

Asustor AS-T10G3

ASUSTOR AS-T10G3 User Manual

10GbE & M.2 NVMe SSD Network Card

1. INTRODUCTION

The ASUSTOR AS-T10G3 is an advanced expansion card designed to significantly upgrade the network and storage capabilities of compatible ASUSTOR Network Attached Storage (NAS) devices. This card integrates a 10 Gigabit Ethernet port with two M.2 NVMe SSD slots, providing a robust solution for high-speed data transfer and enhanced system performance through SSD caching or storage pools.

2. KEY FEATURES

- **10 Gigabit Ethernet Connectivity:** Utilizes the Marvell AQC113 10GbE controller for ultra-fast network speeds.
- **Dual M.2 NVMe SSD Support:** Features two M.2 NVMe SSD slots for flexible storage expansion or caching.
- **PCIe 3.0 x4 Interface:** Ensures high bandwidth for both network and SSD operations.
- **Multi-Gigabit Compatibility:** Supports a wide range of Ethernet speeds including 10/100/1000/2500/5000/10000 Mbps.
- **Jumbo Frame Support:** Compatible with 16K jumbo frames for improved network efficiency.
- **Checksum Offloading:** Supports IP, TCP, and UDP checksum offloading to reduce CPU utilization.
- **VLAN ID Tagging & QoS:** Provides support for Virtual Local Area Network (VLAN) identification and Quality of Service (QoS).
- **Standard RJ-45 Connector:** Uses an 8P8C RJ-45 connection for broad compatibility with existing networking equipment.
- **Integrated Heatsinks:** Equipped with heatsinks to maintain optimal performance and thermal efficiency.

3. SETUP AND INSTALLATION

This section outlines the general steps for installing the AS-T10G3 network card into your compatible ASUSTOR NAS device. Always refer to your specific NAS model's user manual for detailed instructions on opening the chassis and accessing internal expansion slots.

3.1 Package Contents

Verify that your package contains the following items:

- AS-T10G3 Network Card x1
- Full-Height Bracket x1
- Low-Profile Bracket x1



Image: AS-T10G3 network card with its dimensions and included full-height and low-profile brackets.

3.2 Hardware Installation

1. **Power Off NAS:** Ensure your ASUSTOR NAS is completely powered off and disconnected from the power source.
2. **Open NAS Chassis:** Carefully open the NAS chassis according to your model's instructions to access the internal PCIe expansion slot.
3. **Select Bracket:** Choose the appropriate bracket (full-height or low-profile) for your NAS model and attach it to the AS-T10G3 card if necessary.
4. **Insert Card:** Align the AS-T10G3 card with an available PCIe 3.0 x4 slot (or higher) and firmly press it down until it is securely seated.



Image: Angled view of the ASUSTOR AS-T10G3 Network Card, showing the 10GbE port and heatsink.



Image: Angled view of the ASUSTOR AS-T10G3 Network Card, highlighting the two M.2 NVMe SSD slots beneath the heatsinks.

5. **Install M.2 NVMe SSDs (Optional):** If you plan to use M.2 NVMe SSDs for caching or storage, carefully insert them into the designated M.2 slots on the AS-T10G3 card and secure them with the provided screws or retention mechanisms.

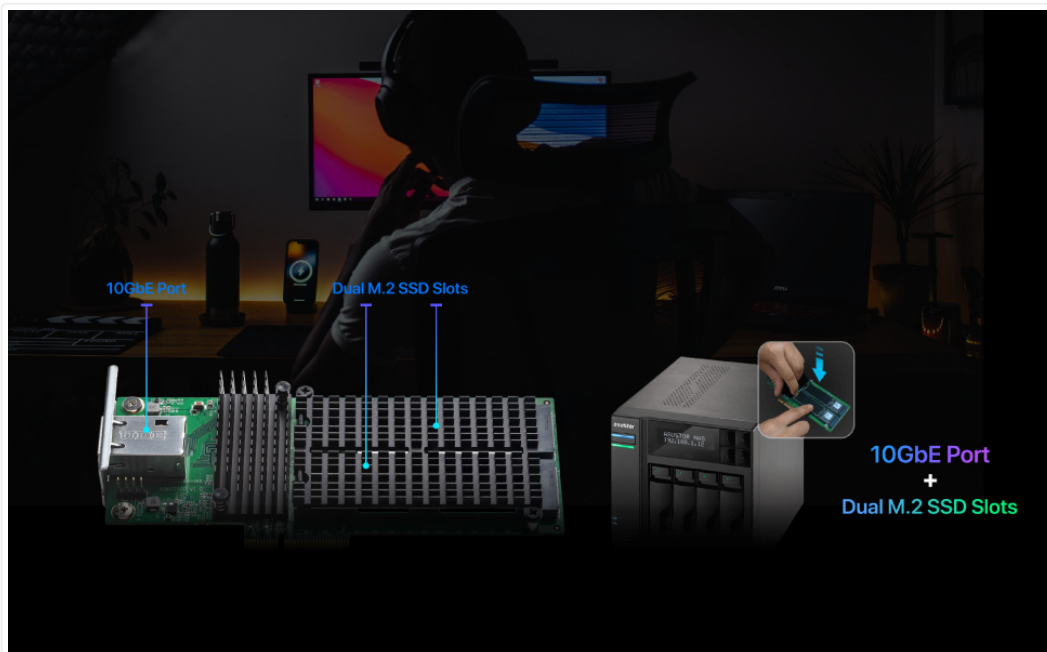


Image: Diagram illustrating the installation process of the AS-T10G3 card into an ASUSTOR NAS device, showing the 10GbE port and dual M.2 SSD slots.

6. **Close Chassis & Reconnect:** Close the NAS chassis, reconnect the power cable, and power on the device.

4. OPERATING INSTRUCTIONS

Once the AS-T10G3 card is physically installed, the NAS operating system (ADM) will typically detect the new hardware. Follow these steps to configure and utilize the card's features.

4.1 Network Configuration

1. **Access ADM:** Log in to your ASUSTOR NAS's ADM (ASUSTOR Data Master) interface via a web browser.
2. **Verify Detection:** Navigate to **Settings > Network**. The new 10GbE interface should be listed.
3. **Configure IP Settings:** Configure the IP address, subnet mask, gateway, and DNS settings for the 10GbE interface as required by your network environment.
4. **Connect 10GbE Cable:** Connect a Cat6a or Cat7 Ethernet cable from the AS-T10G3's RJ-45 port to your 10GbE-compatible switch or router.



Image: Representation of a network cable connected to the 10GbE port of the network card.

4.2 M.2 NVMe SSD Configuration

The M.2 NVMe SSDs installed on the AS-T10G3 can be configured for SSD caching or as a dedicated storage volume, depending on your NAS model and ADM version.

1. **Access Storage Manager:** In ADM, navigate to **Storage Manager**.
2. **Detect SSDs:** The newly installed M.2 NVMe SSDs should be detected and listed.
3. **Configure SSD Cache:** To set up SSD caching, follow the wizard to select the SSDs for read-only or read-write cache. This can significantly improve I/O performance for frequently accessed data.
4. **Create Storage Volume (if supported):** If your NAS model supports M.2 SSDs as a standalone storage volume, you can create a new volume or add them to an existing storage pool.

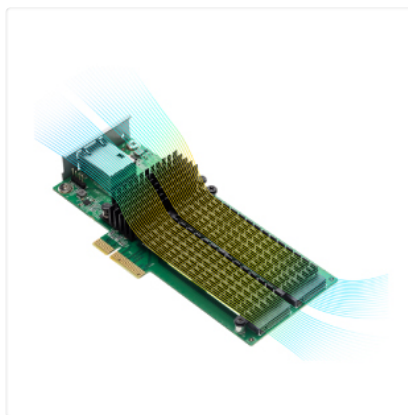


Image: Icon representing high data transfer speeds and performance, achievable with the AS-T10G3.

5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your AS-T10G3 network card and NAS system.

- **Firmware Updates:** Regularly update your ASUSTOR NAS ADM firmware to ensure compatibility and access to the latest features and bug fixes for the AS-T10G3.
- **Ventilation:** Ensure your NAS device has adequate ventilation. The AS-T10G3 includes heatsinks, but proper airflow within the NAS chassis is crucial to prevent overheating, especially under heavy load.
- **Cable Integrity:** Periodically check the 10GbE Ethernet cable for any damage or loose connections. A damaged cable can lead to reduced performance or connectivity issues.
- **Dust Removal:** If comfortable, and following NAS manufacturer guidelines, occasionally power down and open

your NAS to gently remove any accumulated dust from the AS-T10G3 card and surrounding components using compressed air.

6. TROUBLESHOOTING

If you encounter issues with your AS-T10G3 network card, consider the following troubleshooting steps:

- **Card Not Detected:**
 - Ensure the NAS is powered off before installation.
 - Reseat the AS-T10G3 card firmly into the PCIe slot.
 - Verify that your NAS model is listed as compatible with the AS-T10G3.
 - Try a different PCIe slot if available.
- **Slow Network Speeds:**
 - Confirm you are using Cat6a or Cat7 Ethernet cables for 10GbE connections.
 - Ensure your network switch or router supports 10GbE speeds.
 - Check network settings in ADM for correct IP configuration and jumbo frame settings (if enabled).
 - Update NAS firmware and network card drivers (if applicable via ADM updates).
- **M.2 NVMe SSDs Not Recognized:**
 - Ensure the SSDs are correctly seated in the M.2 slots on the AS-T10G3.
 - Verify the SSDs are compatible with your NAS model and the AS-T10G3.
 - Check Storage Manager in ADM to initialize or format the new SSDs.
- **General Issues:**
 - Restart the NAS device.
 - Consult the ASUSTOR official website or support forums for specific model-related issues.







7. SPECIFICATIONS

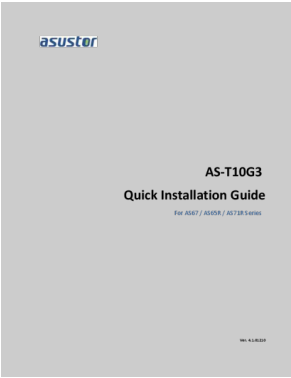
Feature	Specification
Model Number	AS-T10G3
Controller	Marvell AQC113
Interface	PCIe 3.0 x4
M.2 SSD Slots	2 (NVMe compatible)
Ethernet Speeds	10/100/1000/2500/5000/10000 Mbps
Jumbo Frame Support	16K
Connector	8P8C RJ-45
Dimensions (L x W x H)	153.1 mm x 68.9 mm x 20.6 mm (approx. 6.03 x 2.71 x 0.81 inches)
Weight	92.6 g (approx. 0.20 lbs)
Compatible Devices	ASUSTOR NAS models (e.g., AS6704T/AS6706T/AS6504RD/AS6504RS/AS6512RD/AS7112RDX/AS7116RDX)

8. WARRANTY AND SUPPORT

ASUSTOR products are designed for reliability and performance. For specific warranty terms and conditions, please refer to the warranty information provided with your ASUSTOR NAS device or visit the official ASUSTOR website. For technical support, driver updates, or further assistance, please visit the official ASUSTOR support page or contact their customer service directly. You can find more information and resources at the [ASUSTOR Brand Store](#).

Related Documents - AS-T10G3

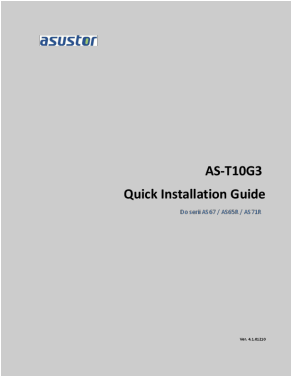
	<p>Global Cybermind Technologies Pte Ltd - Storage Device Price List</p> <p>A comprehensive price list for various storage devices including Micro SD cards, SD cards, USB flash drives, portable SSDs, external drives, NAS devices, and internal HDDs from leading brands like Lexar, Kioxia, SanDisk, Samsung, Transcend, Seagate, WD, Asustor, QNAP, and Toshiba, distributed by Global Cybermind Technologies Pte Ltd.</p>
	<p>ASUSTOR AS-T10G3 10-Gigabit Ethernet Card Quick Installation Guide</p> <p>This guide provides step-by-step instructions for installing the ASUSTOR AS-T10G3 10-Gigabit Ethernet expansion card into ASUSTOR NAS devices, including models from the AS67, AS65R, and AS71R series. It covers package contents, necessary tools, installation procedures, and basic troubleshooting.</p>
	<p>ASUSTOR FLASHSTOR 6 Gen2 FS6806X: High-Performance NAS with Ryzen, 10GbE, and USB4</p> <p>Explore the ASUSTOR FLASHSTOR 6 Gen2 FS6806X, a powerful NAS solution featuring an AMD Ryzen Embedded CPU, 10GbE networking, USB4 connectivity, and 6x M.2 NVMe SSD slots for exceptional speed and versatility. Ideal for 4K editing, content creation, and demanding workloads.</p>
	<p>ASUSTOR AS5402T / AS5404T Quick Installation Guide</p> <p>This guide provides instructions for the quick installation of ASUSTOR AS5402T and AS5404T NAS devices, covering hardware setup, software installation, and basic troubleshooting.</p>
	<p>ASUSTOR FS6806X/FS6812X Quick Installation Guide</p> <p>A comprehensive guide for the quick installation and setup of ASUSTOR FS6806X and FS6812X Network Attached Storage (NAS) devices, covering hardware installation, software configuration, and basic troubleshooting.</p>
	<p>ASUSTOR AS5004U Quick Installation Guide</p> <p>Step-by-step guide for installing and setting up the ASUSTOR AS5004U NAS expansion unit, including hardware installation, connections, and LED indicator information.</p>



[ASUSTOR AS-T10G3 10-Gigabit Ethernet Card Quick Installation Guide](#)

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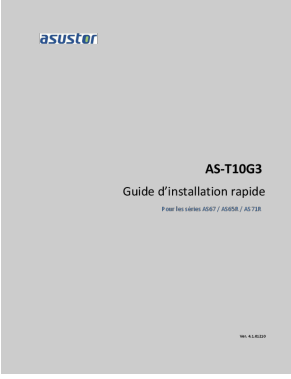


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Notices.....

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Datasheet AS T10G3 ENG 20221216 Asustor LAN adapter RJ 45 2x M 2 Key PCIe 3 0 x4 Data sheet

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AS-T10G3 10GbE M.2 NVMe SSD Combo Adapter SSD Caching and Storage with the Speed of 10GbE Ins **AS-T10G3** in a compatible ASUSTOR NAS with a PCIe 3.0 x4 interface to upgrade your NAS to 10GbE whi taking advantage of that speed with NVMe SSDs. It s Fast Nuff Said The **AS-T10G3** brings ...

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