TECH SPEC

ATTO

ThunderLink® NS-5102

ATTO Thunderlink® Thunderbolt™ 5/4/3 to 100GbE adapters provide maximum throughput for high bandwidth network connectivity for demanding IT and media & entertainment applications

Technical Features

- 5th generation Thunderbolt 80Gb/s
- Dual Thunderbolt 5/4/3 (USB-C connect-ors)
- Supports 8K video file transfer and display simultaneously with dual Thunderbolt 5 (80Gb/s)
- ATTO 360TM Networking Software Support
- Daisy chain up to five additional Thunder-bolt technology enabled devices
- Backwards compatible with Thunderbolt 3/4 and 1/2 via legacy adapter
- Driver support for macOS®, Windows®, and Linux® operating systems
- Advanced Data Streaming (ADS™) Technology
- Minimized interrupts for low latency
- End-to-end Quality of Service and conges-tion control
- Models support QSFP28 & QSFP+, (SFP28/SFP+/RJ45 via QSA adapters)
- TCP/UDP/IP hardware based stateless offloads
- Advanced HW/SW offloads including LRO, LSO, TSO, RSS, and TSS
- Support for downstream USB 2/3/4 devices for more coverage
- Three-year standard product warranty
- TAA and ROHS compliant

ATTO ThunderLink® NS 5102
Thunderbolt™ 5 Connectivity to High–Speed Ethernet

Industry Proven Technology

ATTO has over 30 years of experience developing first-to-market high performance and reliable storage connectivity solutions for customers. ATTO ThunderLink 5 Ethernet adapters now provide creative professionals using Thunderbolt enabled hosts, cost effective access to storage not previously available using USB. The integrated family of ThunderLink adapters boasts an extensive list of customer design wins and certifications with respected industry partners. Now, the combination of ATTO and 100GbE is being integrated with the latest in cutting edge high performance Thunderbolt 5 connectivity.

ATTO 360™ Networking

ATTO simplifies the optimization and configuration of our world class ThunderLink devices via our ATTO 360™ management utility. This software offers easy-to-use tuning profiles for performance and efficiency including partner specific storage profiles that get the most out of your storage. This application also includes ATTOview™ monitoring that analyzes thousand of metrics in both real-time and point in time via time series database and ATTO Expert™ that gives instant advice on how to solve bottlenecks and eliminate downtime.

Flexible Connectivity Solutions

ATTO 100GbE adapters provide the most flexible and scalable connectivity for today's high bandwidth content creation environments. Growing adoption of 100GbE combined with increased bandwidth of Thunderbolt 5 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 5 provides a purpose-built solution. With 100Gb/s data transfer rates and multiple offloads, 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.

About ATTO

For over 35 years, ATTO Technology, has been a global leader across the IT and media & ntertainment 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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The Power Behind the Storage

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Applications

ATTO ThunderLink 5 adapters solutions allow the unparalleled performance of 100 Gigabit Ethernet to meet the performance and economic needs of today. ThunderLink NS 5102 is ideal for applications that require low latency, high bandwidth unstructured data transfers, such as video post production, data back-up and restoration, medical imaging, and clustered IT environments.

Key Features

- Data rate per port: 100GbE
- Low latency interrupts
- PCI-SIG SR-IOV support
- Interrupt levels MSI, MSI-X
- Plug and play specification support
- Advanced Packet Filtering
- VLAN support with tag filtering, insertion, and stripping.
- End-to-end Quality of Service and congestion control
- Hardware offloads for NVGRE and VXLAN encapsulated traffic
- Hardware-based I/O virtualization
- Direct Cache Access (DCA) eliminates cache misses and reduces CPU load
- PCI Hot Plug/Active Peripheral interconnect
- Remote Direct Memory Access (RDMA) for Windows® and Linux®
  - RoCE v1 and RoCE v2 support

Advanced Software/Mangement Tools

- ATTO 360™ Networking support
- 60 Individual tuning profiles designed to optimize for specific workflows
- ATTO Expert™ Alerts to eliminate bottlenecks
- Receive Side Scaling (RSS)
- Transmit Side Scaling (TSS)
- PCI Hot Plug/Active Peripheral interconnect
- Adapter and Driver Health Monitoring
- ATTOview™ monitoring metrics in both real-time and point-in-time

Connectivity

- 100Gb/s QSFP28
- Backwards compatible with 10/25GbE via QSA28 adapter
- 2 LED indicators per port
- ATTO 100G QSFP28
  - 100 meters on OM4
  - 70 meters on OM3

Thunderbolt Cabling

- Thunderbolt 5 cables featuring 80Gbps with up to 120Gbps with Bandwidth Boost
- Backwards compatible with Thunderbolt 3/4 cables

Network Standards

- IEEE 802.3by (25 Gigabit Ethernet)
- IEEE 802.3ba (40 Gigabit Ethernet)
- IEEE 802.3cd (50 Gigabit Ethernet)
- IEEEE 802.3z (100 Gigabit Ethernet)
- IEEE 802.3az (Energy Efficient Ethernet)
- IEEE 802.1p (Priority Encoding)
- IEEE 802.3ad (Link aggregation)
- IEEE 802.1qbb (Priority flow control)

Environmental

Hardware Environment

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

Storage Environment

- 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
- EN60825-1 and EN60825-2
- cTUVus
- EU ROSH (2011/65/EU), (EU) 2015/863
- TAA Compliant (Country of Origin: USA)

Operating System Support

- macOS®
- Windows®
- Linux®

Dimensions

- 9.45"(D) x 4.07"(W) × 1.38"(H)

Power Adapter

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

Warranty

- Three (3) Years

Ordering Information

- Phone: 716-691-1999

ATTO ThunderLink Adapter	NS 5102
Model Number	TLNS-5102-D00 (US) TLNS-5102-DE0 (UK/EMEA)
Input Connectors	(2) 80Gb/s Thunderbolt 5 USB-C
Output Connectors	(2) 100GbE
Connector Type	QSFP28
Form Factor	Desktop
Warranty	3 Year