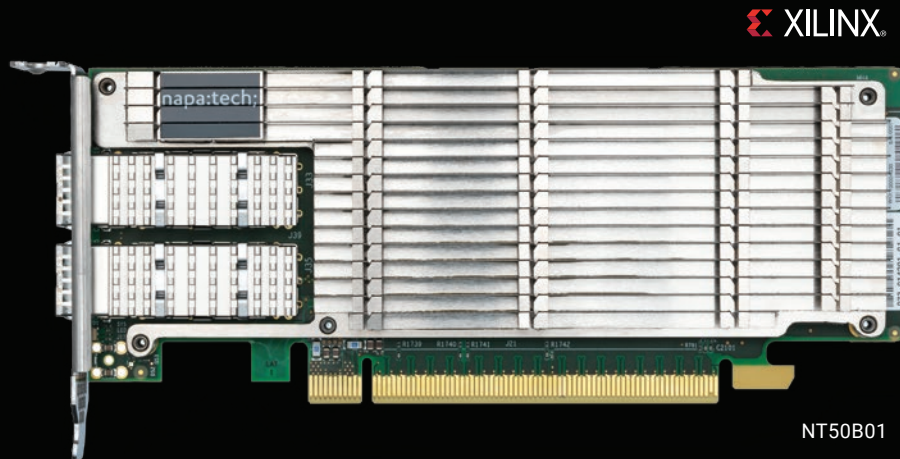


## Link™ 25 SmartNIC NT50B01



## FPGA SmartNICs for Accelerated Virtualization

### Low-Profile PCIe SmartNIC

The NT50B01 SmartNIC enables 2x10/25G applications, depending on your choice of software. This provides flexibility to create high-performance solutions in 1U server platforms for 10/25G network infrastructures.

The NT50B01 SmartNIC is a low-profile PCIe card specifically engineered to reduce footprint without compromising on performance. The card not only saves rack space and reduces TCO – it also provides outstanding agility and scalability for the future. The design delivers best-of-breed reliability and includes a proprietary full body heatsink developed to ensure optimal thermal performance for all critical components. Based on a Xilinx Kintex UltraScale+ FPGA, the NT50B01 can be reconfigured to support specific SmartNIC functionality. By exploiting the FPGA

programmability, features and capacity can be extended to continually accommodate data growth and changing industry standards.

### Full OVS Offload

The NT50B01 SmartNIC comes with fully qualified software, compliant with popular operating systems to enable easy qualification and quick deployment by OEMs and end users. Combined with Napatech Link™ Virtualization Software, the NT50B01 provides a hardware-based solution for Open vSwitch (OVS) offload, dramatically increasing performance while reducing CPU consumption.

Link™ Virtualization Software supports a broad range of applications and use cases and can quickly improve an organization's ability to monetize virtualized applications.

# HARDWARE SPECIFICATIONS AND SOFTWARE HIGHLIGHTS

## Link™ NT50B01 SmartNIC

### General Specs

- Dimensions: ½-length, ½-height PCIe
- FPGA technology: XCKU15P
- SDRAM: 10 GB DDR4
- Bus type: 16-lane 8 GT/s PCIe Gen3
- Network ports: 2xSFP28
- Flash: Support for two boot images
- Supported Transceivers:
  - 10G: SFP+; 10GBASE-SR, LR, CR
  - 25G: SFP28; 25GBASE-SR, LR, LR-BiDi
  - 10/25G: SFP28; dual rate 10/25GBASE-SR, LR

### COTS Environment

- Operating temperature: 0 °C to 45 °C (32 °F to 113 °F)
- Operating humidity: 20% to 80%
- Airflow: >= 2.5 m/s

### NEBS Environment

- Operating temperature: -5 °C to 55 °C (23 °F to 131 °F)
- Operating humidity: 5% to 85%
- Altitude: < 1,800 m
- Airflow: >= 3.5 m/s

### Regulatory Compliance

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

## Link™ Virtualization Software

### Feature Highlights

- Basic NIC support (ethtool/ifconfig)
- OVS version 2.11
- Full offload of OVS DPDK datapath
- Fastpath forwarding of traffic between specified vSwitch vPorts
- OVSDb, CLI, or local flow API for configuration
- Support for standard SDN controllers
- OVS stateful statistics
- Offload of 1K megafloWS (wildcarded flows)
- Support for millions of flows into the megafloWS structure
- Extensive and configurable match processing for L2, L3, L4 packet headers
- VLAN/VXLAN, Q in Q encapsulation/decapsulation
- Hash-based load balancing
- Link aggregation (active/active, active/standby)
- Traffic port mirroring
- 63 datapath VFs/VMs
- Virtio support
- VM live migration
- Jumbo frame support
- Supported on standard Linux distributions (Centos, Ubuntu)
- Quality of Service (QoS)

### Supported OS

#### Linux Kernel:

- 3.0 - 3.19 (64-bit)
- 4.0 - 4.20 (64-bit)
- 5.0 - 5.03 (64-bit)

### Supported APIs

- DPDK: Version 18.11.2 (LTS)
- NTAPI (Napatech API)

### Orderable products

Product	Data Rate
NT50B01-2x10/25	2x10/25 Gbps