NETGEAR®

ReadyNAS OS 6 Desktop Storage Systems

Hardware Manual

Model

ReadyNAS 102, 104

ReadyNAS 202, 204, 212, 214

ReadyNAS 312, 314, 316

ReadyNAS 422 and 424

ReadyNAS 516, 524X, 526X, 528X

ReadyNAS 626X, 628X

ReadyNAS 716X

EDA 500

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Support

Thank you for purchasing this NETGEAR product. You can visit *www.netgear.com/support* to register your product, get help, access the latest downloads and user manuals, and join our community. We recommend that you use only official NETGEAR support resources.

Conformity

For the current EU Declaration of Conformity, visit *http://kb.netgear.com/app/answers/detail/a_id/11621*.

Compliance

For regulatory compliance information, visit *http://www.netgear.com/about/regulatory*.

See the regulatory compliance document before connecting the power supply.

Trademarks

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Chapter 19 Disks

Appendix A Defaults and Technical Specifications

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

For detailed information about configuring, managing, and using your ReadyNAS storage system, see the *ReadyNAS OS 6 Software Manual*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*.

NETGEAR maintains a community website that supports ReadyNAS products. Visit *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 10 (32 bit and 64 bit)
- Microsoft Windows 8.1 (32 bit and 64 bit)
- Microsoft Windows 8 (32 bit and 64 bit)
- Microsoft Windows 7 (32 bit and 64 bit)
- Windows Server 2016 (64 bit)
- Windows Server 2012 R2 (64 bit)
- Microsoft Server 2012 (64 bit)
- Microsoft Server 2008 R2 (64 bit)
- Apple OS X 10.7 or later
- Linux, UNIX, Solaris
- Apple iOS
- Google Android

Supported Browsers

The ReadyNAS local admin page supports the following browsers:

- Microsoft Edge
- Microsoft Internet Explorer 9.0 and later
- Apple Safari, 5.0 and later
- Google Chrome 20 and later
- Mozilla Firefox 14 and later

If you experience 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*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*.

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 149.

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 *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 148.

NETGEAR ReadyNAS 102

2

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

Front and Side Panels

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

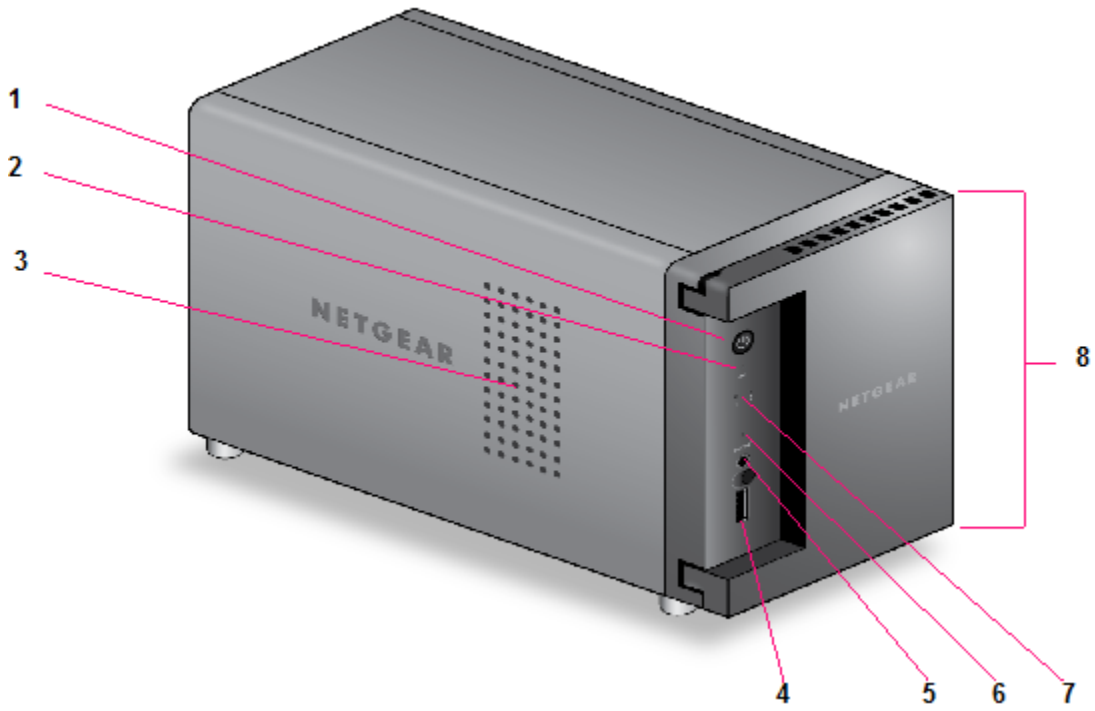


Figure 1. ReadyNAS 102 front and side panels

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 the ReadyNAS 102.

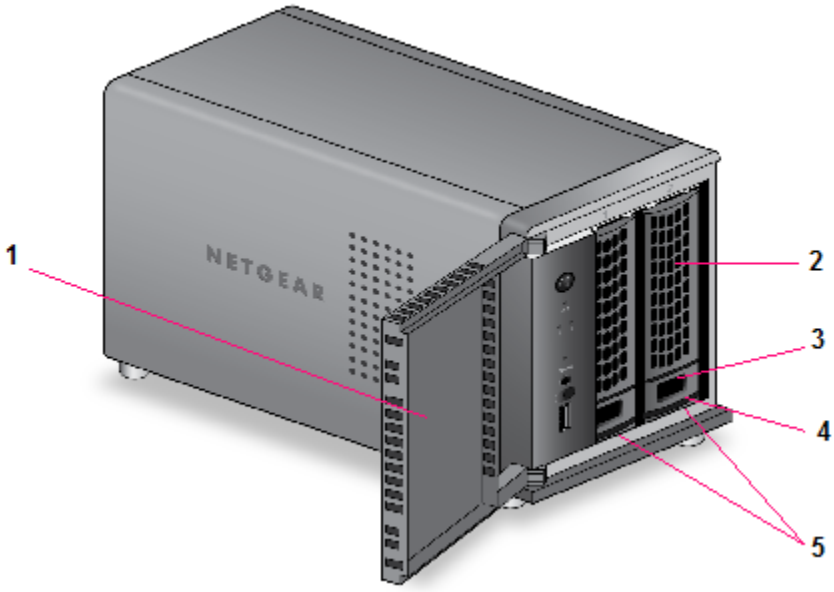


Figure 2. ReadyNAS 102 drive bays

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

Rear Panel

The following figure shows the rear panel of the ReadyNAS 102.

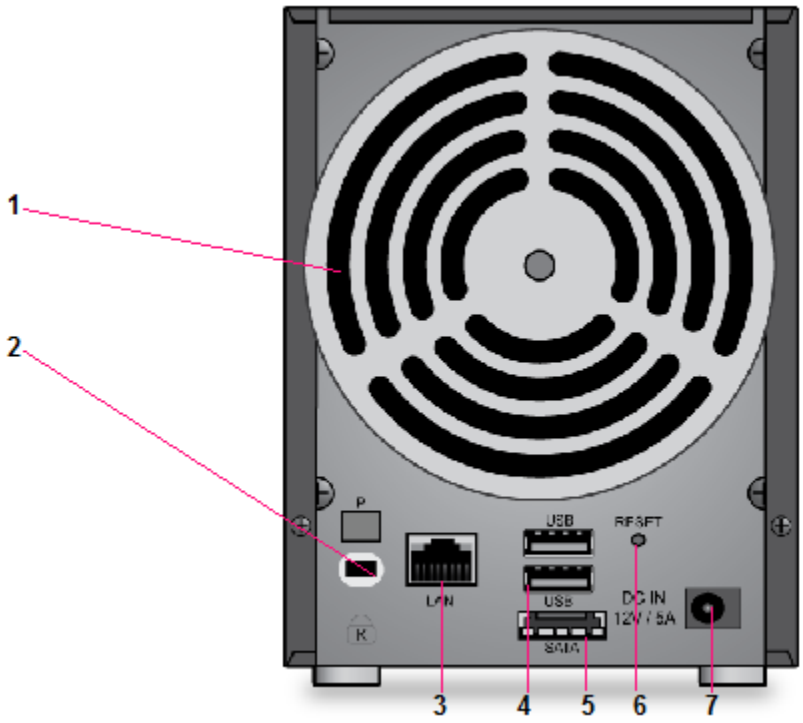


Figure 3. ReadyNAS 102 rear panel

1. Exhaust fan
2. Kensington lock
3. GbE ports with LED status indicators
4. USB 3.0 ports
5. eSATA 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	Press this button to turn on the ReadyNAS. The LED indicates these states: • **On**. Powered on. • **Blinking**. Booting or shutting down. • **Off**. Powered off.
Disk LEDs (1, 2)	An LED on the front panel of the storage system is associated with each drive bay. The disk LEDs have these states: • **On**. Power is on and the disk is operating normally. • **Blinking**. The disk was removed, failed, or is resynchronizing. • **Off**. The drive bay is empty.
Disk activity LED	The disk activity LED has these states: • **On**. At least one disk is present. • **Blinking**. A disk is active. • **Off**. All disks are idle.
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: • **Green on, amber off**. 1000 Mbps connection speed, no activity. • **Green blinking, amber off**. 1000 Mbps connection speed, activity. • **Green off, amber on**. 10 Mbps or 100 Mbps connection speed, no activity. • **Green off, amber blinking**. 10 Mbps or 100 Mbps connection speed, activity. • **Green off, amber off**. No connection.

Power On and Shut Down

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

Power On

When you connect the system to a power supply or the system recovers from a power outage, the system returns to its last state:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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.

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, during which all LEDs blink simultaneously.

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-RAID.

- 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 a NETGEAR technical support representative instructs you to do so.
- **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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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.	■	■	■	■
Normal	Power LED lights.	■	□	□	□
Factory default	Disk 1 LED lights.	□	■	□	□

(Continued)

Boot Mode	Status Indicator				
	Description	Power LED	Disk 1 LED	Disk 2 LED	USB and Backup LED
OS reinstall	Disk 2 LED lights.	☐	☐	■	☐
Tech support	USB and backup status LED lights.	☐	☐	☐	■
Volume read only	Power LED and disk 1 LED light.	■	■	☐	☐
Memory test	Power LED and disk 2 LED light.	■	☐	■	☐
Test disk	Power LED and USB and backup status LED light.	■	☐	☐	■

Legend:

- On: ■
- Off: ☐

6. Press and release the **Reset** button to confirm your boot menu selection.
   The system boots in the selected boot mode.

NETGEAR ReadyNAS 104

3

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

Front and Side Panels

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

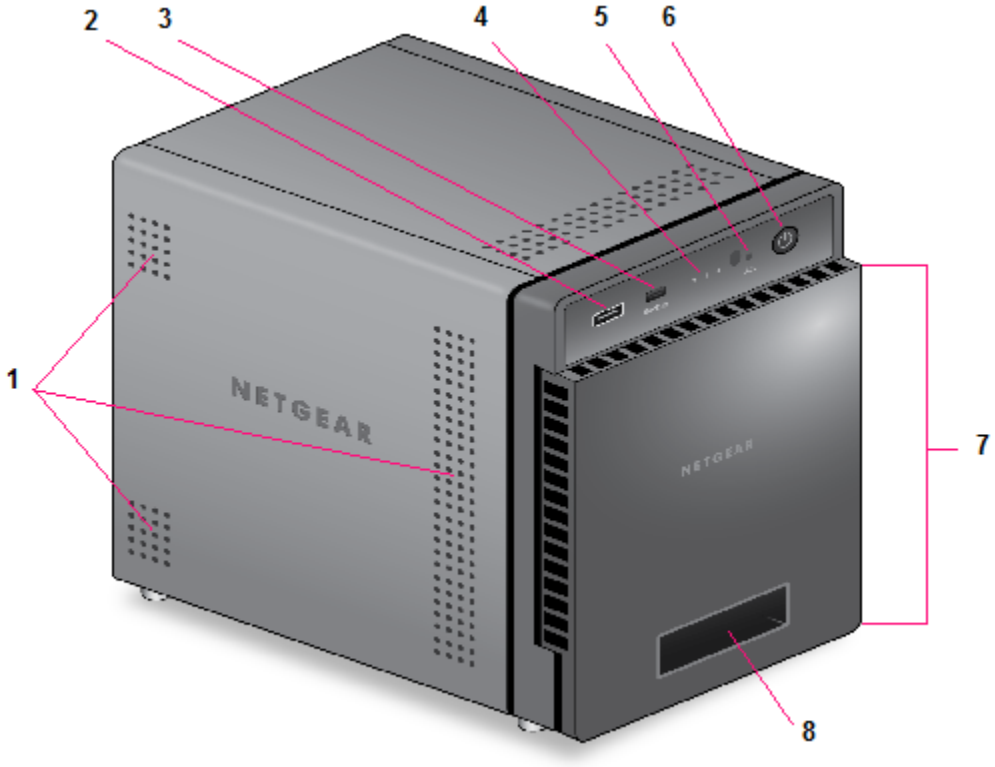


Figure 4. ReadyNAS 104 front and side panels

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 the ReadyNAS 104.

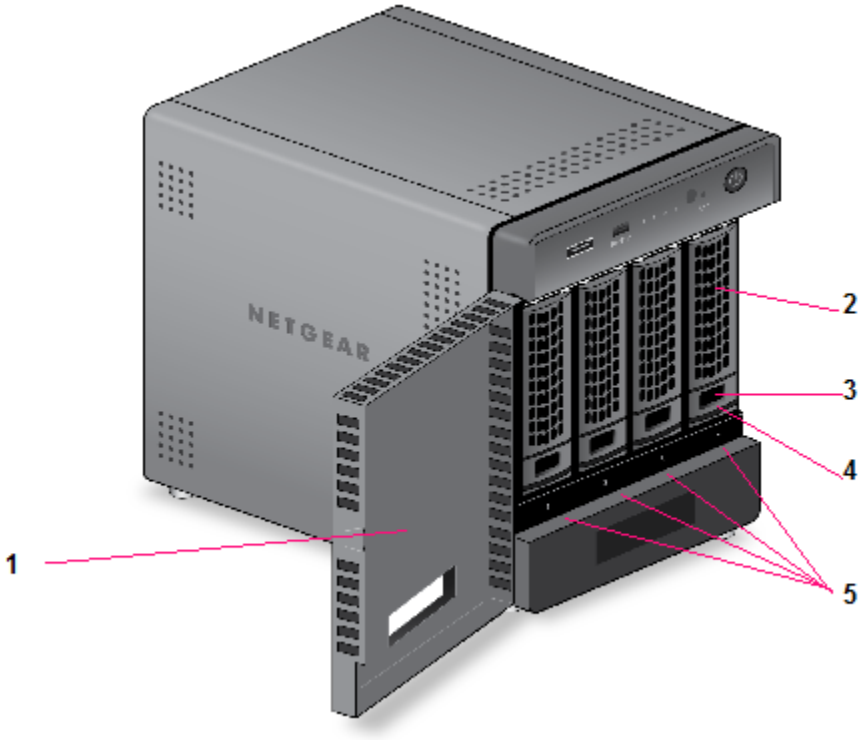


Figure 5. ReadyNAS 104 drive bays

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

Rear Panel

The following figure shows the rear panel of the ReadyNAS 104.

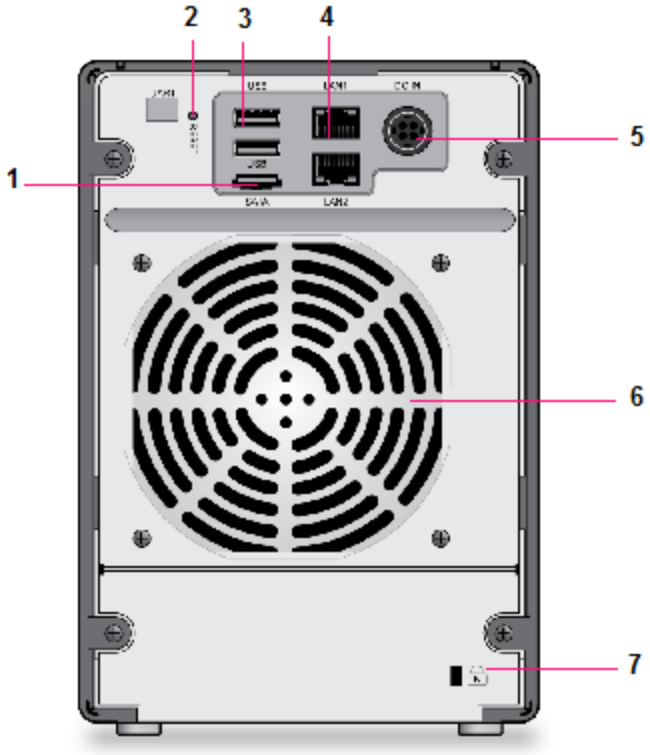


Figure 6. ReadyNAS 104 rear panel

1. eSATA port
2. Reset button
3. USB 3.0 ports
4. GbE ports with LED status indicators

Note The two GbE ports are equivalent. They can be used as two separate Ethernet connections, or can be configured as a single, bonded port with a 2 Gbps potential speed. For information about how to configure a bonded port, and the network configuration requirements needed to support 2 Gbps, see the *ReadyNAS OS 6 Software Manual*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*.

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	Press this button to turn on the ReadyNAS. The LED indicates these states: • **On**. Powered on. • **Blinking**. Booting or shutting down. • **Off**. Powered off.
Disk LEDs (1, 2, 3, 4)	An LED on the top of the front panel is associated with each drive bay. LEDs are in numerical order from left to right. The disk LEDs indicate these states: • **On**. Power is on and the disk is operating normally. • **Blinking**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. The drive bay is empty.
Disk activity LED	The disk activity LED indicates these states: • **On**. At least one disk is present. • **Blinking**. A disk is active. • **Off**. All disks are idle.
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: • **Green on, amber off**. 1000 Mbps connection speed, no activity. • **Green blinking, amber off**. 1000 Mbps connection speed, activity. • **Green off, amber on**. 10 Mbps or 100 Mbps connection speed, no activity. • **Green off, amber blinking**. 10 Mbps or 100 Mbps connection speed, activity. • **Green off, amber off**. No connection.
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 **Power** 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 you connect the system to a power supply or the system recovers from a power outage, the system returns to its last state:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

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

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, during which all LEDs blink simultaneously.

  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-RAID.

  - 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 a NETGEAR technical support representative instructs you to do so.
- **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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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.

NETGEAR ReadyNAS 202

4

This chapter provides an overview of the physical features of the ReadyNAS 202 and includes the following sections:

Front and Side Panels

The following figure shows the front and side panels of the ReadyNAS 202.

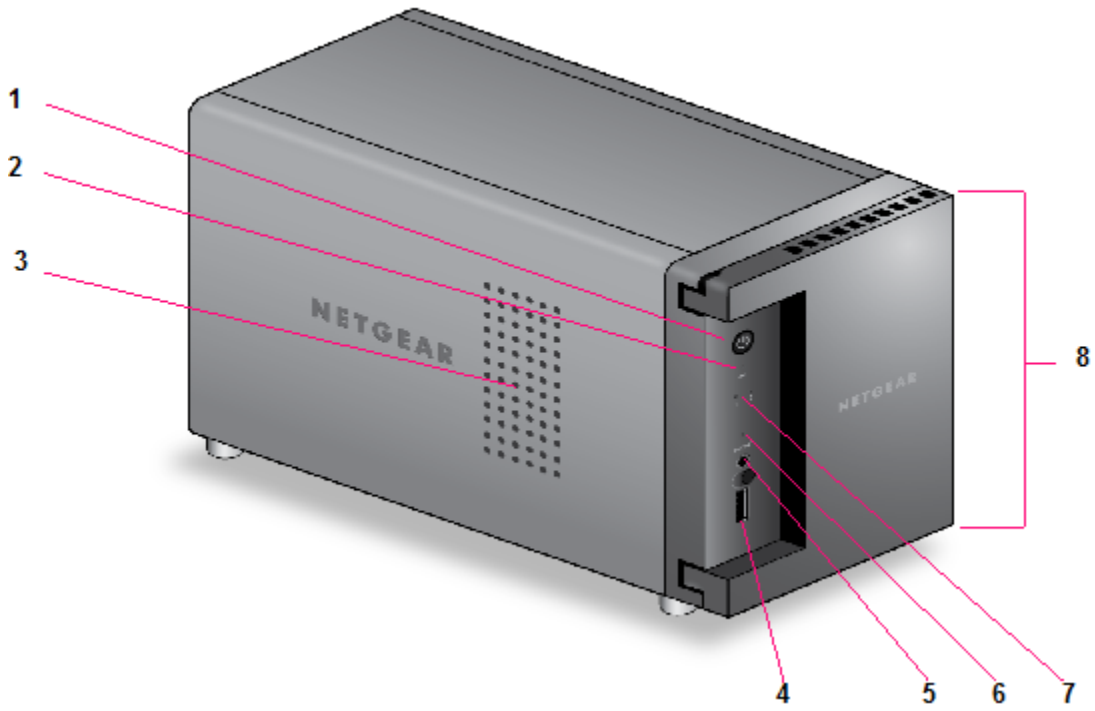


Figure 7. ReadyNAS 202 front and side panels

1. Power button and LED
2. Disk activity LED
3. Exhaust vent
4. USB 3.0 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 the ReadyNAS 202.

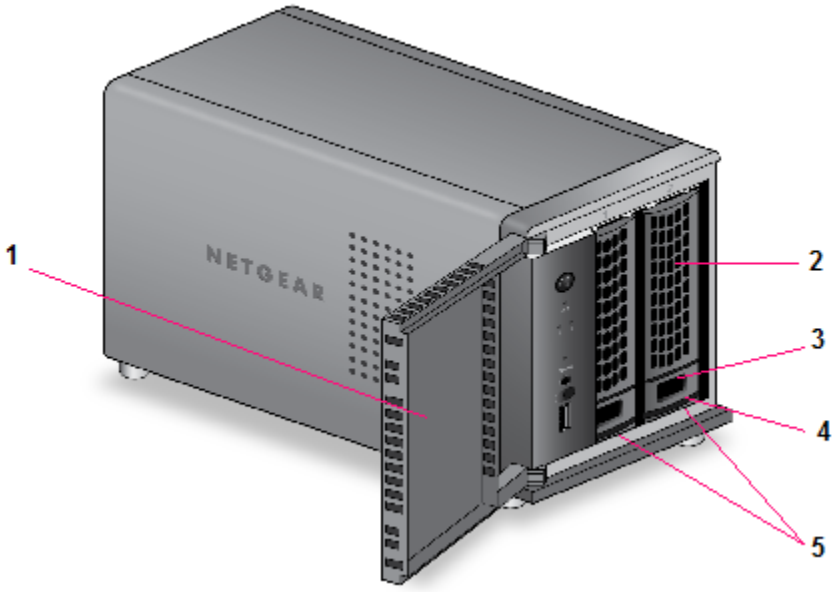


Figure 8. ReadyNAS 202 drive bays

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

Rear Panel

The following figure shows the rear panel of the ReadyNAS 202.

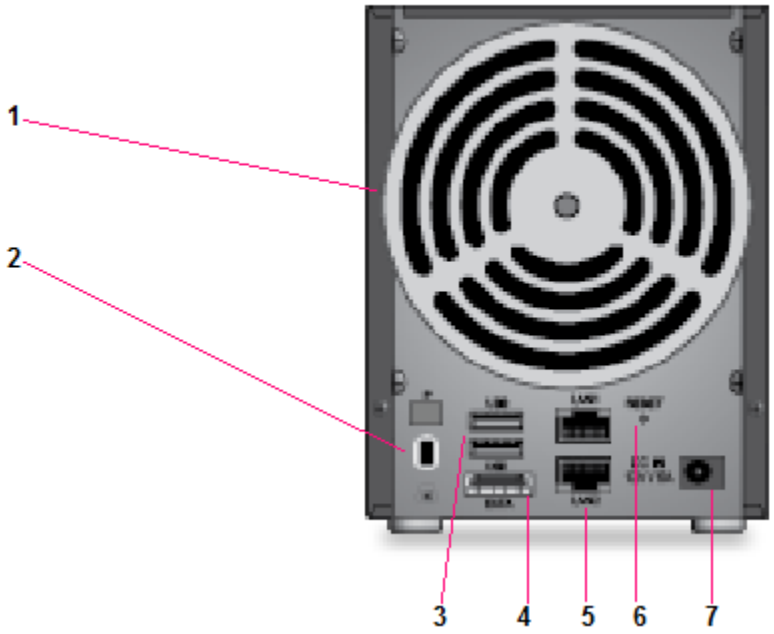


Figure 9. ReadyNAS 202 rear panel

1. Exhaust fan
2. Kensington lock
3. USB 3.0 ports
4. eSATA port
5. GbE ports with LED status indicators

Note The two GbE ports are equivalent. They can be used as two separate Ethernet connections, or can be configured as a single, bonded port with a 2 Gbps potential speed. For information on how to configure a bonded port, and the network configuration requirements needed to support 2 Gbps, see the *ReadyNAS OS 6 Software Manual*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*.

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 3. ReadyNAS 202 indicator descriptions

Indicator	Description
Power button and LED	Press this button to turn on the ReadyNAS. The LED has these states: • **On**. Powered on. • **Blinking**. Booting or shutting down. • **Off**. Powered off.
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: • **On**. Power is on and the disk is operating normally. • **Blinking**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. The drive bay is empty.
Disk activity LED	The disk activity LED has these states: • **Blinking**. A disk is active. • **Off**. Disk is idling.
Rear panel Ethernet port LEDs	Two LED status indicators are built into each port, one off or green and one showing three states: off, amber, or green. They indicate port speed and activity as follows: • **Green, green**. 1000 Mbps connection speed, no activity. • **Green blinking, green**. 1000 Mbps connection speed, activity. • **Green, amber**. 100 Mbps connection speed, no activity. • **Green blinking, amber**. 100 Mbps connection speed, activity. • **Green on, off**. 10 Mbps connection speed, no activity. • **Green blinking, off**. 10 Mbps connection speed, activity. • **Off, off**. No connection.

Power On and Shut Down

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

Power On

When you connect the system to a power supply or the system recovers from a power outage, the system returns to its last state:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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.

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, during which all LEDs blink simultaneously.

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-RAID.

- 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 a NETGEAR technical support representative instructs you to do so.
- **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 memory test runs for eight hours. The current status and the pass or fail result is reported using the storage system LEDs, as described in the following table:

Figure 10. Memory Test Status

Memory Test State	Power LED	Disk 1 LED	Disk 2 LED	Backup LED
1st hour	Off	Off	Off	Blinking
2nd hour	Off	Off	Blinking	Off
3rd hour	Off	Blinking	Off	Off
4th hour	Off	Blinking	Blinking	Blinking
5th hour	On	Off	Off	Blinking
6th hour	On	Off	Blinking	Off
7th hour	On	Blinking	Off	Off
8th hour	On	Blinking	Blinking	Blinking
Result: fail	Blinking	Blinking	Blinking	Blinking
Result: pass	On	On	On	On

- **Test disk**. Performs an offline full disk test. This process can take four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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 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.	■	■	■	■
Normal	Power LED lights.	■	□	□	□
Factory default	Disk 1 LED lights.	□	■	□	□
OS reinstall	Disk 2 LED lights.	□	□	■	□
Tech support	USB and backup status LED lights.	□	□	□	■
Volume read only	Power LED and disk 1 LED light.	■	■	□	□
Memory test	Power LED and disk 2 LED light.	■	□	■	□
Test disk	Power LED and USB and backup status LED light.	■	□	□	■

   Legend:

   - On: ■
   - Off: □

6. Press and release the **Reset** button to confirm your boot menu selection.
   The system boots in the selected boot mode.

NETGEAR ReadyNAS 204

5

This chapter provides an overview of the physical features of the ReadyNAS 204 and includes the following sections:

Front and Side Panels

The following figure shows the front and side panels of the ReadyNAS 204.

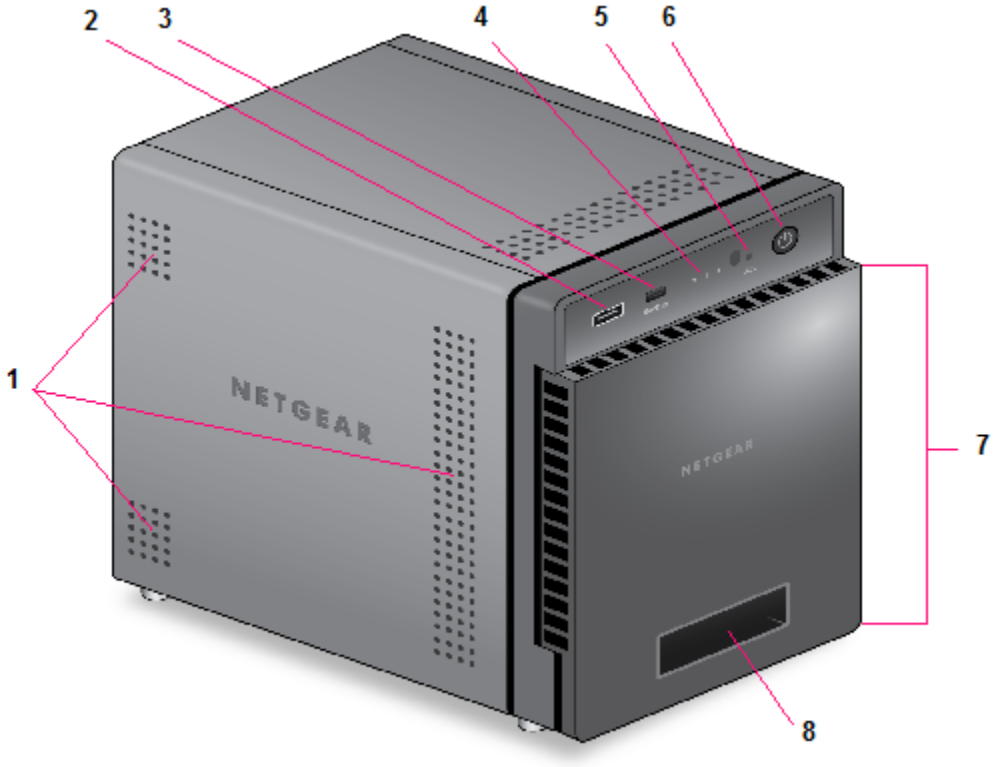


Figure 11. ReadyNAS 204 front and side panels

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 the ReadyNAS 204.

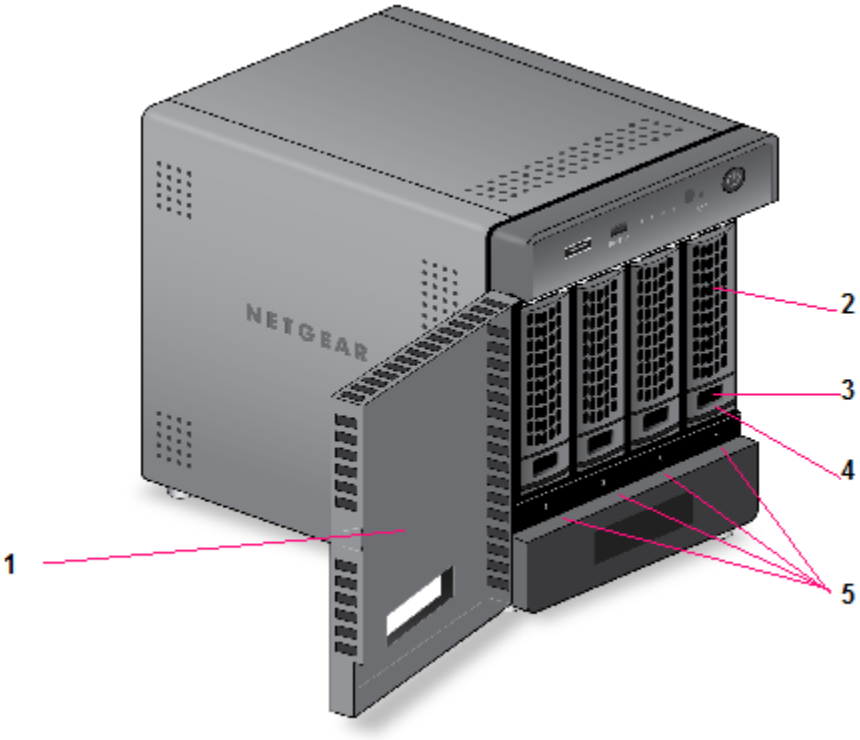


Figure 12. ReadyNAS 204 drive bays

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

Rear Panel

The following figure shows the rear panel of the ReadyNAS 204.

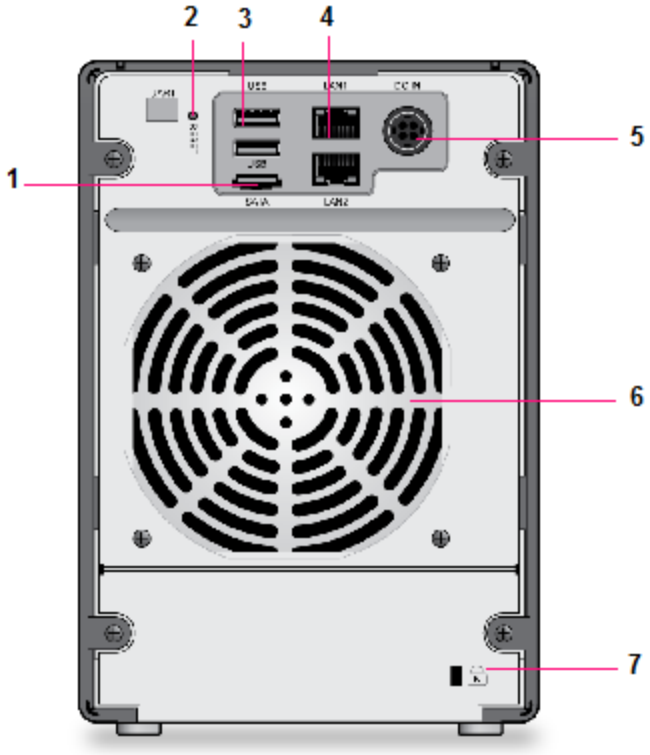


Figure 13. ReadyNAS 204 rear panel

1. eSATA port
2. Reset button
3. USB 3.0 ports
4. LAN ports with LED status indicators

> **Note** The two LAN ports are equivalent. They can be used as two separate Ethernet connections, or can be configured as a single, bonded port with a 2 Gbps potential speed. For information about how to configure a bonded port, and the network configuration requirements needed to support 2 Gbps, see the *ReadyNAS OS 6 Software Manual*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*.

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 4. ReadyNAS 204 indicator descriptions

Indicator	Description
Power button and LED	Press this button to turn on the ReadyNAS. The LED indicates these states: • **On**. Powered on. • **Blinking**. Booting or shutting down. • **Off**. Powered off.
Disk LEDs (1, 2, 3, 4)	An LED on the top of the front panel is associated with each drive bay. LEDs are in numerical order from left to right. The disk LEDs indicate these states: • **On**. Power is on and the disk is operating normally. • **Blinking**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. The drive bay is empty.
Disk activity LED	The disk activity LED indicates these states: • **Blinking**. A disk is being accessed. • **Off**. All disks are idle.
Rear panel Ethernet port LEDs	Two LED status indicators are built into each port, one off or green and one showing three states: off, amber, or green. They indicate port speed and activity as follows: • **Green, green**. 1000 Mbps connection speed, no activity. • **Green blinking, green**. 1000 Mbps connection speed, activity. • **Green, amber**. 100 Mbps connection speed, no activity. • **Green blinking, amber**. 100 Mbps connection speed, activity. • **Green on, off**. 10 Mbps connection speed, no activity. • **Green blinking, off**. 10 Mbps connection speed, activity. • **Off, off**. No connection.
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 **Power** 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 must shut down the system, use one of the preferred shutdown methods whenever possible.

Power On

When you connect the system to a power supply or the system recovers from a power outage, the system returns to its last state:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

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

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, during which all LEDs blink simultaneously.

  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-RAID.

  - 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 a NETGEAR technical support representative instructs you to do so.
- **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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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.

NETGEAR ReadyNAS 212

6

This chapter provides an overview of the physical features of the ReadyNAS 212 and includes the following sections:

Front and Side Panels

The following figure shows the front and side panels of the ReadyNAS 212.

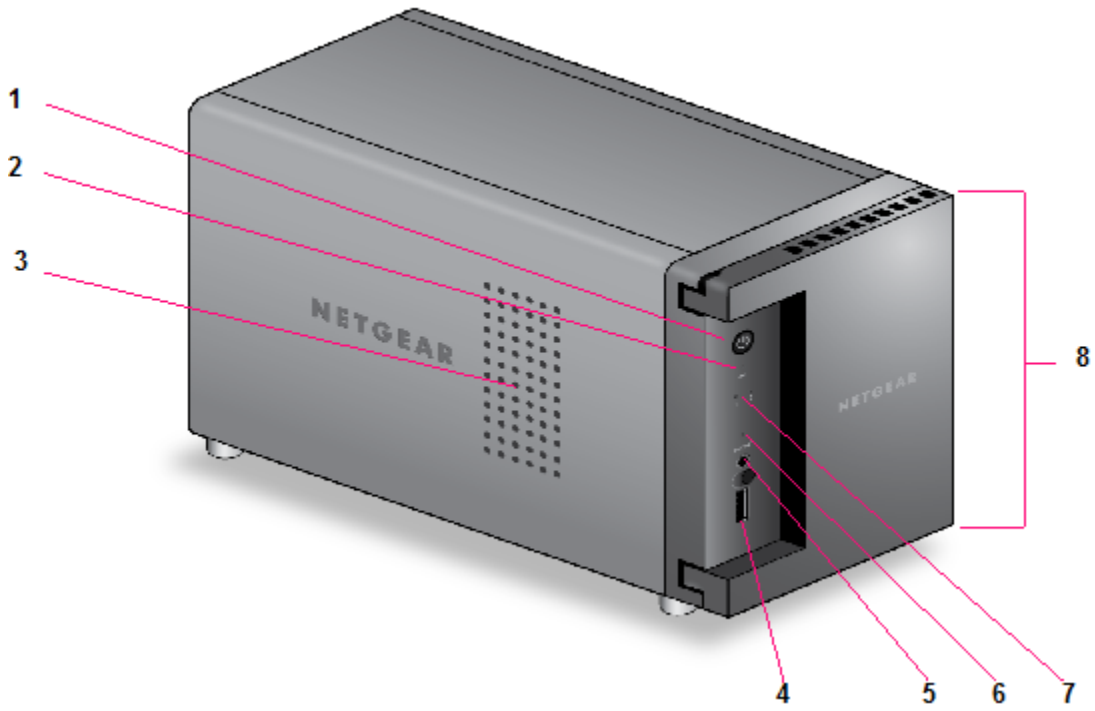


Figure 14. ReadyNAS 212 front and side panels

1. Power button and LED
2. Disk activity LED
3. Exhaust vent
4. USB 3.0 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 the ReadyNAS 212.

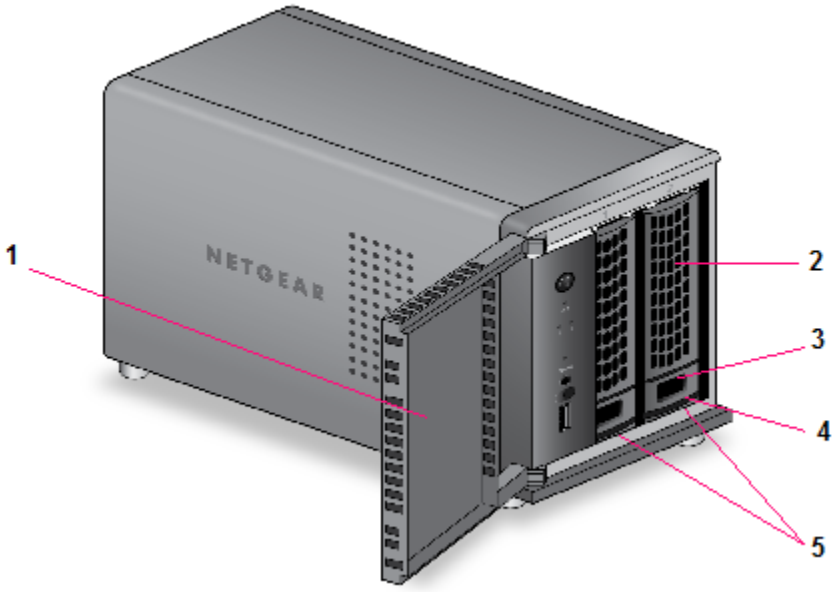


Figure 15. ReadyNAS 212 drive bays

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

Rear Panel

The following figure shows the rear panel of the ReadyNAS 212.

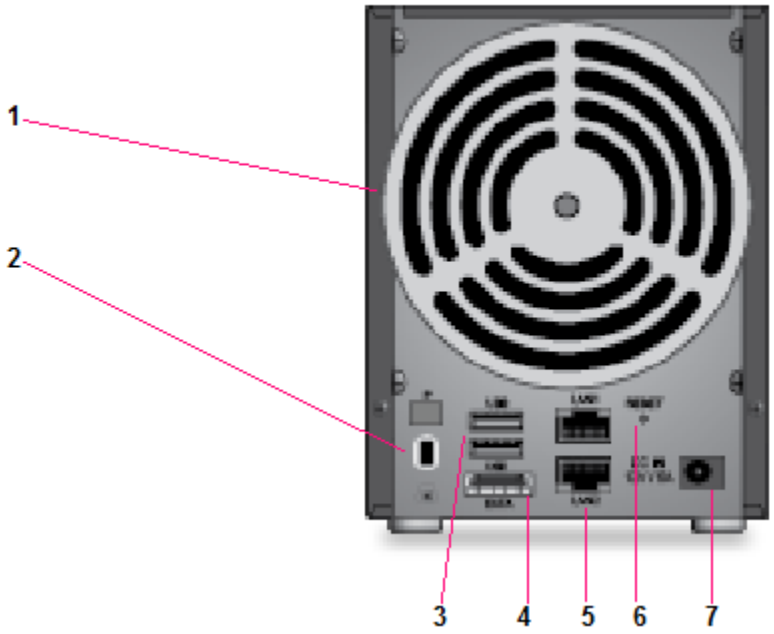


Figure 16. ReadyNAS 212 rear panel

1. Exhaust fan
2. Kensington lock
3. USB 3.0 ports
4. eSATA port
5. GbE ports with LED status indicators

Note The two GbE ports are equivalent. They can be used as two separate Ethernet connections, or can be configured as a single, bonded port with a 2 Gbps potential speed. For information about how to configure a bonded port, and the network configuration requirements needed to support 2 Gbps, see the *ReadyNAS OS 6 Software Manual*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*.

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 5. ReadyNAS 212 indicator descriptions

Indicator	Description
Power button and LED	Press this button to turn on the ReadyNAS. The LED indicates these states: • **On**. Powered on. • **Blinking**. Booting or shutting down. • **Off**. Powered off.
Disk LEDs (1, 2)	An LED on the front panel of the storage system is associated with each drive bay The disk LEDs indicate these states: • **On**. Power is on and the disk is operating normally. • **Blinking**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. The drive bay is empty.
Disk activity LED	The disk activity LED indicates these states: • **Blinking**. A disk is active. • **Off**. disk is idling.
Rear panel Ethernet port LEDs	Two LED status indicators are built into each port, one off or green and one showing three states: off, amber, or green. They indicate port speed and activity as follows: • **Green, green**. 1000 Mbps connection speed, no activity. • **Green blinking, green**. 1000 Mbps connection speed, activity. • **Green, amber**. 100 Mbps connection speed, no activity. • **Green blinking, amber**. 100 Mbps connection speed, activity. • **Green on, off**. 10 Mbps connection speed, no activity. • **Green blinking, off**. 10 Mbps connection speed, activity. • **Off, off**. No connection.

Power On and Shut Down

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

Power On

When you connect the system to a power supply or the system recovers from a power outage, the system returns to its last state:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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.

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, during which all LEDs blink simultaneously.

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-RAID.

- 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 a NETGEAR technical support representative instructs you to do so.
- **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 memory test runs for eight hours. The current status and the pass or fail result is reported using the storage system LEDs, as described in the following table:

Figure 17. Memory Test Status

Memory Test State	Power LED	Disk 1 LED	Disk 2 LED	Backup LED
First hour	Off	Off	Off	Blinking
Second hour	Off	Off	Blinking	Off
Third hour	Off	Blinking	Off	Off
Forth hour	Off	Blinking	Blinking	Blinking
Fifth hour	On	Off	Off	Blinking
Sixth hour	On	Off	Blinking	Off
Seventh hour	On	Blinking	Off	Off
Eigth hour	On	Blinking	Blinking	Blinking
Result: fail	Blinking	Blinking	Blinking	Blinking
Result: pass	On	On	On	On

- **Test disk**. Performs an offline full disk test. This process can take four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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.	■	■	■	■
Normal	Power LED lights.	■	□	□	□
Factory default	Disk 1 LED lights.	□	■	□	□
OS reinstall	Disk 2 LED lights.	□	□	■	□
Tech support	USB and backup status LED lights.	□	□	□	■
Volume read only	Power LED and disk 1 LED light.	■	■	□	□
Memory test	Power LED and disk 2 LED light.	■	□	■	□
Test disk	Power LED and USB and backup status LED light.	■	□	□	■

   Legend:

   - On: ■
   - Off: □

6. Press and release the **Reset** button to confirm your boot menu selection.
   The system boots in the selected boot mode.

NETGEAR ReadyNAS 214

7

This chapter provides an overview of the physical features of the ReadyNAS 214 and includes the following sections:

Front and Side Panels

The following figure shows the front and side panels of the ReadyNAS 214.

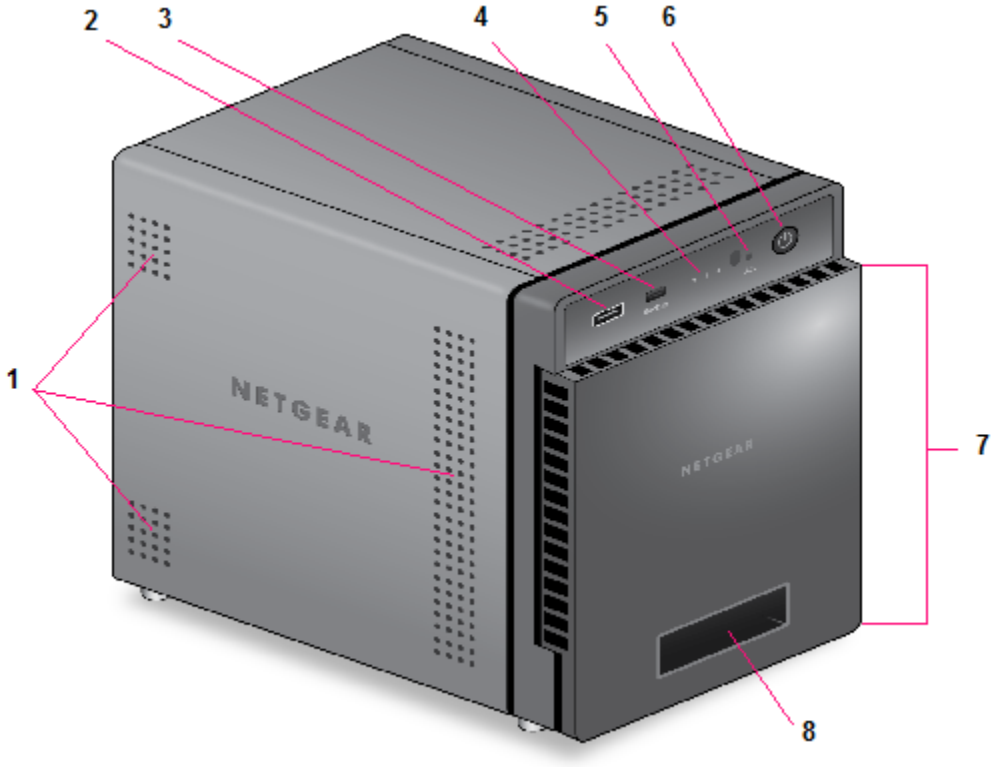


Figure 18. ReadyNAS 214 front and side panels

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 the ReadyNAS 214.

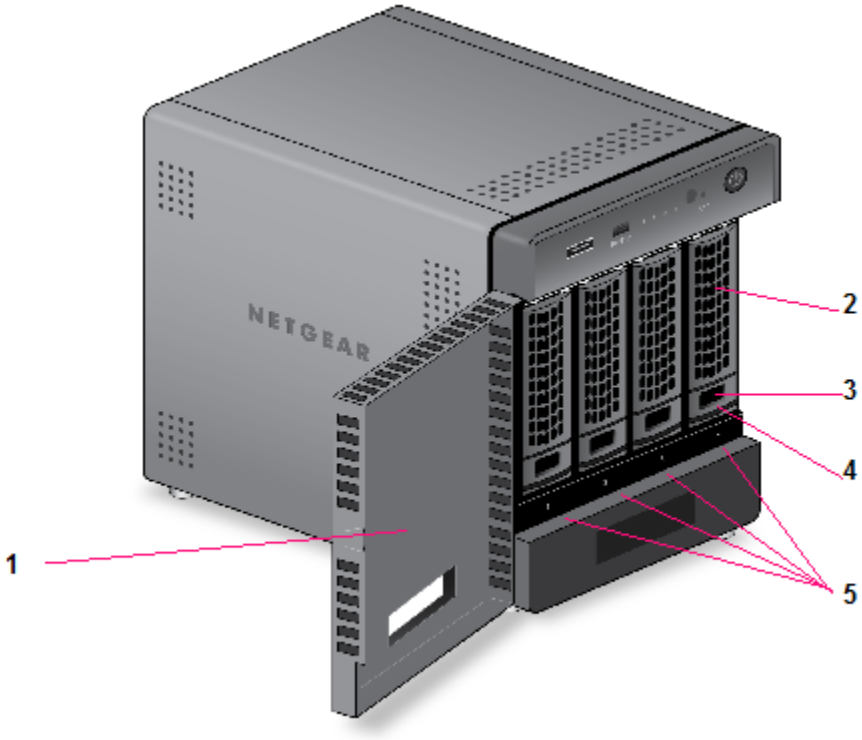


Figure 19. ReadyNAS 214 drive bays

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

Rear Panel

The following figure shows the rear panel of the ReadyNAS 214.

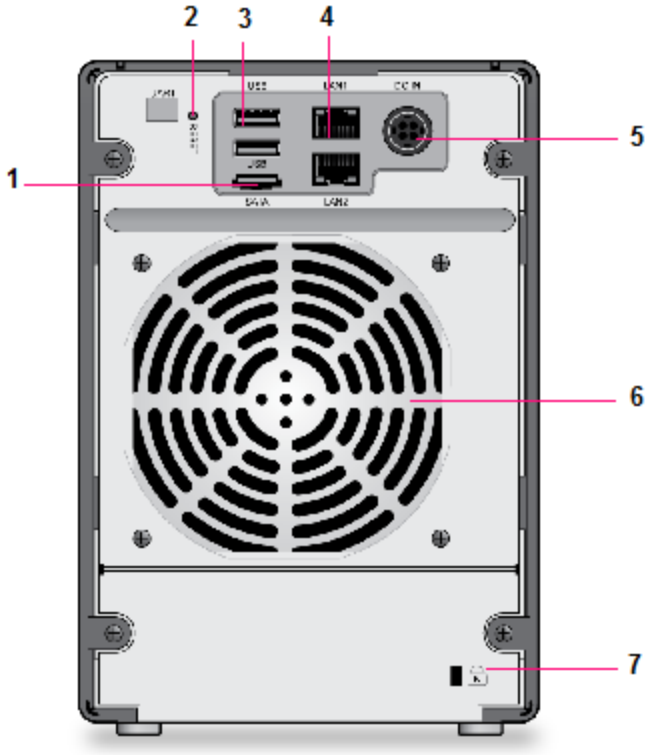


Figure 20. ReadyNAS 214 rear panel

1. eSATA port
2. Reset button
3. USB 3.0 ports
4. LAN ports with LED status indicators

> **Note** The two LAN ports are equivalent. They can be used as two separate Ethernet connections, or can be configured as a single, bonded port with a 2 Gbps potential speed. For information about how to configure a bonded port, and the network configuration requirements needed to support 2 Gbps, see the *ReadyNAS OS 6 Software Manual*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*.

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 6. ReadyNAS 214 indicator descriptions

Indicator	Description
Power button and LED	Press this button to turn on the ReadyNAS. The LED indicates these states: • **On**. Powered on. • **Blinking**. Booting or shutting down. • **Off**. Powered off.
Disk LEDs (1, 2, 3, 4)	An LED on the top of the front panel is associated with each drive bay. LEDs are in numerical order from left to right. The disk LEDs indicate these states: • **On**. Power is on and the disk is operating normally. • **Blinking**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. The drive bay is empty.
Disk activity LED	The disk activity LED indicate these states: • **Blinking**. A disk is being accessed. • **Off**. All disks are idle.
Rear panel Ethernet port LEDs	Two LED status indicators are built into each port, one off or green and one showing three states: off, amber, or green. They indicate port speed and activity as follows: • **Green, green**. 1000 Mbps connection speed, no activity. • **Green blinking, green**. 1000 Mbps connection speed, activity. • **Green, amber**. 100 Mbps connection speed, no activity. • **Green blinking, amber**. 100 Mbps connection speed, activity. • **Green on, off**. 10 Mbps connection speed, no activity. • **Green blinking, off**. 10 Mbps connection speed, activity. • **Off, off**. No connection.
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 **Power** 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 must shut down the system, use one of the preferred shutdown methods whenever possible.

Power On

When you connect the system to a power supply or the system recovers from a power outage, the system returns to its last state:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

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

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, during which all LEDs blink simultaneously.

  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-RAID.

  - 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 a NETGEAR technical support representative instructs you to do so.
- **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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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.

NETGEAR ReadyNAS 312

8

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

Front and Side Panels

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

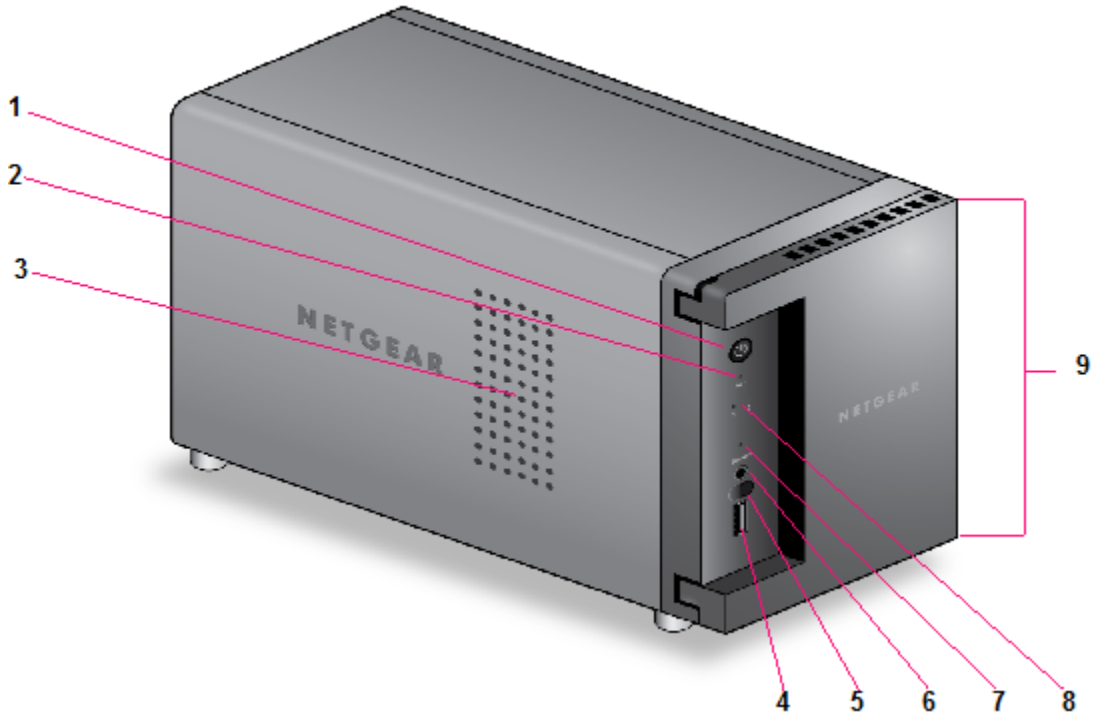


Figure 21. ReadyNAS 312 front and side panels

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 the ReadyNAS 312.

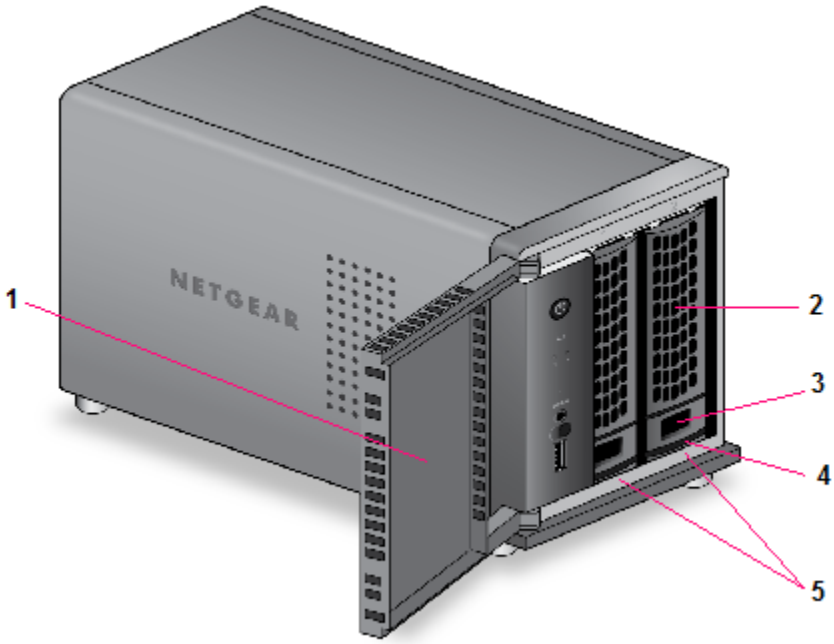


Figure 22. ReadyNAS 312 drive bays

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

Rear Panel

The following figure shows the rear panel of the ReadyNAS 312.

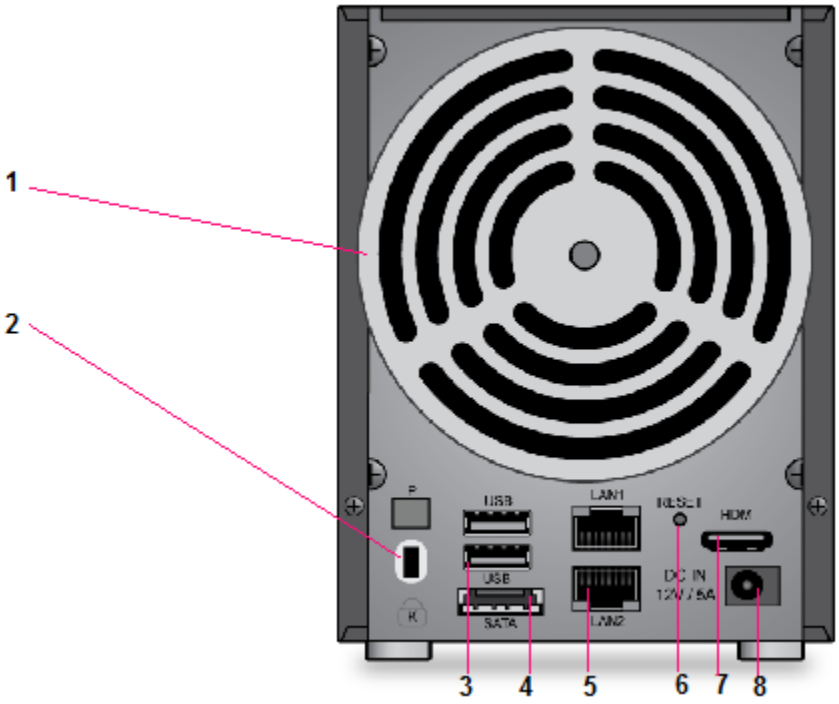


Figure 23. ReadyNAS 312 rear panel

1. Exhaust fan
2. Kensington lock
3. USB 3.0 ports
4. eSATA port
5. LAN ports with LED status indicators
6. Reset button
7. HDMI port (currently not supported)
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 7. ReadyNAS 312 indicator descriptions

Indicator	Description
Power button and LED	Press this button to turn on the ReadyNAS. The LED has these states: • **On**. Powered on. • **Blinking**. Booting or shutting down. • **Off**. Powered off.
Disk LEDs (1, 2)	An LED on the front panel of the storage system is associated with each drive bay The disk LEDs have these states: • **On**. Power is on and the disk is operating normally. • **Blinking**. The disk was removed, failed, or is resynchronizing. • **Off**. The drive bay is empty.
Disk activity LED	The disk activity LED has these states: • **On**. At least one disk is present. • **Blinking**. A disk is active. • **Off**. All disks are idle.
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: • **Green on, amber off**. 1000 Mbps connection speed, no activity. • **Green blinking, amber off**. 1000 Mbps connection speed, activity. • **Green off, amber on**. 10 Mbps or 100 Mbps connection speed, no activity. • **Green off, amber blinking**. 10 Mbps or 100 Mbps connection speed, activity. • **Green off, amber off**. No connection.

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 you connect the system to a power supply or the system recovers from a power outage, the following occurs:

- The system automatically powers on if you enabled the Wake on LAN (WoL) feature or scheduled the system to automatically power on or off.
- The system returns to its last state if the Wake on LAN (WoL) feature is disabled and you did not schedule the system to automatically power on or off:
  - If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
  - If the system was powered off, the system remains off when the power supply is connected or power is restored.
    In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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 five 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, during which all LEDs blink simultaneously.

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-RAID.

- 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 a NETGEAR technical support representative instructs you to do so.
- **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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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.	■	■	■	■
Normal	Power LED lights.	■	□	□	□
Factory default	Disk 1 LED lights.	□	■	□	□
OS reinstall	Disk 2 LED lights.	□	□	■	□
Tech support	USB and backup status LED lights.	□	□	□	■
Volume read only	Power LED and disk 1 LED light.	■	■	□	□
Memory test	Power LED and disk 2 LED light.	■	□	■	□
Test disk	Power LED and USB and backup status LED light.	■	□	□	■

Legend:

- On: ■
- Off: □

6. Press and release the **Reset** button to confirm your boot menu selection.
   The system boots in the selected boot mode.

NETGEAR ReadyNAS 314

9

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

Front and Side Panels

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

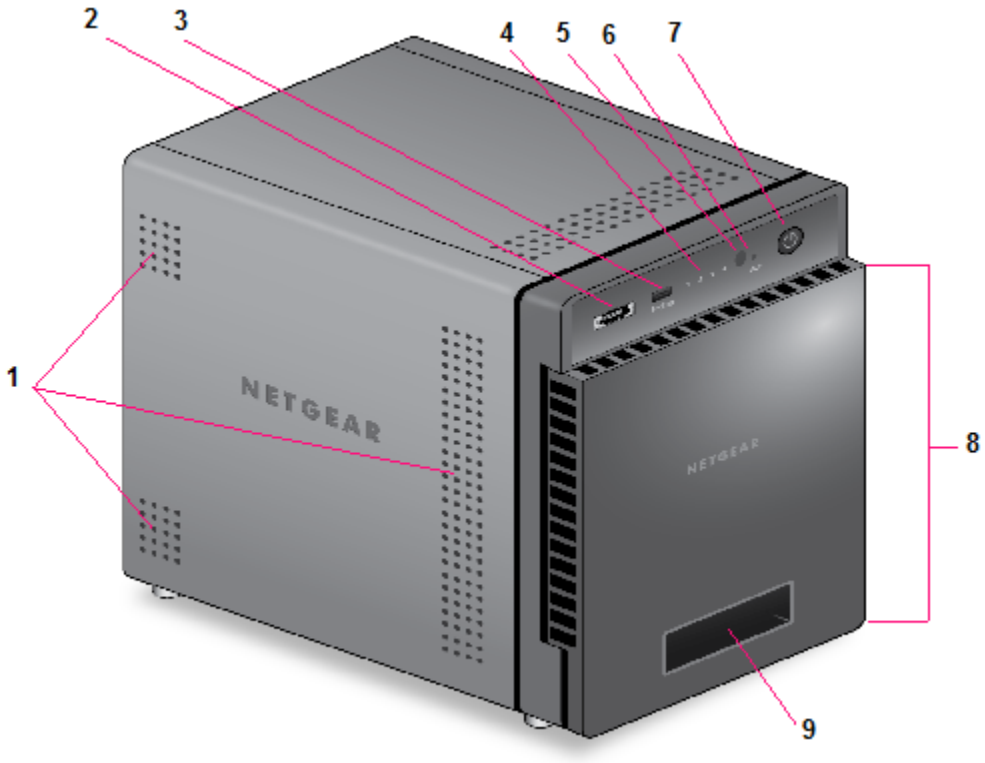


Figure 24. ReadyNAS 314 front and side panels

1. Exhaust vents
2. Shared USB 2.0 and eSATA 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 the ReadyNAS 314.

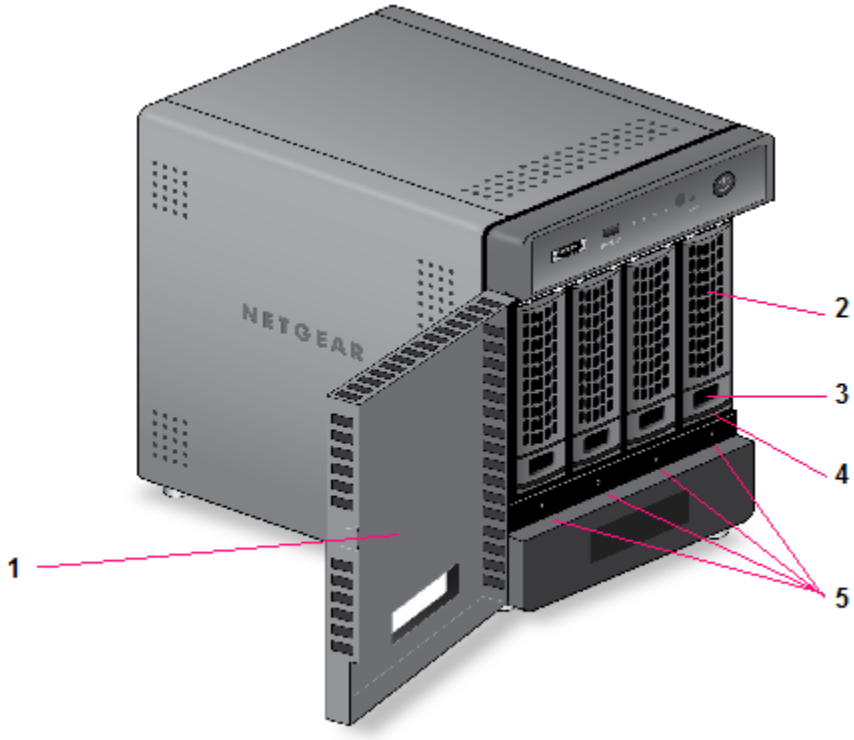


Figure 25. ReadyNAS 314 drive bays

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

Rear Panel

The following figure shows the rear panel of the ReadyNAS 314.

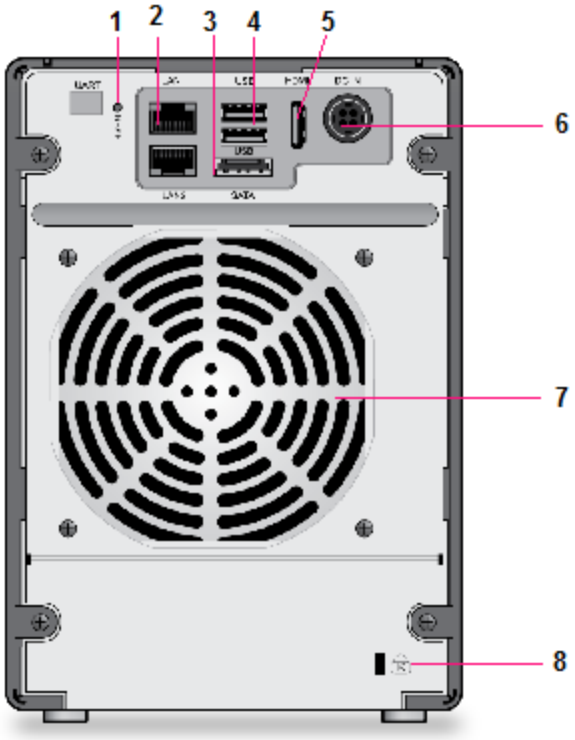


Figure 26. ReadyNAS 314 rear panel

1. Reset button
2. LAN ports with LED status indicators
3. eSATA port
4. USB 3.0 ports
5. HDMI port (currently not supported)
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 8. ReadyNAS 314 indicator descriptions

Indicator	Description
Power button and LED	Press this button to turn on the ReadyNAS. The LED indicates these states: • **On**. Powered on. • **Blinking**. Booting or shutting down. • **Off**. Powered off.
Disk LEDs (1, 2, 3, 4)	An LED on the top of the front panel is associated with each drive bay. LEDs are in numerical order from left to right. The disk LEDs indicate these states: • **On**. Power is on and the disk is operating normally. • **Blinking**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. The drive bay is empty.
Disk activity LED	The disk activity LED has these states: • **On**. At least one disk is present. • **Blinking**. A disk is active. • **Off**. All disks are idle.
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: • **Green on**, amber off. 1000 Mbps connection speed, no activity. • **Green blinking, amber off**. 1000 Mbps connection speed, activity. • **Green off, amber on**. 10 Mbps or 100 Mbps connection speed, no activity. • **Green off, amber blinking**. 10 Mbps or 100 Mbps connection speed, activity. • **Green off, amber off**. No connection.
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 **Power** 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 must shut down the system, use one of the preferred shutdown methods whenever possible.

Power On

When you connect the system to a power supply or the system recovers from a power outage, the following occurs:

- The system automatically powers on if you enabled the Wake on LAN (WoL) feature or scheduled the system to automatically power on or off.
- The system returns to its last state if the Wake on LAN (WoL) feature is disabled and you did not schedule the system to automatically power on or off:
  - If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
  - If the system was powered off, the system remains off when the power supply is connected or power is restored.
    In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

1. If the status display screen is not lit, do the following:
   a. Press the **Power** button.
      The status display screen wakes.
   b. Press the **Power** button a second time.
      Instructions for graceful shutdown display on the status display screen.
   c. Press the **Power** button a third time.
      The system shuts down gracefully.
2. If the status display screen is lit, do the following:
   a. Press the **Power** button.
      Instructions for graceful shutdown display on the status display screen.
   b. 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 five 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, during which all LEDs blink simultaneously.

  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-RAID.

  - 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 a NETGEAR technical support representative instructs you to do so.
- **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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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.

NETGEAR ReadyNAS 316

10

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

Front and Side Panels

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

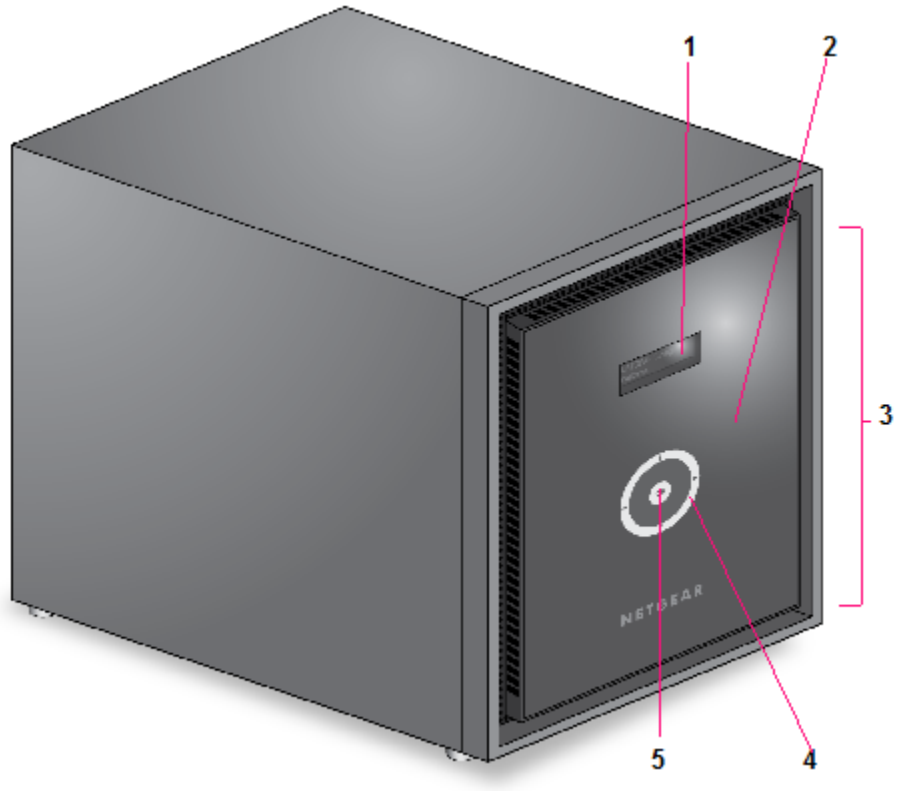


Figure 27. ReadyNAS 316 front and side panels

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

Drive Bays

The following figure shows the drive bays of the ReadyNAS 316.

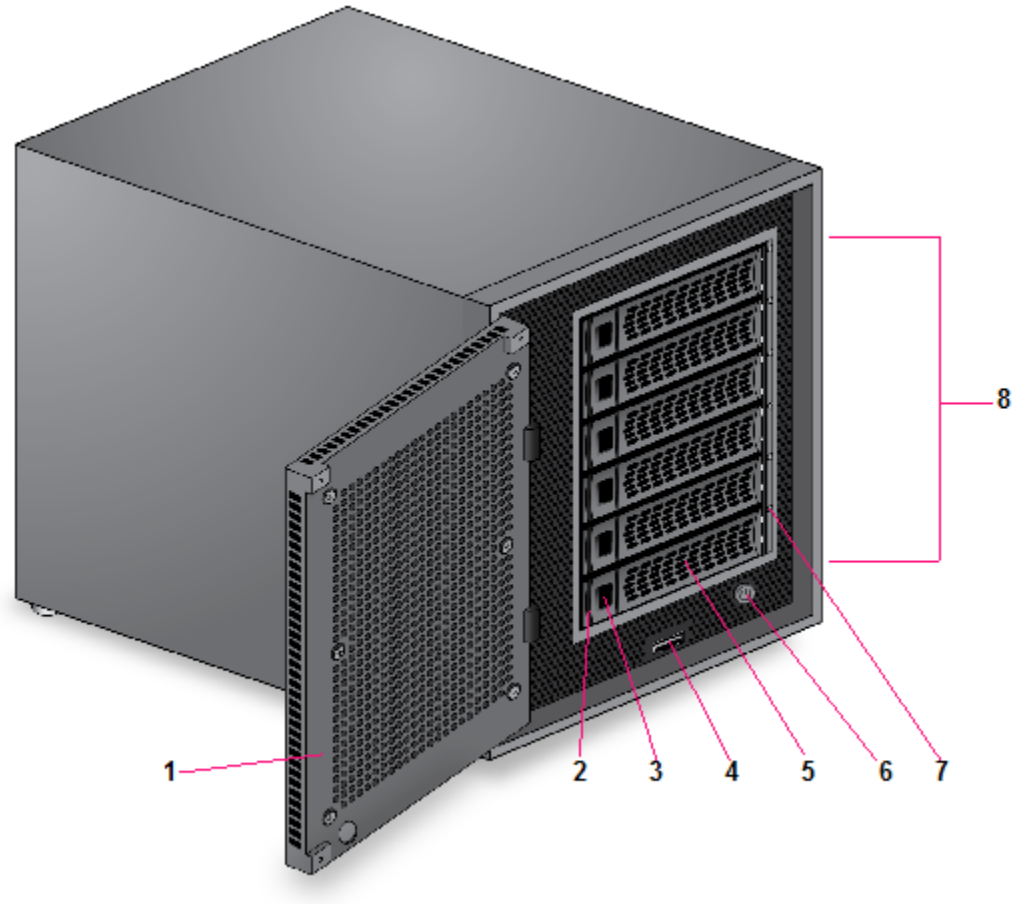


Figure 28. ReadyNAS 316 drive bays

1. Drive bay door
2. Disk tray release latch
3. Recessed disk tray handle lock
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 the ReadyNAS 316.

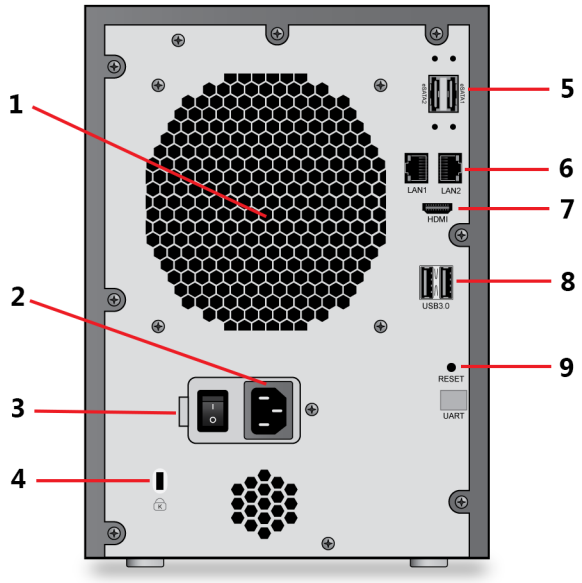


Figure 29. ReadyNAS 316 rear panel

1. Exhaust fan
2. Power cable socket
3. Power switch
4. Kensington lock
5. eSATA ports
6. LAN ports with LED status indicators
7. HDMI port (currently not supported)
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 9. ReadyNAS 316 indicator descriptions

Indicator	Description
Disk LEDs	A disk LED next to each drive bay indicates the status of the disk inside. The disk LEDs indicate these states: • **Solid blue**. Power is on and the disk is operating normally. • **Blinking blue**. The disk is active. • **Solid red**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. No disk is present.
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: • **Green on, amber off**. 1000 Mbps connection speed, no activity. • **Green blinking, amber off**. 1000 Mbps connection speed, activity. • **Green off, amber on**. 10 Mbps or 100 Mbps connection speed, no activity. • **Green off, amber blinking**. 10 Mbps or 100 Mbps connection speed, activity. • **Green off, amber off**. No connection.
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 the status display screen, activate the proximity sensor, press the touch pad, press the **OK** button, or press the **Power** 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 must shut down the system, use one of the preferred shutdown methods whenever possible.

Power On

When you connect the system to a power supply and the **Power** switch is in the On position or the system recovers from a power outage and the **Power** switch is in the On position, the following occurs:

- The system automatically powers on if you enabled the Wake on LAN (WoL) feature or scheduled the system to automatically power on or off.
- The system returns to its last state if the Wake on LAN (WoL) feature is disabled and you did not schedule the system to automatically power on or off:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

1. If the status display screen is not lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      The status display screen wakes.
   b. Press the **Power** button a second time.
      Instructions for graceful shutdown display on the status display screen.
   c. Press the **Power** button a third time.
      The system shuts down gracefully.
2. If the status display screen is lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      Instructions for graceful shutdown display on the status display screen.
   b. 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 five 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, during which all LEDs blink simultaneously.

  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-RAID.

  - 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 a NETGEAR technical support representative instructs you to do so.
- **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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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 touch pad 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.

NETGEAR ReadyNAS 422

11

This chapter provides an overview of the physical features of the ReadyNAS 422 and includes the following sections:

Front and Side Panels

The following figure shows the front and side panels of the ReadyNAS 422.

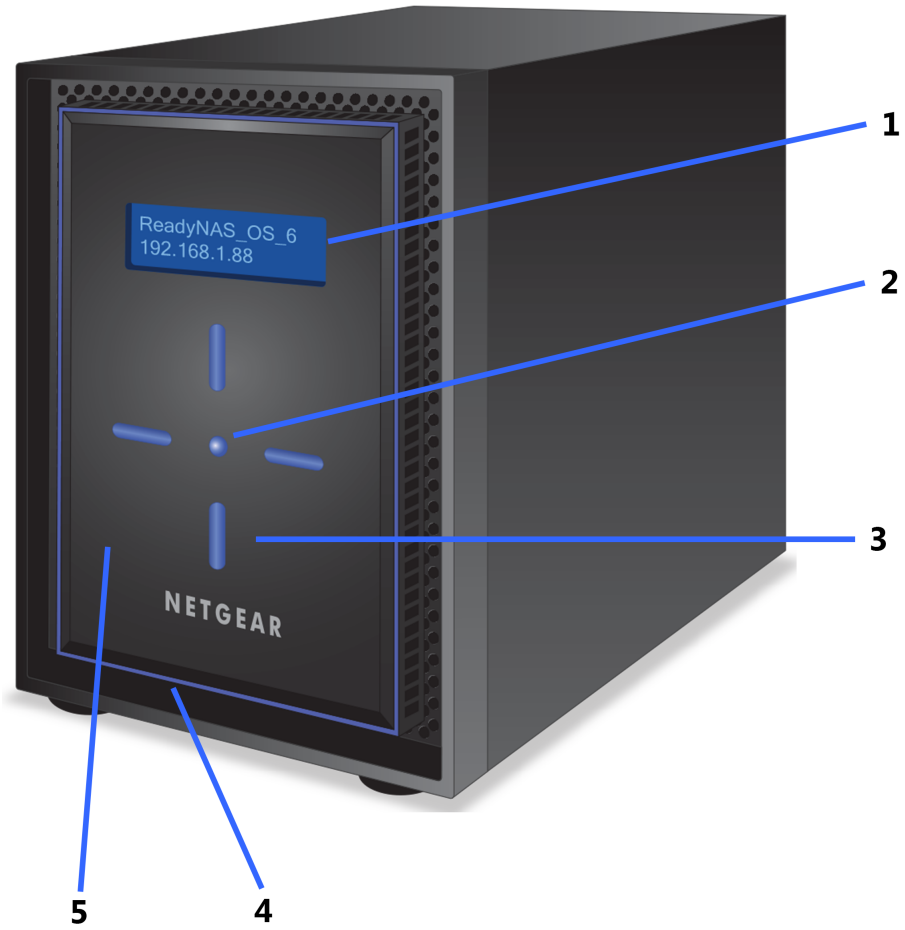


Figure 30. ReadyNAS 422 front and side panels

1. Status and menu display screen
2. OK button
3. Four buttons (Up, Down, Left, Right) and backlights
4. USB 3.0 port
5. Drive bay door

Drive Bays

The following figure shows the drive bays of ReadyNAS 422.

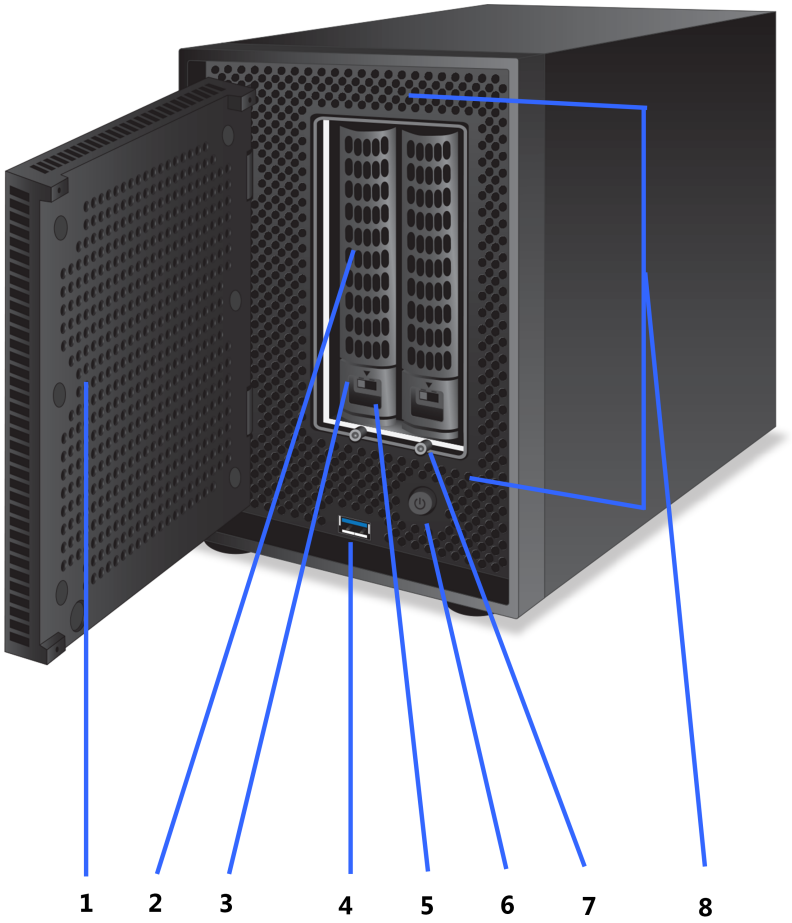


Figure 31. ReadyNAS 422 drive bays

1. Drive bay door
2. Disk tray handle
3. Disk tray release latch
4. USB 3.0 port
5. Recessed disk tray handle lock
6. Power button
7. Disk LED
8. Drive bays

Rear Panel

The following figure shows the rear panel of the ReadyNAS 422.

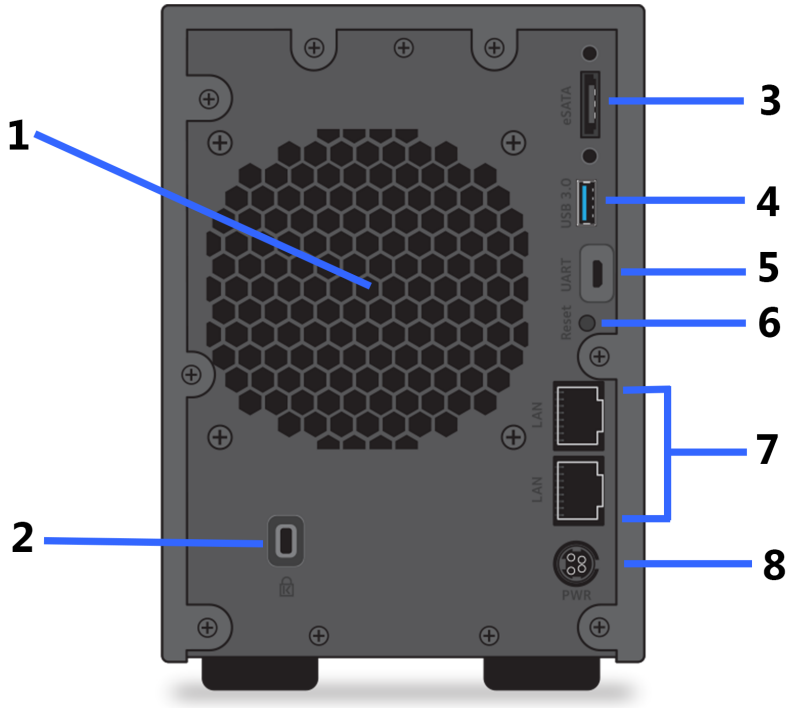


Figure 32. Rear panel ReadyNAS 422

1. Exhaust fan
2. Kensington lock
3. eSATA port
4. USB 3.0 port
5. Micro USB console connector (marked as UART)
6. Reset button
7. 1 GbE LAN ports with LED status indicators
8. Power cable socket

Status Information

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

Table 10. Indicator descriptions ReadyNAS 422

Indicator	Description
Front panel 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 the status display screen, press any button on the front panel. If the storage system reports an abnormal operation or error, the status display screen stays on.
Drive bay disk LEDs	A disk LED next to each drive bay indicates the status of the disk inside. The disk LEDs indicate these states: • **Solid blue**. Power is on and the disk is operating normally. • **Blinking blue**. The disk is active. • **Solid red**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. No disk is present.
Rear panel 1G Ethernet LAN port LEDs	Two LED status indicators are built into each 1G Ethernet port. One LED is a bicolor LED that can light solid amber or solid green and indicates the port speed. The other LED is green and indicates the link (solid green) and activity (blinking green). These LEDs indicate port speed and activity as follows: • **Bicolor LED green, green LED solid**. 1 Gbps connection speed, no activity. • **Bicolor LED green, green LED blinking**. 1 Gbps connection speed, activity. • **Bicolor LED amber, green LED solid**. 100 Mbps connection speed, no activity. • **Bicolor LED amber, green LED blinking**. 100 Mbps connection speed, activity. • **Bicolor LED off, green LED off**. Either no connection or 10 Mbps connection without activity. • **Bicolor LED off, green LED blinking.** 10 Mbps connection, activity.

Power On and Shut Down

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

Power On

When you connect the system to a power supply or the system recovers from a power outage, the system returns to its last state:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

1. If the status display screen is not lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      The status display screen wakes.
   b. Press the **Power** button a second time.
      Instructions for graceful shutdown display on the status display screen.
   c. Press the **Power** button a third time.
      The system shuts down gracefully.
2. If the status display screen is lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      Instructions for graceful shutdown display on the status display screen.
   b. 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 five 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, during which all LEDs blink simultaneously.

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-RAID.

  - 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 IP 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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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 **Up** and **Down** buttons on the front panel 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.

NETGEAR ReadyNAS 424

12

This chapter provides an overview of the physical features of the ReadyNAS 424 and includes the following sections:

Front and Side Panels

The following figure shows the front and side panels of the ReadyNAS 424.

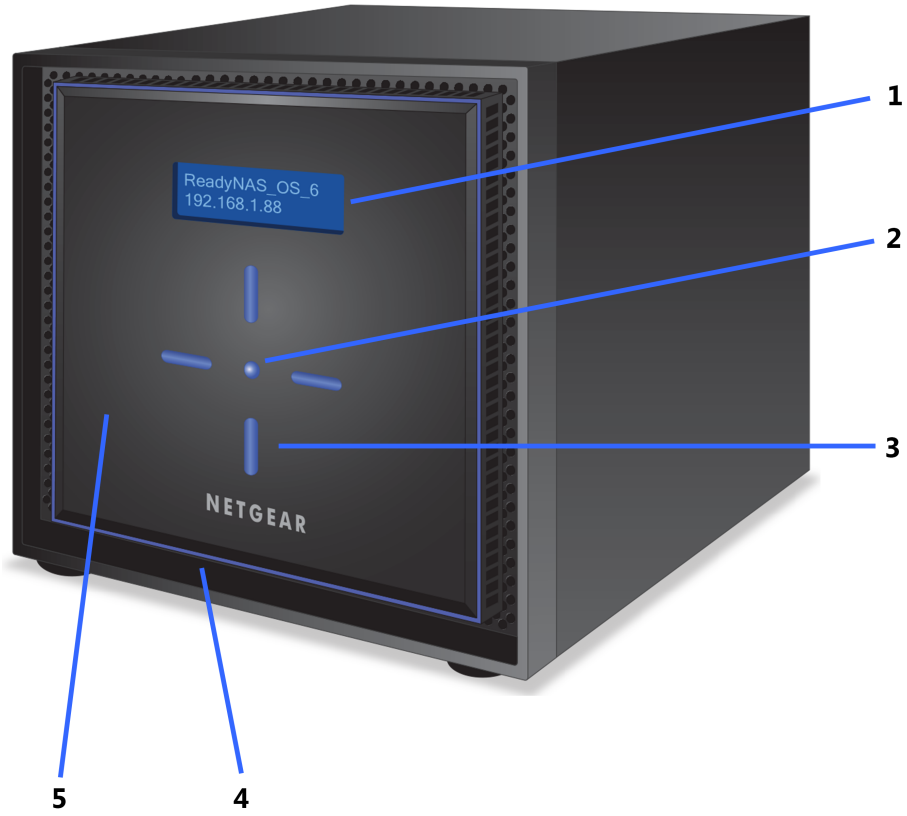


Figure 33. ReadyNAS 424 front and side panels

1. Status and menu display screen
2. OK button
3. Four buttons (Up, Down, Left, Right) and backlights
4. USB 3.0 port
5. Drive bay door

Drive Bays

The following figure shows the drive bays of ReadyNAS 424.

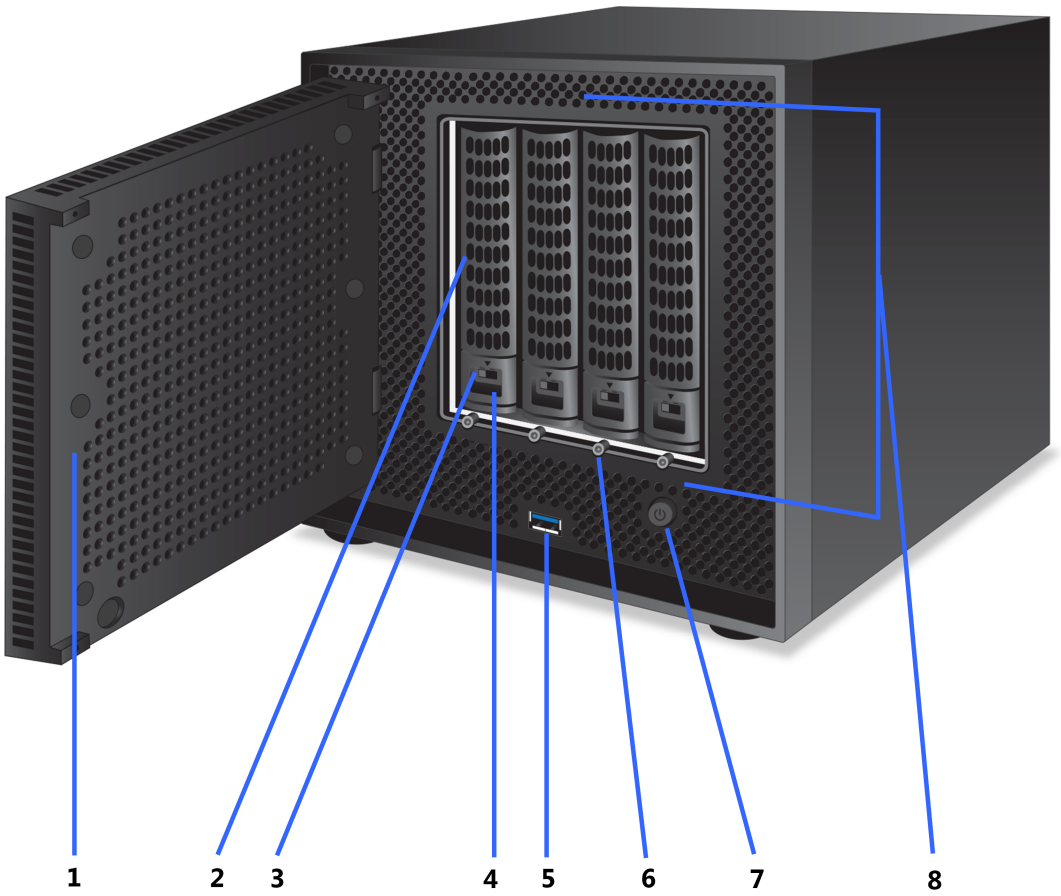


Figure 34. ReadyNAS 424 drive bays

1. Drive bay door
2. Disk tray handle
3. Disk tray release latch
4. Recessed disk tray handle lock
5. USB 3.0 port
6. Disk LED
7. Power button
8. Drive bays

Rear Panel

The following figure shows the rear panel of the ReadyNAS 424.

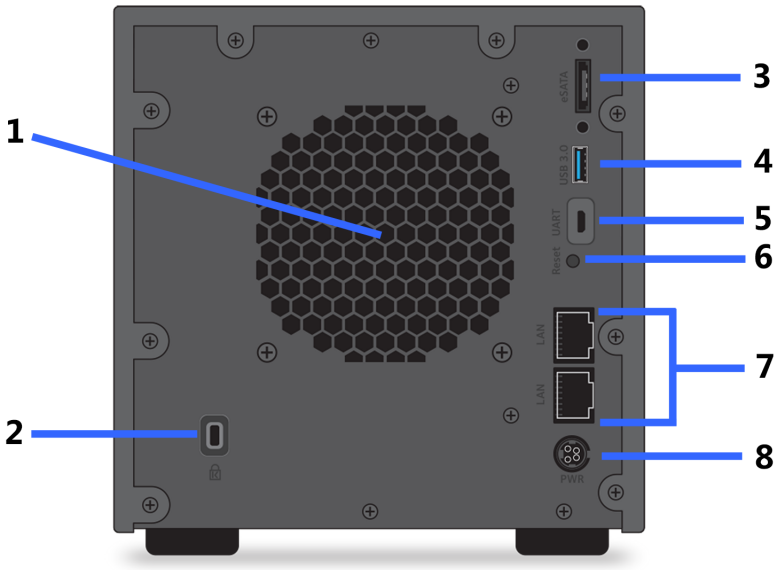


Figure 35. Rear panel ReadyNAS 424

1. Exhaust fan
2. Kensington lock
3. eSATA port
4. USB 3.0 port
5. Micro USB console connector (marked as UART)
6. Reset button
7. 1 GbE LAN ports with LED status indicators
8. Power cable socket

Status Information

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

Table 11. Indicator descriptions ReadyNAS 424

Indicator	Description
Front panel 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 the status display screen, press any button on the front panel. If the storage system reports an abnormal operation or error, the status display screen stays on.
Drive bay disk LEDs	A disk LED next to each drive bay indicates the status of the disk inside. The disk LEDs indicate these states: • **Solid blue**. Power is on and the disk is operating normally. • **Blinking blue**. The disk is active. • **Solid red**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. No disk is present.
Rear panel 1G Ethernet LAN port LEDs	Two LED status indicators are built into each 1G Ethernet port. One LED is a bicolor LED that can light solid amber or solid green and indicates the port speed. The other LED is green and indicates the link (solid green) and activity (blinking green). These LEDs indicate port speed and activity as follows: • **Bicolor LED green, green LED solid**. 1 Gbps connection speed, no activity. • **Bicolor LED green, green LED blinking**. 1 Gbps connection speed, activity. • **Bicolor LED amber, green LED solid**. 100 Mbps connection speed, no activity. • **Bicolor LED amber, green LED blinking**. 100 Mbps connection speed, activity. • **Bicolor LED off, green LED off**. Either no connection or 10 Mbps connection without activity. • **Bicolor LED off, green LED blinking.** 10 Mbps connection, activity.

Power On and Shut Down

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

Power On

When you connect the system to a power supply or the system recovers from a power outage, the system returns to its last state:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

1. If the status display screen is not lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      The status display screen wakes.
   b. Press the **Power** button a second time.
      Instructions for graceful shutdown display on the status display screen.
   c. Press the **Power** button a third time.
      The system shuts down gracefully.
2. If the status display screen is lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      Instructions for graceful shutdown display on the status display screen.
   b. 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 five 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, during which all LEDs blink simultaneously.

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-RAID.

  - 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 IP 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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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 **Up** and **Down** buttons on the front panel 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.

NETGEAR ReadyNAS 516

13

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

Front and Side Panels

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

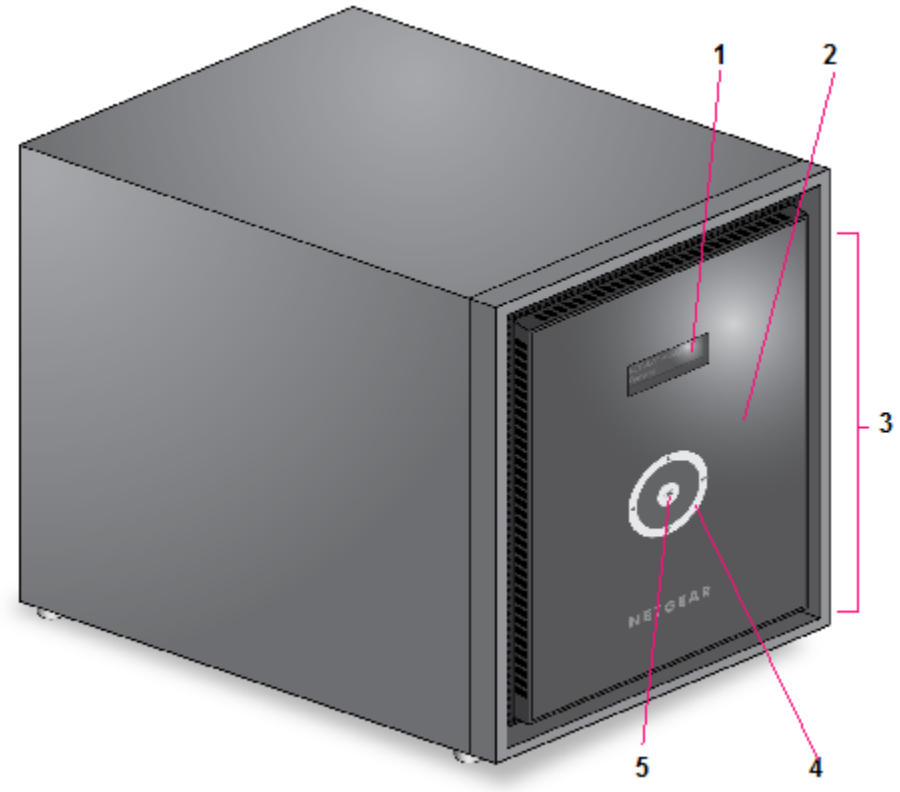


Figure 36. ReadyNAS 516 front and side panels

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

Drive Bays

The following figure shows the drive bays of the ReadyNAS 516.

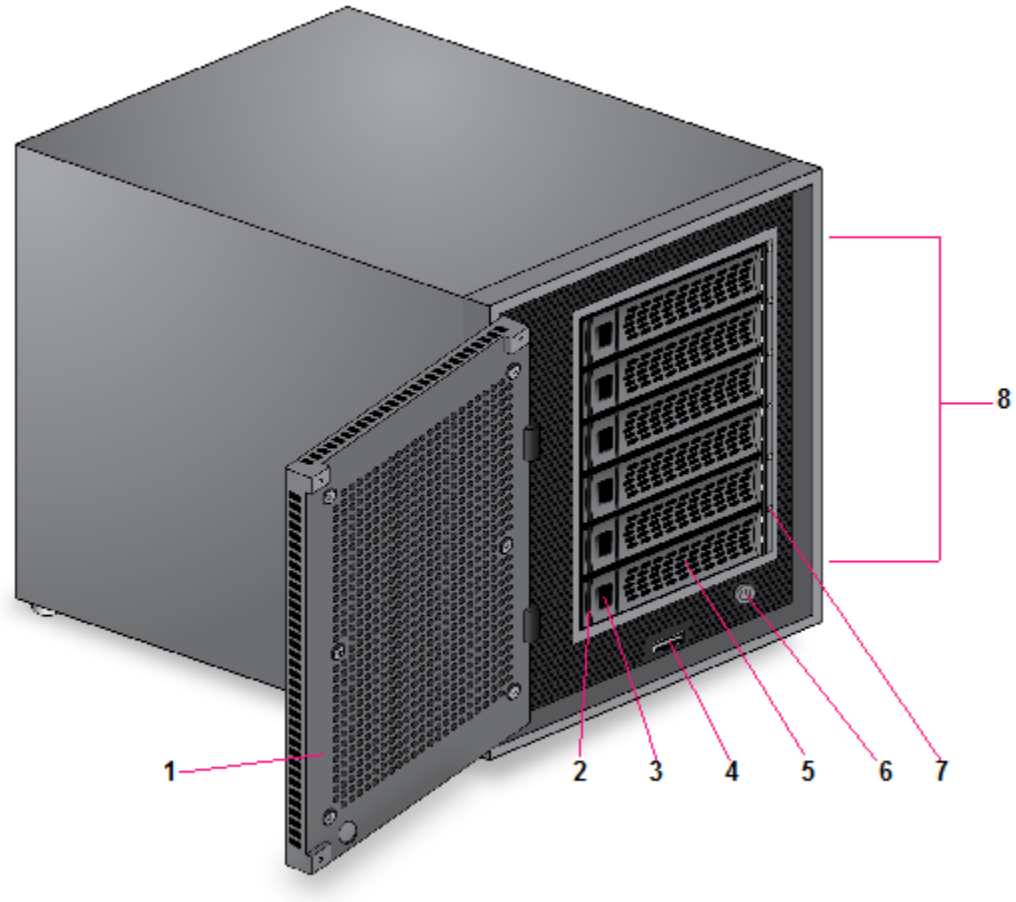


Figure 37. ReadyNAS 516 drive bays

1. Drive bay door
2. Disk tray release latch
3. Recessed disk tray handle lock
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 the ReadyNAS 516.

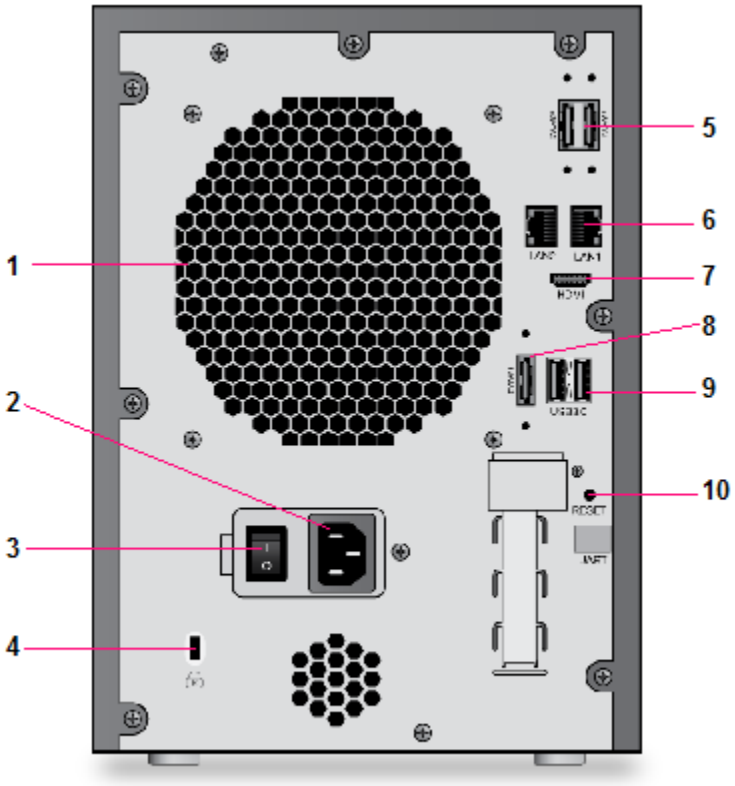


Figure 38. ReadyNAS 516 rear panel

1. Exhaust fan
2. Power cable socket
3. Power switch
4. Kensington lock
5. eSATA ports
6. LAN ports with LED status indicators
7. HDMI port (currently not supported)
8. eSATA 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 12. ReadyNAS 516 indicator descriptions

Indicator	Description
Disk LEDs	A disk LED next to each drive bay indicates the status of the disk inside. The disk LEDs indicate these states: • **Solid blue**. Power is on and the disk is operating normally. • **Blinking blue**. The disk is active. • **Solid red**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. No disk is present.
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: • **Green on, amber off**. 1000 Mbps connection speed, no activity. • **Green blinking, amber off**. 1000 Mbps connection speed, activity. • **Green off, amber on**. 10 Mbps or 100 Mbps connection speed, no activity. • **Green off, amber blinking**. 10 Mbps or 100 Mbps connection speed, activity. • **Green off, amber off**. No connection.
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 the status display screen, activate the proximity sensor, press the touch pad, press the **OK** button, or press the **Power** 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 must shut down the system, use one of the preferred shutdown methods whenever possible.

Power On

When you connect the system to a power supply and the **Power** switch is in the On position or the system recovers from a power outage and the **Power** switch is in the On position, the following occurs:

- The system automatically powers on if you enabled the Wake on LAN (WoL) feature or scheduled the system to automatically power on or off.
- The system returns to its last state if the Wake on LAN (WoL) feature is disabled and you did not schedule the system to automatically power on or off:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

1. If the status display screen is not lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      The status display screen wakes.
   b. Press the **Power** button a second time.
      Instructions for graceful shutdown display on the status display screen.
   c. Press the **Power** button a third time.
      The system shuts down gracefully.
2. If the status display screen is lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      Instructions for graceful shutdown display on the status display screen.
   b. 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 five 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, during which all LEDs blink simultaneously.

  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-RAID.

  - 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 a NETGEAR technical support representative instructs you to do so.
- **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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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 touch pad 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.

NETGEAR ReadyNAS 524X

14

This chapter provides an overview of the physical features of the ReadyNAS 524X and includes the following sections:

Front and Side Panels

The following figure shows the front and side panels of the ReadyNAS 524X.

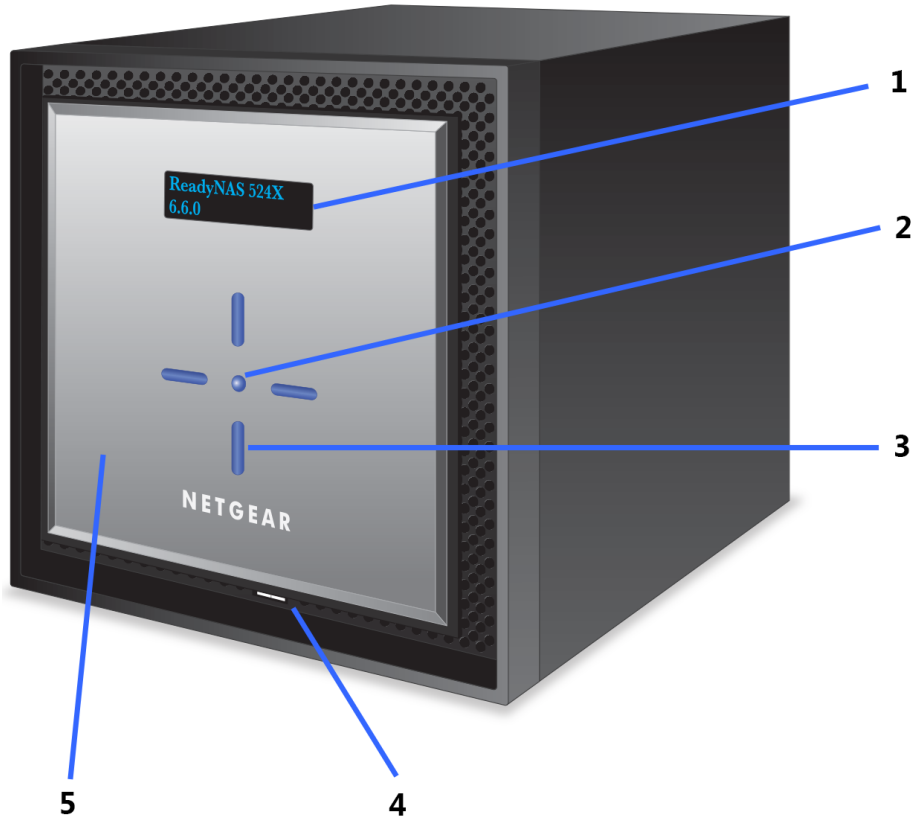


Figure 39. ReadyNAS 524X front and side panels

1. Status and menu display screen
2. OK button
3. Four buttons (Up, Down, Left, Right) and backlights
4. USB 3.0 port
5. Drive bay door

Drive Bays

The following figure shows the drive bays of ReadyNAS 524X.

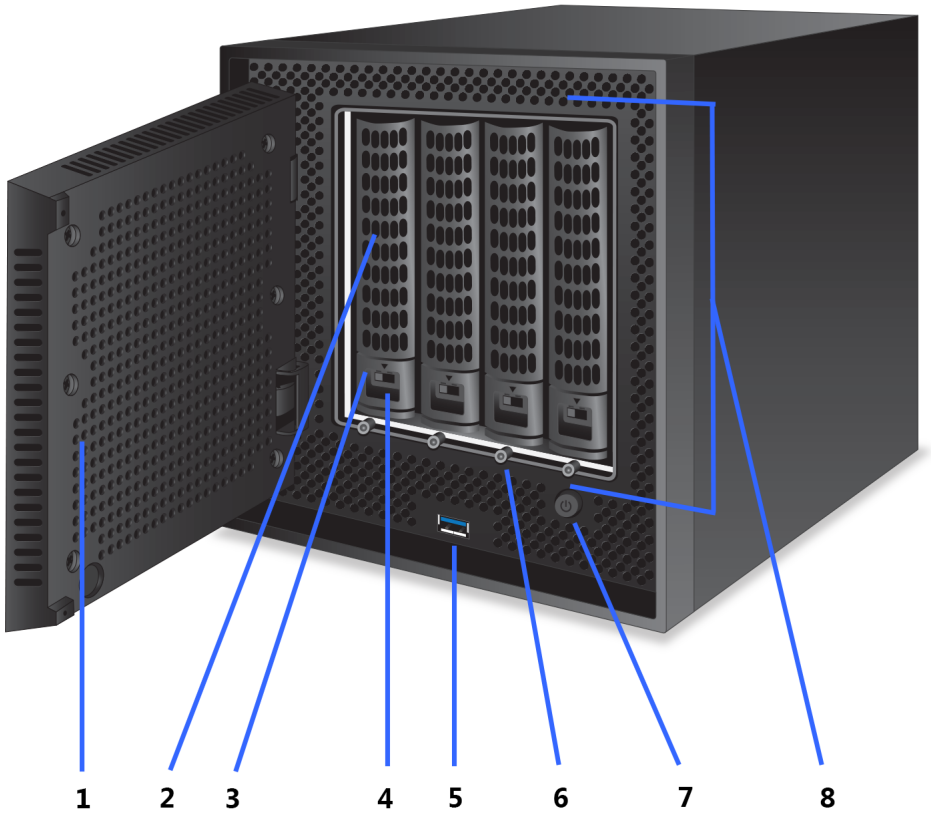


Figure 40. ReadyNAS 524X drive bays

1. Drive bay door
2. Disk tray handle
3. Disk tray release latch
4. Recessed disk tray handle lock
5. USB 3.0 port
6. Disk LED
7. Power button
8. Drive bays

Rear Panel

The following figure shows the rear panel of the ReadyNAS 524X.

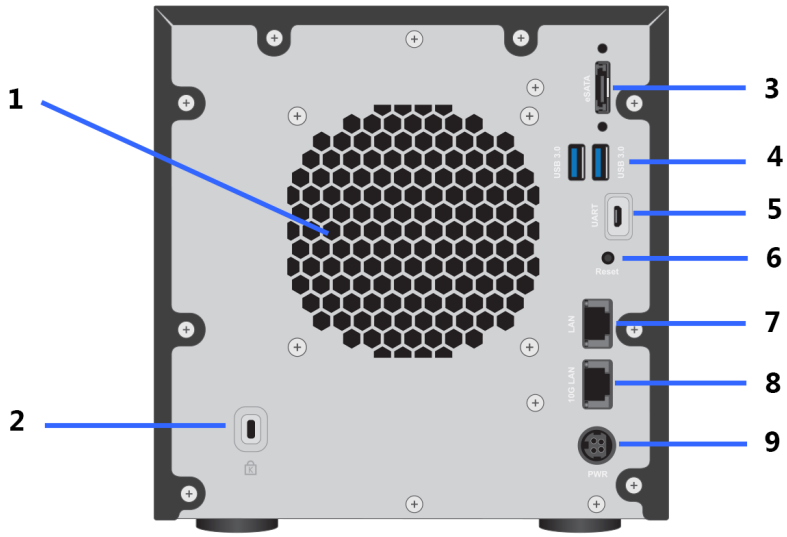


Figure 41. Rear panel ReadyNAS 524X

1. Exhaust fan
2. Kensington lock
3. eSATA port
4. USB 3.0 ports
5. Micro USB console connector (marked as UART)
6. Reset button
7. 1 GbE LAN port with LED status indicators
8. 10 GbE LAN port with LED status indicators
9. Power cable socket

Status Information

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

Table 13. Indicator descriptions ReadyNAS 524X

Indicator	Description
Front panel 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 the status display screen, press any button on the front panel. If the storage system reports an abnormal operation or error, the status display screen stays on.
Drive bay disk LEDs	A disk LED next to each drive bay indicates the status of the disk inside. The disk LEDs indicate these states: • **Solid blue**. Power is on and the disk is operating normally. • **Blinking blue**. The disk is active. • **Solid red**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. No disk is present.

Table 13. Indicator descriptions ReadyNAS 524X (Continued)

Indicator	Description
Rear panel 1G Ethernet LAN port LEDs	Two LED status indicators are built into each 1G Ethernet port. One LED is a bicolor LED that can light solid amber or solid green and indicates the port speed. The other LED is green and indicates the link (solid green) and activity (blinking green). These LEDs indicate port speed and activity as follows: • **Bicolor LED green, green LED solid**. 1 Gbps connection speed, no activity. • **Bicolor LED green, green LED blinking**. 1 Gbps connection speed, activity. • **Bicolor LED amber, green LED solid**. 100 Mbps connection speed, no activity. • **Bicolor LED amber, green LED blinking**. 100 Mbps connection speed, activity. • **Bicolor LED off, green LED off**. Either no connection or 10 Mbps connection without activity. • **Bicolor LED off, green LED blinking.** 10 Mbps connection, activity.
Rear panel 10G Ethernet LAN port LEDs	Two LED status indicators are built into each 10G Ethernet port. One LED is a bicolor LED that can light solid amber or solid green and indicates the port speed. The other LED is green and indicates the link (solid green) and activity (blinking green). These LEDs indicate port speed and activity as follows: • **Bicolor LED green, green LED solid**. 1 Gbps connection speed, no activity. • **Bicolor LED green, green LED blinking**. 1 Gbps connection speed, activity. • **Bicolor LED amber, green LED solid**. 10 Gbps connection speed, no activity. • **Bicolor LED amber, green LED blinking**. 10 Gbps connection speed, activity. • **Bicolor LED off, green LED off**. No connection.

Power On and Shut Down

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

Power On

When you connect the system to a power supply or the system recovers from a power outage, the system returns to its last state:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

1. If the status display screen is not lit, do the following:

   a. Press the **Power** button on the front panel of the system.
   The status display screen wakes.

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

   c. Press the **Power** button a third time.
   The system shuts down gracefully.

2. If the status display screen is lit, do the following:

   a. Press the **Power** button on the front panel of the system.
   Instructions for graceful shutdown display on the status display screen.

   b. 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 five 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, during which all LEDs blink simultaneously.

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-RAID.

- 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 IP 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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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 **Up** and **Down** buttons on the front panel 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.

NETGEAR ReadyNAS 526X and 626X 15

This chapter provides an overview of the physical features of the ReadyNAS 526X and 626X and includes the following sections:

Front and Side Panels

The following figure shows the front and side panels of the ReadyNAS 526X and 626X.

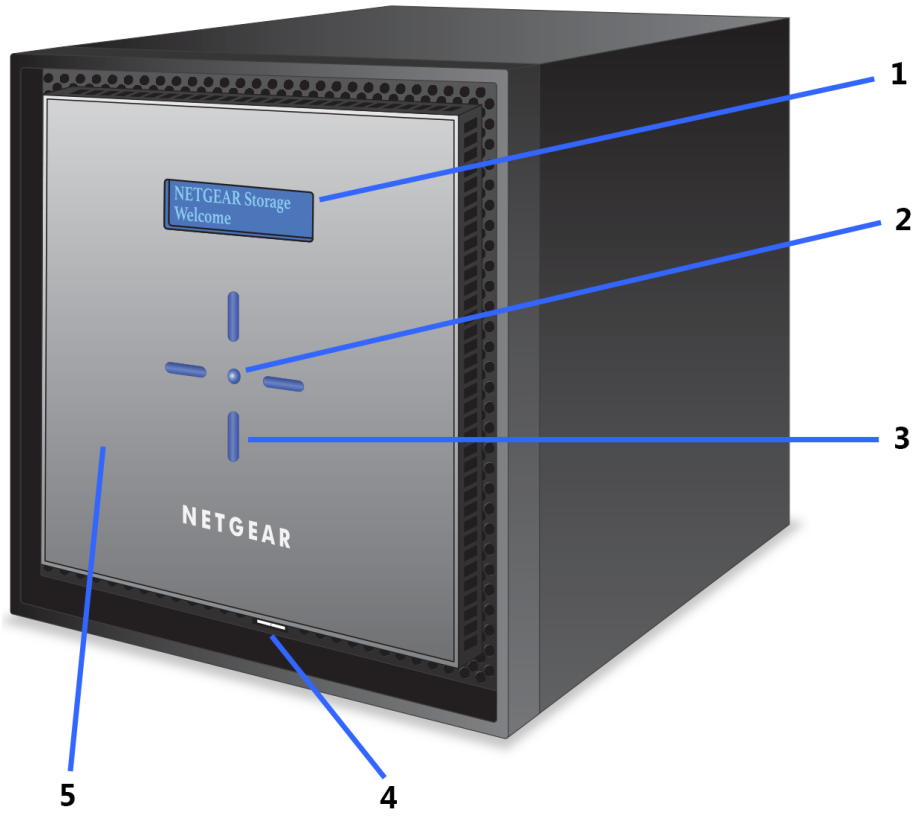


Figure 42. ReadyNAS 526X and 626X front and side panels

1. Status and menu display screen
2. OK button
3. Four buttons (Up, Down, Left, Right) and backlights
4. USB 3.0 port
5. Drive bay door

Drive Bays

The following figure shows the drive bays of ReadyNAS 526X AND 626X.

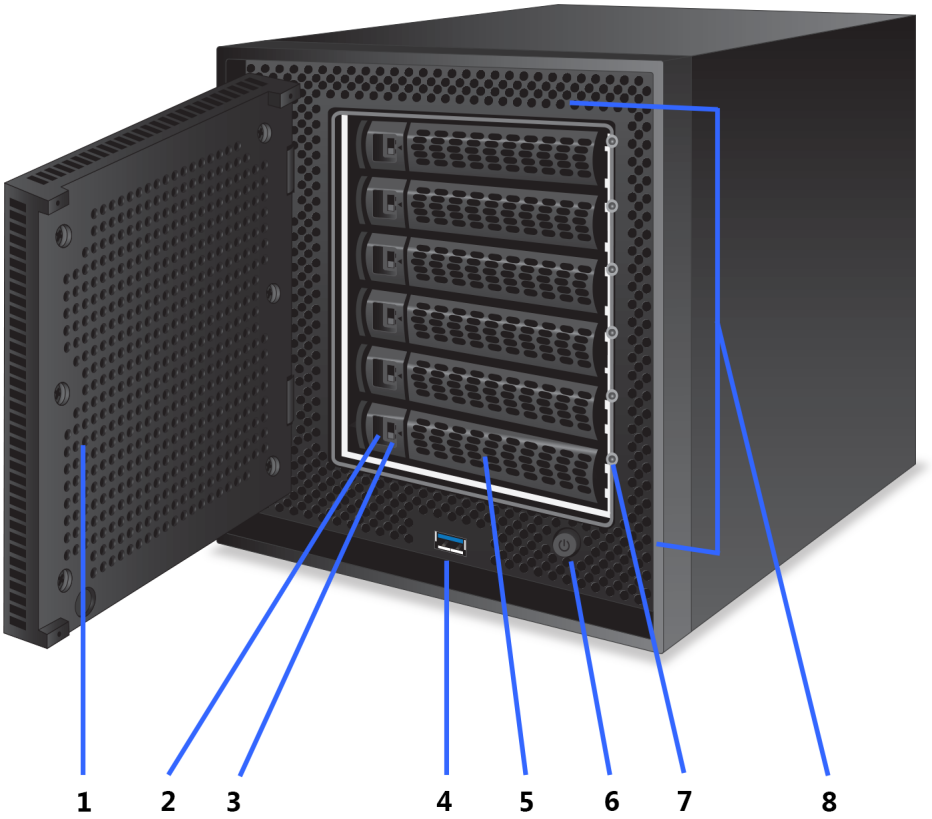


Figure 43. ReadyNAS 526X and 626X drive bays

1. Drive bay door
2. Disk tray release latch
3. Recessed disk tray handle lock
4. USB 3.0 port
5. Disk tray handle
6. Power button
7. Disk LED
8. Drive bays

Rear Panel ReadyNAS 526X

The following figure shows the rear panel of the ReadyNAS 526X.

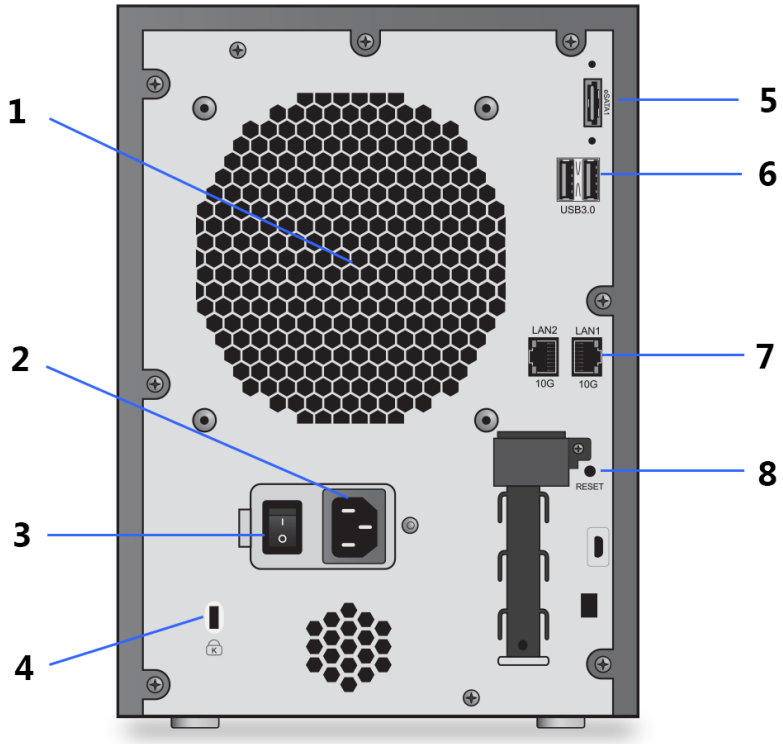


Figure 44. Rear panel ReadyNAS 526X

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

Rear Panel ReadyNAS 626X

The following figure shows the rear panel of the ReadyNAS 626X.

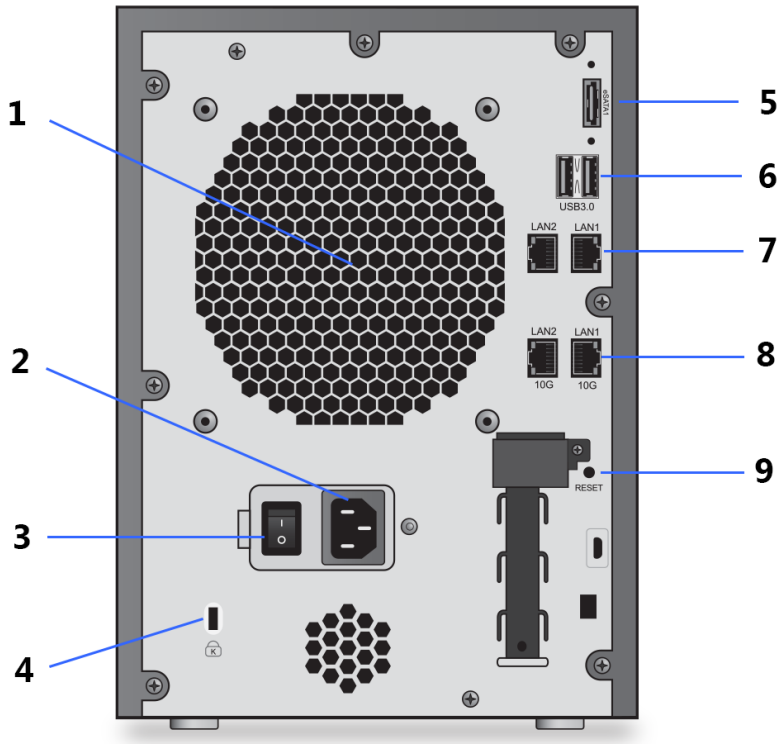


Figure 45. Rear panel ReadyNAS 626X

1. Exhaust fan
2. Power cable socket
3. Power switch
4. Kensington lock
5. eSATA port
6. USB 3.0 ports
7. 1 GbE LAN ports with LED status indicators
8. 10 GbE LAN ports with LED status indicators
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 14. Indicator descriptions ReadyNAS 526X and 626X

Indicator	Description
Front panel 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 the status display screen, press any button on the front panel. If the storage system reports an abnormal operation or error, the status display screen stays on.
Drive bay disk LEDs	A disk LED next to each drive bay indicates the status of the disk inside. The disk LEDs indicate these states: • **Solid blue**. Power is on and the disk is operating normally. • **Blinking blue**. The disk is active. • **Solid red**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. No disk is present.

Table 14. Indicator descriptions ReadyNAS 526X and 626X (Continued)

Indicator	Description
Model RN626X *only*: Rear panel 1G Ethernet LAN port LEDs	Two LED status indicators are built into each 1G Ethernet port. One LED is a bicolor LED that can light solid amber or solid green and indicates the port speed. The other LED is green and indicates the link (solid green) and activity (blinking green). These LEDs indicate port speed and activity as follows: • **Bicolor LED green, green LED solid**. 1 Gbps connection speed, no activity. • **Bicolor LED green, green LED blinking**. 1 Gbps connection speed, activity. • **Bicolor LED amber, green LED solid**. 100 Mbps connection speed, no activity. • **Bicolor LED off, green LED off**. Either no connection or 10 Mbps connection without activity. • **Bicolor LED off, green LED blinking.** 10 Mbps connection, activity.
Rear panel 10G Ethernet LAN port LEDs	Two LED status indicators are built into each 10G Ethernet port. One LED is a bicolor LED that can light solid amber or solid green and indicates the port speed. The other LED is green and indicates the link (solid green) and activity (blinking green). These LEDs indicate port speed and activity as follows: • **Bicolor LED green, green LED solid**. 1 Gbps connection speed, no activity. • **Bicolor LED green, green LED blinking**. 1 Gbps connection speed, activity. • **Bicolor LED amber, green LED solid**. 10 Gbps connection speed, no activity. • **Bicolor LED amber, green LED blinking**. 10 Gbps connection speed, activity. • **Bicolor LED off, green LED off**. No connection.

Power On and Shut Down

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

Power On

When you connect the system to a power supply and the **Power** switch is in the On position or the system recovers from a power outage and the **Power** switch is in the On position, the following occurs:

- The system automatically powers on if you enabled the Wake on LAN (WoL) feature or scheduled the system to automatically power on or off.
- The system returns to its last state if the Wake on LAN (WoL) feature is disabled and you did not schedule the system to automatically power on or off:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

1. If the status display screen is not lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      The status display screen wakes.
   b. Press the **Power** button a second time.
      Instructions for graceful shutdown display on the status display screen.
   c. Press the **Power** button a third time.
      The system shuts down gracefully.
2. If the status display screen is lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      Instructions for graceful shutdown display on the status display screen.
   b. 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 five 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, during which all LEDs blink simultaneously.

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-RAID.

  - 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 IP 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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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 **Up** and **Down** buttons on the front panel 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.

NETGEAR ReadyNAS 528X and 628X 16

This chapter provides an overview of the physical features of the ReadyNAS 528X and 628X and includes the following sections:

Front and Side Panels

The following figure shows the front and side panels of the ReadyNAS 528X and 628X.

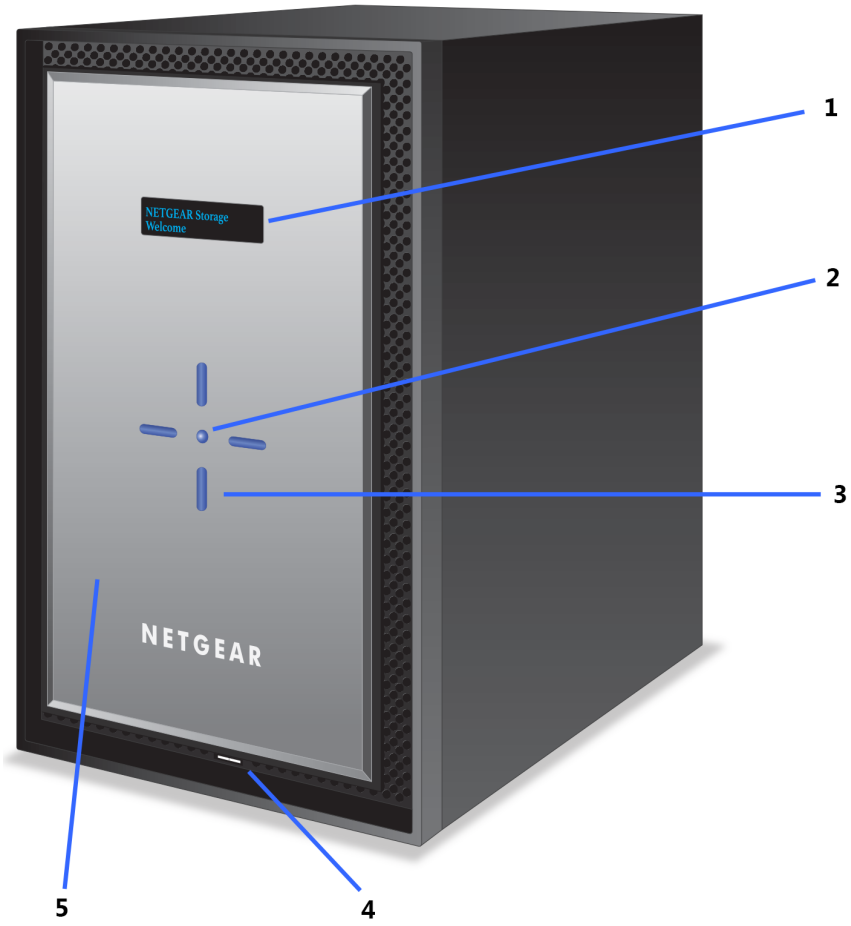


Figure 46. ReadyNAS 528X and 628X front and side panels

1. Status and menu display screen
2. OK button
3. Four buttons (Up, Down, Left, Right) and backlights
4. USB 3.0 port
5. Drive bay door

Drive Bays

The following figure shows the drive bays of ReadyNAS 528X AND 628X.

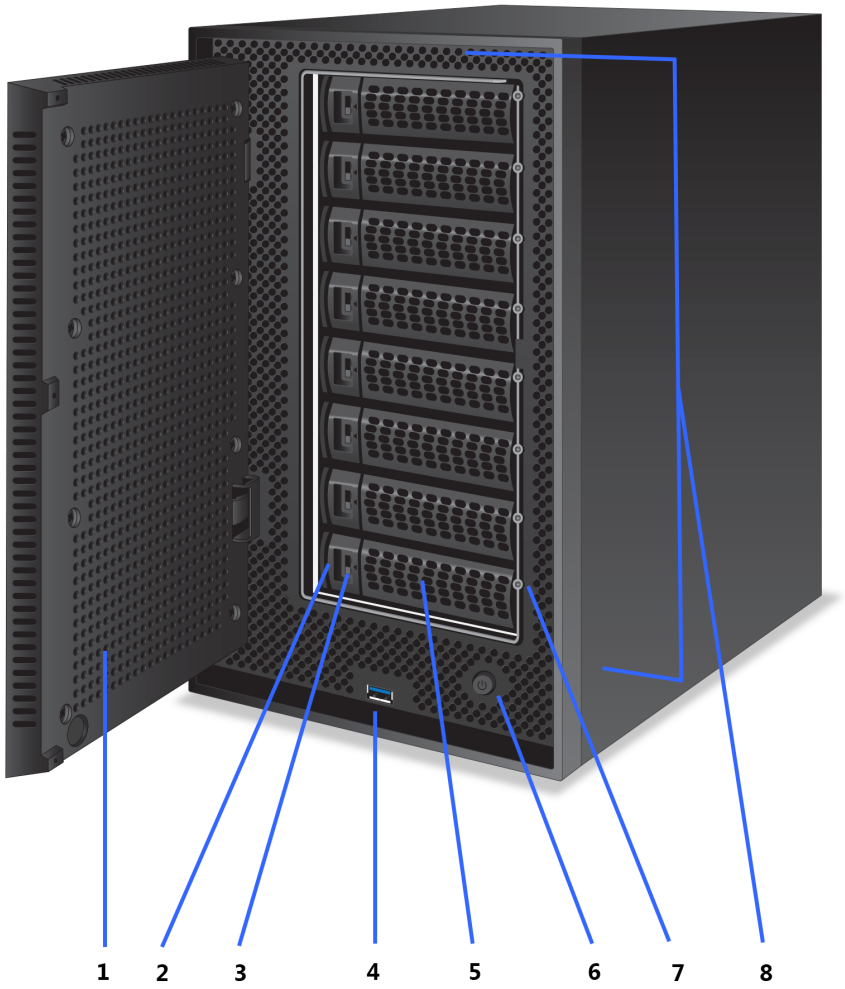


Figure 47. ReadyNAS 528X and 628X drive bays

1. Drive bay door
2. Disk tray release latch
3. Recessed disk tray handle lock
4. USB 3.0 port
5. Disk tray handle
6. Power button
7. Disk LED
8. Drive bays

Rear Panel ReadyNAS 528X

The following figure shows the rear panel of the ReadyNAS 528X.

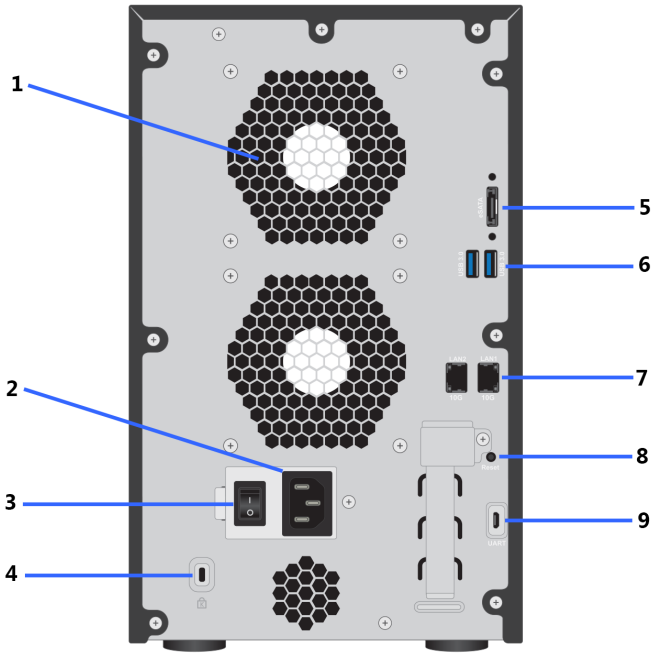


Figure 48. Rear panel ReadyNAS 528X

1. Exhaust fan
2. Power cable socket
3. Power switch
4. Kensington lock
5. eSATA port
6. USB 3.0 ports
7. 10 GbE LAN ports with LED status indicators
8. Reset button
9. Micro USB console connector (marked as UART)

Rear Panel ReadyNAS 628X

The following figure shows the rear panel of the ReadyNAS 628X.

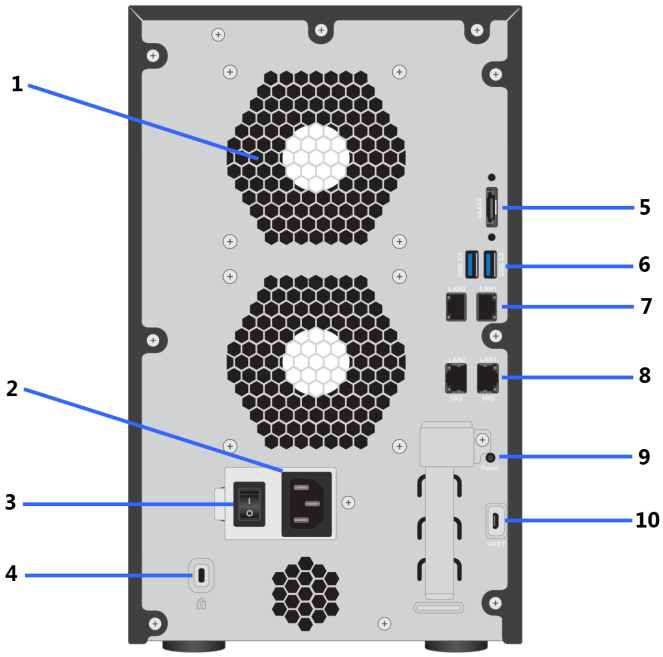


Figure 49. Rear panel ReadyNAS 628X

1. Exhaust fan
2. Power cable socket
3. Power switch
4. Kensington lock
5. eSATA port
6. USB 3.0 ports
7. 1 GbE LAN ports with LED status indicators
8. 10 GbE LAN ports with LED status indicators
9. Reset button
10. Micro USB console connector (marked as UART)

Status Information

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

Table 15. Indicator descriptions ReadyNAS 528X and 628X

Indicator	Description
Front panel 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 the status display screen, press any button on the front panel. If the storage system reports an abnormal operation or error, the status display screen stays on.
Drive bay disk LEDs	A disk LED next to each drive bay indicates the status of the disk inside. The disk LEDs indicate these states: • **Solid blue**. Power is on and the disk is operating normally. • **Blinking blue**. The disk is active. • **Solid red**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. No disk is present.

Table 15. Indicator descriptions ReadyNAS 528X and 628X (Continued)

Indicator	Description
Model RN628X *only*: Rear panel 1G Ethernet LAN port LEDs	Two LED status indicators are built into each 1G Ethernet port. One LED is a bicolor LED that can light solid amber or solid green and indicates the port speed. The other LED is green and indicates the link (solid green) and activity (blinking green). These LEDs indicate port speed and activity as follows: • **Bicolor LED green, green LED solid**. 1 Gbps connection speed, no activity. • **Bicolor LED green, green LED blinking**. 1 Gbps connection speed, activity. • **Bicolor LED amber, green LED solid**. 100 Mbps connection speed, no activity. • **Bicolor LED off, green LED off**. Either no connection or 10 Mbps connection without activity. • **Bicolor LED off, green LED blinking.** 10 Mbps connection, activity.
Rear panel 10G Ethernet LAN port LEDs	Two LED status indicators are built into each 10G Ethernet port. One LED is a bicolor LED that can light solid amber or solid green and indicates the port speed. The other LED is green and indicates the link (solid green) and activity (blinking green). These LEDs indicate port speed and activity as follows: • **Bicolor LED green, green LED solid**. 1 Gbps connection speed, no activity. • **Bicolor LED green, green LED blinking**. 1 Gbps connection speed, activity. • **Bicolor LED amber, green LED solid**. 10 Gbps connection speed, no activity. • **Bicolor LED amber, green LED blinking**. 10 Gbps connection speed, activity. • **Bicolor LED off, green LED off**. No connection.

Power On and Shut Down

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

Power On

When you connect the system to a power supply and the **Power** switch is in the On position or the system recovers from a power outage and the **Power** switch is in the On position, the system returns to its last state:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

1. If the status display screen is not lit, do the following:

   a. Press the **Power** button on the front panel of the system.
   The status display screen wakes.

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

   c. Press the **Power** button a third time.
   The system shuts down gracefully.

2. If the status display screen is lit, do the following:

   a. Press the **Power** button on the front panel of the system.
   Instructions for graceful shutdown display on the status display screen.

   b. 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 five 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, during which all LEDs blink simultaneously.

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-RAID.

- 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 IP 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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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 **Up** and **Down** buttons on the front panel 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.

NETGEAR ReadyNAS 716X 17

This chapter provides an overview of the physical features of the ReadyNAS 716X and includes the following sections:

Front and Side Panels

The following figure shows the front and side panels of the ReadyNAS 716X.

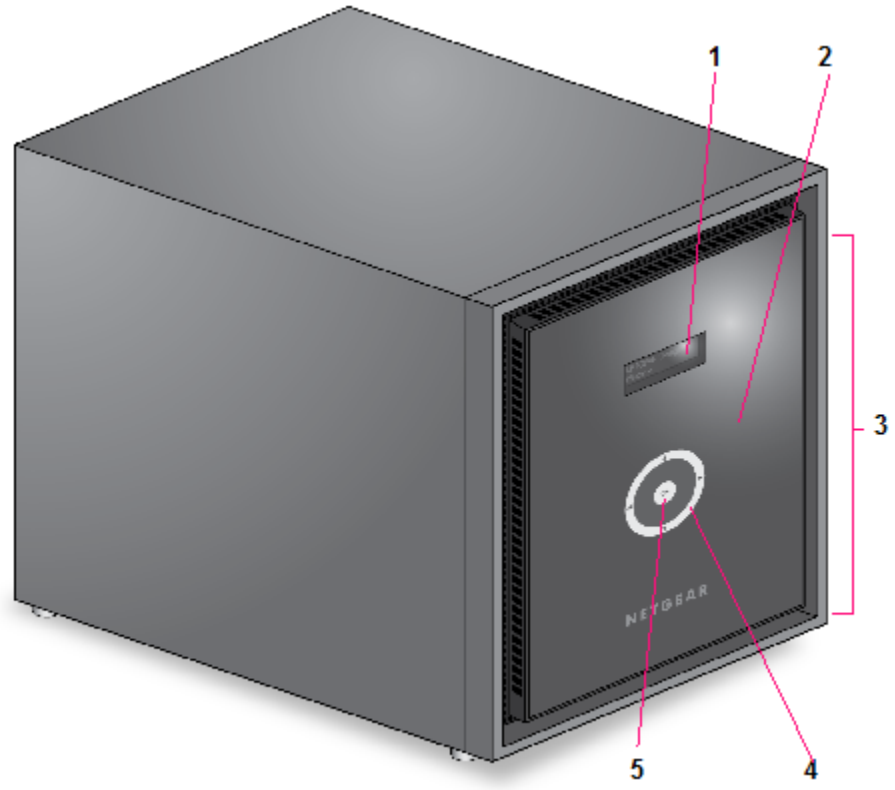


Figure 50. ReadyNAS 716X front and side panels

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

Drive Bays

The following figure shows the drive bays of ReadyNAS 716X.

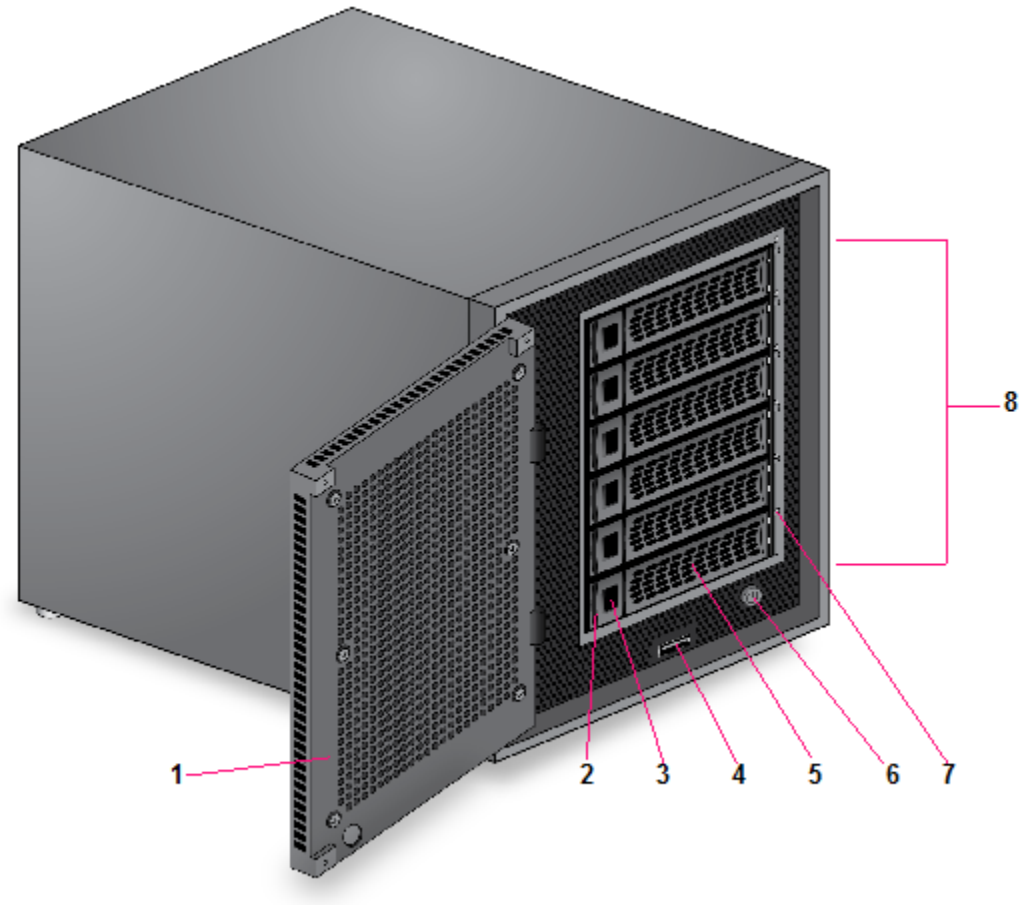


Figure 51. ReadyNAS 716X drive bays

1. Drive bay door
2. Disk tray release latch
3. Recessed disk tray handle lock
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 716X.

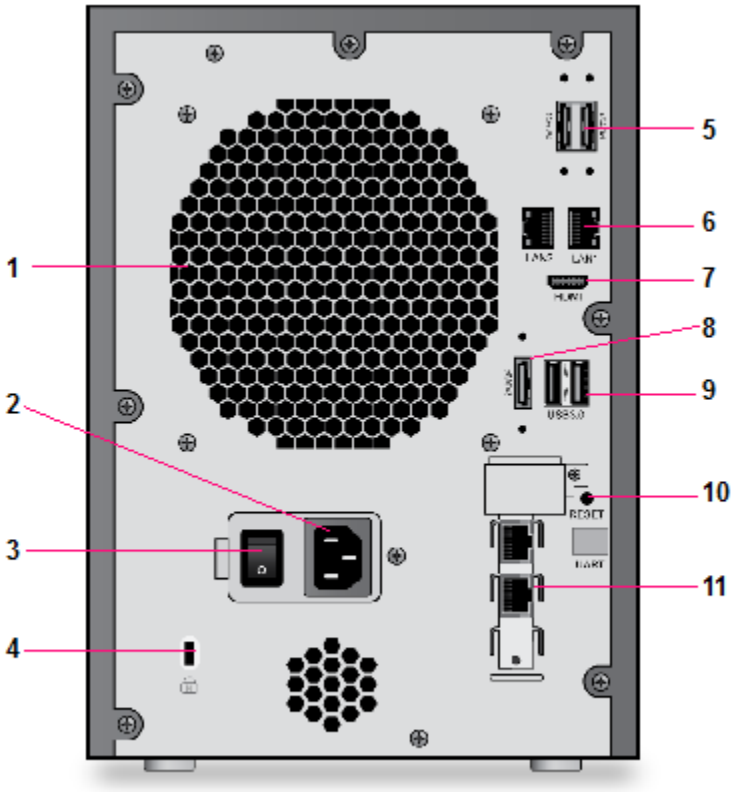


Figure 52. ReadyNAS 716X rear panel

1. Exhaust fan
2. Power cable socket
3. Power switch
4. Kensington lock
5. eSATA ports
6. 1 Gb LAN ports with LED status indicators
7. HDMI port
8. eSATA port
9. USB 3.0 ports
10. Reset button
11. 10 Gb LAN ports with LED status indicators

Status Information

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

Table 16. ReadyNAS 716X indicator descriptions

Indicator	Description
Disk LEDs	A disk LED next to each drive bay indicates the status of the disk inside. The disk LEDs indicate these states: • **Solid blue**. Power is on and the disk is operating normally. • **Blinking blue**. The disk is active. • **Solid red**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. No disk is present.
Rear panel Ethernet port LEDs (1 Gb)	Two LED status indicators are built into this port, one green and one amber. They indicate port speed and activity as follows: • **Green on, amber off**. 1000 Mbps connection speed, no activity. • **Green blinking, amber off**. 1000 Mbps connection speed, activity. • **Green off, amber on**. 10 Mbps or 100 Mbps connection speed, no activity. • **Green off, amber blinking**. 10 Mbps or 100 Mbps connection speed, activity. • **Green off, amber off**. No connection.

Table 16. ReadyNAS 716X indicator descriptions (Continued)

Indicator	Description
Rear panel Ethernet port LEDs (10 Gb)	Two LED status indicators are built into this port. They indicate port speed and activity as follows: • LED 1 **Off**. No link. **Solid green**. Linked. **Blinking green**. Activity. • LED 2 **Solid green**. 10 GbE. **Solid yellow**. 1 GbE. **Off**. 100 Mbps.
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 the status display screen, activate the proximity sensor, press the touch pad, press the **OK** button, or press the **Power** 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 must shut down the system, use one of the preferred shutdown methods whenever possible.

Power On

When you connect the system to a power supply and the **Power** switch is in the On position or the system recovers from a power outage and the **Power** switch is in the On position, the following occurs:

- The system automatically powers on if you enabled the Wake on LAN (WoL) feature or scheduled the system to automatically power on or off.
- The system returns to its last state if the Wake on LAN (WoL) feature is disabled and you did not schedule the system to automatically power on or off:

- If the system was powered on, the system automatically powers on again when the power supply is connected or power is restored.
- If the system was powered off, the system remains off when the power supply is connected or power is restored.
  In this situation, press the **Power** button on the front panel of the system to power on 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 *netgear.com/support/product/ReadyNAS_OS_6*.

To gracefully shut down your system using the Power button:

1. If the status display screen is not lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      The status display screen wakes.
   b. Press the **Power** button a second time.
      Instructions for graceful shutdown display on the status display screen.
   c. Press the **Power** button a third time.
      The system shuts down gracefully.
2. If the status display screen is lit, do the following:
   a. Press the **Power** button on the front panel of the system.
      Instructions for graceful shutdown display on the status display screen.
   b. 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 five 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, during which all LEDs blink simultaneously.

  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-RAID.

  - 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 four 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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 touch pad 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.

NETGEAR EDA 500

18

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

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 147.

A ReadyNAS cannot boot using the disks in an EDA 500. All disks in a RAID volume must be either in a ReadyNAS or in an EDA 500. A RAID volume cannot combine disks in a ReadyNAS with disks in an EDA 500.

You can add an EDA 500 to a ReadyNAS while the ReadyNAS is running, but you cannot remove the EDA while the ReadyNAS is running.

You can add and remove disks while an EDA 500 is in operation (hot swap). If an added disk has data on it, the data shows as an inactive volume. You need to destroy inactive volumes, which destroys all data in the volume, and create new volumes, before the space is available for use by the ReadyNAS.

Front and Side Panels

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

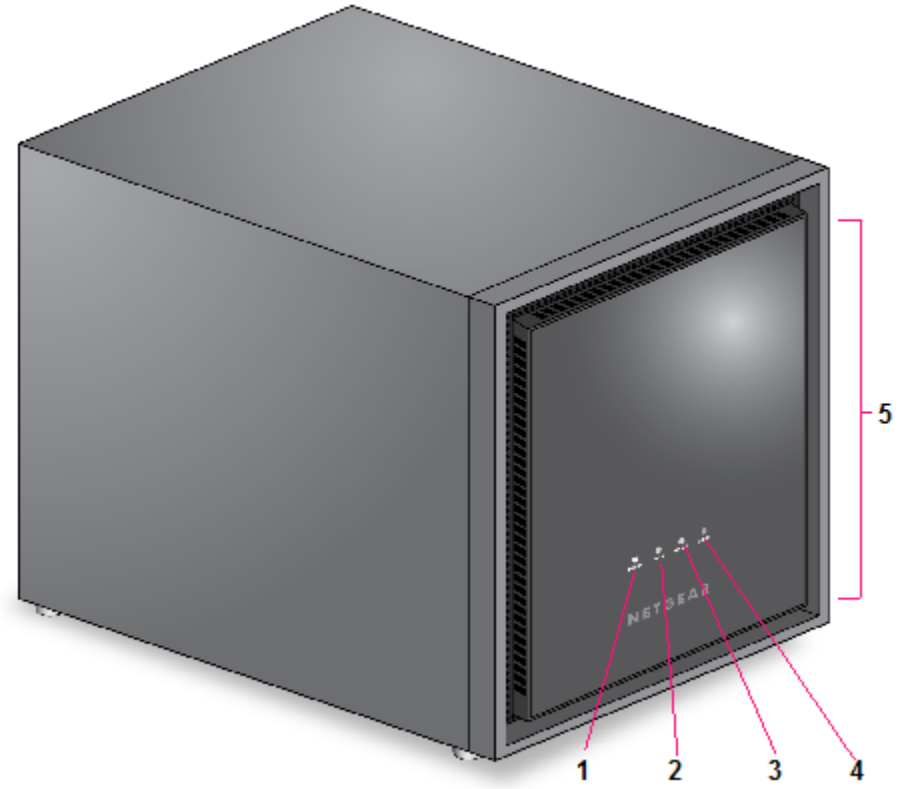


Figure 53. EDA 500 front and side panels

1. Power LED
2. eSATA LED
3. Volume LED
4. Alert LED
5. Drive bay door

Drive Bays

The following figure shows the drive bays of EDA 500.

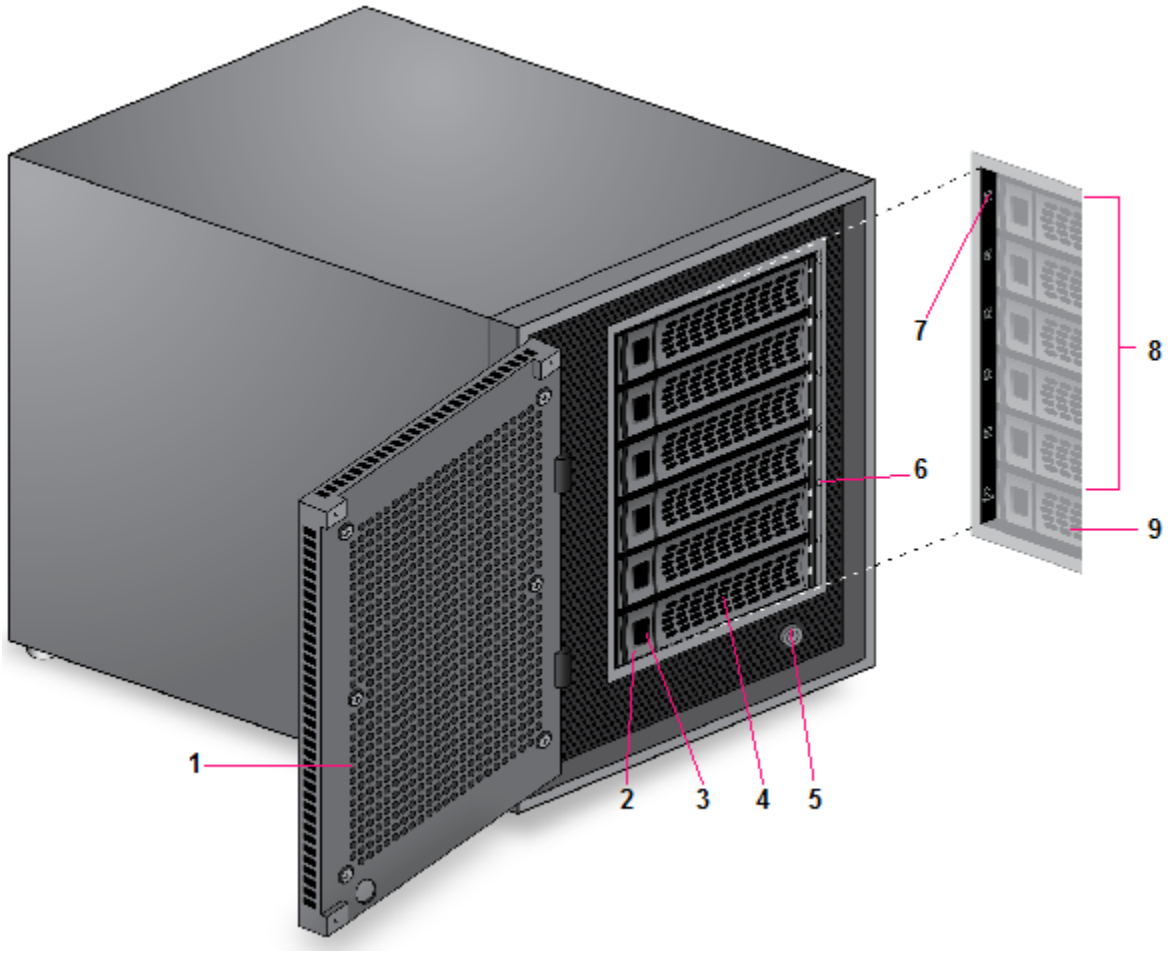


Figure 54. EDA 500 drive bays

1. Drive bay door
2. Disk tray release latch
3. Recessed disk tray handle lock
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.

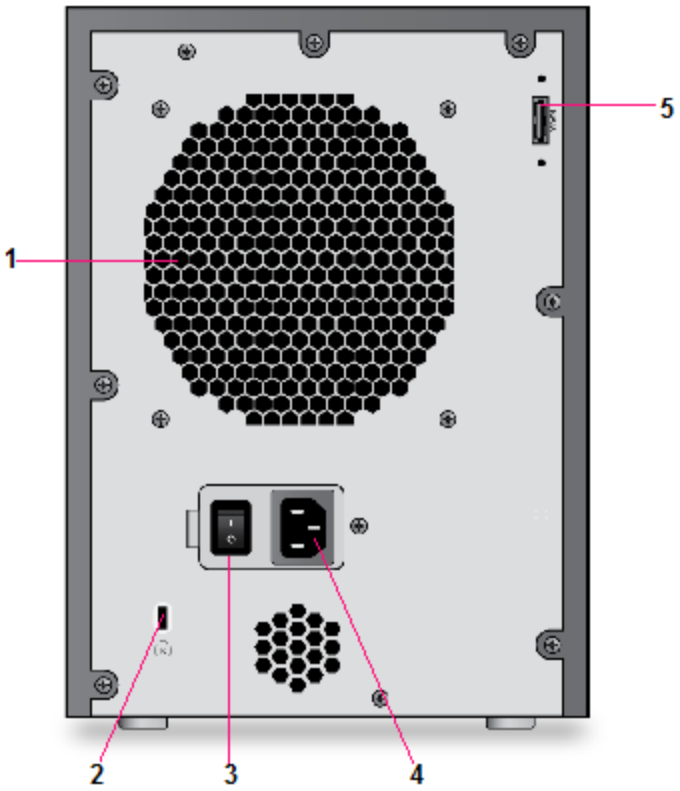


Figure 55. EDA 500 rear panel

1. Exhaust fan
2. Kensington lock
3. Power switch
4. Power cable socket
5. eSATA port

Status Information

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

Table 17. EDA 500 indicator descriptions

Indicator	Description
Power LED	The Power LED indicates these states: • **On**. Powered on. • **Off**. Powered off.
eSATA LED	The eSATA LED indicates these states: • **On**. The SATA link is established between the EDA 500 and a host. • **Off**. The SATA link is not established.
Volume LED	The Volume LED indicates these states: • **On**. The data volume or volumes are mounted by a host. • **Off**. The data volume or volumes are not mounted. You can safely disconnect the eSATA cable.
Alert LED	The Alert LED indicates these states: • **On**. The system needs attention. Use the local admin page to determine the problem. For more information, see the *ReadyNAS OS 6 Software Manual*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*. • **Off**. The system is healthy.
Disk LEDs	A disk LED next to each active drive bay indicates the status of the disk inside. (The cold spare drive bay has no LED.) The disk LEDs indicate these states: • **Solid blue**. Power is on and the disk is operating normally. • **Blinking blue**. The disk is active. • **Solid red**. The disk was removed, failed, or is resynchronizing. See the display screen for details. • **Off**. No disk is present.

Power On and Shut Down

This section describes how to power on and shut down your system. If you must 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 eSATA 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 *netgear.com/support/product/ReadyNAS_OS_6*.

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.

Disks

19

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 *netgear.com/support/product/ReadyNAS_OS_6*.

This chapter includes the following topics:

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.

Note For some disks, first remove the plastic mounting bracket from the disk tray before you mount the disk to the disk tray. After you mount the disk to the disk tray, use the screws to secure the disk to the disk tray.

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 147.

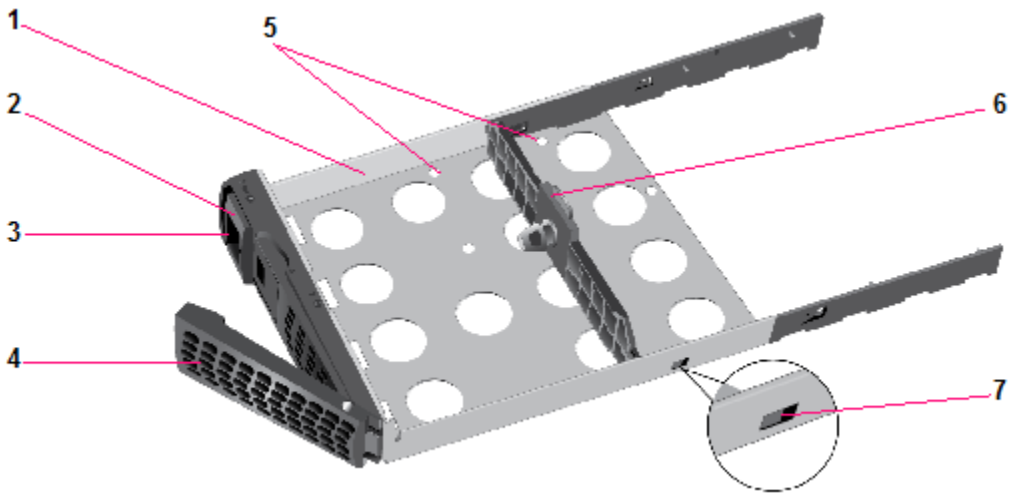


Figure 56. Standard disk tray

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

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.

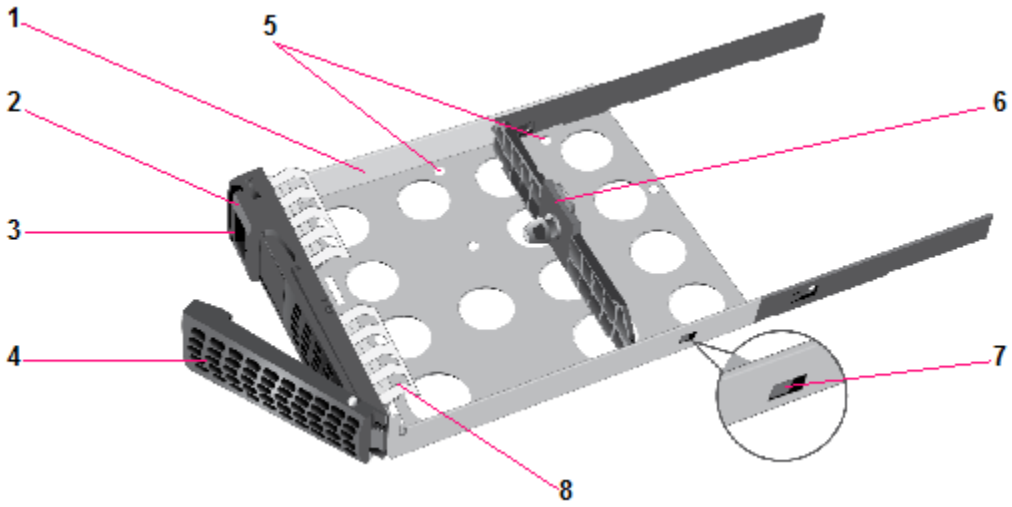


Figure 57. EDA 500 disk tray

1. Disk tray
2. Disk tray release latch
3. Recessed disk tray handle lock
4. Disk tray handle
5. Disk screw holes
6. Mounting bracket
7. Bracket lock
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 *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 *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 149.

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 disks.
   For more information, see *Add a Disk* on page 149.
3. Reset the system to its factory default settings.

WARNING:
This process erases all data and reformats all disks into a single X-RAID 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 149.

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 149.

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

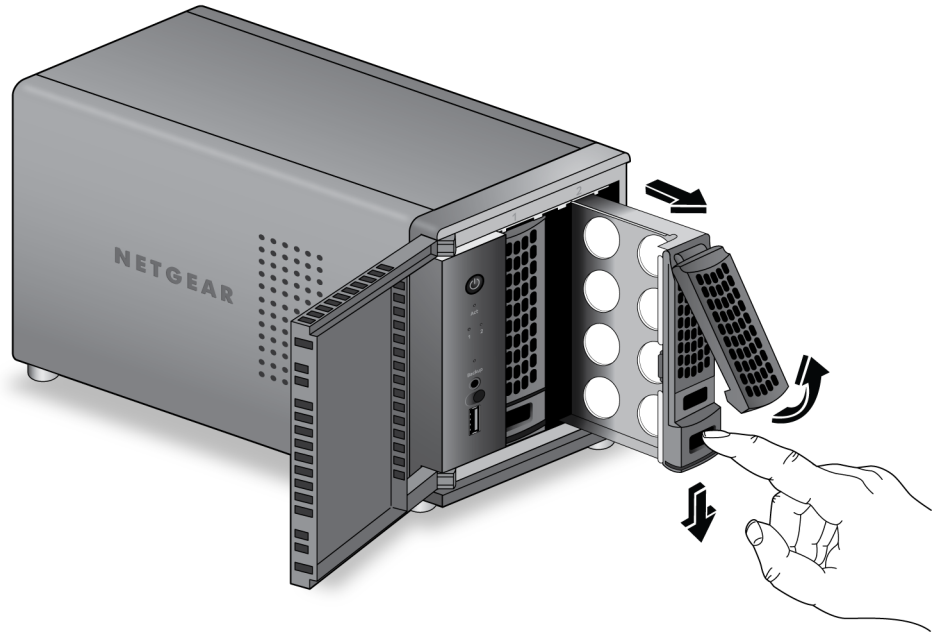
If you want to add a previously formatted disk to your storage system, see the instructions in *Previously Formatted Disks* on page 148.

Add a 3.5-Inch Disk

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

1. Determine whether you must 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 recessed handle lock to the unlocked position.

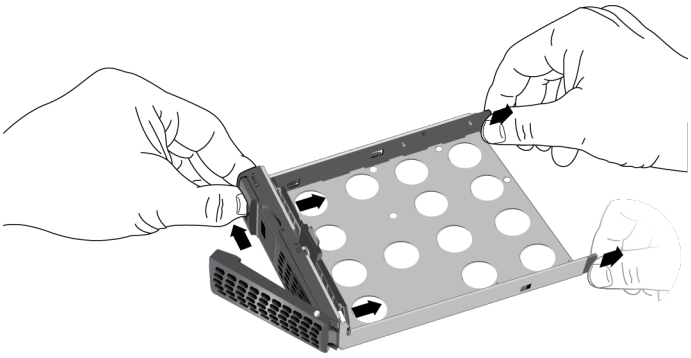
3. Press the disk tray release latch.



The disk tray handle pops out.

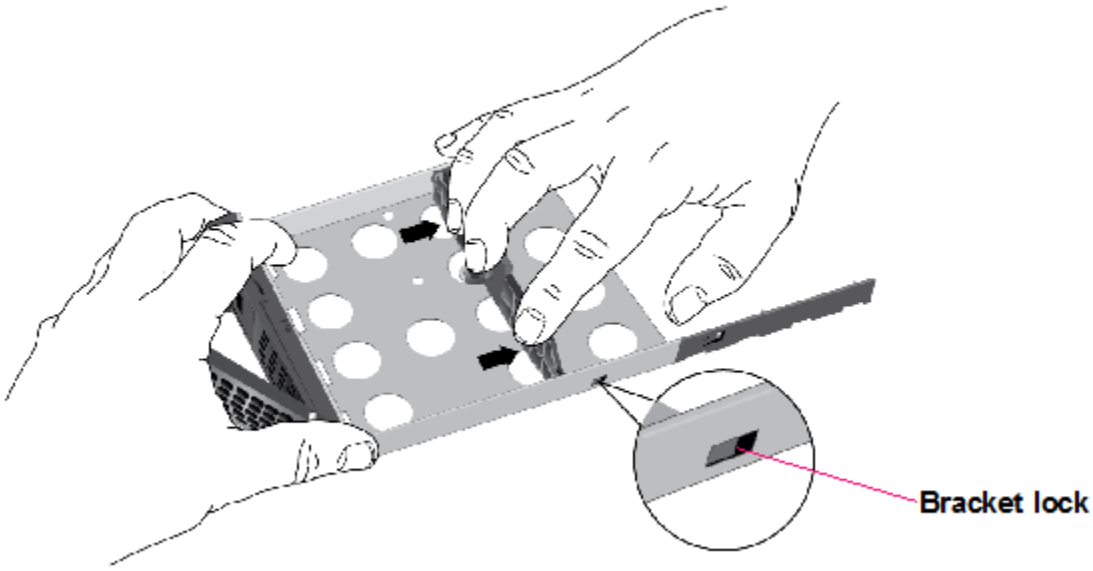
4. Pull out the disk tray.
5. Separate the mounting bracket from the disk tray:

   a. Press and hold the disk tray release latch.
   b. While holding the release latch, use your other hand to pull out one end of the mounting bracket and then the other until the ends extend slightly past the disk tray.



Make sure that the ends of the mounting bracket are even with each other.

c. Slide the bracket down the disk tray, keeping both sides of the bracket even with each other.

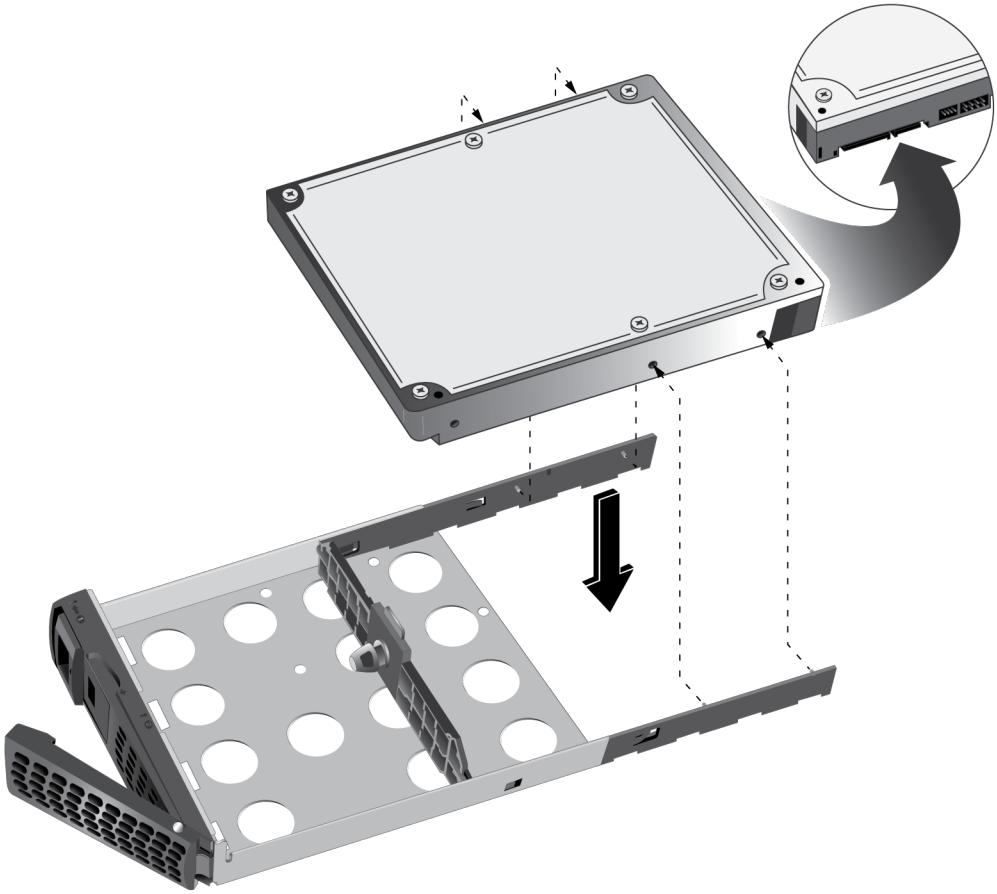


The mounting bracket stops when it hits the bracket lock.

The bracket lock prevents the mounting bracket from sliding all the way off 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 disk tray.



7. Push the mounting bracket and HDD 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.

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:

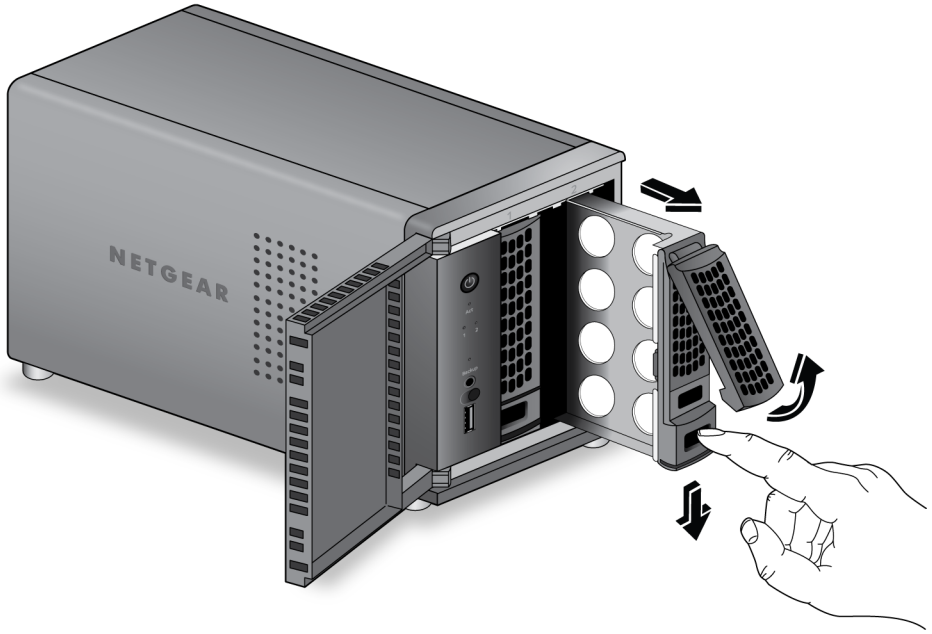
- If you are adding the disk to a system that uses X-RAID, the system automatically determines whether the disk is used for protection or storage. The new disk is incorporated in the background while you continue to use your system.
- If you are adding the disk to a system that uses Flex-RAID, the disk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

For more information about X-RAID, Flex-RAID, and using the local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*.

Add a 2.5-Inch Disk

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

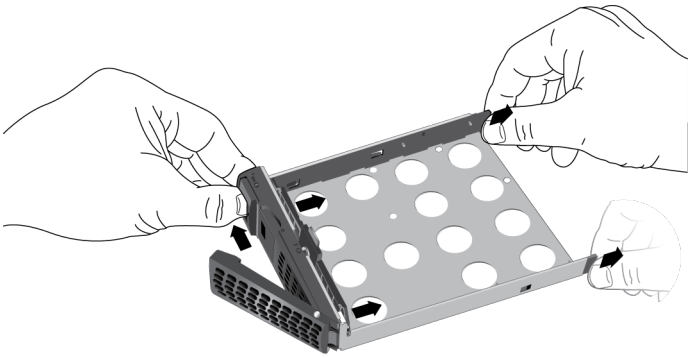
1. Determine whether you must shut down your system:
   - If you are adding disks to a diskless system, gracefully shut down the system.
     For information about how to gracefully shut down your system, see the Preferred Shutdown section of the chapter that describes your system.
   - If your system 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 recessed handle lock 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 from the disk tray:

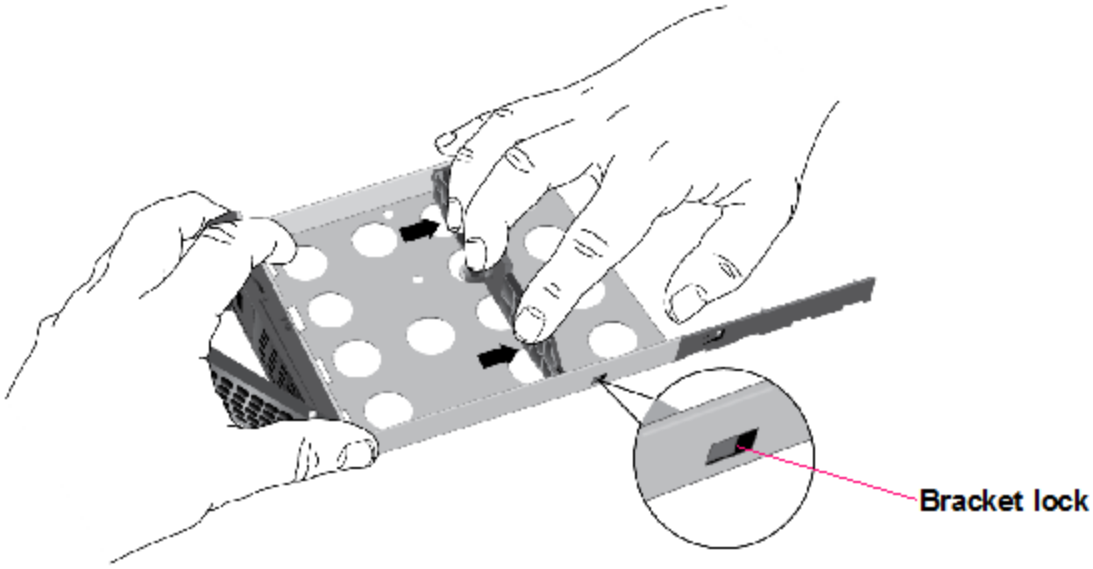
a. Press and hold the disk tray release latch.

b. While holding the release latch, use your other hand to pull out one end of the mounting bracket and then the other until the ends extend slightly past the disk tray.



Make sure that the ends of the mounting bracket are even with each other.

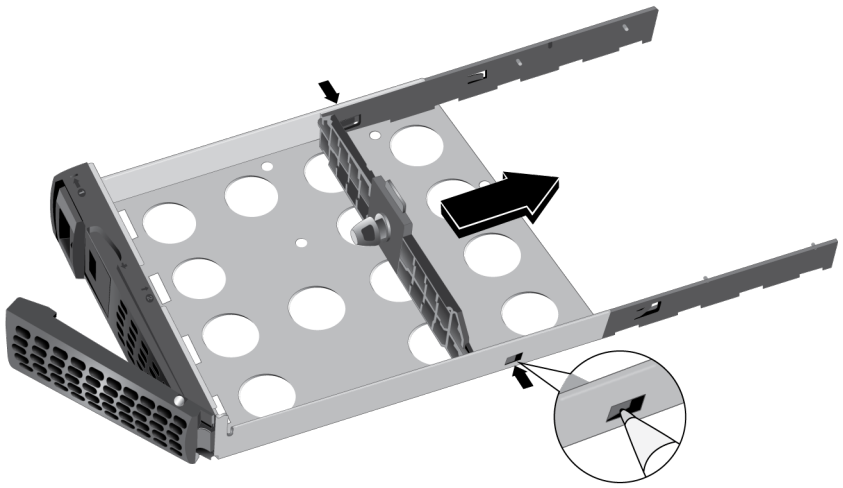
c. Slide the bracket down the disk tray, keeping both sides of the bracket even with each other.



The mounting bracket stops when it hits the bracket lock.

The bracket lock prevents the mounting bracket from sliding all the way off the disk tray.

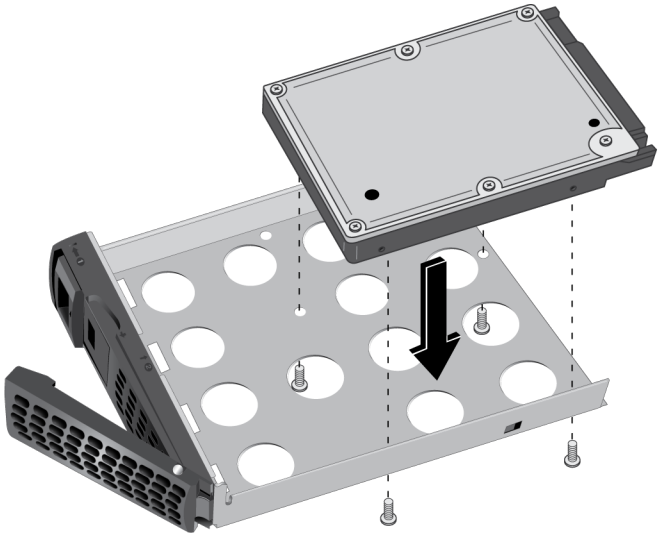
d. Push the mounting bracket out of each bracket lock using a pointed object, such as a pen.



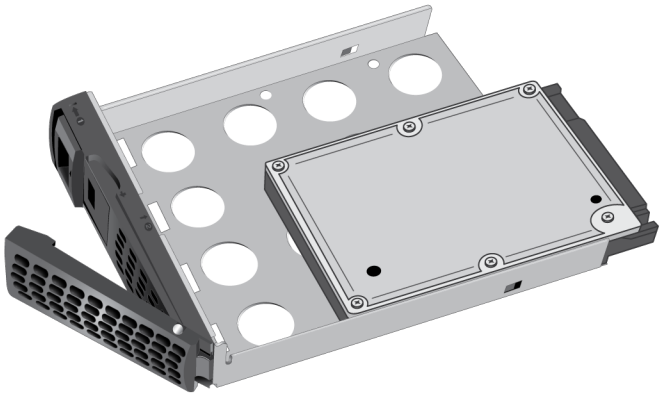
The mounting bracket is released from the bracket locks.

e. 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.



Make sure that the HDD or SSD is installed on the correct side of 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.

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-RAID, 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-RAID, Flex-RAID, and using the local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*.

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 set up 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, and using the local admin page, see the *ReadyNAS OS 6 Software Manual*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*.

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

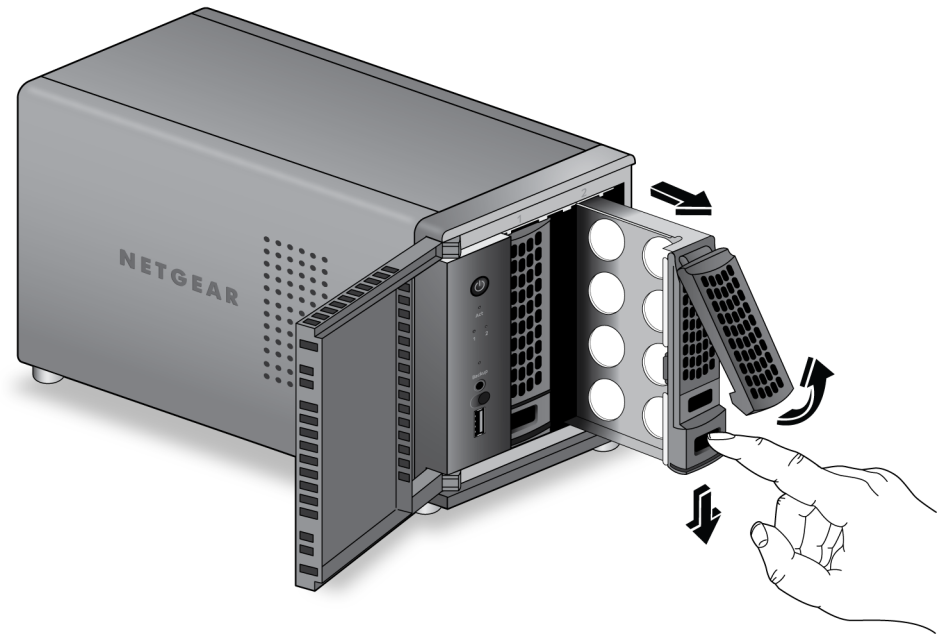
If you are replacing a disk with a previously formatted disk, see the instructions in *Previously Formatted Disks* on page 148.

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.

Replace a 3.5-Inch Disk

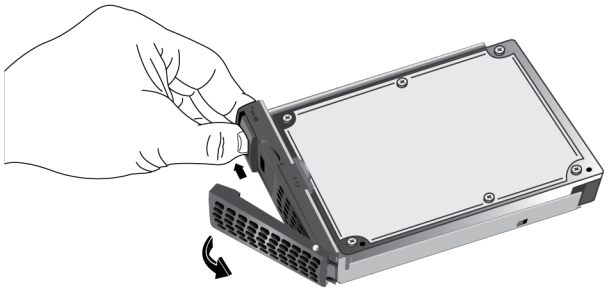
To replace a 3.5-inch hard disk drive (HDD):

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

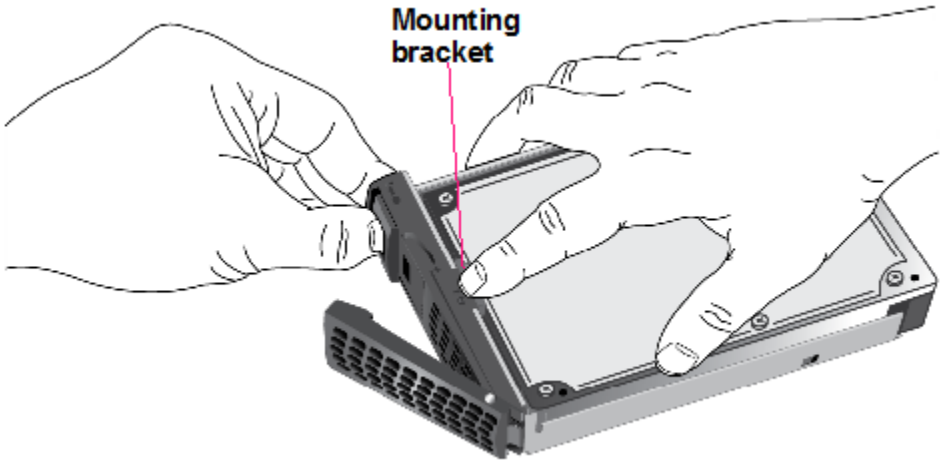


The disk tray handle pops out.

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

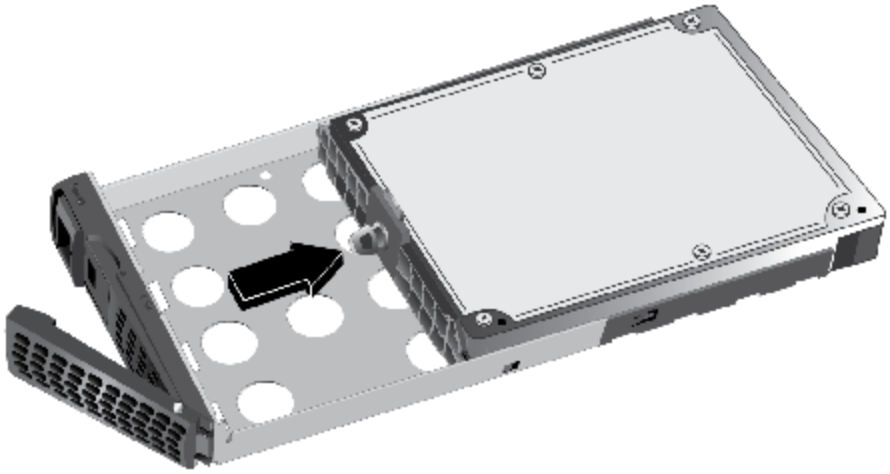


5. While holding the disk tray release latch, pull out the mounting bracket and slide the bracket down the tray.



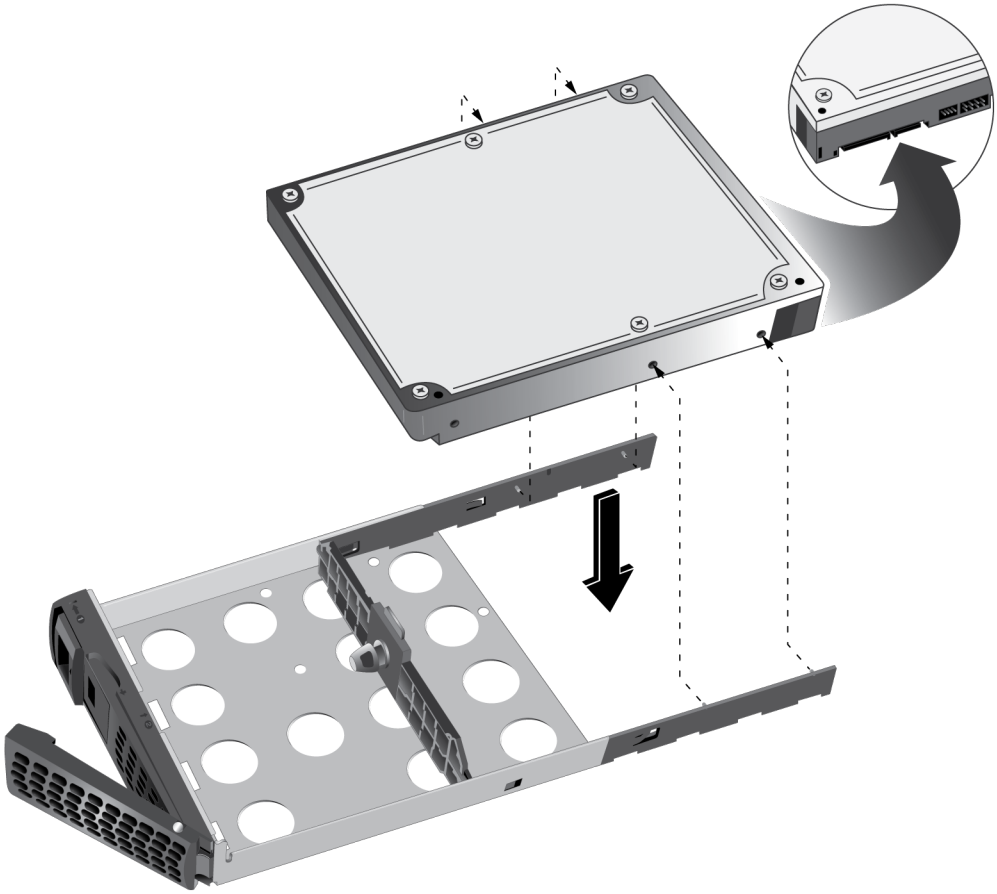
The mounting bracket stops when it hits the bracket lock.

The bracket lock prevents the mounting bracket from sliding all the way off 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 and HDD 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.

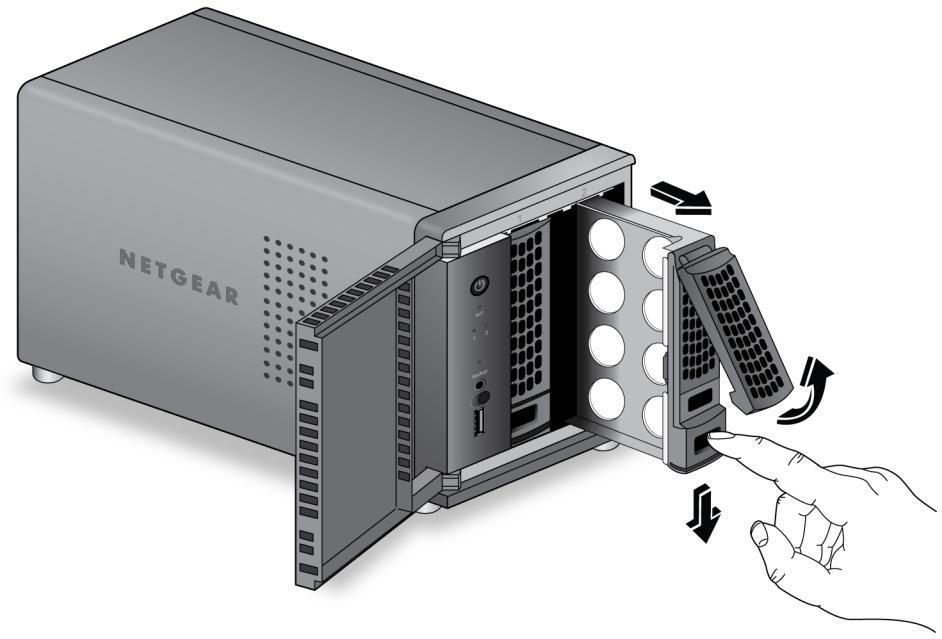
    If the volume that contained the failed disk uses a protected RAID configuration, the system automatically resynchronizes the volume using the new disk. Resynchronization might take several hours, depending on the disk size. You can continue to use your storage system, although access is slower until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

For more information about RAID configurations, see the *ReadyNAS OS 6 Software Manual*, which is available at *netgear.com/support/product/ReadyNAS_OS_6*.

Replace a 2.5-Inch Disk

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

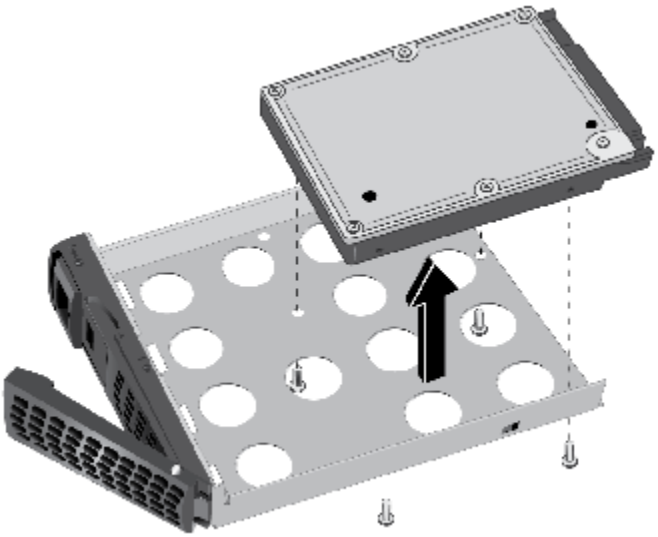
1. If necessary, slide the recessed handle lock to the unlocked position.
2. Press the disk tray release latch.



The tray handle pops out.

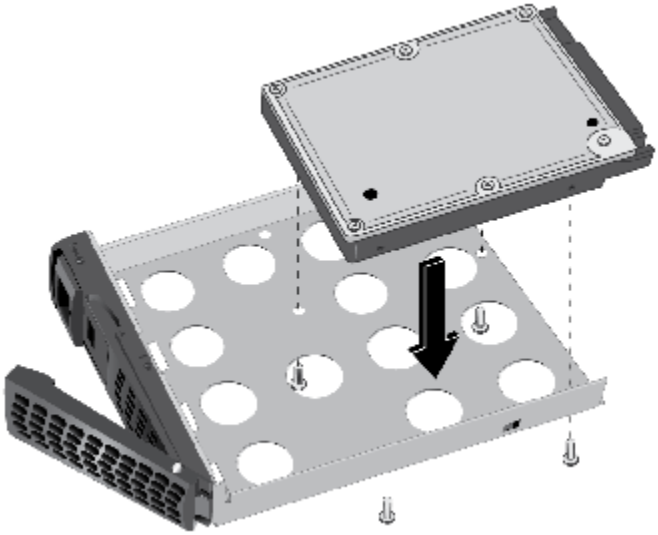
3. Pull out the disk tray.
4. Replace the 2.5-inch HDD or SSD:

a. Remove the screws and the old 2.5-inch HDD or SSD.

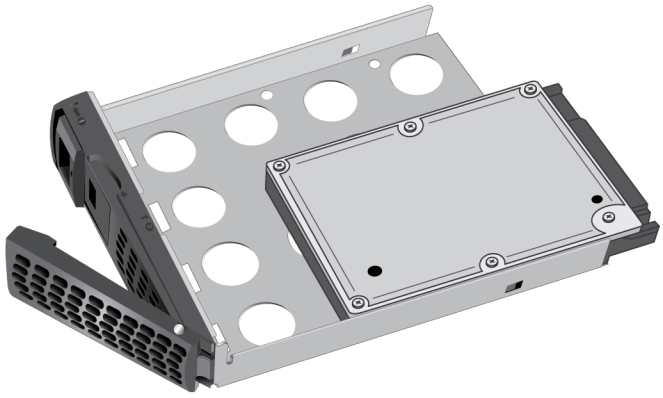


b. Place the new 2.5-inch HDD or SSD in the disk tray.

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.



Make sure that the HDD or SSD is installed on the correct side of 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.

5. 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.
6. 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 *netgear.com/support/product/ReadyNAS_OS_6*.

Defaults and Technical Specifications

A

This appendix includes the following sections:

Factory Default Settings

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

Table 18. 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 defaults to the IP address https://169.254.x.x, where the last two octets are randomly generated based on the system's MAC address.
	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 eSATA port

- One USB 2.0 port (front)
- Two USB 3.0 ports (back)
- One GbE 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: 31.7W
- In operation: 31W
- Power off (Wake On LAN): 1.0W
- 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 (noncondensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (noncondensing)
- 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 eSATA port
- One USB 2.0 port (front)
- Two USB 3.0 ports (back)
- Two GbE 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: 47W
- In operation: 45.6W
- Power off (Wake On LAN): 1.4W
- Power off: 0.44 W

Electrical:

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

Environmental requirements:

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

Certifications:

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

ReadyNAS 202 Technical Specifications

The ReadyNAS 202 storage system meets the following technical specifications:

General:

- Annapurna Labs AL212 1.4 GHz processor
- 2 GB memory
- Two-bay storage
- One eSATA port
- One USB 3.0 port (front)
- Two USB 3.0 ports (back)
- Two GbE ports

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: 39.5W
- In operation: 38W
- Power off (Wake On LAN): 1.31W

Electrical:

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

Environmental requirements:

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

Certifications:

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

ReadyNAS 212 Technical Specifications

The ReadyNAS 212 storage system meets the following technical specifications:

General:

- Annapurna Labs AL214 1.4 GHz processor
- 2 GB memory
- Two-bay storage
- One eSATA port
- One USB 3.0 port (front)
- Two USB 3.0 ports (back)
- Two GbE ports

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: 39.5W
- In operation: 38W
- Power off (Wake On LAN): 1.31W

Electrical:

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

Environmental requirements:

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

Certifications:

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

ReadyNAS 204 Technical Specifications

The ReadyNAS 204 storage system meets the following technical specifications:

General:

- Annapurna Labs AL212 1.4 GHz processor
- 2 GB memory

- Four-bay storage
- One eSATA port
- One USB 2.0 port (front)
- Two USB 3.0 ports (back)
- Two GbE 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: 48.7W
- In operation: 46.8W
- Power off (Wake On LAN): 1.31W

Electrical:

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

Environmental requirements:

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

Certifications:

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

ReadyNAS 214 Technical Specifications

The ReadyNAS 214 storage system meets the following technical specifications:

General:

- Annapurna Labs AL214 1.4 GHz processor
- 2 GB memory
- Four-bay storage
- One eSATA port
- One USB 2.0 port (front)
- Two USB 3.0 ports (back)
- Two GbE 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: 48.7W
- In operation: 46.8W
- Power off (Wake On LAN): 1.31W

Electrical:

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

Environmental requirements:

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (noncondensing)

- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (noncondensing)
- Software-controlled 92 mm chassis cooling fan

Certifications:

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

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 eSATA port
- One HDMI port (not currently supported)
- 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: 50.58W
- In operation: 34.92W
- Power off (Wake On LAN): 627.07 mW
- Power off: 266.61 mW

Electrical:

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

Environmental requirements:

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (noncondensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (noncondensing)
- 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 eSATA ports (one shared USB 2.0 and eSATA port)
- One HDMI port (not currently supported)
- 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: 69.45W
- In operation: 48.71 W
- Power off (Wake On LAN): 843.36 mW
- Power off: 472.77 mW

Electrical:

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

Environmental requirements:

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (noncondensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (noncondensing)
- 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
- 2 GB memory
- Six-bay storage
- Two eSATA ports

- One HDMI port (not currently supported)
- 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:

7.49 kg (16.50 lb) without disks

Power consumption:

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

Electrical:

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

Environmental requirements:

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

Certifications:

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

ReadyNAS 422 Technical Specifications

The ReadyNAS 422 storage system meets the following technical specifications:

General:

- Intel Atom C3338 Dual Core Processor
- 2 GB DDR4 memory
- Two-bay storage
- One eSATA port
- Two USB 3.0 ports (one on the front and one on the back)
- Two 1 GbE LAN ports
- One micro USB console connector (marked as UART)
- OLED display

Physical dimensions (h x w x d):

194 x 135.5 x 239 mm (7.64 x 5.3 x 9.4 in.)

Physical weight:

3.52 kg (7.76 lb) without disks

Power consumption:

- BTU at full power supply utilization: 40.15W
- In operation: 34.86W
- Power off (Wake On LAN): 4.5W
- Power off: 270 mW

Electrical:

- External 60W AC power supply
- Input: 100–240 VAC, 50/60 Hz

Environmental requirements:

- Operating temperature: 0 to 45°C (32° to 113°F)
- Operating humidity: 20 to 80% relative humidity (noncondensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (noncondensing)
- Software-controlled 92 mm chassis cooling fan

Certifications:

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

ReadyNAS 424 Technical Specifications

The ReadyNAS 424 storage system meets the following technical specifications:

General:

- Intel Atom C3338 Dual Core Processor
- 2 GB DDR4 memory
- Four-bay storage
- One eSATA port
- Two USB 3.0 ports (one on the front and one on the back)
- Two 1 GbE LAN ports
- One micro USB console connector (marked as UART)
- OLED display

Physical dimensions (h x w x d):

194 x 185 x 239 mm (7.64 x 7.3 x 9.4 in.)

Physical weight:

3.95 kg (8.7 lb) without disks

Power consumption:

- BTU at full power supply utilization: 57.4W
- In operation: 43.09W
- Power off (Wake On LAN): 4.4W
- Power off: 400 mW

Electrical:

- External 90W AC power supply
- Input: 100–240 VAC, 50/60 Hz

Environmental requirements:

- Operating temperature: 0 to 45°C (32° to 113°F)
- Operating humidity: 20 to 80% relative humidity (noncondensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (noncondensing)
- 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
- 4 GB ECC memory
- Six-bay storage
- Three eSATA 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:

8.00 kg (17.60 lb) without disks

Power consumption:

- BTU at full power supply utilization: 153.54W
- In operation: 87.69W
- Power off (Wake On LAN): 798.08 mW
- Power off: 416.77 mW

Electrical:

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

Environmental requirements:

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

Certifications:

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

ReadyNAS 524X Technical Specifications

The ReadyNAS 524X storage system meets the following technical specifications:

General:

- Intel Pentium processor D-1508
- 4 GB ECC DDR4 memory
- Four-bay storage
- One eSATA port
- One USB 3.0 port (front)
- Two USB 3.0 ports (back)
- One 1 GbE LAN port
- One 10 GbE LAN port
- One micro USB console connector (marked as UART)
- OLED display

Physical dimensions (h x w x d):

194 x 185 x 239 mm (7.64 x 7.28 x 9.4 in.)

Physical weight:

4.53 kg (10.0 lb) without disks

Power consumption:

- BTU at full power supply utilization: 74.9W
- In operation: 41.9W
- Power off (Wake On LAN): 5.3W
- Power off: 204 mW

Electrical:

- External 120W AC power supply
- Input: 100–240 VAC, 50/60 Hz

Environmental requirements:

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (noncondensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (noncondensing)
- Software-controlled 92 mm or 120 mm chassis cooling fan

Certifications:

FCC Class B, CE Class B, RoHS, VCCI Class B, CCC, MIC, BIS

ReadyNAS 526X Technical Specifications

The ReadyNAS 526X storage system meets the following technical specifications:

General:

- Intel Pentium processor D-1508
- 4 GB ECC DDR4 memory
- Six-bay storage
- One eSATA port
- One USB 3.0 port (front)
- Two USB 3.0 ports (back)
- Two 10 GbE LAN ports
- OLED display

Physical dimensions (h x w x d):

260 x 190 x 280 mm (10.24 x 7.48 x 11.02 in.)

Physical weight:

7.9 kg (17.4 lb) without disks

Power consumption:

- BTU at full power supply utilization: 100W
- In operation: 70.5W
- Power off (Wake On LAN): 310 mW
- Power off: 264 mW

Electrical:

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

Environmental requirements:

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

Certifications:

FCC Class B, CE Class B, RoHS, VCCI Class B, CCC, MIC, BIS

ReadyNAS 528X Technical Specifications

The ReadyNAS 528X storage system meets the following technical specifications:

General:

- Intel Pentium processor D-1508
- 4 GB ECC DDR4 memory
- Eight-bay storage
- One eSATA port
- One USB 3.0 port (front)
- Two USB 3.0 ports (back)
- Two 10 GbE LAN ports

- One micro USB console connector (marked as UART)
- OLED display

Physical dimensions (h x w x d):

319 x 192 x 289 mm (12.56 x 7.56 x 11.38 in.) with feet

Physical weight:

9.35 kg (20.61 lb) without disks

Power consumption:

- BTU at full power supply utilization: 104.3W
- In operation: 82.2W
- Power off (Wake On LAN): 344 mW
- Power off: 341 mW

Electrical:

- Internal 250W server-rated AC power supply
- Input: 100–240 VAC, 50/60 Hz

Environmental requirements:

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

Certifications:

FCC Class B, CE Class B, RoHS, VCCI Class B, CCC, MIC, BIS

ReadyNAS 626X Technical Specifications

The ReadyNAS 626X storage system meets the following technical specifications:

General:

- Intel Xeon processor D-1521
- 8 GB ECC DDR4 memory
- Six-bay storage
- One eSATA port
- One USB 3.0 port (front)
- Two USB 3.0 ports (back)
- Two 1 GbE LAN ports
- Two 10 GbE LAN ports
- OLED display

Physical dimensions (h x w x d):

260 x 190 x 280 mm (10.24 x 7.48 x 11.02 in.)

Physical weight:

7.9 kg (17.4 lb) without disks

Power consumption:

- BTU at full power supply utilization: 100W
- In operation: 70.5W
- Power off (Wake On LAN): 310 mW
- Power off: 264 mW

Electrical:

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

Environmental requirements:

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

Certifications:

FCC Class B, CE Class B, RoHS, VCCI Class B, CCC, MIC, BIS

ReadyNAS 628X Technical Specifications

The ReadyNAS 628X storage system meets the following technical specifications:

General:

- Intel Xeon processor D-1521
- 8 GB ECC DDR4 memory
- Eight-bay storage
- One eSATA port
- One USB 3.0 port (front)
- Two USB 3.0 ports (back)
- Two 1 GbE LAN ports
- Two 10 GbE LAN ports
- One micro USB console connector (marked as UART)
- OLED display

Physical dimensions (h x w x d):

319 x 192 x 289 mm (12.56 x 7.56 x 11.38 in.) with feet

Physical weight:

9.35 kg (20.61 lb) without disks

Power consumption:

- BTU at full power supply utilization: 104.3W
- In operation: 82.2W
- Power off (Wake On LAN): 344 mW
- Power off: 341 mW

Electrical:

- Internal 250W server-rated AC power supply
- Input: 100–240 VAC, 50/60 Hz

Environmental requirements:

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

Certifications:

FCC Class B, CE Class B, RoHS, VCCI Class B, CCC, MIC, BIS

ReadyNAS 716X Technical Specifications

The ReadyNAS 716X storage system meets the following technical specifications:

General:

- Intel Xeon processor E3-1265L v2 CPU
- 16 GB ECC memory
- Six-bay storage
- Three eSATA ports
- One HDMI port
- One USB 2.0 port (front)
- Two USB 3.0 ports (back)
- Two 1 GbE LAN ports

- Two 10 GbE 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:

8.20 kg (18.04 lb) without disks

Power consumption:

- BTU at full power supply utilization: 172.79W
- In operation: 96.15W
- Power off (Wake On LAN): 799.89 mW
- Power off: 419.62 mW

Electrical:

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

Environmental requirements:

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (noncondensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (noncondensing)
- 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 eSATA 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: 88.17W
- In operation: 37.3W
- Power off: 453.8 mW

Electrical:

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

Environmental requirements:

- Operating temperature: 0 to 40°C (32° to 104°F)
- Operating humidity: 20 to 80% relative humidity (noncondensing)
- Storage temperature: –20 to 70°C (–4 to 158°F)
- Storage humidity: 5 to 95% relative humidity (noncondensing)
- 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.

Note 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 rooms 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:

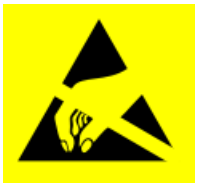
- Keep the area around the ReadyNAS clean and free of clutter.
- See the technical specifications in this manual for details about your specific ReadyNAS storage systems.
- Replace the on-board battery only with the same battery or an equivalent type of battery recommended by the manufacturer. Dispose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

> **Note** 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 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.