ATTO FastFrame™ 40Gb Ethernet NICs
40GbE to PCIe 3.0 Network Interface Cards

ATTO Technology, Inc. FastFrame™ 40 GbE network interface cards (NICs) are designed to enable full-utilization of 40GbE bandwidth with low-latency remote direct memory access (RDMA) over converged ethernet support. FastFrame NICs use less power than other 40GbE NICs, providing a higher ROI by transferring more data per dollar spent on power than the competition.

Optimized for Data Center Applications
With full support for TCP/IP, UDP, iSCSI, Fibre Channel over Ethernet plus RDMA over Converged Ethernet (RoCE), ATTO FastFrame 40GbE NICs deliver the bandwidth needed at the core of today’s data centers. While most TCP-based 40GbE NICs only achieve a maximum 23Gb/s bandwidth, the RoCE feature on FastFrame 40GbE NICs enables near line-rate performance via direct memory transfers over Layer 2 Ethernet.

Best-in-class energy efficiency and single route input/output virtualization technology for enhanced virtualization support make ATTO Frame 40GbE NICs ideal for a wide variety of data center use cases. In addition, their industry-leading low latency powers optimal performance for applications such as high performance computing clusters while simultaneously minimizing CPU utilization.

Performance Engineered for High-Resolution Digital Video
Bandwidth reductions caused by transmission control protocol overhead make many competing 40GbE NICs incapable of supporting 8K video. ATTO Fast Frame 40GbE NICs, in contrast, utilize RoCE to free up the full 40GbE pipeline, providing sufficient bandwidth for a single uncompressed 8K stream or for multiple 4K video streams.
ATTO FastFrame™ 40Gb Ethernet NICs

**APPLICATIONS**
ATTO FastFrame™ 40Gb NICs combine 40GbE technology with the lossless benefits of Enhanced Ethernet and robust software iSCSI initiators to meet the performance and efficiency needs of today's growing data centers. FastFrame 40GbE NICs are specifically built for applications that require low-latency, high-bandwidth data transfers, including HPC clusters, cloud environments, rackmount servers in data centers and high-resolution 4K and 8K video.

**GENERAL FEATURES**
- Remote Direct Memory Access (RDMA) Support via RDMA over Converged Ethernet (RoCE)
- Tx/TCP segmentation offload (Large Send Offload—LSO)
- Low latency interrupts
- PCI-SIG SR-IOV support
- Interrupt levels INTA, MSI, MSI-X
- Direct Cache Access (DCA) eliminates cache misses and reduces CPU load
- Plug and play specification support
- Advanced packet filtering
- VLAN support with tag filtering, insertion and stripping

**USER BENEFITS**
- Multiple offloads reduce CPU utilization and increase throughput
- Low power draw reduces power and cooling costs
- Low total cost of ownership (TCO) with high bandwidth over a single link
- Single adapter solution ideal for numerous applications across IT and M&E markets

**OPERATING SYSTEM SUPPORT**
- Windows®
- Windows Server®
- Linux®
- macOS®

**EXTERNAL CONNECTIVITY**
- QSFP+
- 2 LED indicators per port

**NETWORK STANDARDS**
- IEEE 802.3ba (40 Gigabit Ethernet)
- IEEE 802.3az (Energy Efficient Ethernet)
- IEEE 802.1p (Priority Encoding)
- IEEE 802.1q (VLAN tagging)
- IEEE 802.3ad (Link aggregation)
- IEEE 802.1qbb (Priority flow control)
- IEEE 802.1az (Enhanced Transmission)
- IEEE 8023.AD (Load-balancing, fallback)
- 802.1 Qaz: Enhanced Transmission

**ENVIRONMENTAL**

**OPERATING TEMPERATURE**: Temperature: 0-55°C
- Airflow required: 100 lfm
- Humidity: 10-90% non-condensing

**STORAGE TEMPERATURE**: Temperature: -40°C to 70°C
- Humidity: 5-95% non-condensing

**AGENCY APPROVALS**
- FCC Part 15 Subpart B, Class A
- EN55022: 2010, Class A
- EN55024: 2010

**COMPLIANCE**
- EN60950-1
- EN60825-1
- EN60825-2
- RoHS

**WARRANTY**
- Three Years

**ORDERING INFORMATION**
- Phone: 716-691-1999 ext. 241

**QSFP MODULE INCLUDED:**
- Dual-port: FFRM-NQ42-000
- Single-port: FFRM-NQ41-000

**DIRECT ATTACHED MODELS (NO QSFP INCLUDED):**
- Dual-port: FFRM-NQ42-DA0
- Single-port: FFRM-NQ41-DA0

---

The Power Behind the Storage

Rev. 3/23/18