI traffic, the CN1100R CNAs increase server performance. Customers can also maximize server processing performance by reducing CPU overhead and interrupt latency afforded by the MSI-X standard supported by the CN1100R CNAs. These HPE adapters also support transmit/receive side scaling (TSS/RSS), which boosts performance in Windows® and Linux® environments by directing interrupts to the server's CPU cores.

ROBUST VIRTUALIZATION CAPABILITY

The HPE StoreFabric CN1100R CNAs are ideal for customers deploying virtual server environments. These adapters from HPE and Cavium provide superior network performance with support for VMware® NetQueue and Microsoft® VMQ technologies. Virtual network management and efficiency is enhanced with support for virtual LAN (VLAN) and VLAN tagging.

The HPE StoreFabric CN1100R CNAs also support NIC partitioning (NPAR), which provides the capability to virtualize the physical 10GbE ports at the adapter level. Each port can be virtualized into four distinct functions, and administrators can set quality of service (QoS) parameters based on bandwidth requirements. The QoS can be set in 100Mbps increments, or on a priority basis, using HPE or QLogic management utilities.

STREAMLINE DEPLOYMENT AND MANAGEMENT

The HPE StoreFabric CNAs are based on industry-leading QLogic technology from Cavium. The CN1100R CNAs can provide concurrent iSCSI and FCoE function on a single adapter, simplifying server deployment for customers using both iSCSI and FC storage networks.

SPECIFICATIONS

Throughput

- 10Gbps line rate per port

Bus Type

- x8 PCIe® 2.0 with MSI-X and INTx

Controller

- Cavium QLogic 57810S

Connector

- CN1100R: SFP+ for direct attach copper (DAC) or 10GBASE-SR for short range optical
- CN1100R-T 10Gb BASE-T: RJ-45, 10GBASE-T

Protocols Supported

- FCoE
- Ethernet
- iSCSI

WHAT'S INCLUDED IN THE BOX

Hardware

- HPE StoreFabric CN1100R CNA (P/N QW990A) or; CN1100R-T 10Gb BASE-T CNA (P/N N3U52A)
- Low-profile bracket

Management

- HPE utilities including Converged Network Utility (CNU)
- Pre-boot Comprehensive Configuration Manager (CCM) utility
- Pre-boot unified extensive firmware interface (UEFI) human interface infrastructure (HII) Device Configuration pages in system BIOS
- QLogic Adapter Management Tools
- QLogic Control Suite (QCS) integrated network adapter management utility CLI for Linux and Windows
- QConvergeConsole® (QCC) integrated network management utility GUI for Linux and Windows
- QCC Plug-ins for vSphere® Web Client GUI and ESXCLI plug-in for VMware
- QCC PowerKit (Windows PowerShell® cmdlets) for Linux and Windows

OPERATING SYSTEM SUPPORT

- Windows Server®
- Windows Server Hyper-V™
- VMware
- RHEL®
- SLES®
- Citrix® XenServer®

PRODUCT SUPPORT INFORMATION

- For specific product support information, refer to the HP® Single Point of Connectivity Knowledge for HP Storage Products at: www.hpe.com/storage/spock

SERVER SUPPORT INFORMATION

HPE ProLiant Gen8 Servers

- Select HPE ProLiant Gen8 DL, ML and SL servers

HPE ProLiant Gen9 Servers

- Select HPE ProLiant Gen9 DL, ML and SL servers, and HPE Apollo servers
- For details regarding supported server options, refer to the HPE Server QuickSpecs at www.hpe.com/info/qs.

FORM FACTOR

- PCIe low-profile form factor
16.76cm x 6.89cm (6.60" x 2.71")

ADVANCED FEATURES AND STANDARDS

- VLAN tagging
- Adaptive interrupt coalescing
- MSI and MSI-X support
- NIC teaming (bonding)
- Receive side scaling (RSS)
- Transmit side scaling (TSS)
- Jumbo frames
- Checksum and segmentation offload
- Preboot execution environment
- iSCSI remote boot
- FCoE boot from SAN
- Network Virtualization using Generic Routing Encapsulation (NVGRE)/ Virtual Extensible LAN (VXLAN) tunneling offloads

- VMware NetQueue
- Microsoft VMQ
- Switch independent NPAR with up to four partition assignments per 10GbE link
- Single root I/O virtualization (SR-IOV)
- PCI Bus Power Management Interface (rev 1.2)
- Advanced error reporting (AER)
- TCP segmentation/large send offload
- ACPI v2.0
- SMBus 2.0
- IPv4 (RFQ 791), IPv6 (RFC 2460)
- SFF8431 Annex E (10Gb Direct Attach Copper)

IEEE Compliance

- 802.3-2012 Clause 52 (10Gb Ethernet optical)
- 802.3-2015 Clauses 55, 40 and 25 (10GBASE-T/1000BASE-T/100BASE-T)
- 802.3x (Flow Control)
- 802.3ad/802.1ax (Link Aggregation)
- 802.3ae (10GbE)
- 802.1q (VLAN)
- 1588-20002 PTPv1 (Precision Time Protocol)
- 802.1as/1588-2008 PTPv2 (Precision Time Protocol)
- 802.1Qaz (DCBX and ETS)
- 802.1Qbb (Priority-Based Flow Control)
- 802.1Qbg/ IEEE 802.1Qbh (Edge Virtual Bridging)
- 802.3ab 1000BASE-T
- 802.3an 10GBASE-T
- 802.3u 100BASE-TX
- 802.3az Energy-Efficient Ethernet (EEE)

Resources

For more information, visit us on the web at: www.qlogic.com/info/hpe

For questions or enquiries, e-mail hpesolutions@cavium.com



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