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CHELSIO LAUNCHES TERMINATOR CORE IP

OPEN SERVER SUMMIT, SANTA CLARA, Calif., (November 13, 2014) – Chelsio Communications, a leading provider of 40Gb Ethernet (40GbE) Unified Wire Adapters and ASICs, announced today that it has launched a new product offering, the Terminator Core, a configurable kit for building high performance Converged Ethernet solutions.

The Chelsio Terminator Core IP is built around a configurable, high performance Ethernet packet processing engine with RDMA, iSCSI, FCoE, and advanced server networking features, and leverages a full suite of software, in-boxed within the major server operating systems. A highly efficient and scalable design, Terminator Core is suitable for a wide range of System-on-a-Chip (SoC) network connectivity solutions, with multi-port support from 1 to 100Gbps. At the heart of the Terminator line of field proven Network Interface Card (NIC) controllers, Chelsio's Core architecture is designed for low latency, high capacity cut-through processing, minimum cycles per byte (CPB) and maximum memory efficiency.

Terminator Core is the culmination of more than a decade of expertise with high performance network protocol implementation, and five generations of silicon proven design. Terminator Core offers support for a complete suite of storage and high performance computing networking protocols. Integrating the Core within an SoC design provides a drop-in server grade network-managed and hyper-virtualized Ethernet controller with a complete protocol stack. The Core can also be configured with an embedded edge switch capable of flexible packet switching and replication, with access control support, and an integrated ccNUMA controller that extends cache coherence to multiple nodes.

The Terminator Core architecture can attach using a single ACE or PCI interface on the system bus side, and one or more ports on the network side. With a proven firmware and software stack that can operate on an ARM, Power or other embedded CPU based SoC system, the Core can be configured to support a comprehensive set of offload networking, storage and compute protocols, including a complete list of stateless offloads:

- Large Send Offload (LSO) and Large Receive Offload (LRO)
- Checksum offloads for TCP/UDP over IPv4/IPv6
- CRC offloads for RDMA, FCoE and iSCSI
- Load balancing – RSS
- Drop/Steer filters and NAT offload
- NVGRE/VXLAN/GENEVE offload
- Timestamping, routing, tracing



The Core can also be configured to support one or more of the stateful offloads:

- iSCSI – PDU and full offload with T10-DIX
- FCoE – PDU and full offload with T10-DIX
- iWARP RDMA over Ethernet
- TCP/IP and UDP/IP sockets

“Opening up the Terminator Core for SoC applications is a significant step for Chelsio”, said Kianoosh Naghshineh, President and CEO, Chelsio Communications Inc. “With a field and silicon proven architecture, and instant access to a complete software library across all operating systems, this solution enables high efficiency server processor designs for the next generation data center and clouds. By providing low latency, high performance network access with integrated RDMA, it also breaks down the barriers that limit distributed system scalability.”

“The breadth of Chelsio’s Core IP offering is particularly noteworthy, as it spans storage and compute applications while minimizing the software investment needed to field a comprehensive converged network interface”, said Bob Wheeler, Principal Analyst at The Linley Group. “The fact that Chelsio is shipping the fifth generation Terminator design demonstrates the maturity and performance of their solution.”

Supporting Resources

- Read the [Product Brief](#) for the Terminator Core IP for PCI interface.
- Read the [Product Brief](#) for the Terminator Core IP for ACE interface.
- Read more about the [Chelsio T5 Unified Wire Adapters](#).

About Chelsio T5 Adapters

Chelsio’s T5 adapters are based upon the fifth generation of its high performance Terminator ASIC architecture. They are RDMA-capable Unified Wire adapters that simultaneously offload NVGRE, iSCSI, FCoE, RDMA and sockets applications, along with traffic management and QoS. Designed for data, storage and high performance clustering applications, Chelsio T5 adapters are available today at 40Gbps speeds with iWARP RDMA and NVGRE offload.

About Chelsio Communications, Inc.

Chelsio Communications is leading the convergence of networking, storage and clustering interconnects and I/O virtualization with its robust, high-performance and proven Unified Wire technology. Featuring a highly scalable and programmable architecture, Chelsio is shipping multi-port 10 Gigabit Ethernet (10GbE) and 40GbE adapter cards, delivering the low latency and superior throughput required for high-performance compute and storage applications. For more information, visit the company online at www.chelsio.com.

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