NT20E3-2-PTP
2-PORT 10G PCIE GEN3

20 Gbps PACKET CAPTURE AND ANALYSIS

The NT20E3-2-PTP accelerator provides full packet capture and analysis of Ethernet LAN at 20 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. NT20E3-2-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 PPS and onboard IEEE 1588-2008 (PTP v2) software PTP stack with dedicated PTP port.

The accelerator also comes in a NEBS level 3 compliant variant.

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
- Linux, FreeBSD and Windows

NT20E3-2-PTP

NT20E3-2-PTP-NEBS
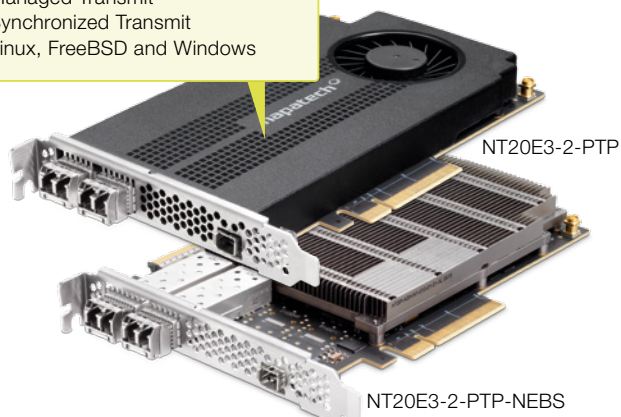
FEATURE HIGHLIGHTS

- 2 × 10 Gbps SFP+ connections
- 2 × 1 Gbps SFP connections
- Full 20 Gbps capture & replay of Ethernet LAN
- Full 20 Gbps transfer to host
- 1200 ms of onboard data burst buffering per accelerator
- 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
- libpcap and WinPcap support

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

DN-0909 Rev. 4

SPECIFICATIONS

GENERAL FEATURES
- Full line-rate processing for all frames from 64 bytes to 10,000 bytes
- IEEE standard: IEEE 802.3 1 Gbps or 10 Gbps Ethernet support
- Pluggable options for IEEE 1588-2008, PPS and NT-TS time synchronization
- Physical interface: 2 SFP ports or 2 SFP+ ports
- Supported SFP modules: Multi-mode SX, single-mode LX and ZX, 1000BASE-T or 10/100/1000BASE-T
- Supported SFP+ modules: Multi-mode SR, singlemode LR and ER, 10GBASE-CR
- Supported dual-rate modules: Multi-mode SR and singlemode LR
- Data rate: From 2 × 1 Gbps up to 2 × 10 Gbps
- PCIe performance: 40 Gbps full-duplex
- Typical CPU load: 5%
- Time formats: PCAP-ns/-µs, native, NDIS 10 ns/100 ns, UNIX 10 ns
- Stratum 3 compliant TCXO
- Packet Delay Variation (PDV) filter for PTP
- 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 8 GT/s PCIe Gen3

REGULATORY APPROVALS AND COMPLIANCES
- NEBS level 3, CE, CB, RoHS, REACH, cURus (UL), FCC, CSA, VCCI, C-TICK, KCC

ACCELERATOR SOFTWARE
- Supported operating systems: Linux, FreeBSD and 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
- 4 GB onboard DDR3 RAM
- Physical dimensions: ½-length and full-height PCIe
- Temperature and power sensors

ENVIRONMENT for NT20E3-2-PTP
- Power consumption: 27 Watts including SFP+ SR modules
- Operating temperature: 0 °C to 45 °C (32 °F to 113 °F)
- Operating humidity: 20% to 80%
- MTBF: 297,993 hours according to UTE C 80-810

ENVIRONMENT for NT20E3-2-PTP-NEBS
- Power consumption: 27 Watts including SFP+ SR modules
- Operating temperature (up to 1,800 m and airflow of at least 2,5 m/s): –5 °C to 55 °C (23 °F to 131 °F) measured around the accelerator
- Operating humidity: 5% to 85%
- MTBF: 367,807 hours according to UTE C 80-810

COMPANY PROFILE
Napatech is the world leader in data delivery solutions for network management and security applications. As data volume and complexity grow, organizations must monitor, compile and analyze all the information flowing through their networks. Our products use patented technology to capture and process data at high speed and high volume with guaranteed performance, enabling real-time visibility. We deliver data faster, more efficiently and on demand for the most advanced enterprise, cloud and government networks. Now and in the future, we enable our customers' applications to be smarter than the networks they need to manage and protect.

Napatech. FASTER THAN THE FUTURE