



**FOR IMMEDIATE RELEASE**

**Media Contact:**  
[media@chelsio.com](mailto:media@chelsio.com)  
Chelsio Communications  
1-408-962-3600

## **CHELSIO TERMINATOR 6 (T6) IN-LINE ACCELERATION OF UBIQUITOUS TLS/SSL DELIVERS GROUND-BREAKING LOW LATENCY, 100 GIGABIT-PER-SECOND LINE-RATE PERFORMANCE**

**Support for Leading Network Security Protocols Enables High-ROI, High-Performance Offering for Next-Generation Security Solutions**

**SUNNYVALE, CA – November 15, 2016** – Chelsio Communications, Inc., a leading provider of high performance (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 cryptographic acceleration capabilities of the latest Chelsio Terminator 6 (T6) 100GbE adapters.

The testing validates trailblazing performance for Transport Layer Security/Secure Sockets Layer (TLS/SSL) using inline cryptographic acceleration which leverages Chelsio's TCP/IP Offload Engine technology. Chelsio T6 fully offloads TLS/SSL acceleration making it uniquely capable of 100Gbps line-rate and less than 2 $\mu$ s latency performance. Chelsio T6 also provides in-line cryptographic acceleration for Datagram Transport Layer Security (DTLS), while also supporting the traditional co-processor lookaside mode to deliver 2x acceleration for TLS/SSL, IPsec, SMB 3.X security protocols, data at rest encryption/decryption and data-deduplication fingerprint computation. Demonstration of the testing will take place at the Supercomputing 2016 (SC16) conference (November 14-17, Salt Lake City, UT) at the Chelsio booth (#1409).

Support for integrated TLS/SSL, DTLS, IPsec and SMB 3.X crypto in Chelsio T6 adapters allows for tremendous differentiation for the end product. For example, T6 adapters are capable of



encrypting/decrypting network data at line-rate and in an in-line fashion (with or without integrated TCP Offload Engine), while concurrently doing encryption/decryption of storage data in a co-processor mode, thus enabling concurrent secure communication and secure storage, all for the price and power of a typical NIC.

Chelsio T6 powered adapters are the industry's highest performance Ethernet interfaces, scaling to deliver 100Gbps wire speed bandwidth, ultra-low latency and high message processing capacity. With a comprehensive suite of offloaded storage, compute and networking protocols – including iWARP (RDMA/TCP), TCP/IP, UDP/IP, NVMe over Fabrics, iSCSI Offload and FCoE with T10-DIX; Terminator 6 (T6) enables network convergence and provides unprecedented performance in virtualized environments, while dramatically increasing host system efficiency and lowering communication overhead.

Support for Chelsio's encryption engine is now part of the Linux kernel. Host software is hence available in source form for no additional licensing fees. The additional power or latency of the encryption engine is insignificant since it is part of the main processing pipeline. The in-line 100Gb encryption is achieved for an incremental latency of less than about 1µs.

“The introduction of integrated encryption within a NIC price and power envelope should further the migration towards secure cloud networks and storage,” said Seamus Crehan, president of [Crehan Research](#). “Acceleration of the SSL/TLS protocol to 100Gbps line-rate levels should complement this migration.”

“The concept of secure network convergence with unified support of leading security protocols such as TLS/SSL, SMB 3.X, IPsec and DTLS at 10, 25, 40, 50, and 100Gbps levels has been a vision for the networking industry for some time but has not widely adopted due to power, price, board real estate, or latency constraints,” said Kianoosh Naghshineh, CEO at Chelsio Communications. “We are gratified that our T6 adapter product line has accomplished this major milestone of delivering encryption capability at essentially no price or power relative to



a basic NIC. T6 will truly enable differentiation for our customers' products so as to respond to the market demand for encrypted and secure products.”

### **More Details**

T6 Encryption Performance: [T6 Crypto Performance Tech Brief](#)

T6 Encryption Offload: [T6 Crypto White Paper](#)

T6 Encryption Video: [T6 Crypto Video](#)

T6 ASIC Architecture: [T6 ASIC Architecture White Paper](#)

### **About Chelsio Communications**

Chelsio is a recognized leader in high performance (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](http://www.chelsio.com), and follow the company on [Twitter](#) and [Facebook](#).

###