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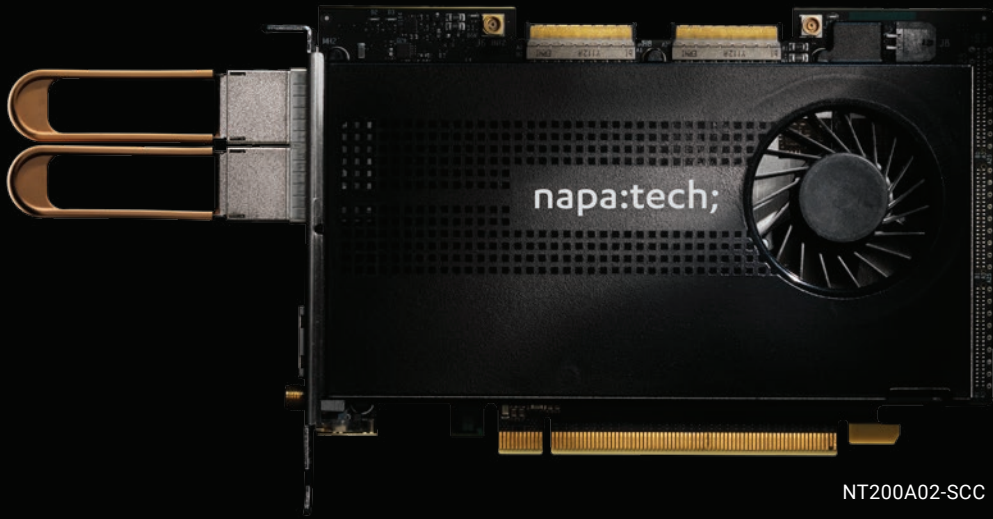
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RECONFIGURABLE COMPUTING

Link NT200A02 SmartNIC

8x10G, 2x10/25G, 2x40G, 2x100G



NT200A02-SCC

APPLICATIONS AND SERVICES



Link Capture Software



Suricata



n2disk



Snort



Zeek



TRex



Wireshark



+More



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Support



Docs



Tutorials

PACKET CAPTURE AND REPLAY

Use cutting-edge network SmartNIC technology to add real-time line-rate performance to your application. The Link NT200A02 SmartNIC provides full packet capture of network data at 100 Gbps and of traffic bursts at 200 Gbps with zero packet loss. The SmartNIC can capture all frames, including erroneous frames normally discarded by standard NICs. The SmartNIC can also be used for 100% packet replay with nanosecond precision of all networking traffic for analytics, testing and simulation.

The 12GB DDR4 RAM buffer allows buffering packets on the SmartNIC to prevent packet loss during peak server loads. Packets are hardware time-stamped when they arrive at the network ports, ensuring that the time stamp is always reliable. The Napatech SmartNIC allows you to merge data from two ports into a single, time-ordered analysis stream. The compact form factor enables 8x10Gbps/2x40Gbps/2x100Gbps applications in 1U server platforms, saving rack space and reducing the overall cost of the solution. The SmartNIC also comes in a NEBS level 3 compliant variant.

HIGHLIGHTS, APPLICATIONS AND SPECIFICATIONS

Feature Highlights

Network ports: 2xQSFP28
Capture of Ethernet traffic: 8x10 Gbps, 2x10/25Gbps, 2x40 Gbps or 2x100 Gbps
Zero packet loss for all frame sizes
12GB DDR4 RAM buffer (500 ms at 200 Gbps or 1280 ms at 80 Gbps)
Typical CPU load: < 5% of one core
Addressing up to 1 TB application buffer memory
Packet or segment delivery to application
Hardware-accelerated:
Multi-port packet merge
Load distribution across up to 128 CPU cores
1 ns time stamp resolution
Frame and protocol information
Filtering based on e.g. L3/L4 criteria
Stateful flow management
GTP, IP-in-IP, GRE and NVGRE tunneling support
IP fragment handling
Slicing at fixed or dynamic offset
Deduplication in hardware
RMON1 counters, including jumbo frames
IEEE 1588-2008 PTP and PPS time synchronization
OS time synchronization
Easy-to-integrate API
Linux, Windows, libpcap, WinPcap and DPDK

Napatech-Supported Applications

Napatech SmartNICs 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
- Financial latency measurement
- Customer experience analysis
- Data loss prevention
- Virtualized activity analysis
- Cyber defense
- Fraud detection and compliance management
- Infrastructure management and security
- Network and application performance
- Troubleshooting and compliance

General Features

Full line-rate processing for all frames from 64 bytes to 10,000 bytes
- keep or discard erroneous frames
IEEE standard: IEEE 802.3 100/40/10 Gbps Ethernet support
Network interface: 2xQSFP28 ports
Supported modules: 100GBASE-SR4 and 100GBASE-LR4, or 40GBASE-SR4, 40GBASE-LR4 and 40GBASE-SR-BiDi, SFP28 25GBASE-SR, LR, LR-BiDi, SFP28 25GBASE-SR, LR or QSFP+ breakout to 4x10GBASE-SR and 4x10GBASE-CR
Data rate: 8x10 Gbps, 2x10/25 Gbps, 2x40 Gbps or 2x100 Gbps
Typical CPU load: < 5%
Time formats: PCAP-ns/-µs and UNIX 10 ns/1 ns

Time stamp resolution: 1 ns
Stratum 3 compliant TCXO
Pluggable options for IEEE 1588-2008 PTP and PPS time synchronization
PTP slave in IEEE 1588-2008 default, power, enterprise and telecom profiles

SmartNIC Software

Operating systems: Linux, Windows
Napatech API for high performance and advanced features
libpcap, WinPcap and DPDK
IEEE 1588-2008 PTP stack
SDK tools included in source code for debugging and prototyping and as application examples

SmartNIC Hardware

Bus type: 16-lane 8 GT/s PCIe Gen3
12 GB onboard DDR4 RAM
Flash: Support for two boot images
Built-in thermal protection
Physical dimensions: ½-length and full-height PCIe
Weight excluding pluggable modules:
NT200A02-SCC: 355 g
NT200A02-NEBS: 350 g
MTBF according to UTE C 80-810:
NT200A02-SCC: 317,821 hours
NT200A02-NEBS: 311,435 hours
Power consumption including 100GBASE-SR4 modules:
NT200A02-SCC: max 75 Watts
NT200A02-NEBS: max 75 Watts

Environment for NT200A02-SCC

Operating temperature: 0 °C to 45 °C (32 °F to 113 °F)
Operating humidity: 20% to 80%

Environment for NT200A02-NEBS

Operating temperature: -5 °C to 55 °C (23 °F to 131 °F) measured around the SmartNIC
Operating humidity: 5% to 85%
Altitude: < 1,800 m
Airflow: >= 2.5 m/s

Regulatory Approvals and Compliances

PCI-SIG®, NEBS level 3, CE, CB, RoHS, REACH, cURus (UL), FCC, ICES, VCCI, RCM

Orderable products

Product	Data Rate
NT200A02-2x100/40	2x100/40 Gbps
NT200A02-2x40/8x10	2x40 Gbps/8x10 Gbps
NT200A02-8x10/2x40	8x10 Gbps/2x40 Gbps

Also available in NEBS variants.