ATTO ThunderLink® NS 3102
THUNDERBOLT™ 3 TO 10Gb ETHERNET

INDUSTRY PROven TECHNOLOGY
ATTO Technology, Inc. Thunderbolt™ 3 to 10GbE adapters provide maximum throughput for high bandwidth network connectivity for demanding IT and media & entertainment applications.

TECHNICAL FEATURES
- Dual Thunderbolt 3
  (40Gb/s USB-C) connectors
- Dual 10GbE (SFP+) ports (modules included)
- Supports 4K video file transfer and display simultaneously with dual 40Gb/s Thunderbolt 3
- Daisy chain up to five additional Thunderbolt technology enabled devices
- Backwards compatible with 20Gb/s and 10Gb/s Thunderbolt devices
- Backwards compatible with Thunderbolt 2 hosts via Apple legacy adapter
- Exclusive Advanced Data Streaming (ADS™) technology
- Minimized interrupts for low latency
- TCP, UDP and IPv4 checksum offloading and Tx/TCP segmentation offloading
- Industry’s lowest power consumption
- Support for downstream USB 3.1 and 2.0 devices
- Three-year standard product warranty
- RoHS Compliant

FLEXIBLE CONNECTIVITY SOLUTIONS
ATTO 10GbE adapters provide the most flexible and scalable connectivity for today’s high bandwidth content creation environments. ThunderLink 10GbE adapters offer driver support for Windows® 7 and later, macOS® Sierra and later, providing a single connectivity solution for customers with heterogeneous operating system environments. Growing adoption of 10 GbE combined with increased bandwidth of Thunderbolt 3 delivers much-needed performance benefits to bandwidth intensive applications.

PERFORMANCE ENGINEERED
When faced with the challenge of architecting solutions that allow guaranteed delivery and easy deployment into your workflow, ATTO ThunderLink provides a purpose-built solution. With 10Gb/s data transfer rates and multiple offloads (TCP, IPv4, UDP), ATTO Ethernet Thunderbolt 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 10GbE, 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. The ThunderLink NS 3102 leverages standard OS management and monitoring tools to dramatically reduce the cost and complexity of a data center’s administration and infrastructure.
ATTO ThunderLink™ NS 3102
Thunderbolt™ 3 to 10Gb Ethernet

Applications
ThunderLink™ 10GbE adapter solutions allow the unparalleled performance of 10 Gigabit Ethernet to meet the performance and economic needs of today’s growing data centers. The ThunderLink NS 3102 is ideal for applications that require low latency, high bandwidth data transfers, such as data backup and restoration, video-on-demand and video streaming, medical imaging, and clustered databases.

General Features
- Data rate per port: 10GbE
- Tx/TCP segmentation offload (Large Send Offload—LSO)
- Low latency interrupts
- PCI-SIG SROV support
- Interrupt levels MSI, MSI-X
- Plug and play specification support
- Advanced Packet Filtering
- VLAN support with tag filtering, insertion and stripping

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

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

External Connectivity
- 10Gb/s, 1Gb/s SFP+
  via Quad to Serial Small Form Factor Pluggable Adapter
- 2 LED indicators per port

Thunderbolt™ Cabling
- 40Gb/s cables are designated with a “3” marking
  - Active
    - 1M - 40 Gb/s performance
    - 2M - 40 Gb/s performance
  - Passive
    - .5M - 40 Gb/s performance
    - 1M - 20 Gb/s performance
    - 2M - 20 Gb/s performance

Network Standards
- IEEE802.3ae: 10GBASE-SR, 10GBASE-LR
- 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 802.1Qaz (Enhanced Transmission)
- IEEE 802.3AD (Load-balancing, failover)

Operating System Support
- Windows® 7 and later
- macOS® Sierra and later

Power Adapter
- 100-240VAC, 50-60Hz, 0.6A Max
- 12VDC

Compliance
- FCC Part 15 Subpart B, Class A
- EN55032, Class A/EN55024
- EN60950-1
- EN60825-1
- EN60825-2
- cTUVus
- EU RoHS (2011/65/EU)
- TAA Compliant (Country of Origin: USA)

Operating Temperature

Hardware Environment
- Temperature: 0-40°C
- Humidity: 10-90% non-condensing

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

Dimensions
- 8.66”(D) x 4.07”(W) x 1.20”(H)

Warranty
- Three Years

Ordering Information
- Phone: 716-691-1999
- ThunderLink NS 3102: TLNS-3102-D00
- ThunderLink NS 3102: TLNS-3102-DE0 (UK/EMEA)

Complementary Products
- ATTO Celerity™ Fibre Channel HBAs
- ATTO ExpressSAS® HBAs and RAID Adapters
- ATTO FastFrame™ NICs
- ATTO FibreBridge® Fibre Channel storage controllers
- ATTO Thunderbolt devices
- ATTO premium cables

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