

## MiiEIAOD NAS Dock

# MiiEIAOD 1-Bay NAS Dock for NanoPi NEO/NEO2 User Manual

## 1. INTRODUCTION

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The MiiEIAOD 1-Bay NAS Dock is an expansion board designed to connect an external 2.5-inch SATA hard disk to a FriendlyElec NanoPi NEO or NanoPi NEO2. This combination allows users to quickly assemble a compact network-attached storage (NAS) server. The dock utilizes a JM20329 USB2SATA IC for communication with the NanoPi NEO via a USB interface. It features a power switch for convenient operation and a dual-color LED to indicate device status.

### Package Contents:

- 1 x MiiEIAOD 1-Bay NAS Dock

## 2. SETUP GUIDE

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Follow these steps to assemble and prepare your 1-Bay NAS Dock for operation:

### 2.1 Component Identification

Familiarize yourself with the various components and connectors on the NAS Dock board.

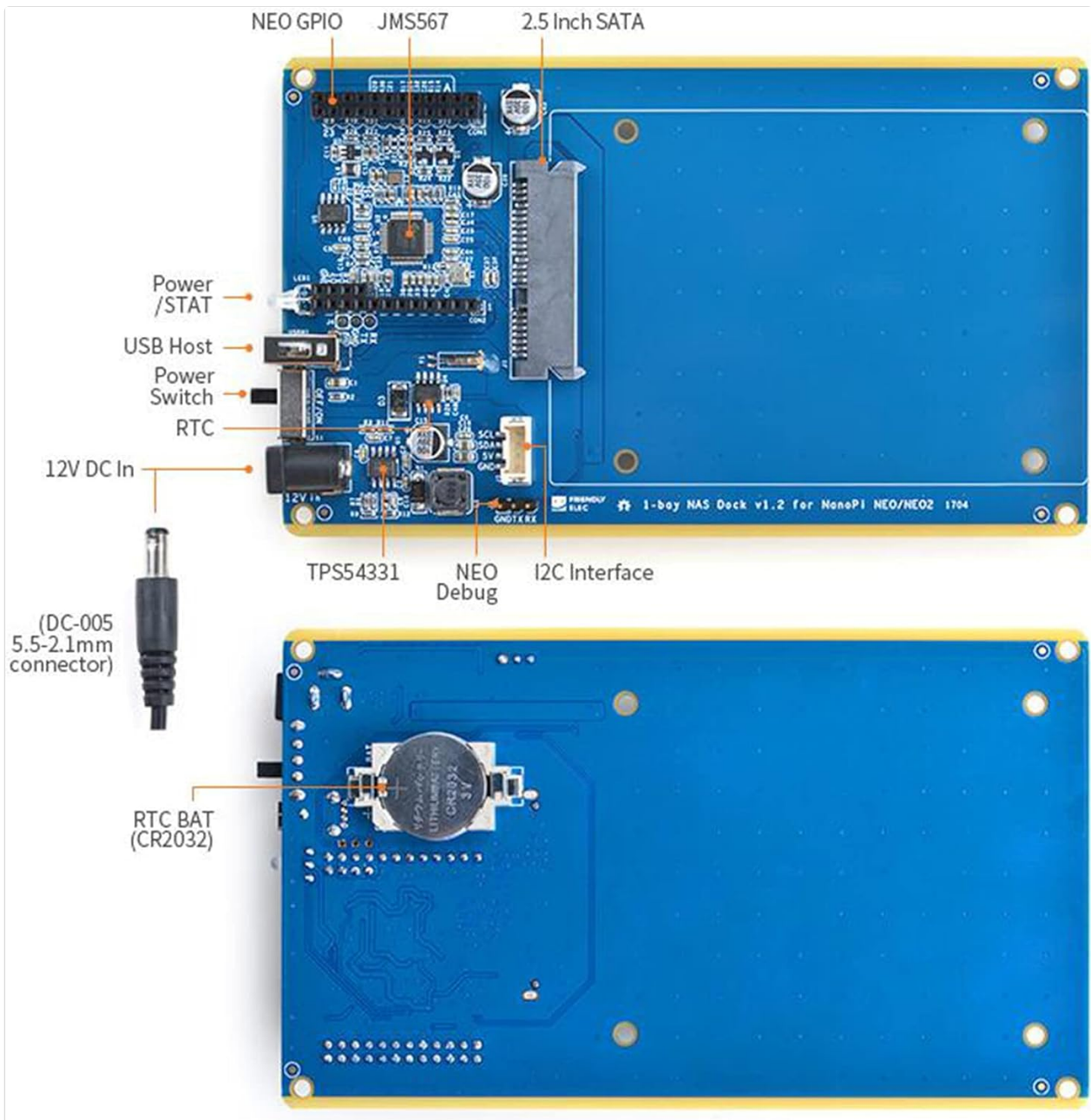


Figure 1: Labeled diagram of the NAS Dock board components.

## 2.2 Hardware Assembly

1. **Connect NanoPi NEO:** Carefully align and connect your NanoPi NEO or NanoPi NEO2 board to the designated GPIO pins on the NAS Dock.
2. **Install 2.5-inch SATA Hard Disk:** Connect a 2.5-inch SATA hard disk to the SATA data and power connectors on the NAS Dock. Ensure a secure connection.
3. **Power Connection:** Connect a 12V DC power adapter (not included) to the 12V DC In port on the NAS Dock. The dock uses a TI DC-DC chipset to convert the 12V input to 5V for the components.
4. **Optional: RTC Battery:** If Real-Time Clock (RTC) functionality is desired, install a CR2032 battery into the RTC battery holder on the underside of the board.

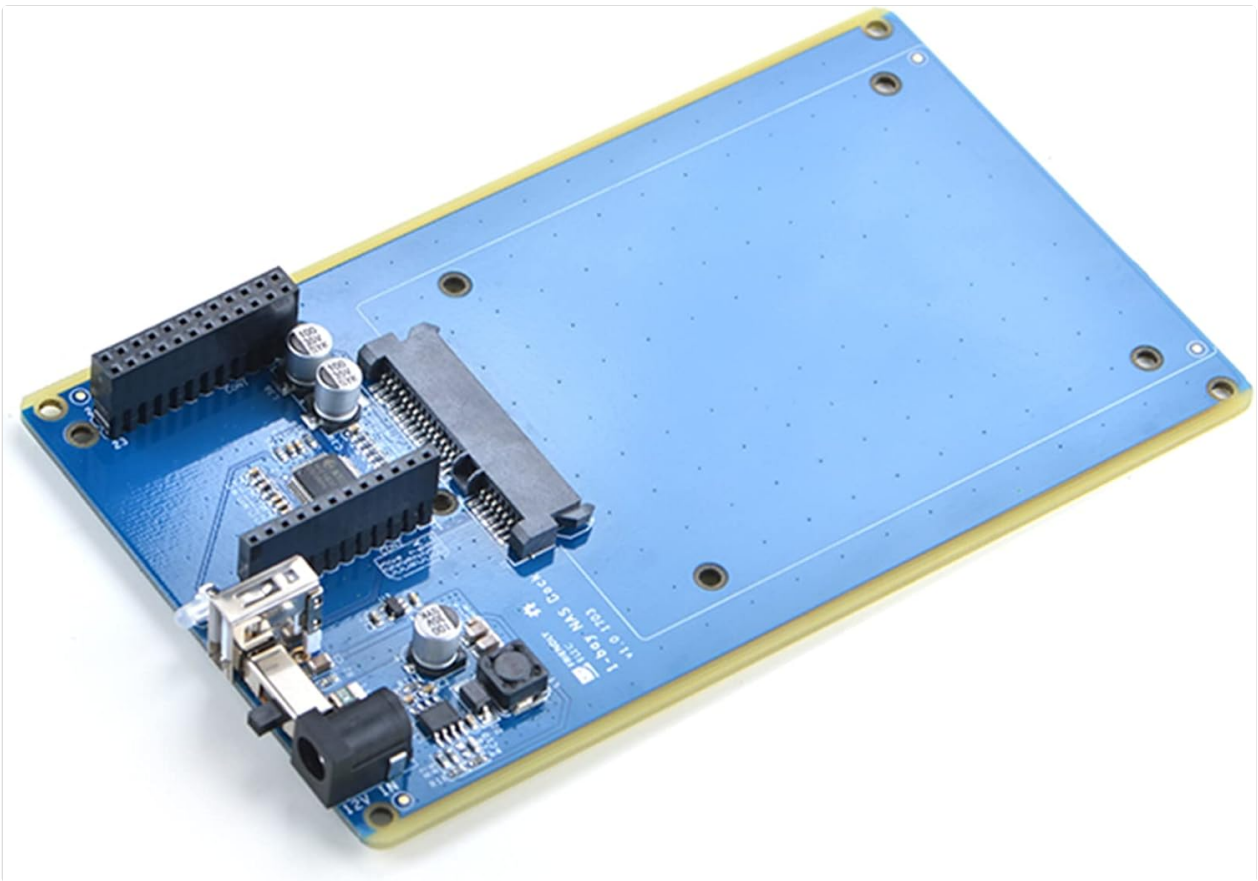


Figure 2: Assembled NAS Dock board.

## 2.3 Software Configuration

The NAS Dock is designed to work with a ready-to-go software system, typically a Linux-based distribution optimized for NAS functionality on NanoPi NEO boards. Refer to the FriendlyElec documentation for your specific NanoPi NEO model for detailed software installation and configuration instructions.

## 3. OPERATING INSTRUCTIONS

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Once assembled and powered, operate the NAS Dock as follows:

1. **Power On:** Use the onboard power switch to turn on the device.
2. **Status LED:** Observe the dual-color status LED:
  - **Green:** Indicates that the power is on.
  - **Red-blinking:** Indicates that the connected hard disk is actively reading or writing data.
3. **Important Warning:** When the status LED is red-blinking, **DO NOT** shut down the power or plug/unplug the power adapter. Doing so may result in data corruption or damage to the hard disk.
4. **Accessing Storage:** Access the network storage server via your network using the appropriate protocols and software configured on your NanoPi NEO.

## 4. MAINTENANCE

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To ensure optimal performance and longevity of your MiiEIAOD 1-Bay NAS Dock, consider the following maintenance guidelines:

- **Keep Dry:** Protect the device from moisture and humidity.

- **Clean Gently:** If cleaning is necessary, use a soft, dry cloth. Avoid using liquid cleaners or solvents.
- **Ventilation:** Ensure adequate airflow around the device, especially if enclosed in a case, to prevent overheating.
- **Firmware Updates:** Regularly check for and apply any available firmware or software updates for your NanoPi NEO and its NAS operating system to enhance stability and security.

## 5. TROUBLESHOOTING

If you encounter issues with your NAS Dock, try the following troubleshooting steps:

- **No Power/LED Off:**
  - Check if the 12V DC power adapter is securely connected and functioning.
  - Ensure the onboard power switch is in the 'On' position.
- **Hard Disk Not Detected:**
  - Verify that the 2.5-inch SATA hard disk is correctly seated in its connectors.
  - Ensure the NanoPi NEO is properly connected to the NAS Dock.
  - Check the hard disk's functionality by testing it with another device if possible.
- **Slow Performance:**
  - Ensure your NanoPi NEO's software is optimized for NAS operations.
  - Check network connectivity and cable quality.
- **Unexpected Shutdowns:**
  - Ensure the power supply is stable and provides sufficient current.
  - Check for overheating; ensure proper ventilation.

For further assistance, refer to the NanoPi NEO documentation or contact MiiEIAOD support.

## 6. SPECIFICATIONS

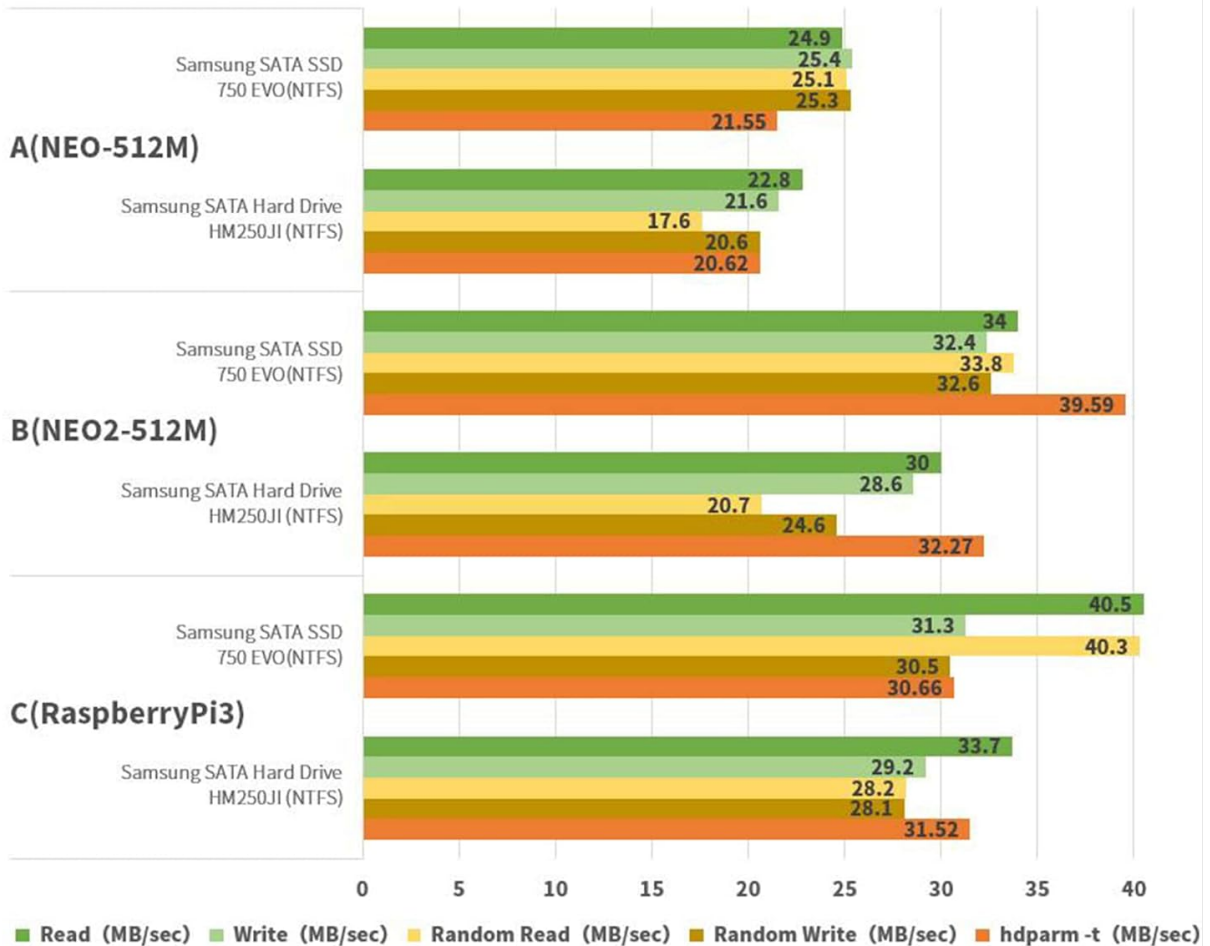
Feature	Description
Model Name	NAS Dock
Compatible Boards	FriendlyElec NanoPi NEO, NanoPi NEO2
Hard Disk Compatibility	2.5-inch SATA Hard Disk
USB2SATA IC	JM20329
Connectivity	USB Interface (for NanoPi NEO communication)
Supply Voltage	12V DC (via external adapter)
Power Conversion	TI DC-DC chipset (12V to 5V)
Indicators	Dual-color status LED (Green for power, Red-blinking for R/W activity)
Onboard Features	Power switch, USB Host, RTC (requires CR2032 battery)

PCB Dimensions	151 x 89.7 mm
Operating System Support	Linux (via NanoPi NEO)
Item Weight	1.1 pounds
Package Dimensions	3.94 x 1.97 x 1.97 inches

## Comparison of W/R Speed

Test Command:

```
iozone -a -e -l -s 1000M -r 500k -r 1M -i 0 -i 1 -i 2 -f /mnt/sdaN/izone-file
```



Testing ROM

A: nanopi-neo\_debian-nas-jessie\_4.11.0.img

B: nanopi-neo2\_debian-nas-jessie\_4.11.0.img

C: Raspberry3-Raspbian-jessie\_4.4.50

Figure 3: Dimensional diagram of the NAS Dock.

## 7. WARRANTY AND SUPPORT

For warranty information, please refer to the purchase documentation or contact your retailer. For technical support and further inquiries, please visit the official MiiEIAOD brand store or contact their customer service. You can find more information about MiiEIAOD products and support resources at the [MiiEIAOD Store on Amazon](#).

