

NTNPU20E INSPECT

Packet Payload Inspection Adapters

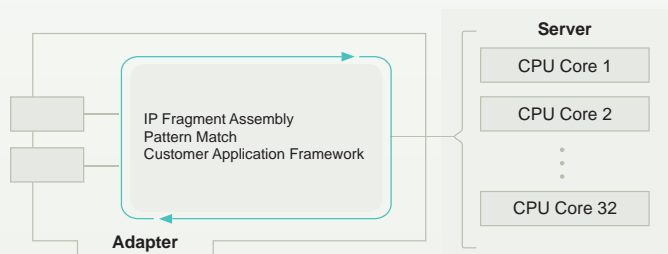
2-port 10 G Ethernet PCIe

DATA SHEET

Advanced Packet Payload Inspection

The NTNPU20E Inspect Adapter is a Packet Payload Inspection Adapter based on a Tileria 64-core processor. The NTNPU20E Inspect Adapter can be used as a stand-alone unit providing packet header and payload inspection. The NTNPU20E Inspect Adapter can also be used as a coprocessing unit to an NT20 network adapter, which can provide more advanced packet header analysis.

The NTNPU20E Inspect Adapter provides advanced application off-load which is supported by a number of unique features and an easy-to-use configuration interface. The feature set provides unmatched pattern match performance at 20 Gbit/s line speed for single packets and fragmented IP packets.



The Napatech configuration interface allows customers to build a pattern database with up to 1 million patterns of up to 2 million characters in total, including options for using case-sensitive/-insensitive or binary patterns, and patterns containing wild cards.

The Customer Application Framework (CAF) allows customer applications to run on the adapter. These applications can be easily configured using a configuration file. For instance, the number of adapter CPUs allocated to the various applications can be configured. The CAF can be programmed using standard C/C++.

Assembled IP frames can be delivered to the server host memory via a master mode DMA operation for further processing.



FEATURE HIGHLIGHTS AND APPLICATIONS

Feature Highlights

- 20 Gbit/s search capacity
- Up to 1 million search patterns
- Up to 2 million characters for all patterns
- Up to 1 million sustained flows
- Up to 100,000 new flows per second
- 64 programmable CPU cores on the adapter
- IP fragment assembly
- Pattern search across fragmented IP packets
- Flexible configuration of pattern database
- Customer Application Framework programmable in standard C/C++
- Integration with NT20E adapter, enabling high-precision time-stamping, pre-filtering and packet decoding
- Same API as other NT network adapters

Napatech-supported Applications

The NTNPU20E Inspect Adapter is intended for very advanced off-load of processing-intensive applications like:

- Lawful Intercept
- Cyberspace Surveillance
- Security Applications
- Network Security
- Data Retention and Logging
- Intrusion Detection Systems (IDS)
- Flow Analysis

SPECIFICATIONS

General Features

- IEEE standard: IEEE 802.3 10 Gigabit Ethernet
- Physical interfaces: 2 SFP+ ports
- Supported SFP+ modules: Multi-mode SR (850 nm)
- Data rate: 2 x 10 Gbit/s
- PCIe performance: 10.5 Gbit/s
- CPU utilization:
 - < 1% of the CPU is used for any data transfer
 - 0% of the CPU is used for any on-board processing

Host Interface

- Bus type: 8-lane 2.5 Gbit/s PCI Express rev. 1.1
- Data transfer modes:
 - Bus master DMA
 - Memory write or memory read transactions
- Support for 32-bit/64-bit addressing and host DMA addressing

Adapter Hardware

- Memory options: 4 standard SO-DIMM 200-pin 512 MB, 1 GB, 2 GB or 4 GB DDR2 RAM modules
- Physical dimensions: Full length full-height PCIe

Environment

- Power consumption: 46 Watts including SFP+ SR modules
- Operating temperature: 0 - 45 °C, 32 - 113 °F
- Operating humidity: 20 - 80%
- Hardware compliance: RoHS, UL, CE, FCC

Software

- Linux kernel 2.6: 32-bit/64-bit
- API supporting user level applications

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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