



ThunderLink® NT 2102

ATTO ThunderLink® 10GbE to Thunderbolt™ 2 adapters provide maximum throughput for high bandwidth network connectivity for demanding IT and media and entertainment applications.

### Technical Features

- Exclusive Advanced Data Streaming (ADS™) Technology which smooths data transfers
- Minimized interrupts for low latency
- Interoperability tested with Tier 1 storage vendors
- Industry's lowest power consumption
- Single configuration tool which runs across multiple products and operating systems to manage devices
- Support tools for diagnosing technical issues and resolving them in a timely manner
- Three -year standard product warranty
- Supports ATTO Xtend SAN™ iSCSI initiator
- Dual 10GBASE-T (RJ45 Copper) ports
- Supports 4K video file transfer and display simultaneously with dual 20Gb/s Thunderbolt 2
- Daisy chain up to five additional Thunderbolt technology enabled devices
- Backwards compatible with 10Gb/s Thunderbolt
- TCP, UDP and IPv4 checksum offloading and Tx/TCP segmentation offloading
- RoHS Compliant

## ATTO ThunderLink® NT 2102 Thunderbolt™ 2 to 10GbE-T

### Industry Proven Technology

ATTO Technology, Inc. has 30 years of experience developing first-to-market high performance and reliable storage connectivity solutions for customers. ATTO ThunderLink® Ethernet adapters now provide creative professionals using Thunderbolt™ enabled hosts, cost effective access to storage not previously available using FireWire or USB. The integrated family of ThunderLink adapters boasts an extensive list of customer design wins and certifications with respected industry partners.

### Flexible Connectivity Solutions

ATTO 10GbE adapters provide the most flexible and scalable connectivity for today's high bandwidth content creation environments. By leveraging support for software iSCSI initiators, including ATTO Xtend SAN™, ThunderLink 10GbE adapters can support both local and local area networks. ThunderLink 10GbE adapters offer driver support for macOS® and Windows®, providing a single connectivity solution for customers with heterogeneous operating system environments.

### Performance Engineered

With 10Gb data transfer rates and multiple offloads (TCP, IPv4, UDP), ATTO Ethernet adapters are the premier connectivity choice for bandwidth-intensive applications such as data back-up and restoration, IP content delivery, medical imaging, and video rendering. With multi-core processors driving the need for higher bandwidth, ThunderLink 10GbE delivers superior throughput to meet that need.

### Advanced Management Tools

ThunderLink 10GbE adapters provide a common foundation for both local and storage networks. ThunderLink NT 2102 leverages standard OS management and monitoring tools to dramatically reduce the cost and complexity of a data center's administration and infrastructure.

## About ATTO

For over 30 years, ATTO Technology, has been a global leader across the IT and media & entertainment markets, specializing in network and storage connectivity and infrastructure solutions for the most data-intensive computing environments. ATTO works with partners to deliver end-to-end solutions to better store, manage and deliver data.

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## Applications

ThunderLink® 10GbE solutions combine the unparalleled performance of 10GbE, the lossless benefits of enhanced Ethernet and robustness of iSCSI initiator software, to meet the performance and economic needs of today's growing data centers. ThunderLink NT 2102 is ideal for applications that require low latency, high bandwidth data transfers, such as data back-up and restoration, video-on-demand and video streaming, medical imaging, and clustered databases.

## General Features

- Data rate per port: 10GbE
- TCP, UDP, IPv4, and IPv6 checksum offloading
- Tx/TCP segmentation offload (Large Send Offload—LSO)
- Low latency interrupts
- Interrupt Moderation
- Interrupt levels INTA, MSI, MSI-X
- Data Center Bridging (DCB) support -Priority-Based Flow Control 802.1Qbb rev.0 Enhanced Transmission Selection 802.1Qaz rev.0 protocol
- Header splits and Replication in Receive
- Receive Side Scaling for multiple Rx queues
- Direct Cache Access (DCA) eliminates cache misses and reduces CPU load
- IEEE 802.3 2005 flow control support
- 802.1p—Priority Encoding
- 802.1q—VLAN Tagging
- 802.3ad—Link Aggregation
- Override MAC Address
- VLAN support with tag insertion and stripping
- Plug and play specification support
- Advanced Packet Filtering

## Advanced Software Features

- Adaptive load balancing
- Teaming support
- PCI Hot Plug/Active peripheral interconnect

## Network Standards

- IEEE802.3an-2006 (10GBASE-T)
- 802.1 qbb: Priority Flow Control
- 802.1 qaz: Enhanced Transmission
- DCBX Protocol

## Management Tools

- Easy system monitoring with Simple Network Management Protocol (SNMP) and Remote Network Monitoring (RMON) Statistic Counters
- Watchdog Timer for chip/driver status monitoring

## Operating System Support

- macOS®
- Windows®
- VMware®

## Dimensions

- 8.66"(D) x 4.07"(W) x 1.20"(H)

## Power Adapter

- Input: 100-240VAC, 50-60Hz, 0.6A Max
- Output: 12VDC

## External Connectivity

- 10Gb/s, 1Gb/s, 100Mb/s two RJ45 connectors
- Two LED indicator per port
- LED Indicators:
  - LINK (solid),
  - ACTIVITY (blinking),
  - LINK SPEED (green = 10GBASE-T, yellow = 1000GBASE-T, off = 100GBASE-TX)

## Environmental

### Operating Temperature

- Temperature: 0-35° C
- Humidity: 10-90% non-condensing

### Storage Temperature

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

## Compliance

- FCC Part 15 Subpart B, Class B
- EN55032, Class B/EN55024
- IEC62368-1
- cTUVus
- EU RoHS (2011/65/EU), (EU) 2015/863
- TAA Compliant (Country Of Origin: USA)

## Warranty

- Three years

## Ordering Information

- Phone: 716-691-1999
- ThunderLink NT 2102: TLNT-2102-D01
- ThunderLink NT 2102: TLNT-2102-DE1

## Complementary Products

- ATTO Celerity™ Fibre Channel HBAs
- ATTO ExpressSAS® adapters
- ATTO FastFrame™ NICs
- ATTO XstreamCORE® Fibre Channel intelligent Bridges
- ATTO premium cables



ATTO ThunderLink	NT 2102
<b>Model Number</b>	TLNT-2102-D01 TLNT-2102-DE1
<b>Input Connectors</b>	(2) 20Gb/s Thunderbolt
<b>Output Connectors</b>	(2) 10GbE
<b>Connector Type</b>	RJ45 Copper
<b>Form Factor</b>	Desktop
<b>Warranty</b>	3 Year