

NT4E-STD IN-LINE

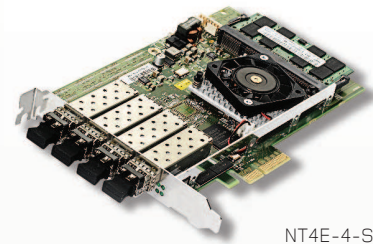
Intelligent Real-time Network Adapters

4-port 10 M / 100 M / 1 G Ethernet PCIe

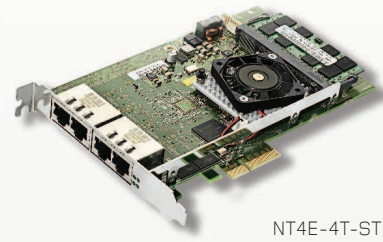
DATA SHEET

4 Gbps In-line Application Acceleration

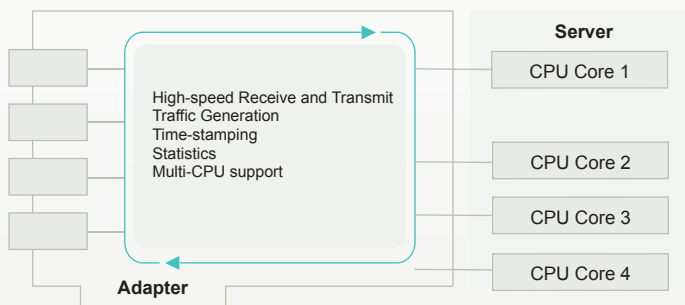
The NT4E-STD In-line Adapters provide full line-rate processing, analysis and retransmission of 4 Gbps data with zero packet loss, no matter the packet size. The adapter supports retransmission of frames with the same Ethernet CRC and IFG as received, enabling the in-line device to be 100% transparent. NT4E-STD is ideal for 4 Gbps applications that require maximum throughput and minimal CPU load. A comprehensive software suite is provided to allow quick and easy integration of the NT4E-STD In-line Adapter supporting Linux, FreeBSD or Windows operating systems.



NT4E-4-STD: 4 x 1 Gbps PCIe



NT4E-4T-STD: 4 x 1 Gbps PCIe



FEATURE HIGHLIGHTS AND APPLICATIONS

Feature Highlights

- 4 x 1 Gbps SFP and/or RJ45 connections
- High-speed in-line processing for all frame sizes
- Low host CPU load
- Low latency
- High-precision 10 ns time-stamping
- Advanced host time synchronization
- 4 Gbps frame processing including statistics and multi-CPU support
- 10 ns control of IFG for transmitted frames
- On-the-fly fully reconfigurable setup
- Easy-to-integrate API
- LibPCAP support
- Linux, FreeBSD and Windows support

Napatech-supported Applications

The Napatech standard in-line adapters enable our OEM customers to build cost-effective and value-added appliances to meet requirements for many different solutions. Examples of supported applications are:

- Firewalls
- Intrusion Prevention System (IPS)
- Unified Threat Management (UTM)
- Anti-spam Filtering
- Traffic Generation and Replay
- Traffic Shaping
- Policy Control

SPECIFICATIONS

General Features

- Full-line-rate processing for all frames from 64 bytes to 10.000 bytes
- IEEE standard: IEEE 802.3 10 Mbit/s / 100 Mbit/s / 1 Gbit/s Ethernet
- Physical interfaces:
 - NT4E-4-STD: 4 SFP ports
 - NT4E-4T-STD: 4 RJ45 ports
- Supported SFP modules: Multi-mode SR (850 nm), single-mode LR (1310 nm), 1000BASE-T or 10/100/1000BASE-T
- Data rate: 4 x 1 Gbit/s
- PCIe performance: 6.3 Gbit/s
- CPU utilization:
 - Low CPU utilization for data transfer
 - 0% of the CPU is used for any on-board processing
- Time formats: Native 10 ns, NDIS 10 ns, UNIX 10 ns

Host Interface

- Bus type: 4-lane 2.5 Gbit/s PCIe Gen1
- Data transfer modes:
 - Bus master DMA
 - Memory write or memory read transactions
- Support for 32-bit/64-bit addressing and host DMA addressing

Statistics

- RMON1 counters plus Jumbo frame counters per port
- Frame and byte counters per host buffer
- Counter sets always delivered as a consistent time-stamped snapshot

Adapter Hardware

- Flash: Supports two boot images
- Memory options: Standard SO-DIMM 200-pin 1 GB, 2 GB or 4 GB DDR2 RAM modules
- Physical dimensions: ½-length full-height PCIe

Environment

- Power consumption: 22 W incl. SFP SR or RJ45 modules
- Operating temperature: 0 - 45 °C, 32 - 113 °F
- Operating humidity: 20 - 80%
- Hardware compliance: RoHS, UL, CE, FCC, CSA, VCCI, C-TICK
- MTBF: 266329 hours according to RIAC-HDBK-217Plus

Software

- Linux kernel 2.6: 32-bit/64-bit
- FreeBSD 6.x and 7.x: 32-bit/64-bit
- Windows Server 2003 and Windows XP: 32-bit/64-bit
- API supporting user level applications
- LibPCAP support
- SDK tools included in source code for debugging and prototyping and as examples of how the adapters are used

COMPANY PROFILE

Napatech develops and markets the world's most advanced programmable network adapters for network traffic analysis and application off-loading. Napatech is the leading OEM supplier of Ethernet network acceleration adapter hardware. Napatech is fully focused on providing the most cost-effective hardware acceleration solutions for Gigabit Ethernet connectivity, increasing our customers' ability to keep their competitive advantage, while maintaining the flexibility and cost position of standard server equipment and operating systems.

Napatech provides unmatched value-add to our OEM customers by offering a very flexible feature set and a highly scalable range of network adapters. With easy-to-use APIs, Napatech adapters enable effective integration of Network Monitoring, Network Security, Network Control and Assurance, and Network Traffic Generation appliances. Napatech has a strong international focus supporting OEM customers worldwide with headquarters and development located in Denmark, and sales and customer support located in the USA.

Europe, Africa and Asia

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