ÜberNIC Full-Height Ethernet Adapters

LMS
THE POWER OF THE POSSIBLE

784ns	910ns	20.45ns	99.8%
Minimum Latency	99th Pctl. Latency	99th Pctl. Latency Std. Dev.	2.5Gbps Latency <=949ns

Full Stack I/O Latency: 10GbE; 5,000,000 64B TCP Frames From 0.1 - 10Gbps To/From User-Space via PCIe Gen 5 w/ÜberLoad

Uncompromising Foundation

Every ÜberNIC utilizes the same architecture - hardware network stack, no compromise on latency or reliability. Both products are fully programmable via the ÜberFPGA FDK, enabling network-edge logic, message preprocessing, and custom workload offload. The difference is in platform, density, and connectivity range.

ÜberNIC DS

Ultra-Storage Programmable SmartNIC

- 16TB Storage (2 x NVMe) + 32GB DDR4
- Altera FPGA Ecosystem
- 2 QSFP56 (2 x 200GbE)
- 80W Total Draw
- Full Line Rate, Sub-µs, No Drops

Board Manufacturer: Molex

ÜberNIC Ultra+ Wide

Ultra-Density Programmable SmartNIC

- Hyperscale Throughput 1GbE to 400GbE
- Altera FPGA Ecosystem
- 2 QSFPDD (1 x 400GbE & 1 x 200GbE)
- 72W Total Draw
- Full Line Rate, Sub-µs, No Drops

Board Manufacturer: Molex

ÜberNIC IP Suite

Base IP

- ÜberStack (HW Logic)
- ÜberSock (SW Logic)
- ÜberLoad (SW Logic)
- ÜberL2

Add-On IP (HW Logic)

- ÜberTime
- ÜberPTP
- ÜberWR
- PTM

- ÜberFPGA FDK (eta Aug. ‘26)
- ÜberDump
- ÜberCapture
- ÜberRaw (eta Aug. ‘26)

LMS Partners Include

intel. altera. An Intel Company AMD Red Hat BittWare a molex company V-CITY 微程科技 HAMBURGNET High Performance IT - Storage, Server, Networks & Consulting JABIL DELL CERN blackcore technologies

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	ÜberNIC Ultra+ Wide	ÜberNIC DS
PLATFORM		
FORM FACTOR	Single-Slot, FH x 3/4L	Single-Slot, FH x 3/4L
FPGA	Altera AGI-023	Altera AGI-023
NETWORK STACK	Hardware	Hardware
NETWORK I/O		
CAGE(S)	2 x QSFPDD	2xQSFP56
MAX INTERFACES	16 (1 x 400GbE + 1 x 200GbE)	8 (2 x 200GbE)
LINK SPEEDS	1/10/25/40/50/100/200/400 GbE	1/10/25/40/50/100/200 GbE
TRANSCEIVER SPEED (ONE-WAY)	72.5ns	72.5ns
FPGA		
LOGIC ELEMENTS	2.308M	2.308M
BLOCK RAM	204Mb	204Mb
ULTRA RAM / eSRAM	18Mb	18Mb
MEMORY		
DDR4	64GB (2 x SODIMM)	32GB
NVMe	N/A	16TB (2 x 8TB)
PCIE		
NATIVE VERSION	5	5
SUPPORTED VERSION(S)	5/4/3	5/4/3
LANES	16	16
CXL 1.1 & 2.0 (ON REQUEST)	Y	Y
AMD SDCI	Y	Y
POWER		
16 INTERFACES (UNIT/INTERFACE)	72W/4.5W	N/A
8 INTERFACES (UNIT/INTERFACE)	54W/6.7W	80W/10.0W
PRECISION TIME		
OSCILLATOR	MEMS	TCXO
PTP IN HOST (LinuxPTP)	Y	Y
PTP IN FPGA (ÜberPTP)	Y	Y
WHITE RABBIT IN FPGA (ÜberWR)	Y	Y
TIMESTAMPING IN FPGA (ÜberTime)	Y	Y
PTM (PRECISION TIME MEASUREMENT)	Y	Y
OPERATING SYSTEM		
RED HAT/FEDORA/ALMALINUX	Y	Y
UBUNTU	Y	Y
DEBIAN	Y	Y
SUSE	Y	Y