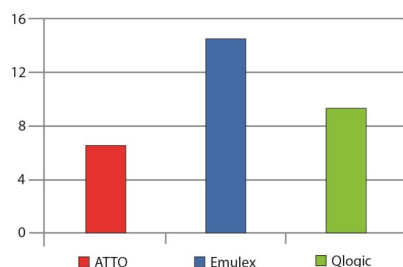


TECHNICAL FEATURES

- Dual- and single-port configurations
- 10GBASE-T, RJ45 connectivity
- High-performance x8 PCIe 2.0 bus
- Low profile and standard height brackets
- Up to 10Gb/s throughput per port
- Auto negotiation at 10GBASE-T, 1000Base-T, and 100Base-TX speeds for backwards compatibility. Supports phased upgrade to 10Gb Ethernet
- Use Cat6a or Cat7 cable for 10GBASE-T connections up to 100 meters
- Supports Data Center Bridging for improved iSCSI quality of service
- ATTO Xtend SAN™ iSCSI initiator for macOS® provides a complete iSCSI solution
- Driver support for Windows®, Linux® and macOS operating systems
- TCP, UDP IPv4 and IPv6 checksum offloading, IPsec offloading and Tx/TCP segmentation offloading
- Load-balancing on multiple CPUs
- Minimized interrupts for low latency

ATTO FastFrame NIC Power Consumption, Watts



In Figure-1, ATTO FastFrame not just offers superior throughput, but also offers industry's lowest power consumption, only 5.9 Watts for a dual-port 10Gb NIC

10GBASE-T Network Interface Cards

FASTFRAME™ NT12, NT11

Use up to 30% less power while taking advantage of ATTO Technology's proprietary Advanced Data Streaming (ADS™) latency management for smoother streaming and reduced risk of dropped frames with FastFrame™ 10Gb Ethernet network interface cards (NICs).

FLEXIBLE SOLUTIONS BUILT ON INDUSTRY

PROVEN TECHNOLOGY

FastFrame 10GbE NICs simplify networking administration, integrate seamlessly into existing environments and reduce the total cost of ownership by improving connection bandwidth and eliminating redundant network infrastructure components.

FastFrame NICs provide the most flexible and scalable connectivity solutions for today's data center environments. Connect clients to servers, clients, to NAS; and by leveraging support for iSCSI initiators, support for connecting into iSCSI storage area networks (SANs).

ATTO'S HIGH-BANDWIDTH, LOW-LATENCY LEADERSHIP

ATTO engineers FastFrame NICs for stable, near-line-speed data rates across a broad range of file sizes for predictable network performance while minimizing CPU utilization.

LOW POWER UTILIZATION FOR LOWER COST AND LESS HEAT

With FastFrame, single-chip integration results in lower power utilization with a low-profile form factor, in single- and dual-port configurations.

FastFrame draws up to 30% less power than competing solutions. A lower power rating

means lower energy costs, lower data center maintenance fees and less heat to dissipate.

MACOS®, WINDOWS® AND LINUX® SUPPORT

Long committed to the Apple® market, ATTO leads in high-performance I/O connectivity for macOS environments. ATTO also offers Xtend SAN™, an iSCSI initiator for macOS, to complete the solution. Acquire your NICs for multiple OS environments from a single source—one familiar with the data-intensive demands of content editing.

APPLICATIONS

FastFrame's Ethernet with iSCSI support makes it the ideal solution for:

- 1) Wiring closet/data center installations where the customer prefers to use Ethernet rather than Fibre Channel to access storage
- 2) Adding network access to block data to an existing network area storage (NAS) network
- 3) Remote offices, to support IP routing over longer distances and ease installations and management for local IT administrators
- 4) Data-intensive environments for which gigabit Ethernet's performance has proven insufficient and consistent, predictable network performance is required

GENERAL FEATURES

- Intel X540 10GBASE-T Ethernet controller
- Data rate per ports: 10GbE, 1GbE, 100mb/s
- 10GbE TCP, UDP, IPv4 and IPv6 checksum offloading
- Tx/TCP segmentation offload (large send offload—LSO)
- Low latency interrupts
- Interrupt coalescing/moderation
- Data center bridging (DCB) support
- Header splits and multiple receive queues

10GBASE-T Network Interface Cards

FASTFRAME™ NT12, NT11

- Direct cache access (DCA) eliminate cache misses and reduces CPU load
- Interrupt levels INTA, MSI, MSI-X
- 802.1p—Priority Encoding
- 802.1q—VLAN Tagging
- Priority flow control (802.1Qbb)
- DCBX protocol (802.1Qaz)
- Plug and play specification support
- Advanced packet filtering
- VLAN support with tag insertion and stripping

CABLE LENGTHS AND TYPE

- Ethernet 10GBASE-T connectors
- Cat6a and Cat7 Ethernet cable for 10GBASE-T connections up to 100 meters
- Cat6 Ethernet cable for 10GBASE-T connections up to 55 meters
- Cat5e Ethernet cable for 100Base-T and 100Base-TX connections up to 100 meters
- External Connectivity
- Dual speed 10Gb/s, 1Gb/s, 100Mb/s two or one RJ-45 connectors
- Easy-to-install full height and low-profile connection bracket for the single- and dual-port cards
- 2 LED indicators per port
- LED indicators: LINK (solid), ACTIVITY (blinking), LINK SPEED (green = 10GBASE-T, yellow = 1000BASE-T, off = 100BASE-Tx)

THEORETICAL MAX PERFORMANCE

- Interface Transfer Rate/Port = 10Gb/s
- Max Throughput/Port = 1000 MB/s
- Max Adapter Throughput: NT12= 2000 MB/s, NT11 = 1000 MB/s

ADVANCE SOFTWARE FEATURES

- Adaptive load balancing
- Teaming support

- PCIe Hot Plug/Active peripheral interconnect

MANAGEMENT TOOLS

- Easy system monitoring with Simple Network Management Protocol (SNMP) and Remote Network Monitoring (RMON) Statistic Counters

NETWORK STANDARDS

- IEEE802.3ae, IEEE802.1p, IEEE802.1Q, IEEE802.3, IEEE802.3x
- 802.1 Qaz: Enhanced Transmission Selection

BUS SPECIFICATIONS

- X8 PCI Express 2.0
- Supports PCI Express Base 2.0 and CEM Spec 2.0

OPERATING SYSTEM SUPPORT

- Windows® Server
- Windows
- macOS®
- SUSE Linux® Enterprise Server (SLES)
- Red Hat Enterprise Linux (RHEL)

ENVIRONMENTAL AND PHYSICAL SPECIFICATIONS

- Operating environment: 0°C to 55° (32°F to 131°F)
- Non-operating environment: -40°C to 70° C (-40°F to 157°F)
- Airflow required: 200 lf/m at 55°C or 100 lf/m at 40°C
- Humidity: 5% to 95% non-condensing
- Typical power consumption:
FFRM-NT12/CT12: <13.6W
FFRM-NT11/CT11: <8.8W

COMPLIANCE

- EN60950-1: 2001, IEC 60950-1: 2001
- RoHS

WARRANTY

- 3 Years

ORDERING INFORMATION

Phone: +1.716.691.1999

Dual Port: FFRM-NT12-000

Single Port: FFRM-NT11-000

ATTO FastFrame NT11	
Ports	Single Port
Max Transfer Rate	1.25GB/s
Bus Characteristics	PCIe 2.0 x8
Connector	RJ-45
Form Factor	Full Height, Low Profile
Warranty	3 Years
Part Number	FFRM-NT11-000

ATTO FastFrame NT12	
Ports	Dual Port
Max Transfer Rate	2.5GB/s
Bus Characteristics	PCIe 2.0 x8
Connector	RJ45
Form Factor	Full Height, Low Profile
Warranty	5000MB/s
Part Number	FFRM-NT12-000