NEW!

Dual-Port
10GbE Bypass Server Adapter

Highlights

- Four operational modes to ensure business continuity:
  - ► Bypass mode
  - ► Normal mode
  - ► Drop mode
  - ► Selective bypass
- Integrated external switch fabric
- Chelsio T3 accelerator for fast, scalable, and reliable networking
- Line-rate full-duplex 10Gbps performance for high-I/O enterprise-grade appliances
- PCI Express x8 connectivity for extremely high bandwidth
- Supports stateless offload
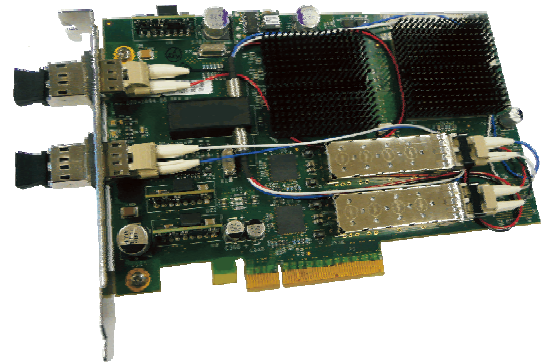- Powerful per-connection, per-server, and per-interface configuration and control

Applications

- WAN optimization
- Web acceleration
- Load balancing
- Inline intrusion prevention
- Security
- Traffic shaping

T O MEET the challenges of collaboration over wide area networks (WANs) and dynamic web services, enterprise IT managers have deployed a range of network-edge appliances for real-time traffic analysis and management, load balancing, and optimized application delivery across WANs. From a network performance viewpoint, such network-edge devices require network require very high bandwidth and minimum latency. Moreover, because these appliances are in-line with the critical path, they must be able to fail safely; otherwise, a failure or instability could bring down the entire network.

To address these requirements, Chelsio has designed a 10GbE bypass server adapter specifically for WAN optimization, load-balancing, traffic management, and other networking appliances at the network edge. Chelsio's 10GbE B320E adapter delivers the highest performance bypass adapter solution available in the industry.

Bypass Mode Ensures Business Continuity

To help maintain business continuity in the event of a failure, B320E provides a programmable bypass mode. The bypass mode automatically activates upon programmed detection of an appliance power-down, BIOS boot, or an OS or application program failure. When a detected failure occurs, mechanical relays switch the network traffic so it flows out the second port of the pair on the adapter, bypassing the problem server appliance and maintaining business continuity.

Integrated External Switch Fabric

The integrated external switch can classify flows, redirect and reject traffic without host intervention such that the host listens on desired flows only. This selective bypass can be enabled on a per packet basis at line rate.

Fully Featured Server Adapter

The dual-port 10GbE B320E offers best-of-class performance and networking features, including IP/UDP/TCP checksum and large send offload, rate control and Quality of Service (QoS), and rule-based traffic steering and filtering.

Third-Generation Protocol Offload Engine

The B320E employs Chelsio's unique third-generation Terminator 3 ASIC, a high-performance, programmable protocol processor. Terminator 3 processes all connections in a single datapath to deliver line-rate 10Gbps performance with one connection, up to thousands of connections.

Robust, Proven Solution

Subjected to thousands of hours of compatibility testing, over two years of stress testing by several OEM test suites and production deployments in servers, storage systems and cluster computing, Chelsio's robust, stable 10GbE protocol offload technology delivers proven performance in a wide range of environments.

Software Drivers and Design Kits

Chelsio offers a full suite of protocol software and drivers for Linux with the B320E adapter.

Product Models

Model:	**B320E**
Physical interface:	10GBASE-SR
Distance:	300m
Connector:	LC Duplex
Media:	MMF – 850nm

Specifications

Host Interface
- PCI Express 1.1 x8, x4, x2, x1
- MSI-X, MSI and support for legacy pin interrupts

Network Interfaces
- 10GBASE-SR short-reach optics (850nm)

Ethernet
- IEEE 802.3ae (10GbE)
- IEEE 802.1p Priority and 802.1Q VLAN tagging
- IEEE 802.3x flow control
- IEEE 802.3ad link aggregation
- Ether II and 802.3 encapsulated frames
- Multiple MAC addresses per interface
- Jumbo Frames up to 9.6Kbytes

Bypass Modes of Operation
- Bypass control via software
- Software programmable behavior on power fail – either Bypass Mode or Drop Mode
- Firmware control of Bypass/Normal/Drop Modes when T3 timer expires
- Bypass/Normal/Drop Mode control on startup via firmware
- Selective Bypass – Programmable HW traffic classification and redirection without host intervention in normal mode
- Green LED indicates adapter in bypass mode when powered

Stateless Offloads
- TCP checksum offload for IPv4 & IPv6
- TCP Segmentation Offload (TSO) for IPv4 & IPv6
- UDP checksum offload for IPv4 & IPv6
- Receive Side Scaling and packet steering
- Line-rate packet filtering and attack protection

Integrated Traffic Manager
- Rule-based packet steering and filtering capability
- Multiple Tx & Rx queues with QoS
- Simultaneous low latency & high bandwidth
- Per-connection and per-class rate control
- Packet loss avoidance

Physical and Environmental
- Dimensions without bracket: 6.6 in. x 4.2 in. or 16.8 cm x 10.7 cm
- Operating Temp: 0 to 55ºC or 32 to 131ºF
- Operating Humidity: 5 to 95%
- Airflow: 200 lf/m
- Typical power consumption: <25W