

Accelerators for Network Analysis

NT4E2-4-PTP 4-PORT 1G PCIe GEN2

Distributed by



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4 Gbps PACKET CAPTURE AND ANALYSIS

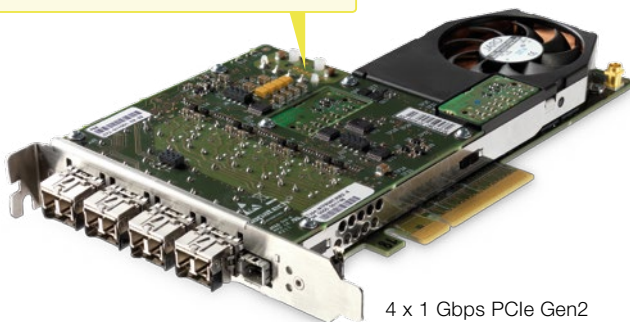
The NT4E2-4-PTP accelerator provides full packet capture and analysis of Ethernet LAN at 4 Gbps with zero packet loss for all frame sizes. It allows real-time data from multiple points in the network to be captured and merged into a single analysis stream. Transmission or replay of Ethernet traffic at 4 Gbps is provided with full control. NT4E2-4-PTP can also be used for in-line application acceleration.

Intelligent features for flow identification, filtering and distribution to up to 32 CPU cores accelerate application performance with extremely low CPU load.

Flexible time synchronization support including onboard IEEE 1588-2008 (PTP v2) software PTP stack with dedicated PTP port.

FEATURES

- HW Time Stamp and Time Sync
- Frame Processing
- Tunneling Support
- IP Fragment Handling
- Flow Identification
- Frame and Flow Filtering
- Intelligent Multi-CPU Distribution
- Advanced Statistics
- Monitoring Sensors
- Managed Transmit
- Synchronized Transmit



FEATURE HIGHLIGHTS

- 4 x 1 Gbps SFP connections
- Full 4 Gbps capture & replay of Ethernet LAN
- Full 4 Gbps transfer to host
- 300 ms of onboard data burst buffering
- Typical CPU load: 5%
- GTP and IP-in-IP tunneling support
- Onboard IEEE 1588-2008 support with dedicated PTP port
- Frame processing with dynamic and conditional slicing and deduplication
- Frame and flow filtering
- 4 ns time-stamping
- GPS, CDMA and IEEE 1588 time synchronization
- Identification and distribution of IP fragments
- 10 ns control of IFG for transmitted frames
- Synchronized transmission across accelerators
- Easy-to-integrate API

NAPATECH-SUPPORTED APPLICATIONS

Napatech accelerators enable OEM vendors to build high-performance network appliances based on standard servers. Examples of applications include:

- Revenue and services optimization
- Quality of experience optimization
- Telecom network management
- Network behavior simulation
- Financial latency measurement
- Customer experience analysis
- Data loss prevention
- Virtualized activity analysis
- Cyber defense
- Infrastructure management and security
- Network and application performance
- Troubleshooting and compliance

SPECIFICATIONS

GENERAL FEATURES

- Full line-rate processing for all frames from 64 bytes to 10,000 bytes
- IEEE standard: IEEE 802.3 1 Gbps Ethernet support
- Pluggable options for IEEE 1588-2008, PPS and NT-TS time synchronization
- Packet Delay Variation (PDV) filter for PTP
- Physical interface: 4 SFP ports
- Supported SFP modules: Multi-mode SX (850 nm), single-mode LX (1310 nm), single-mode ZX (1550 nm), 1000BASE-T or 10/100/1000BASE-T
- Data rate: 4 x 1 Gbps
- PCIe performance: 25 Gbps full-duplex
- Typical CPU load: 5%
- Time formats: PCAP-ns/-µs, native, NDIS 10 ns/100 ns, UNIX 10 ns
- PTP master and slave in IEEE 1588-2008 default profile
- PTP slave in IEEE 1588-2008 telecom and power profiles

HOST INTERFACE

- Data transfer modes:
 - Bus master DMA
 - Memory write or memory read transactions
- Bus type: 8-lane 5 GT/s PCIe Gen2

REGULATORY APPROVALS AND COMPLIANCES

- CE, CB, RoHS, REACH, cURus (UL), FCC, CSA, VCCI, C-TICK

ACCELERATOR SOFTWARE

- Supported operating systems
 - Linux
 - FreeBSD
 - Windows
- API supporting user level applications
- libpcap and WinPcap support
- Software PTP stack
- SDK tools included in source code for debugging and prototyping and as examples of how the accelerators are used

STATISTICS

- RMON1 counters plus jumbo frame counters per port
- Frame and byte counters per color (filter) and per host buffer
- Counter sets always delivered as a consistent time-stamped snapshot

ACCELERATOR HARDWARE

- Flash: Supports two boot images
- 2 GB onboard DDR3 RAM
- Physical dimensions: ½-length full-height PCIe
- Temperature and power sensors

ENVIRONMENT

- Power consumption: 23.3 Watts including SFP SX modules
- Operating temperature: 0 °C to 45 °C (32 °F to 113 °F)
- Operating humidity: 20% to 80%
- MTBF: 202,929 hours according to RIAC-HDBK-217Plus

COMPANY PROFILE

Napatech is the world leader in accelerating network management and security applications. As data volume and complexity grow, the performance of these applications needs to stay ahead of the speed of networks in order to do their jobs. We make this possible, for even the most demanding financial, telecom, corporate and government networks. Now and in the future, we enable our customers' applications to run faster than the networks they need to manage and protect.

Napatech. SMARTER DATA DELIVERY

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