



# ReadyNAS OS 6 Desktop Storage Systems

Hardware Manual

## Models:

ReadyNAS 102

ReadyNAS 104

ReadyNAS 312

ReadyNAS 314

ReadyNAS 316

ReadyNAS 516

EDA 500

April 2013  
202-11206-03

350 East Plumeria Drive  
San Jose, CA 95134  
USA



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# Getting Started

# 1

Congratulations on your purchase of a NETGEAR ReadyNAS® storage system. This manual describes the physical features of the ReadyNAS OS 6 desktop storage systems.

This chapter contains the following sections:

- *Additional Documentation*
- *Setup Location*
- *Supported Operating Systems*
- *Supported Browsers*
- *Diskless Storage Systems*

## Additional Documentation

For detailed information about configuring, managing, and using your ReadyNAS storage system, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

NETGEAR maintains a community website that supports ReadyNAS products. Visit <http://www.netgear.com/readynas> for reviews, tutorials, a comparison chart, software updates, documentation, an active user forum, and much more.

## Setup Location

Your ReadyNAS storage system is suitable for use in a home or small office environment where it can be freestanding. The small, compact size makes it suitable for sitting on a desk or on a closet shelf.

Choose a location for your storage system that meets these criteria:

- Cables can be connected easily.
- Water or moisture cannot enter the case.
- Airflow around the storage system and through the vents in the side of the case is not restricted.
- The air is as free of dust as possible.
- Temperature operating limits are not likely to be exceeded.
- If you are using an uninterruptable power supply (UPS) for protection, the power cable can be securely and safely connected to the UPS.

## Supported Operating Systems

The ReadyNAS storage system is supported on the following systems:

- Microsoft Windows 8
- Microsoft Windows 7
- Microsoft Windows Vista
- Apple Mac OS X 10.5 Leopard or later
- Linux, UNIX, Solaris
- Apple iOS
- Google Android

## Supported Browsers

The ReadyNAS local admin page supports the following browsers:

- Microsoft Internet Explorer 9.0+
- Apple Safari, 5.0+
- Google Chrome 20+
- Mozilla Firefox 14+

If you have difficulty accessing the local admin page or if you notice unexpected behavior, try using another browser. For more information about the ReadyNAS local admin page, see the *ReadyNAS OS 6 Software Manual*.

## Diskless Storage Systems

If you purchased a ReadyNAS storage system without a preinstalled disk drive or drives, you must add at least one disk your system before you use the system. You can add a 3.5-inch hard disk drive, a 2.5-inch hard disk drive, or a 2.5-inch solid-state drive to an empty drive bay. For information about how to install a disk, see *Add a Disk* on page 68.

Use only supported SATA hard disk drives (HDD) or solid state drives (SSD) in your ReadyNAS storage system. If you use disks that are not supported, NETGEAR technical support will not provide assistance. For a list of supported disks, see the NETGEAR Hardware Compatibility List at <http://www.netgear.com/readynas-hcl>.

If you are adding a previously formatted disk to your storage system, see the instructions in *Previously Formatted Disks* on page 66.



## 2. NETGEAR ReadyNAS 102

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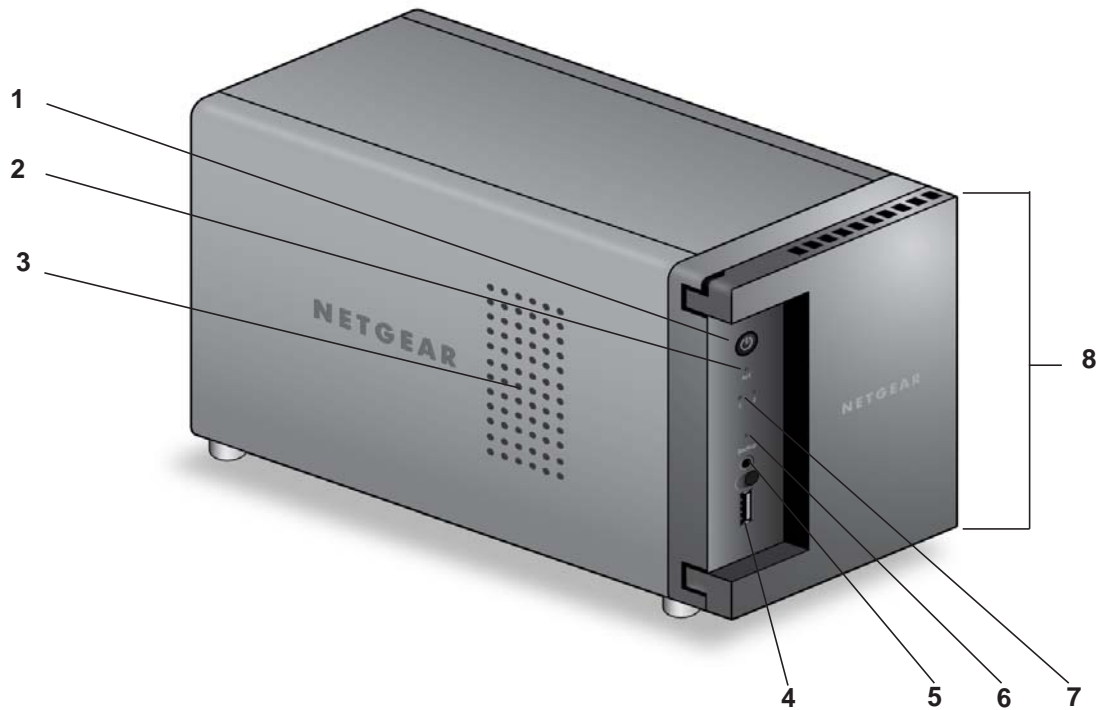
# 2

This chapter provides an overview of the physical features of the ReadyNAS 102 and includes the following sections:

- *Front and Side Panels*
- *Drive Bays*
- *Rear Panel*
- *Status Information*
- *Power On and Shut Down*
- *Boot Menu*

## Front and Side Panels

The following figure shows the front and side panels of ReadyNAS 102.



**Figure 1. ReadyNAS 102 front and side panels**

1. Power button and LED
2. Disk activity LED
3. Exhaust vent
4. USB 2.0 port
5. Backup button
6. USB and Backup status LED
7. Disk 1 and Disk 2 LEDs
8. Drive bay door

## Drive Bays

The following figure shows the drive bays of ReadyNAS 102.

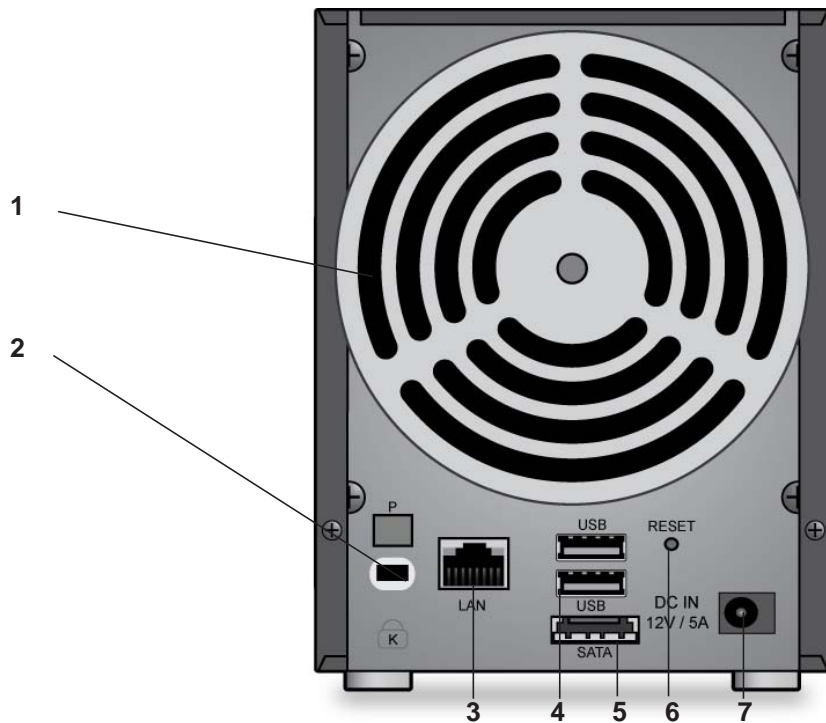


**Figure 2. ReadyNAS 102 drive bays**

1. Drive bay door
2. Disk tray handle
3. Recessed disk tray locking mechanism
4. Disk tray release latch
5. Drive bays

## Rear Panel

The following figure shows the rear panel of ReadyNAS 102.



**Figure 3. ReadyNAS 102 rear panel**

1. Exhaust fan
2. Kensington lock
3. LAN ports with LED status indicators
4. USB 3.0 ports
5. E-SATA port
6. Reset button
7. Power adapter socket

## Status Information

You can obtain information about the status of your storage system by reviewing the indicators listed in the following table.

**Table 1. ReadyNAS 102 indicator descriptions**

Indicator	Description
Power button and LED	<p>Press this button to turn on the ReadyNAS. The LED has these states:</p> <ul style="list-style-type: none"> <li>• <b>On.</b> Powered on.</li> <li>• <b>Blinking.</b> Booting or shutting down.</li> <li>• <b>Off.</b> Powered off.</li> </ul>
Disk LEDs (1, 2)	<p>Each drive bay has an LED associated with it on the front panel of the storage system. The disk LEDs have these states:</p> <ul style="list-style-type: none"> <li>• <b>On.</b> Power is on and the disk is operating normally.</li> <li>• <b>Blinking.</b> The disk was removed, failed, or is resynchronizing.</li> <li>• <b>Off.</b> The drive bay is empty.</li> </ul>
Disk activity LED	<p>The disk activity LED has these states:</p> <ul style="list-style-type: none"> <li>• <b>On.</b> At least one disk is present.</li> <li>• <b>Blinking.</b> A disk is active.</li> <li>• <b>Off.</b> No disks are present.</li> </ul>
Rear panel Ethernet port LEDs	<p>Two LED status indicators are built into this port, one green and one amber. They indicate port speed and activity as follows:</p> <ul style="list-style-type: none"> <li>• <b>Green on, amber off.</b> 1000 Mbps connection speed, no activity.</li> <li>• <b>Green blinking, amber off.</b> 1000 Mbps connection speed, activity.</li> <li>• <b>Green off, amber on.</b> 10 Mbps or 100 Mbps connection speed, no activity.</li> <li>• <b>Green off, amber blinking.</b> 10 Mbps or 100 Mbps connection speed, activity.</li> <li>• <b>Green off, amber off.</b> No connection.</li> </ul>

## Power On and Shut Down

This section describes how to power on and shut down your system. If you need to shut down the system, use one of the preferred shutdown methods whenever possible.

### Power On

➤ **To power on the system:**

1. Connect the system to a power supply.

**Note:** *Depending on the system's last power state, the system might power on automatically. For more information, see [Power State](#) on page 14.*

2. If necessary, press the **Power** button.

The system powers on.

### Preferred Shutdown

You can gracefully shut down your system by using the Power button or the ReadyNAS local admin page.

For information about how to gracefully shut down your system using the ReadyNAS local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

➤ **To gracefully shut down your system using the Power button:**

1. Press the **Power** button.

The Power LED blinks, prompting you to confirm the shutdown.

2. Press the **Power** button again.

The system shuts down gracefully.

### Forced Shutdown

Perform a forced shutdown only if the storage system is not responding.

➤ **To perform a forced shutdown:**

Unplug the system from the power supply.

### Power State

If the power supply is interrupted due to a power failure, the system returns to its last state once the power supply is restored:

- If the system was powered on at the time of the power failure, the system powers on when the power supply is restored.
- If the system was powered off at the time of the power failure, the system remains off when the power supply is restored.

## Boot Menu

Use the boot menu to restart or troubleshoot your ReadyNAS storage system. Your storage system has the following boot modes:

- **Normal.** Initiates a normal boot process, just like booting using the Power button.
- **Factory default.** Initiates a short disk test that takes approximately 5 minutes. After the disk test, a 10-minute time-out period begins.



### WARNING:

**The factory default reboot process resets the storage system to factory settings, erases all data, resets all defaults, and reformats the disk to X-RAID2.**

- If you want to cancel the factory default process, power off the storage system before the 10-minute time-out ends. The system powers down safely without causing any data loss.
- If you want to reset the system to factory default settings, do not power off your system. After the 10-minute time-out period, the factory default process begins.

**Tip:** To start the factory default process immediately, press the **Backup** button during the 10-minute time-out period.

- **OS reinstall.** Reinstalls the firmware from the internal flash to the disks. Use the OS reinstall boot mode when the system crashes and corrupts some configuration files. OS reinstall boot mode also resets some settings on your storage system, such as Internet protocol settings and the administrator password, to defaults.
- **Tech support.** Boots into a low-level diagnostic mode. Use the tech support boot mode only when instructed to do so by a NETGEAR technical support representative.
- **Volume read only.** Mounts a volume as read-only. Use this option when you are attempting to rescue data off a disk during a disaster recovery.
- **Memory test.** Performs a memory test. The pass or fail result is reported using the storage system's LEDs. Contact a NETGEAR technical support representative to interpret memory test results.
- **Test disk.** Performs an offline full disk test. This process can take 4 hours or more, depending on the size of your disks. Any problems are reported in the system logs. For more information about viewing the system logs, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

➤ **To access the boot menu:**

1. Power off your storage system.
2. Using a straightened paper clip, press and hold the **Reset** button.
3. Press the **Power** button.

The system powers on.

4. Continue to press the **Reset** button until the Power button LED, USB and backup status LED, disk 1 LED, and disk 2 LED light.
5. Press the **Backup** button to scroll through boot mode options.

The storage system shows the boot mode options using the LEDs, as described in the following table:

Boot Mode	Status Indicator				
	Description	Power LED	Disk 1 LED	Disk 2 LED	USB and Backup LED
Boot menu	All four LEDs light.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Normal	Power LED lights.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Factory default	Disk 1 LED lights.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OS reinstall	Disk 2 LED lights.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tech support	USB and backup status LED lights.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Volume read only	Power LED and disk 1 LED light.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Memory test	Power LED and disk 2 LED light.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Test disk	Power LED and USB and backup status LED light.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Legend:

- On:
- Off:

6. Press and release the **Reset** button to confirm your boot menu selection.

The system boots in the selected boot mode.



## 3. NETGEAR ReadyNAS 104

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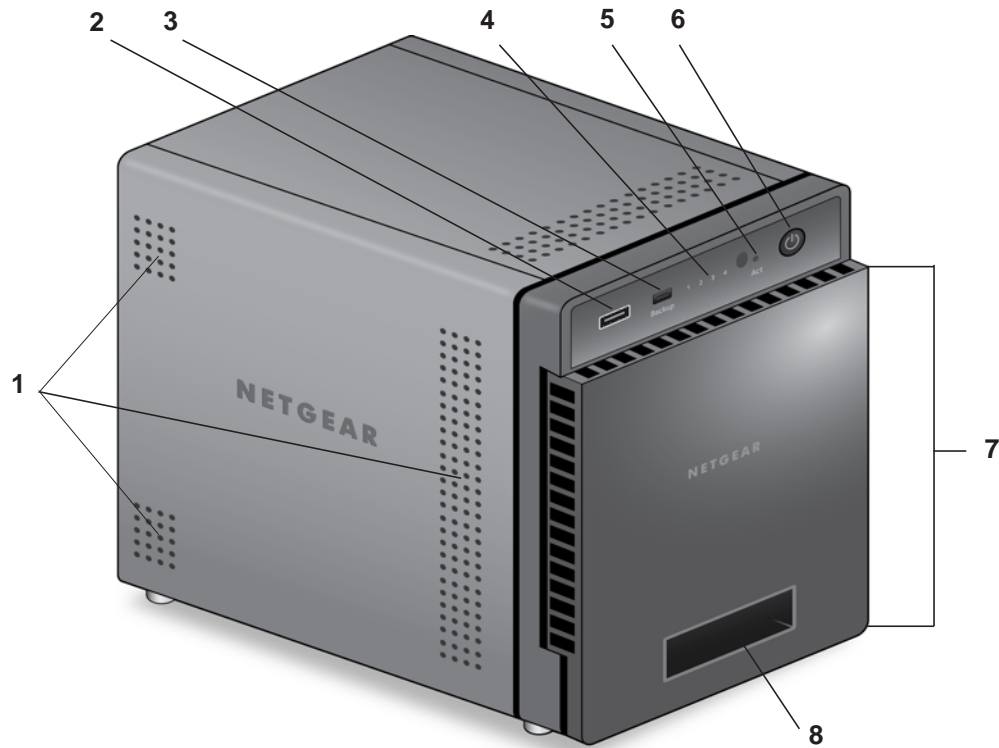
# 3

This chapter provides an overview of the physical features of the ReadyNAS 104 and includes the following sections:

- *Front and Side Panels*
- *Drive Bays*
- *Rear Panel*
- *Status Information*
- *Power On and Shut Down*
- *Boot Menu*

## Front and Side Panels

The following figure shows the front and side panels of ReadyNAS 104.



**Figure 4. ReadyNAS 104 front and side panels**

1. Exhaust vents
2. USB 2.0 port
3. Backup button and LED
4. Disk LEDs
5. Disk activity LED
6. Power button and LED
7. Drive bay door
8. Status display screen

## Drive Bays

The following figure shows the drive bays of ReadyNAS 104.

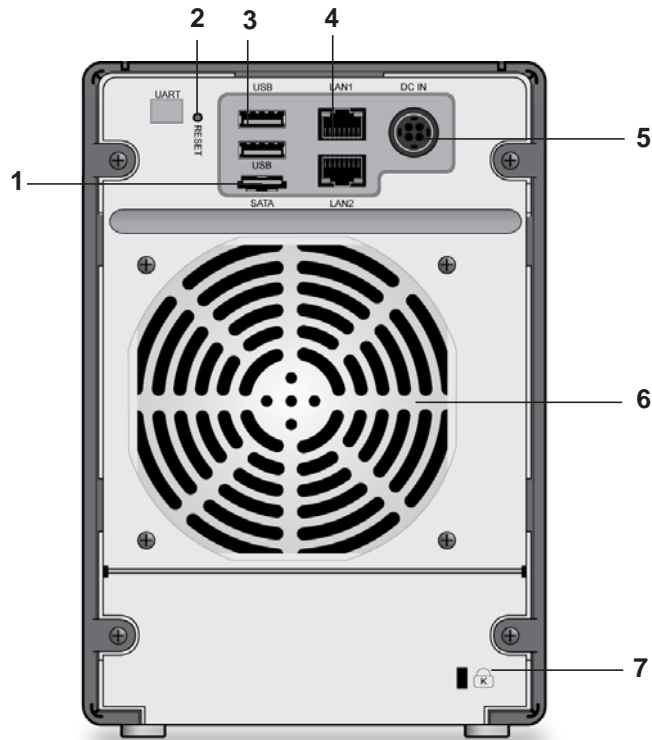


**Figure 5. ReadyNAS 104 drive bays**

1. Drive bay door
2. Disk tray handle
3. Recessed disk tray locking mechanism
4. Disk tray release latch
5. Drive bays

## Rear Panel

The following figure shows the rear panel of ReadyNAS 104.



**Figure 6. ReadyNAS 104 rear panel**

1. E-SATA port
2. Reset button
3. USB 3.0 ports
4. LAN ports with LED status indicators
5. Power cable socket
6. Exhaust fan
7. Kensington lock

## Status Information

You can obtain information about the status of your storage system by reviewing the indicators listed in the following table.

**Table 2. ReadyNAS 104 indicator descriptions**

Indicator	Description
Power button and LED	<p>Press this button to turn on the ReadyNAS. The LED has these states:</p> <ul style="list-style-type: none"> <li>• <b>On.</b> Powered on.</li> <li>• <b>Blinking.</b> Booting or shutting down.</li> <li>• <b>Off.</b> Powered off.</li> </ul>
Disk LEDs (1, 2, 3, 4)	<p>Each drive bay has an LED associated with it, in numerical order from left to right, along the top of the front panel of the storage system. The disk LEDs have these states:</p> <ul style="list-style-type: none"> <li>• <b>On.</b> Power is on and the disk is operating normally.</li> <li>• <b>Blinking.</b> The disk was removed, failed, or is resynchronizing. See the display screen for details.</li> <li>• <b>Off.</b> The drive bay is empty.</li> </ul>
Disk activity LED	<p>The disk activity LED has these states:</p> <ul style="list-style-type: none"> <li>• <b>On.</b> At least one disk is present.</li> <li>• <b>Blinking.</b> A disk is active.</li> <li>• <b>Off.</b> No disks are present.</li> </ul>
Rear panel Ethernet port LEDs	<p>Two LED status indicators are built into this port, one green and one amber. They indicate port speed and activity as follows:</p> <ul style="list-style-type: none"> <li>• <b>Green on, amber off.</b> 1000 Mbps connection speed, no activity.</li> <li>• <b>Green blinking, amber off.</b> 1000 Mbps connection speed, activity.</li> <li>• <b>Green off, amber on.</b> 10 Mbps or 100 Mbps connection speed, no activity.</li> <li>• <b>Green off, amber blinking.</b> 10 Mbps or 100 Mbps connection speed, activity.</li> <li>• <b>Green off, amber off.</b> No connection.</li> </ul>
Status display screen	<p>Displays messages about the status of your storage system. Note that the status display screen goes to sleep to prevent burn-in. To wake it, press the <b>Power</b> button once. If the storage system reports an abnormal operation or error, the status display screen stays on.</p>

## Power On and Shut Down

This section describes how to power on and shut down your system. If you need to shut down the system, use one of the preferred shutdown methods whenever possible.

### Power On

➤ **To power on the system:**

1. Connect the system to a power supply.

**Note:** Depending on the system's last power state, the system might power on automatically. For more information, see *Power State* on page 23.

2. If necessary, press the **Power** button.

The system powers on.

### Preferred Shutdown

You can gracefully shut down your system by using the Power button or the ReadyNAS local admin page.

For information about how to gracefully shut down your system using the ReadyNAS local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

➤ **To gracefully shut down your system using the Power button:**

- If the status display screen is not lit, do the following:
  1. Press the **Power** button.

The status display screen wakes.
  2. Press the **Power** button a second time.

Instructions for graceful shutdown display on the status display screen.
  3. Press the **Power** button a third time.

The system shuts down gracefully.
- If the status display screen is lit, do the following:
  1. Press the **Power** button.

Instructions for graceful shutdown display on the status display screen.
  2. Press the **Power** button again.

The system shuts down gracefully.

## Forced Shutdown

Perform a forced shutdown only if the storage system is not responding.

➤ **To perform a forced shutdown:**

Unplug the system from the power supply.

## Power State

If the power supply is interrupted due to a power failure, the system returns to its last state once the power supply is restored:

- If the system was powered on at the time of the power failure, the system powers on when the power supply is restored.
- If the system was powered off at the time of the power failure, the system remains off when the power supply is restored.

## Boot Menu

Use the boot menu to restart or troubleshoot your ReadyNAS storage system. Your storage system has the following boot modes:

- **Normal.** Initiates a normal boot process, just like booting using the Power button.
- **Factory default.** Initiates a short disk test that takes approximately 5 minutes. After the disk test, a 10-minute time-out period begins.



**WARNING:**

**The factory default reboot process resets the storage system to factory settings, erases all data, resets all defaults, and reformats the disk to X-RAID2.**

- If you want to cancel the factory default process, power off the storage system before the 10-minute time-out ends. The system powers down safely without causing any data loss.
- If you want to reset the system to factory default settings, do not power off your system. After the 10-minute time-out period, the factory default process begins.

**Tip:** To start the factory default process immediately, press the **Backup** button during the 10-minute time-out period.

- **OS reinstall.** Reinstalls the firmware from the internal flash to the disks. Use the OS reinstall boot mode when the system crashes and corrupts some configuration files. OS reinstall boot mode also resets some settings on your storage system, such as Internet protocol settings and the administrator password, to defaults.

- **Tech support.** Boots into a low-level diagnostic mode. Use the tech support boot mode only when instructed to do so by a NETGEAR technical support representative.
- **Volume read only.** Mounts a volume as read-only. Use this option when you are attempting to rescue data off a disk during a disaster recovery.
- **Memory test.** Performs a memory test. The pass or fail result is reported on the status display screen.
- **Test disk.** Performs an offline full disk test. This process can take 4 hours or more, depending on the size of your disks. Any problems are reported in the system logs. For more information about viewing the system logs, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

➤ **To access the boot menu:**

1. Power off your storage system.
2. Using a straightened paper clip, press and hold the **Reset** button.
3. Press the **Power** button.  
The system powers on.
4. Continue to press the **Reset** button until the status display screen shows a boot menu message.
5. Press the **Backup** button to scroll through boot mode options.  
The status display screen shows the current boot mode option.
6. When the status display screen shows the boot mode that you need, press and release the **Reset** button to confirm your boot menu selection.  
The system boots in the selected boot mode.



# 4. NETGEAR ReadyNAS 312

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# 4

This chapter provides an overview of the physical features of the ReadyNAS 312 and includes the following sections:

- *Front and Side Panels*
- *Drive Bays*
- *Rear Panel*
- *Status Information*
- *Power On and Shut Down*
- *Boot Menu*

## Front and Side Panels

The following figure shows the front and side panels of ReadyNAS 312.

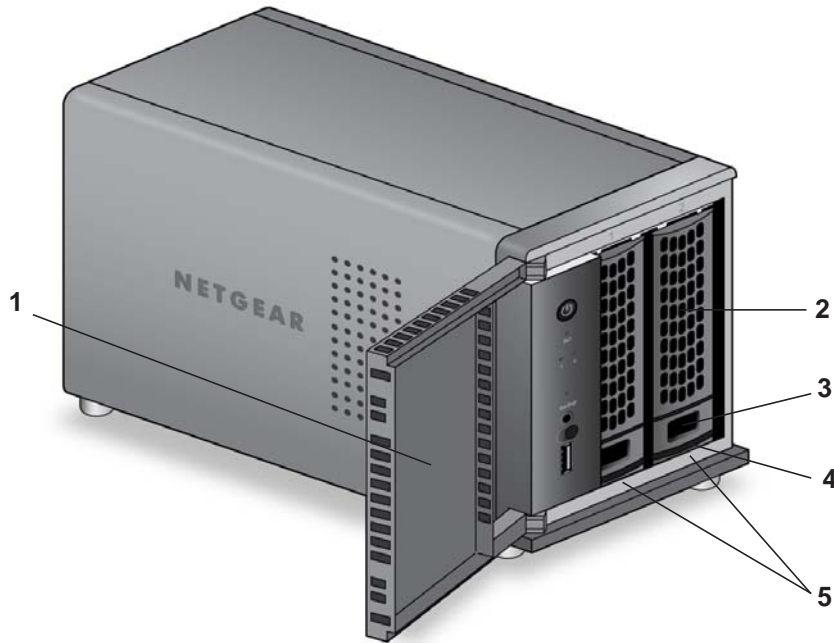


**Figure 7. ReadyNAS 312 front and side panels**

1. Power button and LED
2. Disk activity LED
3. Exhaust vent
4. USB 2.0 port
5. Infrared remote receiver
6. Backup button
7. USB and Backup status LED
8. Disk 1 and Disk 2 LEDs
9. Drive bay door

## Drive Bays

The following figure shows the drive bays of ReadyNAS 312.

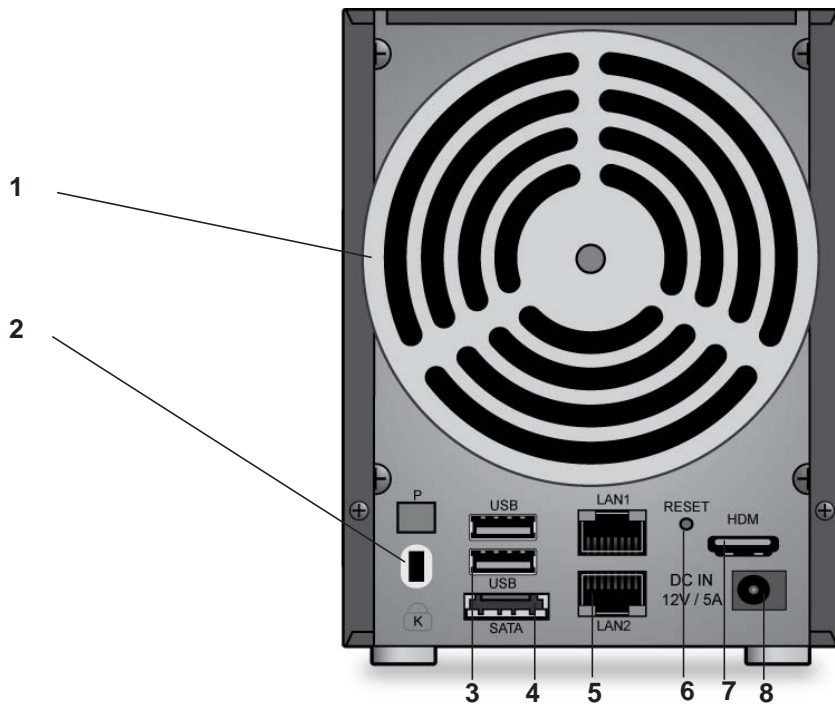


**Figure 8. ReadyNAS 312 drive bays**

1. Drive bay door
2. Disk tray handle
3. Recessed disk tray locking mechanism
4. Disk tray release latch
5. Drive bays

## Rear Panel

The following figure shows the rear panel of ReadyNAS 312.



**Figure 9. ReadyNAS 312 rear panel**

1. Exhaust fan
2. Kensington lock
3. USB 3.0 ports
4. E-SATA port
5. LAN ports with LED status indicators
6. Reset button
7. HDMI port
8. Power adapter socket

## Status Information

You can obtain information about the status of your storage system by reviewing the indicators listed in the following table.

**Table 3. ReadyNAS 312 indicator descriptions**

Indicator	Description
Power button and LED	Press this button to turn on the ReadyNAS. The LED has these states: <ul style="list-style-type: none"> <li>• <b>On.</b> Powered on.</li> <li>• <b>Blinking.</b> Booting or shutting down.</li> <li>• <b>Off.</b> Powered off.</li> </ul>
Disk LEDs (1, 2)	Each drive bay has an LED associated with it on the front panel of the storage system. The disk LEDs have these states: <ul style="list-style-type: none"> <li>• <b>On.</b> Power is on and the disk is operating normally.</li> <li>• <b>Blinking.</b> The disk was removed, failed, or is resynchronizing.</li> <li>• <b>Off.</b> The drive bay is empty.</li> </ul>
Disk activity LED	The disk activity LED has these states: <ul style="list-style-type: none"> <li>• <b>On.</b> At least one disk is present.</li> <li>• <b>Blinking.</b> A disk is active.</li> <li>• <b>Off.</b> No disks are present.</li> </ul>
Rear panel Ethernet port LEDs	Two LED status indicators are built into this port, one green and one amber. They indicate port speed and activity as follows: <ul style="list-style-type: none"> <li>• <b>Green on, amber off.</b> 1000 Mbps connection speed, no activity.</li> <li>• <b>Green blinking, amber off.</b> 1000 Mbps connection speed, activity.</li> <li>• <b>Green off, amber on.</b> 10 Mbps or 100 Mbps connection speed, no activity.</li> <li>• <b>Green off, amber blinking.</b> 10 Mbps or 100 Mbps connection speed, activity.</li> <li>• <b>Green off, amber off.</b> No connection.</li> </ul>

## Power On and Shut Down

This section describes how to power on and shut down your system. If you need to shut down the system, use one of the preferred shutdown methods whenever possible.

### Power On

When the system is connected to a power supply, the system automatically powers on.

You can also power on the system by pressing the **Power** button.

### Preferred Shutdown

You can gracefully shut down your system by using the Power button or the ReadyNAS local admin page.

For information about how to gracefully shut down your system using the ReadyNAS local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

➤ **To gracefully shut down your system using the Power button:**

1. Press the **Power** button.

The Power LED blinks, prompting you to confirm the shutdown.

2. Press the **Power** button again.

The system shuts down gracefully.

### Forced Shutdown

Perform a forced shutdown only if the storage system is not responding.

➤ **To perform a forced shutdown:**

Press and hold the **Power** button for 5 seconds.

The LEDs blink quickly and simultaneously to warn that power will be cut off forcibly.

The system shuts down.

## Boot Menu

Use the boot menu to restart or troubleshoot your ReadyNAS storage system. Your storage system has the following boot modes:

- **Normal.** Initiates a normal boot process, just like booting using the Power button.
- **Factory default.** Initiates a short disk test that takes approximately 5 minutes. After the disk test, a 10-minute time-out period begins.



### WARNING:

**The factory default reboot process resets the storage system to factory settings, erases all data, resets all defaults, and reformats the disk to X-RAID2.**

- If you want to cancel the factory default process, power off the storage system before the 10-minute time-out ends. The system powers down safely without causing any data loss.
- If you want to reset the system to factory default settings, do not power off your system. After the 10-minute time-out period, the factory default process begins.

**Tip:** To start the factory default process immediately, press the **Backup** button during the 10-minute time-out period.

- **OS reinstall.** Reinstalls the firmware from the internal flash to the disks. Use the OS reinstall boot mode when the system crashes and corrupts some configuration files. OS reinstall boot mode also resets some settings on your storage system, such as Internet protocol settings and the administrator password, to defaults.
- **Tech support.** Boots into a low-level diagnostic mode. Use the tech support boot mode only when instructed to do so by a NETGEAR technical support representative.
- **Volume read only.** Mounts a volume as read-only. Use this option when you are attempting to rescue data off a disk during a disaster recovery.
- **Memory test.** Performs a memory test. The pass or fail result is reported using the storage system's LEDs. Contact a NETGEAR technical support representative to interpret memory test results.
- **Test disk.** Performs an offline full disk test. This process can take 4 hours or more, depending on the size of your disks. Any problems are reported in the system logs. For more information about viewing the system logs, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

➤ **To access the boot menu:**

1. Power off your storage system.
2. Using a straightened paper clip, press and hold the **Reset** button.
3. Press the **Power** button.

The system powers on.

4. Continue to press the **Reset** button until the Power button LED, USB and backup status LED, disk 1 LED, and disk 2 LED light.
5. Press the **Backup** button to scroll through boot mode options.

The storage system shows the boot mode options using the LEDs, as described in the following table:

Boot Mode	Status Indicator				
	Description	Power LED	Disk 1 LED	Disk 2 LED	USB and Backup LED
Boot menu	All four LEDs light.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Normal	Power LED lights.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Factory default	Disk 1 LED lights.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OS reinstall	Disk 2 LED lights.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tech support	USB and backup status LED lights.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Volume read only	Power LED and disk 1 LED light.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Memory test	Power LED and disk 2 LED light.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Test disk	Power LED and USB and backup status LED light.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Legend:

- On:
- Off:

6. Press and release the **Reset** button to confirm your boot menu selection.

The system boots in the selected boot mode.



## 5. NETGEAR ReadyNAS 314

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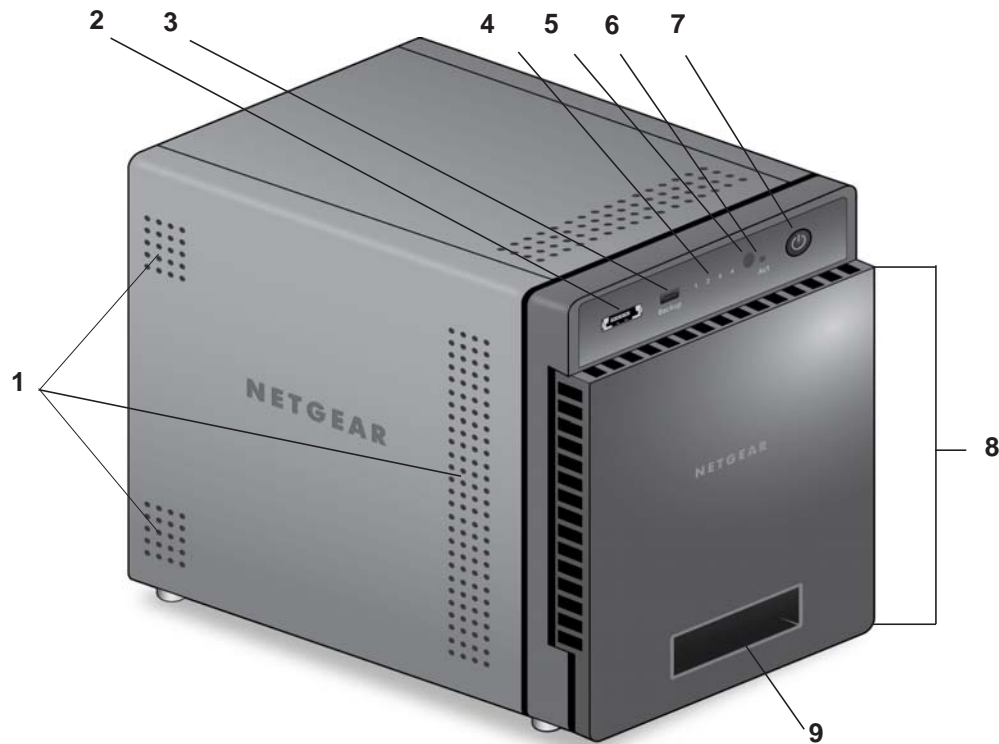
# 5

This chapter provides an overview of the physical features of the ReadyNAS 314 and includes the following sections:

- *Front and Side Panels*
- *Drive Bays*
- *Rear Panel*
- *Status Information*
- *Power On and Shut Down*
- *Boot Menu*

## Front and Side Panels

The following figure shows the front and side panels of ReadyNAS 314.



**Figure 10. ReadyNAS 314 front and side panels**

1. Exhaust vents
2. Shared USB 2.0 and E-SATA port
3. Backup button and LED
4. Disk LEDs
5. Infrared remote receiver
6. Disk activity LED
7. Power button and LED
8. Drive bay door
9. Status display screen

## Drive Bays

The following figure shows the drive bays of ReadyNAS 314.

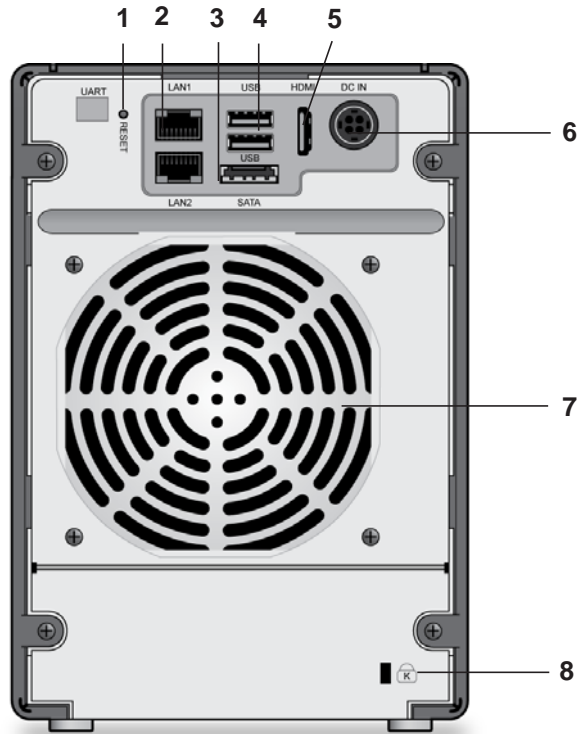


**Figure 11. ReadyNAS 314 drive bays**

1. Drive bay door
2. Disk tray handle
3. Recessed disk tray locking mechanism
4. Disk tray release latch
5. Drive bays

## Rear Panel

The following figure shows the rear panel of ReadyNAS 314.



**Figure 12. ReadyNAS 314 rear panel**

1. Reset button
2. LAN ports with LED status indicators
3. E-SATA port
4. USB 3.0 ports
5. HDMI port
6. Power cable socket
7. Exhaust fan
8. Kensington lock

## Status Information

You can obtain information about the status of your storage system by reviewing the indicators listed in the following table.

**Table 4. ReadyNAS 314 indicator descriptions**

Indicator	Description
Power button and LED	Press this button to turn on the ReadyNAS. The LED has these states: <ul style="list-style-type: none"> <li>• <b>On.</b> Powered on.</li> <li>• <b>Blinking.</b> Booting or shutting down.</li> <li>• <b>Off.</b> Powered off.</li> </ul>
Disk LEDs (1, 2, 3, 4)	Each drive bay has an LED associated with it, in numerical order from left to right along the top of the front panel of the storage system. The disk LEDs have these states: <ul style="list-style-type: none"> <li>• <b>On.</b> Power is on and the disk is operating normally.</li> <li>• <b>Blinking.</b> The disk was removed, failed, or is resynchronizing. See the display screen for details.</li> <li>• <b>Off.</b> The drive bay is empty.</li> </ul>
Disk activity LED	The disk activity LED has these states: <ul style="list-style-type: none"> <li>• <b>On.</b> At least one disk is present.</li> <li>• <b>Blinking.</b> A disk is active.</li> <li>• <b>Off.</b> No disks are present.</li> </ul>
Rear panel Ethernet port LEDs	Two LED status indicators are built into this port, one green and one amber. They indicate port speed and activity as follows: <ul style="list-style-type: none"> <li>• <b>Green on, amber off.</b> 1000 Mbps connection speed, no activity.</li> <li>• <b>Green blinking, amber off.</b> 1000 Mbps connection speed, activity.</li> <li>• <b>Green off, amber on.</b> 10 Mbps or 100 Mbps connection speed, no activity.</li> <li>• <b>Green off, amber blinking.</b> 10 Mbps or 100 Mbps connection speed, activity.</li> <li>• <b>Green off, amber off.</b> No connection.</li> </ul>
Status display screen	Displays messages about the status of your storage system. Note that the status display screen goes to sleep to prevent burn-in. To wake it, press the <b>Power</b> button once. If the storage system reports an abnormal operation or error, the status display screen stays on.

## Power On and Shut Down

This section describes how to power on and shut down your system. If you need to shut down the system, use one of the preferred shutdown methods whenever possible.

### Power On

When the system is connected to a power supply, the system automatically powers on.

You can also power on the system by pressing the **Power** button.

### Preferred Shutdown

You can gracefully shut down your system by using the Power button or the ReadyNAS local admin page.

For information about how to gracefully shut down your system using the ReadyNAS local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

#### ➤ **To gracefully shut down your system using the Power button:**

- If the status display screen is not lit, do the following:
  1. Press the **Power** button.  
The status display screen wakes.
  2. Press the **Power** button a second time.  
Instructions for graceful shutdown display on the status display screen.
  3. Press the **Power** button a third time.  
The system shuts down gracefully.
- If the status display screen is lit, do the following:
  1. Press the **Power** button.  
Instructions for graceful shutdown display on the status display screen.
  2. Press the **Power** button again.  
The system shuts down gracefully.

### Forced Shutdown

Perform a forced shutdown only if the storage system is not responding.

#### ➤ **To perform a forced shutdown:**

Press and hold the **Power** button for 5 seconds.

The LEDs blink quickly and simultaneously to warn that power will be cut off forcibly.

The system shuts down.

## Boot Menu

Use the boot menu to restart or troubleshoot your ReadyNAS storage system. Your storage system has the following boot modes:

- **Normal.** Initiates a normal boot process, just like booting using the Power button.
- **Factory default.** Initiates a short disk test that takes approximately 5 minutes. After the disk test, a 10-minute time-out period begins.



### WARNING:

**The factory default reboot process resets the storage system to factory settings, erases all data, resets all defaults, and reformats the disk to X-RAID2.**

- If you want to cancel the factory default process, power off the storage system before the 10-minute time-out ends. The system powers down safely without causing any data loss.
- If you want to reset the system to factory default settings, do not power off your system. After the 10-minute time-out period, the factory default process begins.

**Tip:** To start the factory default process immediately, press the **Backup** button during the 10-minute time-out period.

- **OS reinstall.** Reinstalls the firmware from the internal flash to the disks. Use the OS reinstall boot mode when the system crashes and corrupts some configuration files. OS reinstall boot mode also resets some settings on your storage system, such as Internet protocol settings and the administrator password, to defaults.
- **Tech support.** Boots into a low-level diagnostic mode. Use the tech support boot mode only when instructed to do so by a NETGEAR technical support representative.
- **Volume read only.** Mounts a volume as read-only. Use this option when you are attempting to rescue data off a disk during a disaster recovery.
- **Memory test.** Performs a memory test. The pass or fail result is reported on the status display screen.
- **Test disk.** Performs an offline full disk test. This process can take 4 hours or more, depending on the size of your disks. Any problems are reported in the system logs. For more information about viewing the system logs, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

➤ **To access the boot menu:**

1. Power off your storage system.
2. Using a straightened paper clip, press and hold the **Reset** button.
3. Press the **Power** button.

The systems powers on.

4. Continue to press the **Reset** button until the status display screen shows a boot menu message.
5. Press the **Backup** button to scroll through boot mode options.

The status display screen shows the current boot mode option.

6. When the status display screen shows the boot mode that you need, press and release the **Reset** button to confirm your boot menu selection.

The system boots in the selected boot mode.



# 6. NETGEAR ReadyNAS 316

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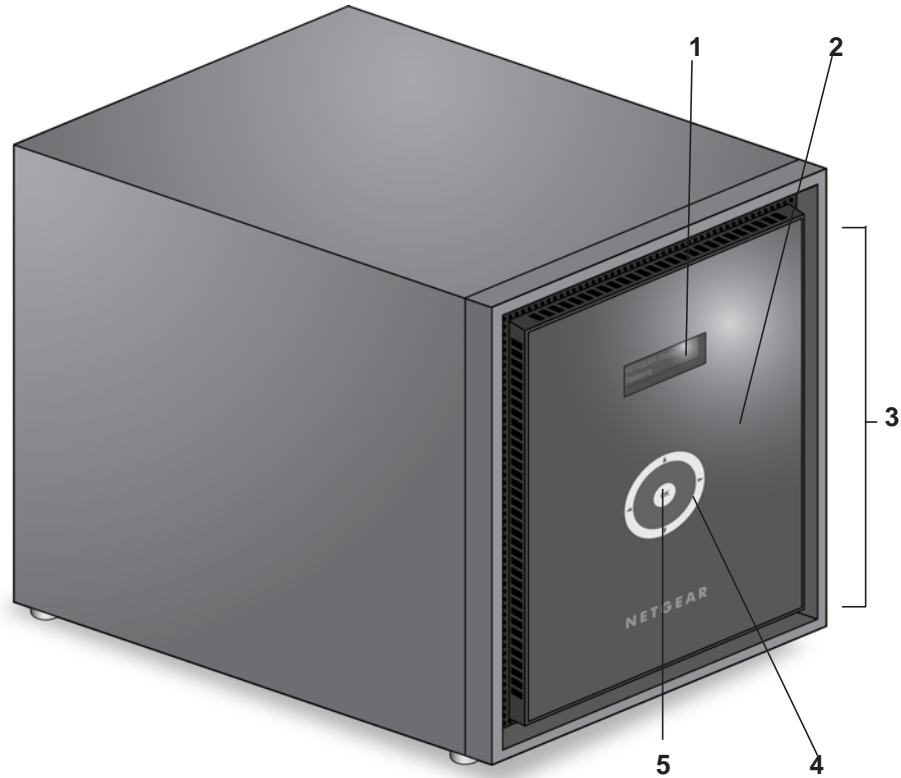
# 6

This chapter provides an overview of the physical features of the ReadyNAS 316 and includes the following sections:

- *Front and Side Panels*
- *Drive Bays*
- *Rear Panel*
- *Status Information*
- *Power On and Shut Down*
- *Boot Menu*

## Front and Side Panels

The following figure shows the front and side panels of ReadyNAS 316.

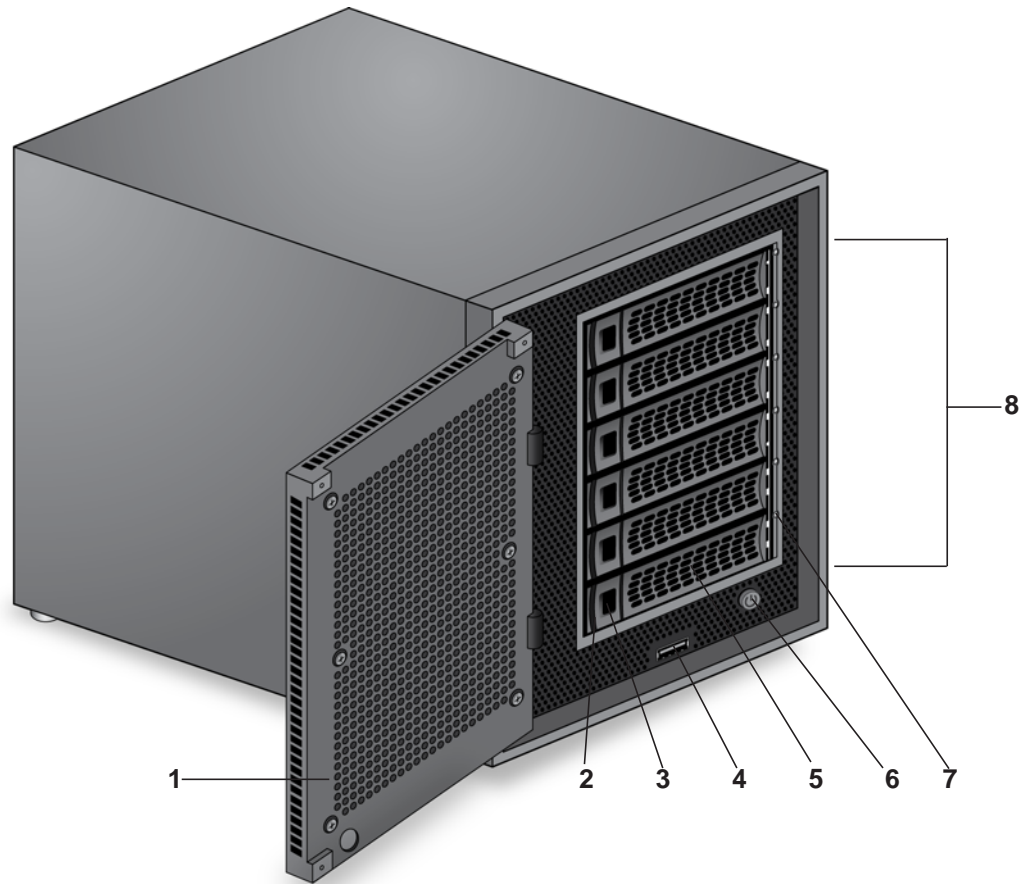


**Figure 13. ReadyNAS 316 front and side panels**

1. Status display screen
2. Infrared remote receiver
3. Drive bay door
4. Touchpad and backlight
5. OK button

## Drive Bays

The following figure shows the drive bays of ReadyNAS 316.

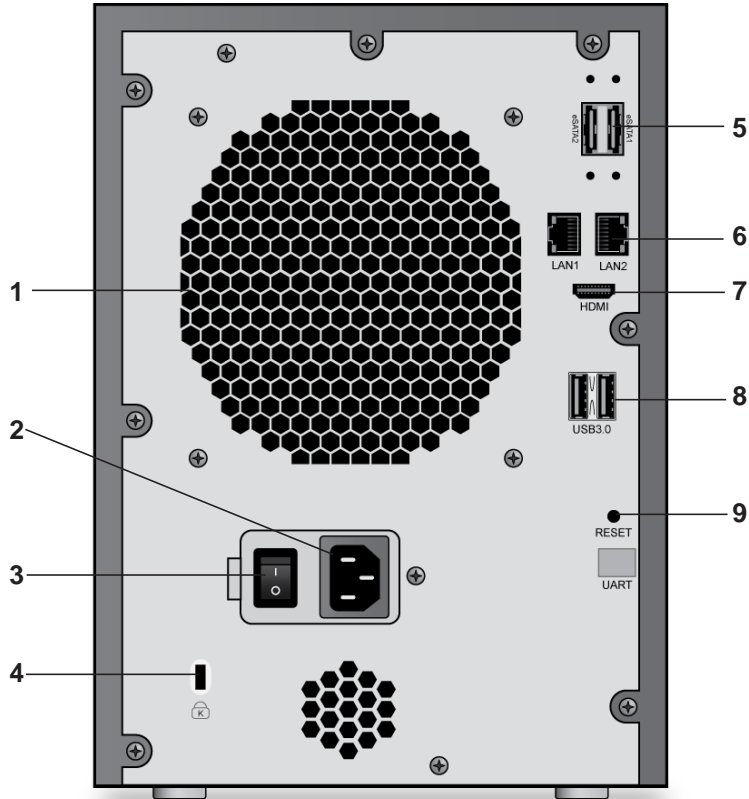


**Figure 14. ReadyNAS 316 drive bays**

1. Drive bay door
2. Disk tray release latch
3. Recessed disk tray locking mechanism
4. USB 2.0 port
5. Disk tray handle
6. Power button
7. Disk LED
8. Drive bays

## Rear Panel

The following figure shows the rear panel of ReadyNAS 316.



**Figure 15. ReadyNAS 316 rear panel**

1. Exhaust fan
2. Power cable socket
3. Power switch
4. Kensington lock
5. E-SATA ports
6. LAN ports with LED status indicators
7. HDMI port
8. USB 3.0 ports
9. Reset button

## Status Information

You can obtain information about the status of your storage system by reviewing the indicators listed in the following table.

**Table 5. ReadyNAS 316 indicator descriptions**

Indicator	Description
Disk LEDs	<p>A disk LED next to each drive bay indicates the status of the disk inside. The disk LEDs have these states:</p> <ul style="list-style-type: none"> <li>• <b>Solid blue.</b> Power is on and the disk is operating normally.</li> <li>• <b>Blinking blue.</b> The disk is active.</li> <li>• <b>Solid red.</b> The disk was removed, failed, or is resynchronizing. See the display screen for details.</li> <li>• <b>Off.</b> No disk is present.</li> </ul>
Rear panel Ethernet port LEDs	<p>Two LED status indicators are built into this port, one green and one amber. They indicate port speed and activity as follows:</p> <ul style="list-style-type: none"> <li>• <b>Green on, amber off.</b> 1000 Mbps connection speed, no activity.</li> <li>• <b>Green blinking, amber off.</b> 1000 Mbps connection speed, activity.</li> <li>• <b>Green off, amber on.</b> 10 Mbps or 100 Mbps connection speed, no activity.</li> <li>• <b>Green off, amber blinking.</b> 10 Mbps or 100 Mbps connection speed, activity.</li> <li>• <b>Green off, amber off.</b> No connection.</li> </ul>
Status display screen	<p>Displays messages about the status of your storage system. Note that the status display screen goes to sleep to prevent burn-in. To wake the status display screen, activate the proximity sensor, press the touchpad, press the <b>OK</b> button, or press the <b>Power</b> button once. If the storage system reports an abnormal operation or error, the status display screen stays on.</p>

## Power On and Shut Down

This section describes how to power on and shut down your system. If you need to shut down the system, use one of the preferred shutdown methods whenever possible.

### Power On

When the system is connected to a power supply and the Power switch is in the On position, the system automatically powers on.

You can also power on the system by pressing the **Power** button on the front panel of the system.

## Preferred Shutdown

You can gracefully shut down your system by using the Power button or the ReadyNAS local admin page.

For information about how to gracefully shut down your system using the ReadyNAS local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

### ➤ To gracefully shut down your system using the Power button:

- If the status display screen is not lit, do the following:
  1. Press the **Power** button on the front panel of the system.  
The status display screen wakes.
  2. Press the **Power** button a second time.  
Instructions for graceful shutdown display on the status display screen.
  3. Press the **Power** button a third time.  
The system shuts down gracefully.
- If the status display screen is lit, do the following:
  1. Press the **Power** button on the front panel of the system.  
Instructions for graceful shutdown display on the status display screen.
  2. Press the **Power** button again.  
The system shuts down gracefully.

## Forced Shutdown

Perform a forced shutdown only if the storage system is not responding.

### ➤ To perform a forced shutdown:

Press and hold the **Power** button on the front panel of the system for 5 seconds.

The LEDs blink quickly and simultaneously to warn that power will be cut off forcibly.

The system shuts down.

## Boot Menu

Use the boot menu to restart or troubleshoot your ReadyNAS storage system. Your storage system has the following boot modes:

- **Normal.** Initiates a normal boot process, just like booting using the Power button.
- **Factory default.** Initiates a short disk test that takes approximately 2 minutes. After the disk test, a 10-minute time-out period begins.



### WARNING:

**The factory default reboot process resets the storage system to factory settings, erases all data, resets all defaults, and reformats the disk to X-RAID2.**

- If you want to cancel the factory default process, power off the storage system before the 10-minute time-out ends. The system powers down safely without causing any data loss.
- If you want to reset the system to factory default settings, do not power off your system. After the 10-minute time-out period, the factory default process begins.

**Tip:** To start the factory default process immediately, press the **OK** button during the 10-minute time-out period.

- **OS reinstall.** Reinstalls the firmware from the internal flash to the disks. Use the OS reinstall boot mode when the system crashes and corrupts some configuration files. OS reinstall boot mode also resets some settings on your storage system, such as Internet protocol settings and the administrator password, to defaults.
- **Tech support.** Boots into a low-level diagnostic mode. Use the tech support boot mode only when instructed to do so by a NETGEAR technical support representative.
- **Volume read only.** Mounts a volume as read-only. Use this option when you are attempting to rescue data off a disk during a disaster recovery.
- **Memory test.** Performs a memory test. The pass or fail result is reported on the status display screen.
- **Test disk.** Performs an offline full disk test. This process can take 4 hours or more, depending on the size of your disks. Any problems are reported in the system logs. For more information about viewing the system logs, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

➤ **To access the boot menu:**

1. Power off your storage system.
2. Using a straightened paper clip, press and hold the **Reset** button.
3. Press the **Power** button on the front panel of the system.

The system powers on.

4. Continue to press the **Reset** button until the status display screen shows a boot menu message.
5. Use the arrows on the touchpad to scroll through boot mode options.

The status display screen shows the current boot mode option.

6. When the status display screen shows the boot mode that you need, press the **OK** button to confirm your boot menu selection.

The system boots in the selected boot mode.



# 7. NETGEAR ReadyNAS 516

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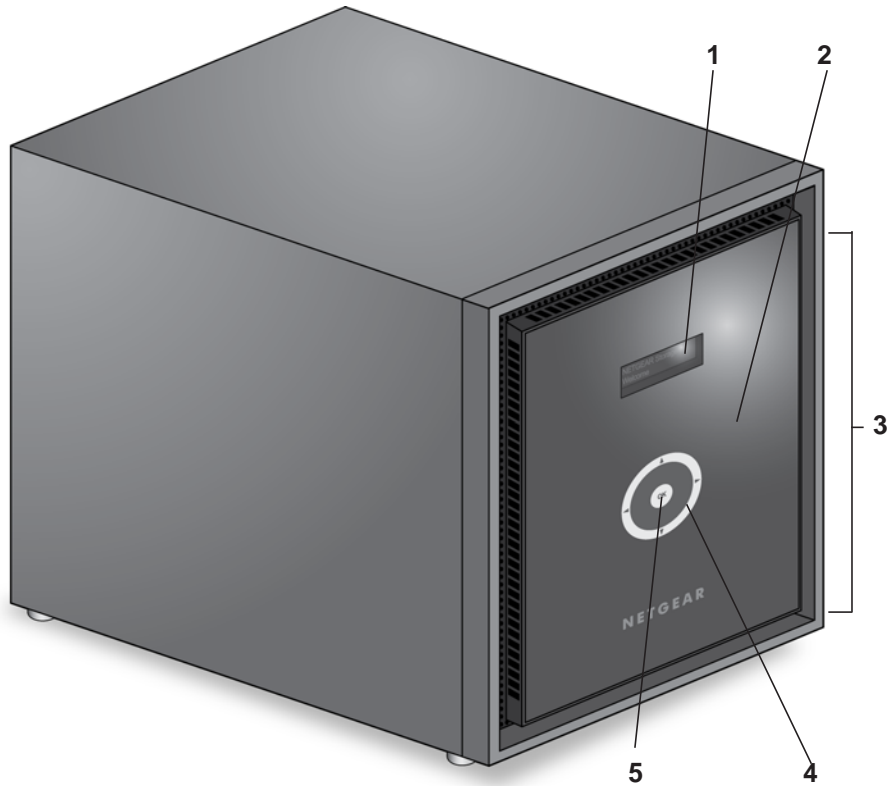
# 7

This chapter provides an overview of the physical features of the ReadyNAS 516 and includes the following sections:

- *Front and Side Panels*
- *Drive Bays*
- *Rear Panel*
- *Status Information*
- *Power On and Shut Down*
- *Boot Menu*

## Front and Side Panels

The following figure shows the front and side panels of ReadyNAS 516.

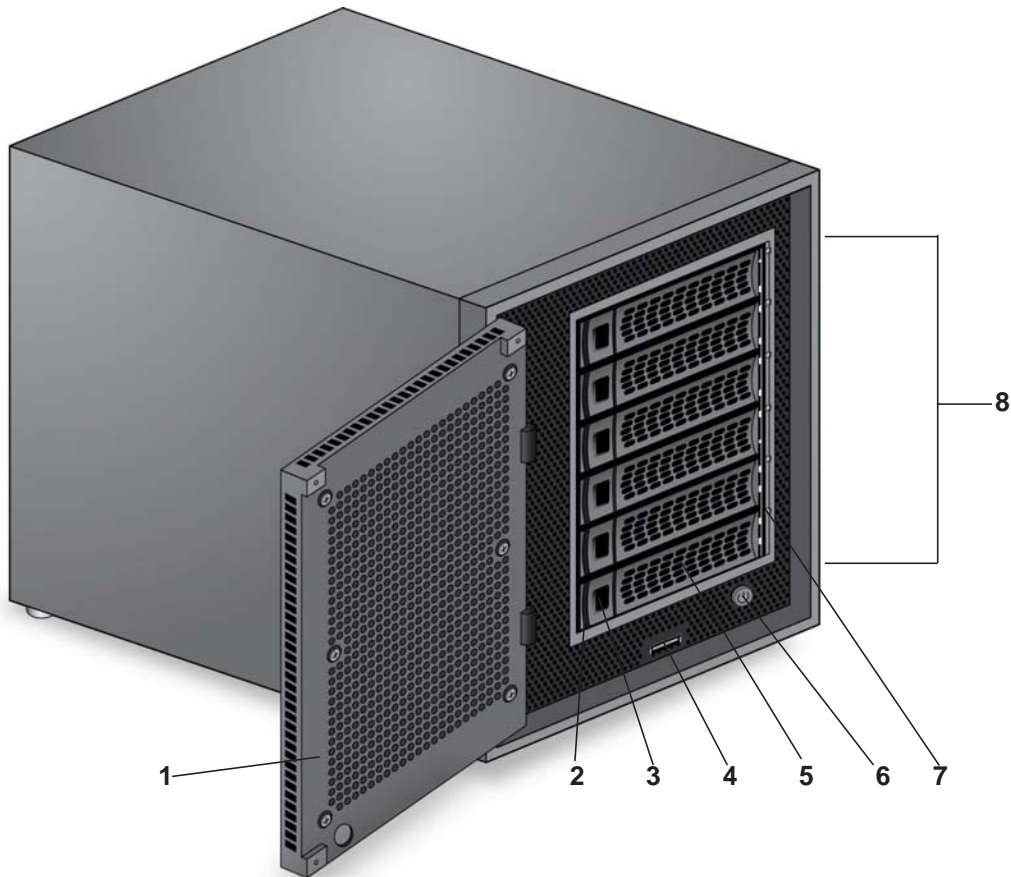


**Figure 16. ReadyNAS 516 front and side panels**

1. Status display screen
2. Infrared remote receiver
3. Drive bay door
4. Touchpad and backlight
5. OK button

## Drive Bays

The following figure shows the drive bays of ReadyNAS 516.

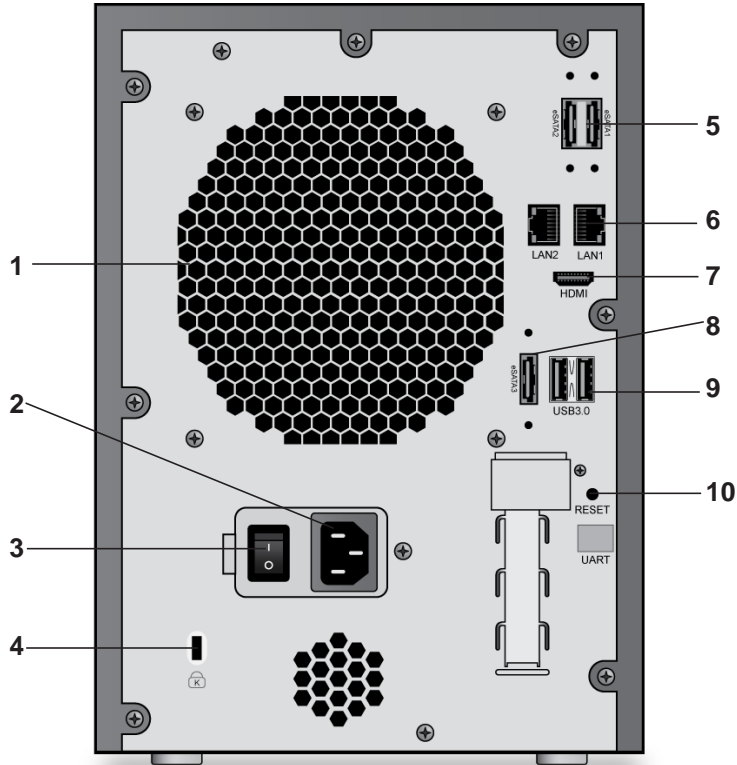


**Figure 17. ReadyNAS 516 drive bays**

1. Drive bay door
2. Disk tray release latch
3. Recessed disk tray locking mechanism
4. USB 2.0 port
5. Disk tray handle
6. Power button
7. Disk LED
8. Drive bays

## Rear Panel

The following figure shows the rear panel of ReadyNAS 516.



**Figure 18. ReadyNAS 516 rear panel**

1. Exhaust fan
2. Power cable socket
3. Power switch
4. Kensington lock
5. E-SATA ports
6. LAN ports with LED status indicators
7. HDMI port
8. E-SATA port
9. USB 3.0 ports
10. Reset button

## Status Information

You can obtain information about the status of your storage system by reviewing the indicators listed in the following table.

**Table 6. ReadyNAS 516 indicator descriptions**

Indicator	Description
Disk LEDs	<p>A disk LED next to each drive bay indicates the status of the disk inside. The disk LEDs have these states:</p> <ul style="list-style-type: none"> <li>• <b>Solid blue.</b> Power is on and the disk is operating normally.</li> <li>• <b>Blinking blue.</b> The disk is active.</li> <li>• <b>Solid red.</b> The disk was removed, failed, or is resynchronizing. See the display screen for details.</li> <li>• <b>Off.</b> No disk is present.</li> </ul>
Rear panel Ethernet port LEDs	<p>Two LED status indicators are built into this port, one green and one amber. They indicate port speed and activity as follows:</p> <ul style="list-style-type: none"> <li>• <b>Green on, amber off.</b> 1000 Mbps connection speed, no activity.</li> <li>• <b>Green blinking, amber off.</b> 1000 Mbps connection speed, activity.</li> <li>• <b>Green off, amber on.</b> 10 Mbps or 100 Mbps connection speed, no activity.</li> <li>• <b>Green off, amber blinking.</b> 10 Mbps or 100 Mbps connection speed, activity.</li> <li>• <b>Green off, amber off.</b> No connection.</li> </ul>
Status display screen	<p>Displays messages about the status of your storage system. Note that the status display screen goes to sleep to prevent burn-in. To wake the status display screen, activate the proximity sensor, press the touchpad, press the <b>OK</b> button, or press the <b>Power</b> button once. If the storage system reports an abnormal operation or error, the status display screen stays on.</p>

## Power On and Shut Down

This section describes how to power on and shut down your system. If you need to shut down the system, use one of the preferred shutdown methods whenever possible.

### Power On

When the system is connected to a power supply and the Power switch is in the On position, the system automatically powers on.

You can also power on the system by pressing the **Power** button on the front panel of the system.

## Preferred Shutdown

You can gracefully shut down your system by using the Power button or the ReadyNAS local admin page.

For information about how to gracefully shut down your system using the ReadyNAS local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

### ➤ To gracefully shut down your system using the Power button:

- If the status display screen is not lit, do the following:
  1. Press the **Power** button on the front panel of the system.  
The status display screen wakes.
  2. Press the **Power** button a second time.  
Instructions for graceful shutdown display on the status display screen.
  3. Press the **Power** button a third time.  
The system shuts down gracefully.
- If the status display screen is lit, do the following:
  1. Press the **Power** button on the front panel of the system.  
Instructions for graceful shutdown display on the status display screen.
  2. Press the **Power** button again.  
The system shuts down gracefully.

## Forced Shutdown

Perform a forced shutdown only if the storage system is not responding.

### ➤ To perform a forced shutdown:

Press and hold the **Power** button on the front panel of the system for 5 seconds.

The LEDs blink quickly and simultaneously to warn that power will be cut off forcibly.

The system shuts down.

## Boot Menu

Use the boot menu to restart or troubleshoot your ReadyNAS storage system. Your storage system has the following boot modes:

- **Normal.** Initiates a normal boot process, just like booting using the Power button.
- **Factory default.** Initiates a short disk test that takes approximately 2 minutes. After the disk test, a 10-minute time-out period begins.



### WARNING:

**The factory default reboot process resets the storage system to factory settings, erases all data, resets all defaults, and reformats the disk to X-RAID2.**

- If you want to cancel the factory default process, power off the storage system before the 10-minute time-out ends. The system powers down safely without causing any data loss.
- If you want to reset the system to factory default settings, do not power off your system. After the 10-minute time-out period, the factory default process begins.

**Tip:** To start the factory default process immediately, press the **OK** button during the 10-minute time-out period.

- **OS reinstall.** Reinstalls the firmware from the internal flash to the disks. Use the OS reinstall boot mode when the system crashes and corrupts some configuration files. OS reinstall boot mode also resets some settings on your storage system, such as Internet protocol settings and the administrator password, to defaults.
- **Tech support.** Boots into a low-level diagnostic mode. Use the tech support boot mode only when instructed to do so by a NETGEAR technical support representative.
- **Volume read only.** Mounts a volume as read-only. Use this option when you are attempting to rescue data off a disk during a disaster recovery.
- **Memory test.** Performs a memory test. The pass or fail result is reported on the status display screen.
- **Test disk.** Performs an offline full disk test. This process can take 4 hours or more, depending on the size of your disks. Any problems are reported in the system logs. For more information about viewing the system logs, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

➤ **To access the boot menu:**

1. Power off your storage system.
2. Using a straightened paper clip, press and hold the **Reset** button.
3. Press the **Power** button on the front panel of the system.

The system powers on.

4. Continue to press the **Reset** button until the status display screen shows a boot menu message.
5. Use the arrows on the touchpad to scroll through boot mode options.

The status display screen shows the current boot mode option.

6. When the status display screen shows the boot mode that you need, press the **OK** button to confirm your boot menu selection.

The system boots in the selected boot mode.



This chapter provides an overview of the physical features of the EDA 500 and includes the following sections:

- *Front and Side Panels*
- *Drive Bays*
- *Rear Panel*
- *Status Information*
- *Power On and Shut Down*

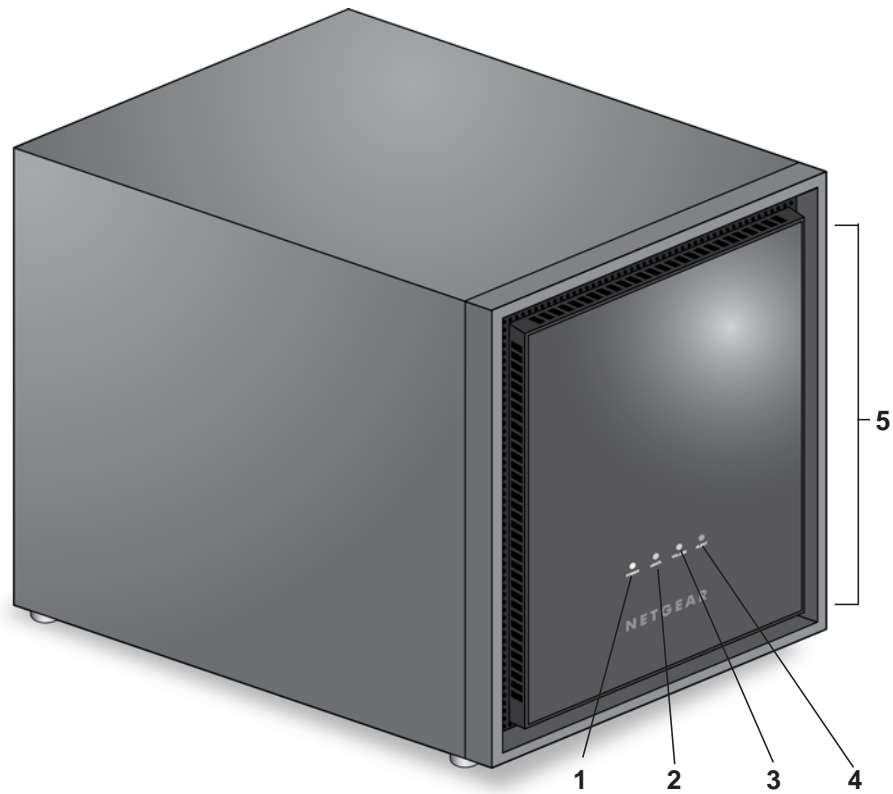
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**Note:** The EDA 500 disk trays are slightly different from the standard trays. Use only EDA 500 disk trays with the EDA 500. For more information about the EDA 500 disk trays, see *EDA 500 Disk Tray* on page 65.

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## Front and Side Panels

The following figure shows the front and side panels of EDA 500.

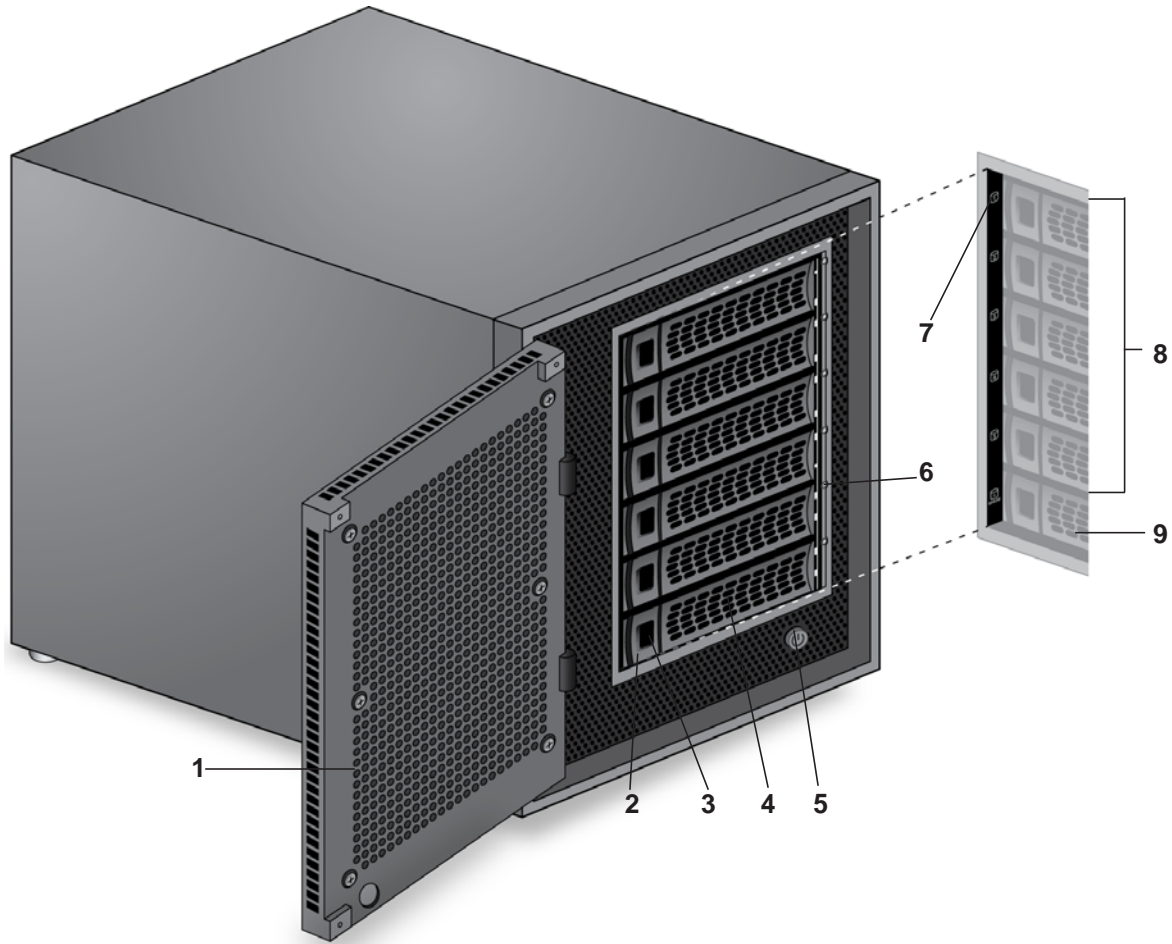


**Figure 19. EDA 500 front and side panels**

1. Power LED
2. E-SATA LED
3. Volume LED
4. Alert LED
5. Drive bay door

## Drive Bays

The following figure shows the drive bays of EDA 500.

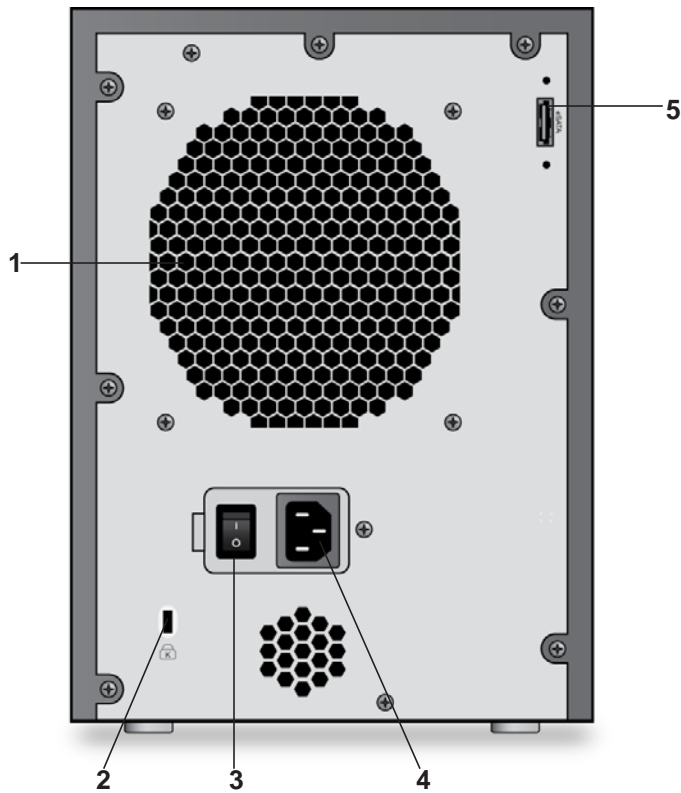


**Figure 20. EDA 500 drive bays**

1. Drive bay door
2. Disk tray release latch
3. Recessed disk tray locking mechanism
4. Disk tray handle
5. Power button
6. Disk LED
7. Disk label
8. Active drive bays
9. Cold spare drive bay

## Rear Panel

The following figure shows the rear panel of EDA 500.



**Figure 21. EDA 500 rear panel**

1. Exhaust fan
2. Kensington lock
3. Power switch
4. Power cable socket
5. E-SATA port

## Status Information

You can obtain information about the status of your storage system by reviewing the indicators listed in the following table.

**Table 7. EDA 500 indicator descriptions**

Indicator	Description
Power LED	The Power LED has these states: <ul style="list-style-type: none"> <li>• <b>On.</b> Powered on.</li> <li>• <b>Off.</b> Powered off.</li> </ul>
E-SATA LED	The E-SATA LED has these states: <ul style="list-style-type: none"> <li>• <b>On.</b> SATA link is established between the EDA500 and a host.</li> <li>• <b>Off.</b> SATA link is not established.</li> </ul>
Volume LED	The Volume LED has these states: <ul style="list-style-type: none"> <li>• <b>On.</b> The data volume or volumes are mounted by a host.</li> <li>• <b>Off.</b> The data volume or volumes are not mounted. You can safely disconnect the ESATA cable.</li> </ul>
Alert LED	The Alert LED has these states: <ul style="list-style-type: none"> <li>• <b>On.</b> The system needs attention. Use the local admin page to determine the problem. For more information, see the <i>ReadyNAS OS 6 Software Manual</i>, which is available at <a href="http://support.netgear.com/product/ReadyNAS-OS6">http://support.netgear.com/product/ReadyNAS-OS6</a>.</li> <li>• <b>Off.</b> The system is healthy.</li> </ul>
Disk LEDs	A disk LED next to each active drive bay indicates the status of the disk inside. (There is no disk LED for the cold spare drive bay.) The disk LEDs have these states: <ul style="list-style-type: none"> <li>• <b>Solid blue.</b> Power is on and the disk is operating normally.</li> <li>• <b>Blinking blue.</b> The disk is active.</li> <li>• <b>Solid red.</b> The disk was removed, failed, or is resynchronizing. See the display screen for details.</li> <li>• <b>Off.</b> No disk is present.</li> </ul>

## Power On and Shut Down

This section describes how to power on and shut down your system. If you need to shut down the system, use the preferred shutdown method whenever possible.

### Power On

When the system is connected to a power supply and the Power switch is in the On position, the system automatically powers on.

When connected to a host that is powered on, the EDA 500 automatically powers on. The EDA 500 detects a powered-on host through the E-SATA link.

You can also power on the system by pressing the **Power** button on the front panel of the system.

### Preferred Shutdown

If possible, always unmount the EDA 500 volumes from the host before shutting down the EDA 500.

Use the ReadyNAS local admin page to gracefully shut down the EDA 500. For information about how to gracefully shut down the EDA 500 using the ReadyNAS local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

### Forced Shutdown

Perform a forced shutdown only if the storage system is not responding.

➤ **To perform a forced shutdown:**

Flip the **Power** switch on the back panel of the system to the Off position.

## 9. Disks

---

# 9

This chapter describes how to reformat, add, and replace disks in your ReadyNAS OS 6 storage system.

For information about configuring disks on your storage system, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

This chapter includes the following topics:

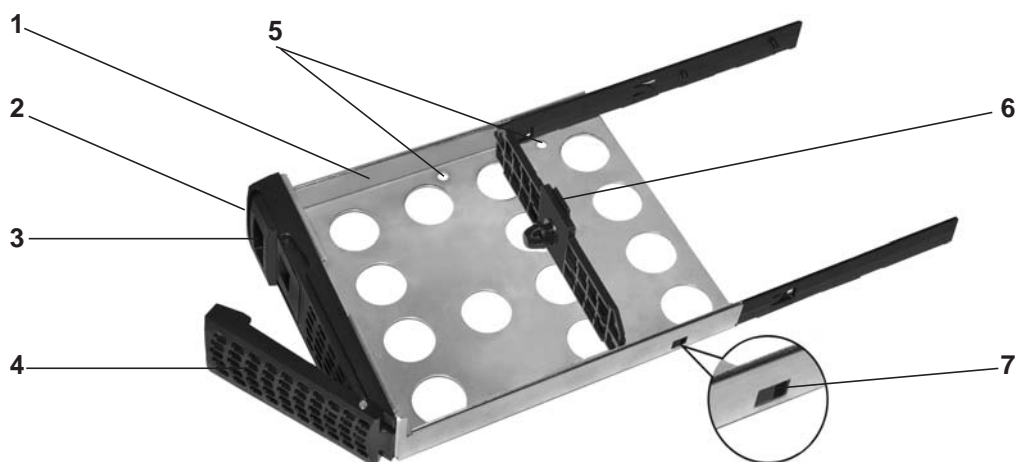
- *Disk Trays*
- *Supported Disks*
- *Previously Formatted Disks*
- *Add a Disk*
- *Replace a Disk*

## Disk Trays

All systems except the EDA 500 use standard disk trays. The EDA 500 comes with its own special disk trays. This section describes both the standard and EDA 500 disk trays.

### Standard Disk Tray

The following figure shows the features of the standard disk tray. This disk tray is used in all systems except the EDA 500. For information about the EDA 500 disk tray, see [EDA 500 Disk Tray](#) on page 65.



**Figure 22. Standard disk tray**

1. Disk tray
2. Disk tray release latch
3. Recessed disk tray handle locking mechanism
4. Disk tray handle
5. Disk screw holes
6. Mounting bracket
7. Disk tray locking mechanism

#### **IMPORTANT:**

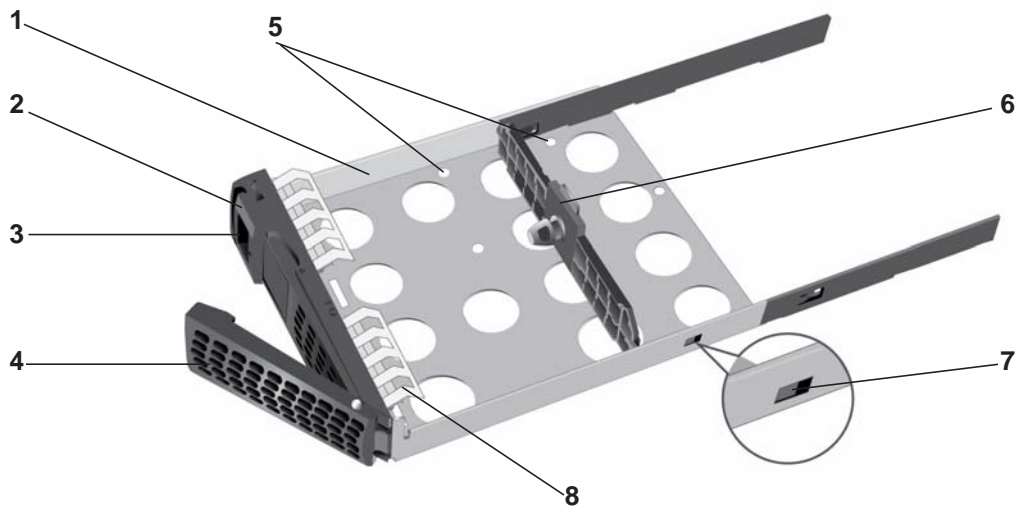
**To maintain adequate airflow, make sure that all disk trays remain in the drive bays, even if no disk is installed in the tray.**

**Do not use standard disk trays with the EDA 500. Use only EDA 500 disk trays with the EDA 500.**



## EDA 500 Disk Tray

The following figure shows the features of the EDA 500 disk tray. The EDA 500 disk tray and the standard disk tray are the same, except for the EMI shielding on the EDA 500 disk tray. For this reason, use only EDA 500 disk trays with the EDA 500.



**Figure 23. EDA 500 disk tray**

1. Disk tray
2. Disk tray release latch
3. Recessed disk tray handle locking mechanism
4. Disk tray handle
5. Disk screw holes
6. Mounting bracket
7. Disk tray locking mechanism
8. EMI shielding

### **IMPORTANT:**

**Use only EDA 500 disk trays with the EDA 500. Do not use standard disk trays with the EDA 500.**

**To maintain adequate airflow, make sure that all disk trays remain in the drive bays, even if no disk is installed in the tray.**

## Supported Disks

Use only supported SATA hard disk drives (HDD) or solid state drives (SSD) in your ReadyNAS storage system. If you use disks that are not supported, NETGEAR technical support will not provide assistance. For a list of supported disks, see the NETGEAR Hardware Compatibility List at <http://www.netgear.com/readynas-hcl>.

## Previously Formatted Disks

This section describes how to use previously formatted disks with your ReadyNAS OS 6 storage system.

Previously formatted disks must appear on the NETGEAR Hardware Compatibility List, which is available at <http://www.netgear.com/readynas-hcl>.

## Reformat Previously Formatted Disks

If you want to use disks that were previously formatted for an operating system other than ReadyNAS OS 6 (for example, Windows or RAIDiator), you must reformat the disks.

If you want to use disks from another ReadyNAS OS 6 storage system, see *Migrate a Volume* on page 67.

---

**Note:** If you try to use previously formatted disks in a system that does not contain any other disks, the system does not boot and ReadyCLOUD does not discover your device. If you use RAIDar to discover your device, RAIDar displays a “Corrupt Root” error message.

If you try to use previously formatted disks in a system that already contains usable disks, the system does not reformat or use the previously formatted disks. Any data on the previously formatted disk remains intact.

---

The following instructions describe how to reformat previously formatted disks in a ReadyNAS OS 6 system. This procedure assumes that the system does not contain any other disks.

➤ **To reformat previously formatted disks with a diskless ReadyNAS OS 6 system:**

1. Gracefully shut down the storage system.

For information about how to gracefully shut down your system, see the Preferred Shutdown section of the chapter that describes your system.

2. Install the disk.  
For more information, see [Add a Disk](#) on page 68.
3. Reset the system to its factory default settings.



**WARNING:**

**This process erases all data and reformats all disks into a single X-RAID2 volume. If you want to preserve the data on the disks, you must back up the data to an external drive before using the disks in your ReadyNAS storage system.**

For information about how to reset the system to its factory default settings, see the Boot Menu section of the chapter that describes your system.

The disk is reformatted and becomes available for use with your ReadyNAS OS 6 storage system.

## Migrate a Volume

You can migrate a volume from one ReadyNAS OS 6 storage system to another, as long as you migrate every disk in the volume. For example, if you want to migrate a volume that contains two disks, you must add both disks to the new system. If you add only part of a volume to the new system, the system recognizes the disk as a degraded volume.

If your ReadyNAS storage system is operating with one or more disks, you can add disks while the system is running. The new system recognizes the migrated volume and its data. For more information about adding a disk while the system is running, see [Add a Disk](#) on page 68.

If your ReadyNAS storage system does not have any disks installed, perform the following procedure.

➤ **To migrate a volume to a diskless ReadyNAS OS 6 system:**

1. Gracefully shut down the new (diskless) storage system.  
For information about how to gracefully shut down your system, see the Preferred Shutdown section of the chapter that describes your system.
2. Remove each disk in the volume from the old system.
3. Install each disk in the volume into the new storage system.  
For more information, see [Add a Disk](#) on page 68.
4. Turn on the new system by pressing the **Power** button.  
The new system recognizes the migrated volume and its data.

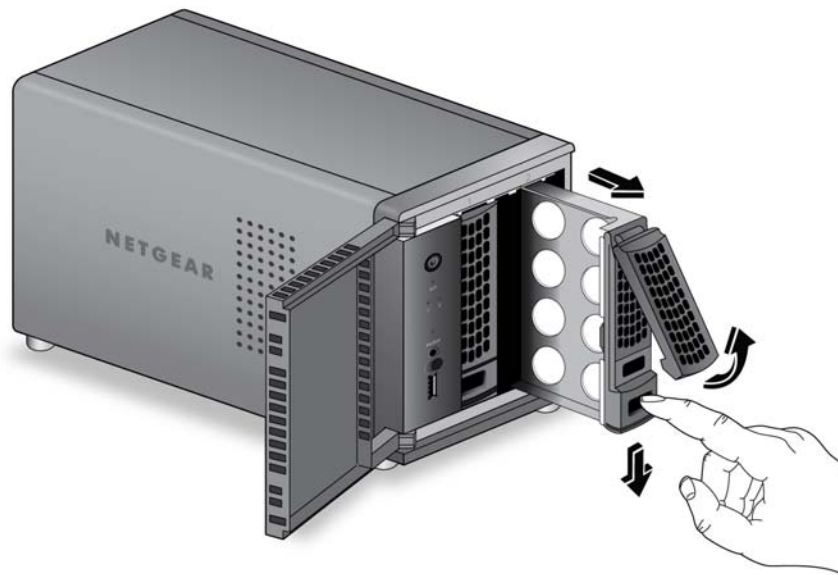
## Add a Disk

You can add a 3.5-inch hard disk drive, 2.5-inch hard disk drive, or a 2.5-inch solid-state drive to an empty drive bay.

If you want to add a previously formatted disk to your storage system, see the instructions in *Previously Formatted Disks* on page 66.

➤ **To add a 3.5-inch hard disk drive (HDD):**

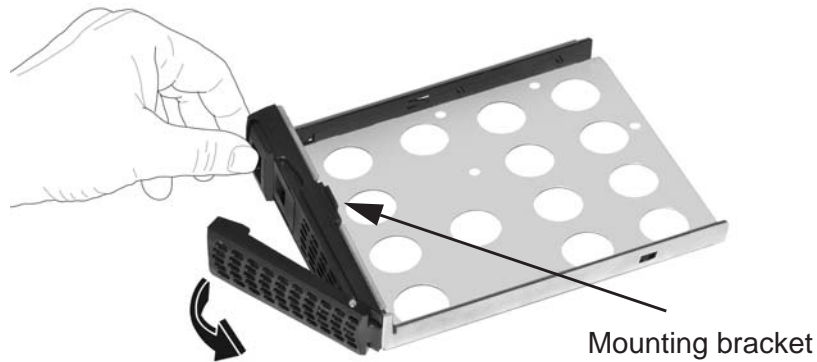
1. Determine whether you need to shut down your system:
  - If you are adding disks to a diskless system, gracefully shut down the system.  
For information about how to gracefully shut down your system, see the Preferred Shutdown section of the chapter that describes your system.
  - If your system is operating with one or more disks, you can add disks while the system is running. You do not need to shut down the system.
2. If necessary, slide the disk tray handle locking mechanism to the unlocked position.
3. Press the disk tray release latch.



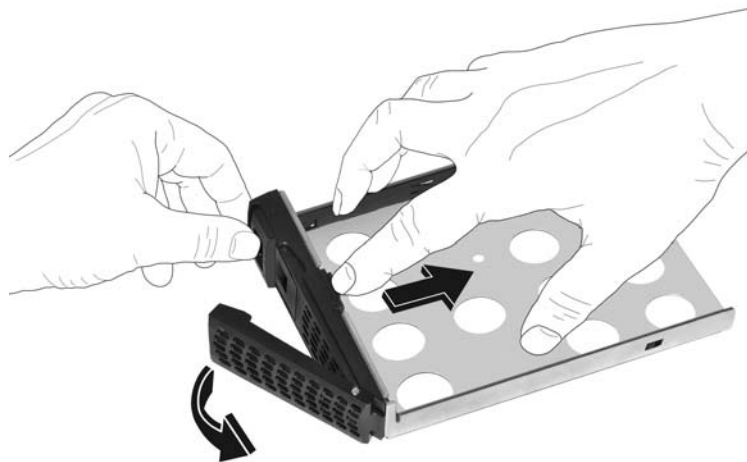
The disk tray handle pops out.

4. Pull out the disk tray.
5. Separate the mounting bracket from the disk tray:

- a. Press and hold the disk tray release latch.

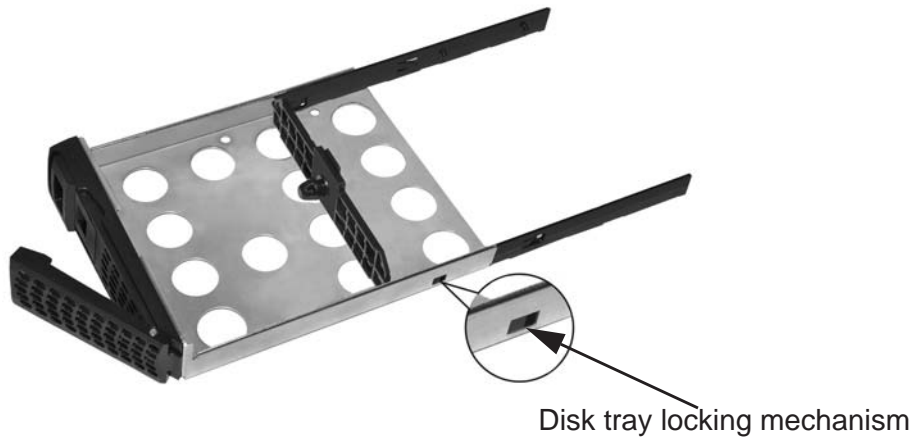


- b. While holding the disk tray release latch, pull out the mounting bracket and slide the bracket down the tray.



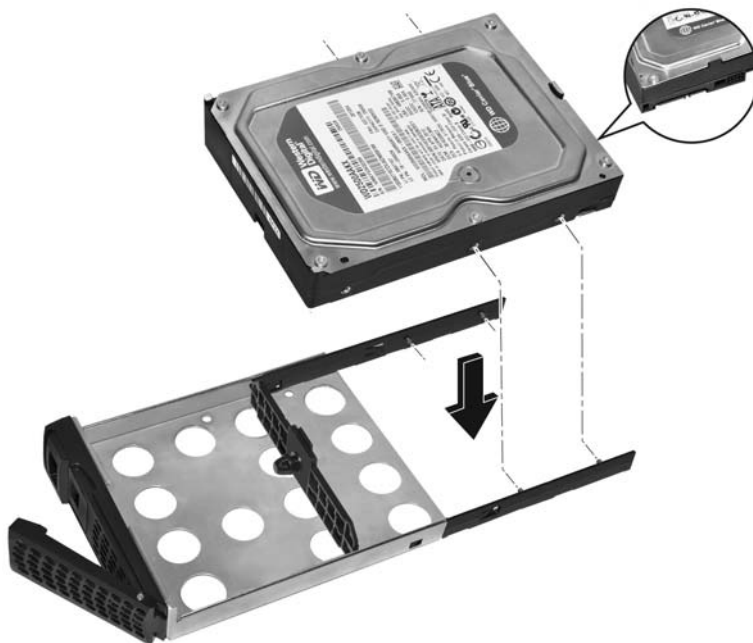
When the mounting bracket is partially removed from the disk tray, the disk tray locking mechanism locks the mounting bracket to the disk tray.

You do not need to fully remove the mounting bracket from the disk tray.



**6.** Attach the new HDD to the mounting bracket.

Make sure that the HDD mounting holes are aligned with the bracket's mounting posts, and that the HDD connectors face the interior of the drive tray.



7. Push the mounting bracket and HDD back into the disk tray.



The following figure shows a fully assembled disk tray:



**WARNING:**

To prevent damage to your system, make sure that the disk tray is correctly oriented before inserting it into the drive bay.

8. Insert the disk tray back into the drive bay of the storage system.
  - For 2-bay and 4-bay systems, insert the disk tray so that the disk tray release latch is near the bottom of the system.
  - For 6-bay systems, insert the disk tray so that the disk tray release latch is on the left side of the system.
9. Press down on the disk tray handle until it latches closed.  
The disk tray is secured in the drive bay.
10. If necessary, turn on your system by pressing the **Power** button.

If the disk that you added was not previously formatted, the system uses the disk in one of the following ways:

- If you are adding the disk to a system that uses X-RAID2, the system automatically determines whether the disk is used for protection or storage. The new disk is incorporated in the background while you continue to use your system.
- If you are adding the disk to a system that uses Flex-RAID, the disk becomes available for use. You use the local admin page to manually configure the new disk.

For more information about X-RAID2, Flex-RAID, and using the local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

### ➤ To add a 2.5-inch hard disk drive (HDD) or 2.5-inch solid-state drive (SSD):

#### 1. Determine whether you need to shut down your system:

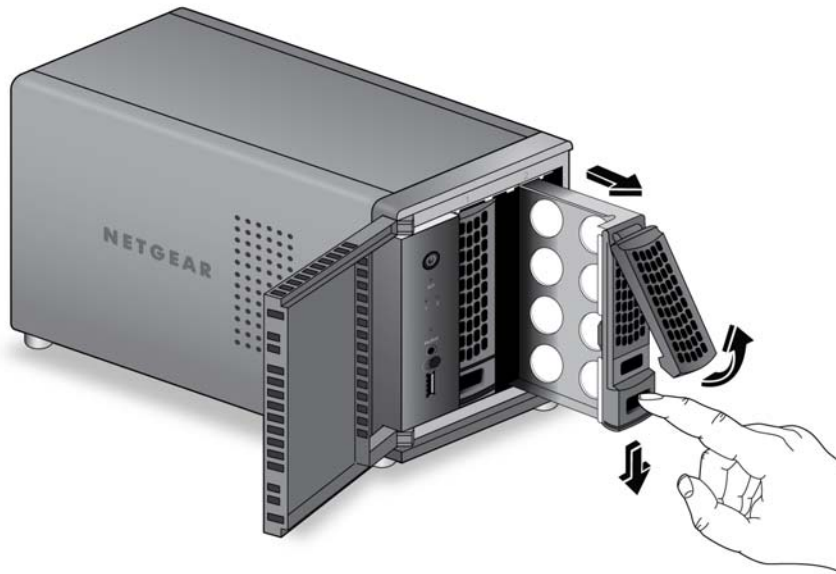
- If you are adding disks to a diskless system, gracefully shut down the system.

For information about how to gracefully shut down your system, see the Preferred Shutdown section of the chapter that describes your system.

- If your system is operating with one or more disks, you can add disks while the system is running. You do not need to shut down the system.

#### 2. If necessary, slide the disk tray handle locking mechanism to the unlocked position.

#### 3. Press the disk tray release latch.

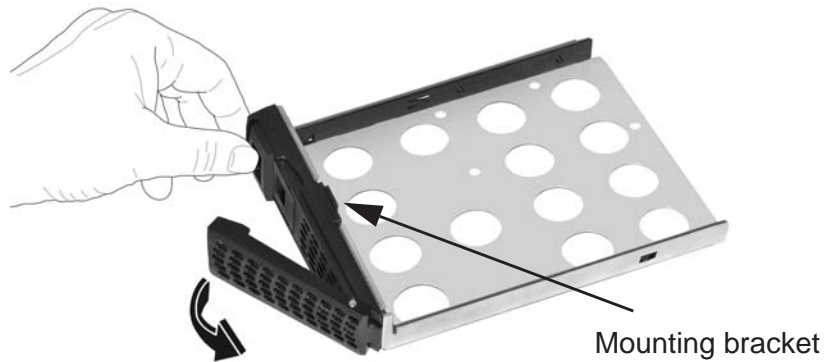


The disk tray handle pops out.

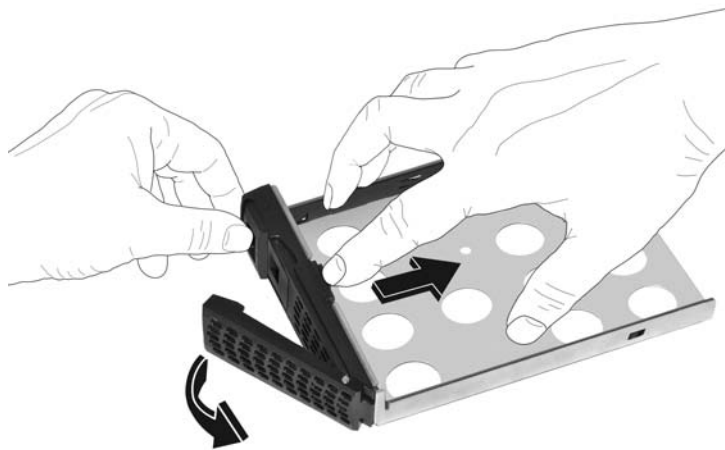
4. Pull out the disk tray.
5. Remove the mounting bracket inside the disk tray:



- a. Press and hold the disk tray release latch.

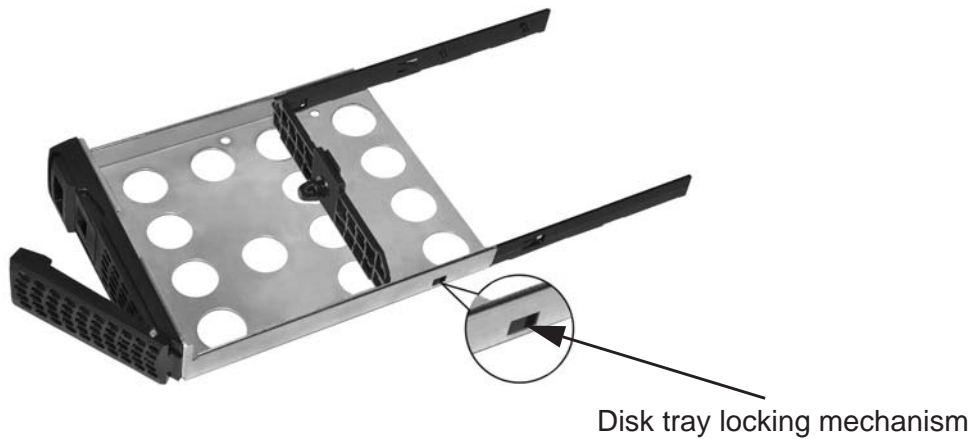


- b. While holding the disk tray release latch, pull out the mounting bracket, slide the bracket down the tray.



When the mounting bracket is partially removed from the disk tray, the disk tray locking mechanism locks the mounting bracket to the disk tray.

- c. Release the mounting bracket from the locking mechanism by pushing a pen through the locking mechanism on the side of the disk tray.



- d. Slide the mounting bracket out of the disk tray.

The mounting bracket is not used to secure 2.5-inch HDDs or SSDs.

6. Place the new 2.5-inch HDD or SSD in the disk tray.
7. Secure the HDD or SSD to the disk tray using the screws that came with your storage system.

Make sure that the HDD or SSD connectors face the interior of the disk tray.



The following figures show fully assembled disk trays with a 2.5-inch HDD or 2.5 SSD:



Disk tray with 2.5-inch HDD



Disk tray with 2.5-inch SSD



### WARNING:

To prevent damage to your system, make sure that the disk tray is correctly oriented before inserting it into the drive bay.

8. Insert the disk tray back into the drive bay of the storage system.
  - For 2-bay and 4-bay systems, insert the disk tray so that the disk tray release latch is near the bottom of the system.
  - For 6-bay systems, insert the disk tray so that the disk tray release latch is on the left side of the system.
9. Press down on the disk tray handle until it latches closed.  
The disk tray is secured in the drive bay.
10. If necessary, turn on your system by pressing the **Power** button.

If the disk that you added was not previously formatted, the system uses the disk in one of the following ways:

- If you are adding the disk to a system that uses X-RAID2, the system automatically determines whether the disk is used for protection or storage. The new disk is incorporated in the background while you continue to use your system.
- If you are adding the disk to a system that uses Flex-RAID, the disk becomes available for use. You use the local admin page to manually configure the new disk.

For more information about X-RAID2, Flex-RAID, and using the local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

## Replace a Disk

If your volumes use a protected RAID configuration, your system can recover from the failure of a disk. When you replace the failed disk, the system rebuilds the volume using the new disk and no data from the volume is lost.

The Disk LEDs can help you identify a failed disk. For more information, see the Status Information section of the chapter that describes your system. You can also use the local admin page to setup email alerts that notify you when a disk fails. In addition, the local admin page provides information about the failed disk.

For information about RAID configurations, setting up email alerts, using the local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

ReadyNAS supports hot-swap drive bays, so you do not need to power down your storage system when replacing a disk.

If you are replacing a disk with a previously formatted disk, see the instructions in *Previously Formatted Disks* on page 66.

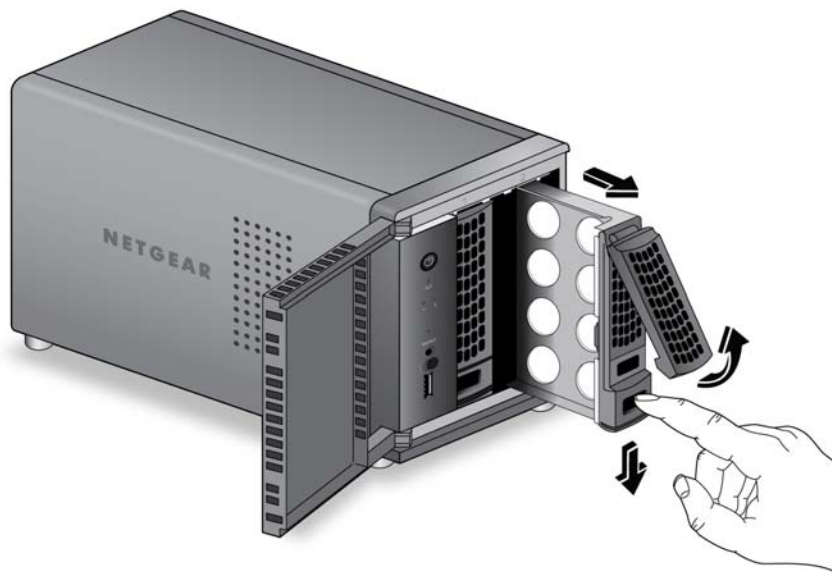


### WARNING:

**Replace one disk at a time. Wait for the volume to resynchronize your data before replacing another disk. If you attempt to replace more than one disk at a time, the system will crash.**

#### ➤ To replace a 3.5-inch hard disk drive (HDD):

1. If necessary, slide the disk tray handle locking mechanism to the unlocked position.
2. Press the disk tray release latch.



The disk tray handle pops out.

3. Pull out the disk tray.
4. Press and hold the disk tray release latch.



5. While holding the disk tray release latch, pull out the mounting bracket and slide the bracket down the tray.

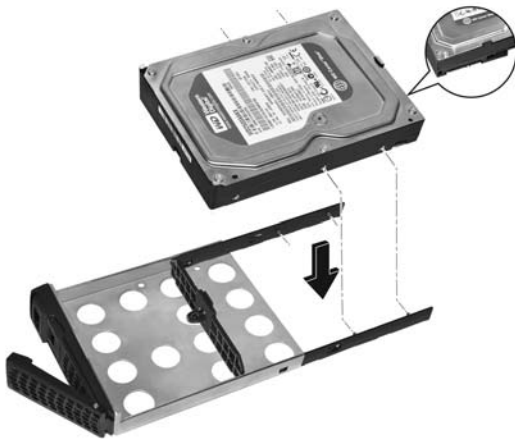
You do not need to fully remove the mounting bracket from the disk tray.



6. Remove the old HDD from the mounting bracket.



7. Attach the new HDD to the mounting bracket.



Make sure that the HDD mounting holes are aligned with the bracket's mounting posts, and that the HDD connectors face the interior of the disk tray.

8. Push the mounting bracket with the hard disk drive back into the disk tray.



**WARNING:**

**To prevent damage to your system, make sure that the disk tray is correctly oriented before inserting it into the drive bay.**

9. Insert the disk tray back into the drive bay of the storage system.
  - For 2-bay and 4-bay systems, insert the disk tray so that the disk tray release latch is near the bottom of the system.
  - For 6-bay systems, insert the disk tray so that the disk tray release latch is on the left side of the system.
10. Press down on the disk tray handle until it latches closed.

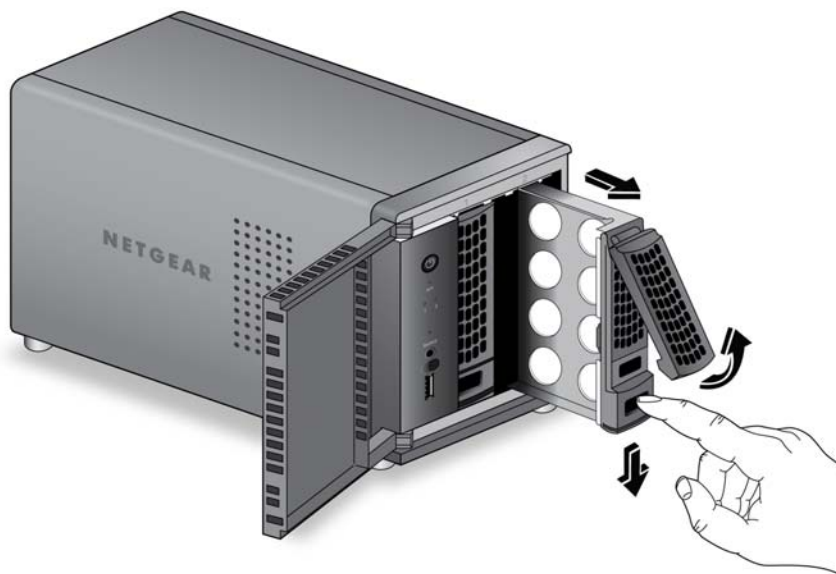
The disk tray is secured in the drive bay.

If the volume that contained the failed disk uses a protected RAID configuration, the system automatically resynchronizes the volume using the new disk. Resynchronization might take several hours, depending on the disk size. You can continue to use your storage system, although access is slower until the volume resynchronization finishes.

For more information about RAID configurations, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

➤ **To replace a 2.5-inch hard disk drive (HDD) or 2.5-inch solid-state drive (SSD):**

1. If necessary, slide the disk tray handle locking mechanism to the unlocked position.
2. Press the disk tray release latch.



The tray handle pops out.

3. Pull out the disk tray and replace the 2.5-inch HDD or SSD:
  - a. Remove the screws and the old 2.5-inch HDD or SSD.





- b. Place the new 2.5-inch HDD or SSD in the disk tray.
  - c. Secure the HDD or SSD to the disk tray using the screws.
- Make sure that the disk connectors face the interior of the disk tray.



The following figures show fully assembled disk trays with a 2.5-inch HDD or 2.5-inch SSD:



Disk tray with 2.5-inch HDD



Disk tray with 2.5-inch SSD



**WARNING:**

To prevent damage to your system, make sure that the disk tray is correctly oriented before inserting it into the drive bay.

- 4. Insert the disk tray back into the drive bay of the storage system.
    - For 2-bay and 4-bay systems, insert the disk tray so that the disk tray release latch is near the bottom of the system.
    - For 6-bay systems, insert the disk tray so that the disk tray release latch is on the left side of the system.
  - 5. Press down on the disk tray handle until it latches closed.
- The disk tray is secured in the drive bay.



If the volume that contained the failed disk uses a protected RAID configuration, the system automatically resynchronizes the volume using the new disk. Resynchronization might take several hours, depending on the disk size. You can continue to use your storage system, although access is slower until the volume resynchronization finishes.

For more information about RAID configurations, see the *ReadyNAS OS 6 Software Manual*, which is available at <http://support.netgear.com/product/ReadyNAS-OS6>.

# A Defaults and Technical Specifications

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This appendix includes the following sections:

- *Factory Default Settings*
- *ReadyNAS 102 Technical Specifications*
- *ReadyNAS 104 Technical Specifications*
- *ReadyNAS 312 Technical Specifications*
- *ReadyNAS 314 Technical Specifications*
- *ReadyNAS 316 Technical Specifications*
- *ReadyNAS 516 Technical Specifications*
- *EDA 500 Technical Specifications*
- *Safety Warnings*

## Factory Default Settings

The following table lists factory default settings for ReadyNAS OS 6 desktop storage systems.

**Table 8. ReadyNAS OS 6 factory default settings**

Feature	Default
Login	
	Default IP address The default IP address for the ReadyNAS is assigned by the local router (DHCP server). If a router does not assign an IP address, the ReadyNAS will default to a known address ( <a href="https://192.168.168.168/admin">https://192.168.168.168/admin</a> ).
	Admin user name (case-sensitive) admin
	Admin login password (case-sensitive) password
Management	
	System configuration ReadyNAS local admin page web-based configuration and status monitoring
	Discovery, setup, and multi-storage system status monitoring web ReadyCloud for Windows, Mac, and Linux
LAN Connections	
	MAC address See product label
	MTU size 1500
	Ethernet port Auto Sense 10/100/1000BASE-T, RJ-45
	LAN IP address DHCP acquired

## ReadyNAS 102 Technical Specifications

The ReadyNAS 102 storage system meets the following technical specifications:

### General:

- Marvell Armada 370 1.2 GHz CPU
- 512 MB memory
- Two-bay storage
- One E-SATA port
- One USB 2.0 port (front)
- Two USB 3.0 ports (back)
- One LAN port

### Physical dimensions (h x w x d):

- 142 x 101 x 220 mm (5.60 x 3.98 x 8.70 in.)

### Physical weight:

- 2.12 kg (4.67 lb) without disks

### Power consumption:

- BTU at full power supply utilization: 31.7 W
- In operation: 31 W
- Power off (Wake On LAN): 1.0 W
- Power off: 210 mW

### Electrical:

- External 60 W (12V, 5A) AC power supply
- Input: 100–240V AC, 50/60 Hz

### Environmental requirements:

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (non-condensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (non-condensing)
- Software controlled 92 mm chassis cooling fan

**Certifications:**

FCC Class B, CE Class B, RoHS, VCCI Class B

## ReadyNAS 104 Technical Specifications

The ReadyNAS 104 storage system meets the following technical specifications:

**General:**

- Marvell Armada 370 1.2 GHz CPU
- 512 MB memory
- Four-bay storage
- One E-SATA port
- One USB 2.0 port (front)
- Two USB 3.0 ports (back)
- Two LAN ports
- LCD display

**Physical dimensions (h x w x d):**

- 205 x 134 x 223 mm (8.97 x 5.28 x 8.78 in.)

**Physical weight:**

- 4.70 kg (10.36 lb) without disks

**Power consumption:**

- BTU at full power supply utilization: 47 W
- In operation: 45.6 W
- Power off (Wake On LAN): 1.4 W
- Power off: 0.44 W

**Electrical:**

- External 90 W (12V, 7A) AC power supply
- Input: 100–240V AC, 50/60 Hz

**Environmental requirements:**

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (non-condensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)

- Storage humidity: 5 to 95% relative humidity (non-condensing)
- Software controlled 92 mm chassis cooling fan

**Certifications:**

- FCC Class B, CE Class B, RoHS, VCCI Class B

## ReadyNAS 312 Technical Specifications

The ReadyNAS 312 storage system meets the following technical specifications:

**General:**

- Intel Atom 2.1 GHz Dual Core CPU
- 2 GB memory
- Two-bay storage
- One E-SATA port
- One HDMI port
- One USB 2.0 port (front)
- Two USB 3.0 ports (back)
- Two LAN ports
- Infrared remote receiver

**Physical dimensions (h x w x d):**

- 142 x 101 x 220 mm (5.60 x 3.98 x 8.70 in.)

**Physical weight:**

- 2.22 kg (4.89 lb) without disks

**Power consumption:**

- BTU at full power supply utilization: 50.58 W
- In operation: 34.92 W
- Power off (Wake On LAN): 627.07 mW
- Power off: 266.61 mW

**Electrical:**

- External 60 W (12V, 5A) AC power supply
- Input: 100–240V AC, 50/60 Hz

**Environmental requirements:**

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (non-condensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (non-condensing)
- Software controlled 92 mm chassis cooling fan

**Certifications:**

- FCC Class B, CE Class B, RoHS, VCCI Class B

## ReadyNAS 314 Technical Specifications

The ReadyNAS 314 storage system meets the following technical specifications:

**General:**

- Intel Atom 2.1 GHz Dual Core CPU
- 2 GB memory
- Four-bay storage
- Two E-SATA ports (one shared USB 2.0 and E-SATA port)
- One HDMI port
- One USB 2.0 port (front)
- Two USB 3.0 ports (back)
- Two LAN ports
- LCD display
- Infrared remote receiver

**Physical dimensions (h x w x d):**

- 205 x 134 x 223 mm (8.97 x 5.28 x 8.78 in.)

**Physical weight:**

- 3.97 kg (8.75 lb) without disks

**Power consumption:**

- BTU at full power supply utilization: 69.45 W
- In operation: 48.71 W
- Power off (Wake On LAN): 843.36 mW
- Power off: 472.77 mW

**Electrical:**

- External 90 W (12V, 7A) AC power supply
- Input: 100–240V AC, 50/60 Hz

**Environmental requirements:**

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (non-condensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (non-condensing)
- Software controlled 92 mm chassis cooling fan

**Certifications:**

- FCC Class B, CE Class B, RoHS, VCCI Class B

## ReadyNAS 316 Technical Specifications

The ReadyNAS 316 storage system meets the following technical specifications:

**General:**

- Intel Atom 2.1 GHz Dual Core CPU
- 2GB memory
- Six-bay storage
- Two E-SATA ports
- One HDMI port
- One USB 2.0 port (front)
- Two USB 3.0 ports (back)
- Two LAN ports
- LCD display
- Infrared remote receiver
- Proximity sensor

**Physical dimensions (h x w x d):**

- 259 x 192 x 287.5 mm (10.20 x 7.56 x 11.32 in.)

**Physical weight:**

- 7.53 kg (16.60 lb) without disks



**Power consumption:**

- BTU at full power supply utilization: 110.66 W
- In operation: 54.94 W
- Power off (Wake On LAN): 804.64 mW
- Power off: 338.42 mW

**Electrical:**

- Internal 200 W server-rated AC power supply
- Input: 100–240V AC, 50/60 Hz

**Environmental requirements:**

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (non-condensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (non-condensing)
- Software controlled 120 mm chassis cooling fan

**Certifications:**

- FCC Class B, CE Class B, RoHS, VCCI Class B

## ReadyNAS 516 Technical Specifications

The ReadyNAS 516 storage system meets the following technical specifications:

**General:**

- Intel Core i3 3.3 GHz Dual Core CPU
- 4GB ECC memory
- Six-bay storage
- Three E-SATA ports
- One HDMI port
- One USB 2.0 port (front)
- Two USB 3.0 ports (back)
- Two LAN ports
- LCD display
- Infrared remote receiver
- Proximity sensor

**Physical dimensions (h x w x d):**

- 259 x 192 x 287.5 mm (10.20 x 7.56 x 11.32 in.)

**Physical weight:**

- 7.97 kg (17.57 lb) without disks

**Power consumption:**

- BTU at full power supply utilization: 189.30 W
- In operation: 87.69 W
- Power off (Wake On LAN): 956.12 mW
- Power off: 370.09 mW

**Electrical:**

- Internal 200 W server-rated AC power supply
- Input: 100–240V AC, 50/60 Hz

**Environmental requirements:**

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (non-condensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (non-condensing)
- Software controlled 120 mm chassis cooling fan

**Certifications:**

- FCC Class B, CE Class B, RoHS, VCCI Class B

## EDA 500 Technical Specifications

The EDA 500 storage system meets the following technical specifications:

**General:**

- Five-bay storage
- One E-SATA port
- Proximity sensor

**Physical dimensions (h x w x d):**

- 259 x 192 x 287.5 mm (10.20 x 7.56 x 11.32 in.)

**Physical weight:**

- 7.3 kg (16.1 lb) without disks

**Power consumption:**

- BTU at full power supply utilization: 88.17 W
- In operation: 37.3 W
- Power off: 453.8 mW

**Electrical:**

- Internal 200 W server-rated AC power supply
- Input: 100–240V AC, 50/60 Hz

**Environmental requirements:**

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (non-condensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (non-condensing)
- Software controlled 120 mm chassis cooling fan

**Certifications:**

- FCC Class B, CE Class B, RoHS, VCCI Class B

## Safety Warnings

- The equipment contains no operator access areas and is certified for installation only by trained personnel, according to the installation instructions provided with each storage system.
- Install the socket outlet near the equipment in an easily accessible location.
- Observe the on-board battery precautions.



### **DANGER:**

Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to their instructions.

- Connect the storage systems and their associated LAN connections only to equipment within the same building.

## Electrical Safety Precautions

Follow basic electrical safety precautions to protect yourself from harm and the ReadyNAS from damage:

- Be aware of the locations of the power on/off switch on the chassis as well as the room's emergency power-off switch, disconnection switch, or electrical outlet. If an electrical accident occurs, you can then quickly remove power from the system.
- Do not work alone when working with high-voltage components.
- Always disconnect power from the system when removing or installing main system components, such as the main board or memory modules. When disconnecting power, first power down the system with the operating system and then unplug the power cords of all the power supply storage systems in the system.
- When working around exposed electrical circuits, ensure that another person who is familiar with the power-off controls is nearby to switch off the power if necessary.
- Use only one hand when working with powered-on electrical equipment. This is to avoid making a complete circuit, which will cause electrical shock. Use extreme caution when using metal tools, which can easily damage any electrical components or circuit boards they come into contact with.
- Do not use mats designed to decrease static electrical discharge as protection from electrical shock. Instead, use rubber mats that have been specifically designed as electrical insulators.
- Use only power supply cords that include a grounding plug and plug them into grounded electrical outlets.

## General Safety Precautions

Follow these rules to ensure general safety:

- Keep the area around the ReadyNAS clean and free of clutter.
- See the technical specifications in this manual for details about your specific ReadyNAS storage systems.
- Replace the on-board battery only with the same battery or an equivalent type of battery recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.



### **DANGER:**

Installing the battery upside down reverses its polarities and creates a danger of explosion.

- Only trained service technicians can replace the soldered-in self-resetting PTC (positive temperature coefficient) fuses on the main board, using only new fuses that are the same as or equivalent to the ones being replaced. Contact technical support for details and support.

## Electrostatic Discharge (ESD) Precautions

Electrostatic discharge (ESD) is generated by two objects with different electrical charges coming into contact with each other. An electrical discharge is created to neutralize this difference, which can damage electronic components and printed circuit boards. The following measures are generally sufficient to neutralize this difference before contact is made to protect your equipment from ESD:



- Use a grounded wrist strap designed to prevent static discharge.
- Keep all components and printed circuit boards (PCBs) in their antistatic bags until ready for use.
- Touch a grounded metal object before removing the board from the antistatic bag.
- Do not let components or PCBs come into contact with your clothing, which might retain a charge even if you are wearing a wrist strap.
- Handle a board by its edges only; do not touch its components, peripheral chips, memory modules, or contacts.
- When handling chips or modules, avoid touching their pins.
- Put the main board and peripherals back into their antistatic bags when not in use.
- For grounding purposes, make sure your computer chassis provides excellent conductivity between the power supply, the case, the mounting fasteners, and the main board.

## B. Notification of Compliance

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# B

### Regulatory Compliance Information

This section includes user requirements for operating this product in accordance with National laws for usage of radio spectrum and operation of radio devices. Failure of the end-user to comply with the applicable requirements may result in unlawful operation and adverse action against the end-user by the applicable National regulatory authority.

This product's firmware limits operation to only the channels allowed in a particular Region or Country. Therefore, all options described in this user's guide may not be available in your version of the product.

### Europe – EU Declaration of Conformity

Products bearing the **CE** marking comply with the following EU directives:

- EMC Directive 2004/108/EC
- Low Voltage Directive 2006/95/EC

If this product has telecommunications functionality, it also complies with the requirements of the following EU Directive:

- R&TTE Directive 1999/5/EC

Compliance with these directives implies conformity to harmonized European standards that are noted in the EU Declaration of Conformity.

### FCC Requirements for Operation in the United States

#### FCC Information to User

This product does not contain any user serviceable components and is to be used with approved antennas only. Any product changes or modifications will invalidate all applicable regulatory certifications and approvals.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### FCC Guidelines for Human Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

### FCC Declaration Of Conformity

We, NETGEAR, Inc., 350 East Plumeria Drive, San Jose, CA 95134, declare under our sole responsibility that the NETGEAR ReadyNAS OS 6 desktop storage systems comply with Part 15 of FCC Rules.

Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

### FCC Radio Frequency Interference Warnings & Instructions

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following methods:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an electrical outlet on a circuit different from that which the radio receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications made to the product, unless expressly approved by NETGEAR, Inc., could void the user's right to operate the equipment.

### Canadian Department of Communications Radio Interference Regulations

This digital apparatus, NETGEAR ReadyNAS OS 6 Desktop Storage Systems, does not exceed the Class B limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

This Class [B] digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

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