



NR170S

Quick Installation Guide

Internal 5-Bay SATA Disk Array Storage System

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1. Overview

The backplane module, NR170S, is an internal 5-bay SATA disk array storage system that fits into existing IT infrastructure, cost effective for solution to add RAID storage to PCs, servers, or workstations. In addition, this module features built-in hardware RAID protection, high transmission rate, and simple setup of the enclosure. It requires only one internal SATA port to connect with the NR170S enclosure, and no drivers are needed after the connection between the host and the NR170S is made. The NR170S backplane module is compatible with Mac, Windows, and Linux PCs, servers, or workstations.

2. Package Checklist

Before the installation of the unit, verify the items below are included in the package.



A Enclosure x 1



B HDD tray (installed in the NR170S) x 5



C CD containing user manual and GUI x 1



D Hard disk drive mounting screw x 20



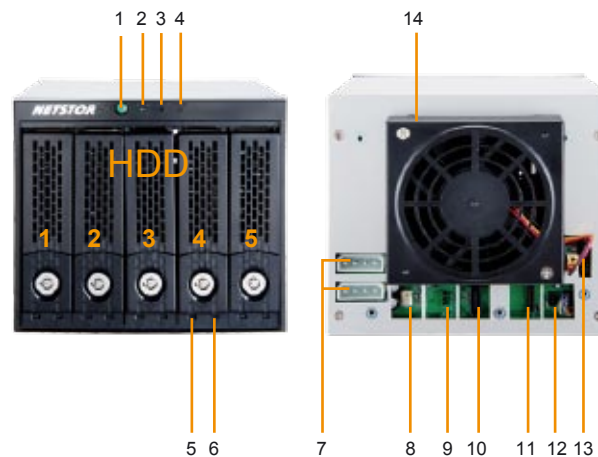
E Key for HDD tray x 2



F SATA cable x 1

If any of the items listed above is missing or damaged, please contact the sales representative.

3. Panel Layout



1. Buzzer mute button

2. Temperature LED

- Green – Normal
- Red – Overheated (higher than 50°C)

3. Fan LED

- Green – Normal
- Red – Failure (low frequency of RPM or stop)

4. Enclosure Power LED

- White – Power On

5. Drive Presence LED

- White – Power On
- Blue – Hard disk drive ready
- Flash Blue – Access
- Flash Pink – Rebuilding

7. 4-pin Molex connectors

8. 3-pin fan connector (does not support self-adjusted fan speed)

9. Pin 1 and pin 2 closed (default) – volume larger than 2 TB

Pin 2 and pin 3 closed – volume under 2TB

If you want to use volume larger than 2 TB, the jumper should be placed over pin 1 and pin 2, and the operating system and the hardware should also support volume larger than 2 TB. If you want to use volume under 2 TB, the jumper should be placed over pin 2 and pin 3.



10. SATA 7-pin L-type connector

11. 14-pin connector – transfer data for LCD (this module does not apply this function)

11. 14-pin connector – transfer data for LCD (this module does not apply this function)

12. 8-pin connector – transfer data for LCD controls (this module does not apply this function)

13. 10-pin connector – transfer data that indicate activity on hard disk drive

Pins 2, 4, 6, 8, and 10 – Ground

Pins 1, 3, 5, 7, and 9 – External Access/Rebuild LED output

Ground

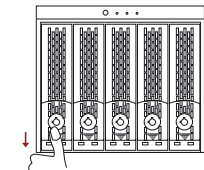


14. Swappable fan

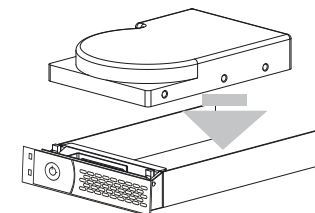
4. Enclosure Setup

1. Remove the NR170S from its packaging, and place the module next to PC, server, or workstation.

2. Hold one of the drive trays from the enclosure and push its button downward for the release of the lever until the lever emerges.



3. Place a drive tray on a flat and level surface, and then attach the hard disk drive into the drive tray.

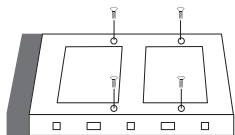


WARNING:

You must verify the heads of the four screws are level with the drive tray while the trays are attached to the hard disk drives; otherwise, a screw could take hold of the tray from the right side and prevent you to pull the drive tray out of the array.

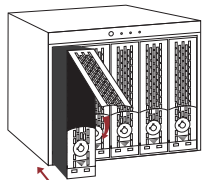
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- Adopt four of the screws provided, and fasten the tray on the hard disk drive. Tighten each screw to fasten the drive tray snugly to the hard disk drive. Do not tighten the screws overly.



WARNING: Do not force the levers to close while you insert drive modules into the NR170S enclosure. If a lever does not close smoothly, draw out and inlay the drive module again, and then press the lever to close.

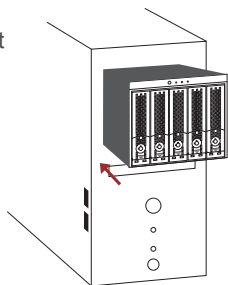
- Insert the drive module into the NR170S enclosure correctly until its lever appears to shut, and then press the lever to close until it clicks to ensure that the drive module is within the enclosure.



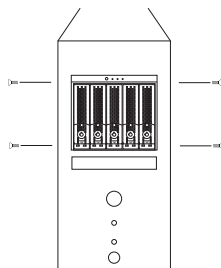
- Go over steps 2 to 6 again for further drives.

- Open the case from a PC, a server, or a workstation. Take off three 5.25" bay lids on the front panel of the PC, server, or workstation to provide an outlet for the module.

- Insert the NR170S into the outlet created by step 7.



- Once the module is inserted and the front panel of the module is level with the front panel of PC, server, and workstation, tighten four screws on each side of the module inside the PC, server, or workstation.



- If the chassis of PC, server, or workstation has plastic lock for 5.25" drive bay from one side, push the plastic lock forward until it clicks to secure the NR170S module inside the PC, server, or workstation.
- Connect one end of SATA cable to the SATA port on the NR170S. Make sure the connector is fastened to the enclosure.
 - Connect the other end of SATA cable to the SATA port that features port multiplier on motherboard or SATA add-on card inside PC, server, or workstation. Verify the connector is firmly conjoined.
 - Connect two Molex connectors to the NR170S module from the power supply inside PC, server, or workstation. Verify the power cables are firmly connected.
 - Close the case from PC, server, or workstation, and then switch on your PC, server, or workstation.

5. Quick RAID Configuration

The following is an example for Windows operating system.

- Copy the folder **RAID_AP_v1.8** from the CD to your computer.
- Open the folder **RAID_AP_v1.8** from your computer, and then open the sub-folder **Netstor_RAID_Server**. Execute program **ManagementServerSetup**.
- Go to folder **Netstor_RAID_AP** under **RAID_AP_v1.8**, and execute **RAID_AP_v1.8**, and then an interface shows up.
- After the interface appears, you are required to input data for three entries: the IP address, the user name, and the password, and then input **localhost** for the IP address, **admin** for the user name, and **111111** for the password. After you input the data, click **Connect**.
- After the partition and the format, go to My Computer and you will see the newly created volume.
- Select the disk drives you want to use for RAID, and then select a RAID level from RAID 0 to RAID 10. After you select a RAID level, click **Apply**.

- A confirmation of RAID configuration shows up, and click **Yes** to continue, and then the RAID will be created.

- For detailed information on RAID configuration, please see **System Configuration Guide**.

6. Disk Partition and Format

- For Windows operating system

- Right click **My Computer**, and then select **Manage**.
- Click **Disk Management** from the left column of the window. If a dialog that reads **Initialize and Convert Disk Wizard** shows, click **Cancel** to close it. All the hard disk drives will be identified and listed by the system. Right click the device from Netstor, and then choose **Initialize Disk**.
- Right click the bar that indicates the disk for the RAID system, and then choose **New Partition**.
- Follow the procedures from the New Partition Wizard to complete the partition.
- After the partition and the format, go to My Computer and you will see the newly created volume.

Note:

- Operating systems that allow disk volume larger than 2 Terabytes (2048 Gigabytes) include: Windows Vista, Windows 7, and Windows Server 2008.
- If you want to use multiple RAID volumes, your system should meet either of the following requirements.
 - The motherboard's SATA port should support port multiplier function.
 - The system should have an internal SATA card with port multiplier function.