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CHELSIO TERMINATOR 6 (T6) 100G UNIFIED WIRE ADAPTERS DELIVER GROUND-BREAKING DPDK PERFORMANCE

Enables Rapid Network Function Virtualization (NFV) Deployment for Enterprise and Service Provider Clouds

SUNNYVALE, CA – May 1, 2017 – Chelsio Communications, Inc., a leading provider of high performance (1Gb/10Gb/25Gb/40Gb/50Gb/100Gb) Ethernet Unified Wire Adapters and ASICs for storage networking, virtualized enterprise datacenters, cloud service installations, and cluster computing environments today announced benchmark results of the integrated packet handling capabilities of the latest Chelsio Terminator 6 (T6) 100GbE adapters. T6 100G adapters demonstrate exceptional packet processing performance for the for small size 64B network packets, delivering upto 75 MPPS, when measured Tx and Rx network traffic independently. Bi-directional network processing for both 64B and 128B packets, delivers a performance of 93 MPPS, saturating the PCI Gen3 x16 bus. Such record-breaking performance enables a rapid and seamless deployment of Network Function Virtualization (NFV) in both service provider and enterprise network cloud deployments.

The new T6 100 Gigabit Ethernet (100GbE) Unified Wire adapter delivers line rate throughput of over 176 Gb/s for 512B packets and up to 93 MPPS Bi-Directional packet rate for small packets, which is a major milestone towards taking NFV forward for large-scale deployment. Chelsio T6 adapters flexibly support 1, 10, 25, 40, 50 and 100GbE interfaces and support advanced offload capabilities including iWARP, storage protocol acceleration (iSCSI, NVMe-oF, FCoE) and DPDK acceleration. Detailed Data Plane Development Kit (DPDK) performance results over Chelsio T6 100G adapters are available in a [Chelsio Technical Brief](#).



Chelsio T6 Unified Wire adapters accelerate DPDK-based networking applications, increasing bandwidth (Gb/s) and packet rate (MPPS). By offloading compute intensive server-based networking functions and utilizing multi-CPU socket platforms more efficiently, performance can be significantly improved, while freeing up CPU cycles for additional applications processing. Chelsio Unified Wire adapters use DPDK based poll mode driver (PMD) which is designed for fast packet processing and low latency, eliminating the need for data to traverse through the Linux kernel and avoiding interrupt handling overhead for sending and receiving data to the x86 server.

“While DPDK technology has the potential to provide a 10X performance improvement for cloud networking and security applications that often have very high-performance requirements for throughput, latency and cycles-per-packet, standard NIC cards without acceleration struggle with packet processing, which ties up valuable server CPU resources and creates a bottleneck that starves applications,” said Kianoosh Naghshineh, CEO at Chelsio Communications. “We are pleased to demonstrate that T6 Unified Wire adapters can remove such inefficiencies to enable high-ROI deployment of NFV for private and public clouds.”

Chelsio T6’s DPDK based driver is ideal for high-instruction compute node and service node applications such as cybersecurity and telecom wired and wireless infrastructure applications. The architecture is based on packet processing on T6 processor, while using DPDK to execute other workloads on x86 processors. This lowers hardware costs, simplifies the application development environment, and reduces time to market. The DPDK workload model also plays a critical role in Software-Defined Networking (SDN) and Network Functions Virtualization (NFV).

Chelsio T6 adapters also support an offload solution for Traffic Management, Packet Classification and Filtering, OVS Offload, and Crypto functions. Once combined and configured with the DPDK interfaces, these functions further enhance the DPDK functionalities by enabling network security, monitoring, and QoS for both incoming/outgoing traffic.



About Chelsio Communications

Chelsio is a recognized leader in high performance (1Gb/10Gb/25Gb/40Gb/50Gb/100Gb) Ethernet adapters for networking and storage within virtualized enterprise datacenters, public and private hyperscale clouds, and cluster computing environments. With a clear emphasis on performance and delivering the only robust offload solution, as opposed to simple speeds and feeds, Chelsio has set itself apart from the competition. The Chelsio Unified Wire fully offloads all protocol traffic, providing no-compromise performance with high packet processing capacity, sub-microsecond hardware latency and high bandwidth. Visit the company at www.chelsio.com, and follow the company on [Twitter](#) and [Facebook](#).

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