



NETGEAR[®]

ReadyNAS[®] Ultra Hardware Manual

Models:
Ultra 6
Ultra 4

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San Jose, CA 95134
USA

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Table of Contents

Chapter 1 Getting Acquainted

- What is the NETGEAR ReadyNAS Ultra? 6
 - ReadyNAS Community Website 7
- ReadyNAS for Home Storage Product Lineup 8
- Choosing a Setup Location 9
 - System Requirements 9
- Initial Setup and Default Login 10
 - Installation 10
 - Default Login 10
 - Diskless Units 10
- The RAIDar Setup Utility 11
 - RAIDar Installation 11
 - RAIDar Commands 12
 - RAIDar LED Descriptions 13
 - Log in to Your ReadyNAS 14
- FrontView Management Console 15
 - Setup Wizard Mode 15
 - Advanced Control Mode 16
 - Status Bar 17

Chapter 2 ReadyNAS Ultra 4

- ReadyNAS Ultra 4 19
 - Front and Side Panel 19
 - Drive Bay 20
 - Rear Panel 21
- LED and Status Information 22
- System Shutdown 23
 - Using the Power Button 23
 - Using the FrontView Browser User Interface 23

Chapter 3 ReadyNAS Ultra 6

- ReadyNAS Ultra 6 25
 - Front and Side Panel 25
 - Drive Bay 26
 - Rear Panel 27
- LED and Status Information 28
- System Shutdown 29

Using the Power Button29
 Using the FrontView Browser User Interface29

Chapter 4 Disks and Disk Replacements

Failed Disk Notification31
 Choosing a Replacement Disk31
 Hardware Compatibility List31
 Adding or Replacing Disks32
 Adding a New Disk32
 Replacing a Failed Disk33

Appendix A Defaults and Technical Specifications

Factory Default Settings35
 ReadyNAS Ultra 435
 ReadyNAS Ultra 636
 Technical Specifications37
 ReadyNAS Ultra 637
 ReadyNAS Ultra 438
 Safety Warning39
 Electrical Safety Precautions39
 General Safety Precautions40
 Electrostatic Discharge (ESD) Precautions40

Appendix B Notification of Compliance

Index

Getting Acquainted

1

NETGEAR ReadyNAS Ultra

Congratulations on your purchase of a NETGEAR ReadyNAS Ultra storage unit.

The NETGEAR ReadyNAS Ultra family provides advanced home users with an easy-to-use, high-performance, gigabit multimedia desktop storage system with iSCSI support.

This *ReadyNAS Ultra Hardware Manual* describes the physical features and attributes of ReadyNAS Ultra products.

This chapter contains the following sections:®

- **What is the NETGEAR ReadyNAS Ultra?**
- **ReadyNAS for Home Storage Product Lineup**
- **Choosing a Setup Location**
- **Initial Setup and Default Login**
- **The RAIDar Setup Utility**
- **FrontView Management Console**

For detailed information about configuring, managing, and using your ReadyNAS Ultra, refer to the *ReadyNAS for Home Software Manual*, which is available at <http://www.readynas.com/documentation>.

What is the NETGEAR ReadyNAS Ultra?

The NETGEAR ReadyNAS Ultra series deliver the power you need to run bleeding-edge applications, and the flexibility you want to store, share, and protect your prized multimedia collections.

Two Gigabit Ethernet ports deliver ultra-fast connections, while three USB ports offer the flexibility to connect other devices using a USB connection, like printer servers, external USB storage devices, or digital cameras.

These multimedia desktop storages are ideal for media enthusiasts with large digital media libraries who want to take their media files wherever they go, and enable users across the LAN, or WAN, or over the Internet to back up and share data from Windows, Macintosh, and Linux systems.

Offering extensible, high-availability data protection, ReadyNAS Ultra systems come with robust, fail-safe features that can include:

- X-RAID2™ — Manage volume expansion automatically as you add new hard drives or replace existing drives with larger-capacity drives. Multiple volume support for RAID 0, 1, 5, 6 (varies by product model).
- ReadyNAS Remote — Get secure drag-and-drop remote access without complicated network setups.
- ReadyNAS Vault — Back up critical files off-site for added security and peace of mind, then access and restore them remotely online.
- Rsync — Replicate and synchronize files between two ReadyNAS devices.
- TiVo®-compatible — Store your favorite television programs and play them back to any TiVo® DVR in your home.
- Media shifting with Skifta — Access multimedia content from your ReadyNAS while you're away from home on connected DLNA® devices.
- Transcoding with Orb — Convert multimedia content for optimal streaming on mobile devices.
- Automatic backups — Back up three computers (PC or Mac) continuously using Memeo® Premium Backup, and restore any previous version of a file with a simple right-click.
- iSCSI — Built-in iSCSI target service.
- Journaling mode, and user, group, and share-level quotas.

Storage Protocols

- CIFS/SMB for Windows®
- AFP for Mac® OS
- NFS for Linux® and UNIX®
- HTTP/S for Web browsers
- FTP/S support

Multimedia Streaming

ReadyNAS is DLNA Certified® and can stream to:

- Media players (see www.dlna.org for latest information)
 - NETGEAR Digital Entertainers
 - Network DVD/Blu-ray players
 - Game consoles, like Sony® PlayStation® 3
- Nintendo® Wii and Microsoft® Xbox®, Xbox 360®
 - Music players, like Sonos and Squeezebox
 - TiVo® DVRs
 - Skifta™ clients
- Orb™ and Air Video transcoding
- Apple® iTunes® server

Network Security

- Encrypted network logins
- Secure Sockets Layer (SSL)

Power-Saving Features

- Disk spin-down mode
- Power On/Off Scheduler
- Wake-on-LAN

ReadyNAS Community Website

For more information about NETGEAR ReadyNAS products visit the dedicated ReadyNAS Community website at <http://readynas.com>, where you will find reviews, tutorials, a comparison chart, software updates, documentation, an active user forum, and much more.

ReadyNAS for Home Storage Product Lineup

NETGEAR offers a complete lineup of ReadyNAS home storage products, each with its own unique characteristics to fit your specific requirements. With all ReadyNAS products, the embedded operating system and easy-to-configure software makes installation, and upgrades a breeze.

The ReadyNAS Ultra series offers:

- Blazing-fast performances for bleeding-edge applications
- Best software partnerships in the industry
- X-RAID2™ automatic volume expansion technology
- ReadyNAS Remote Secure drag-and-drop remote access
- ReadyNAS Vault embedded online backup service

ReadyNAS Ultra 6



ReadyNAS Ultra 6 is NETGEAR's first 6-bay multimedia desktop storage system that supports both NAS and iSCSI SAN for advanced home users. Ultra 6 provides up to two times the performance of the Duo (over 90 MBps), X-RAID2 automatic volume expansion technology, secure drag-and-drop remote access (ReadyNAS Remote), optional online backup solution (ReadyNAS Vault), replication (Rsync), and RAID 0/1/5/6 for data protection.

ReadyNAS Ultra 4

ReadyNAS Ultra 4 is NETGEAR's first 4-bay multimedia desktop storage system with both NAS and iSCSI SAN support. Ultra 4 provides two times the performance of the current NV+ (over 80 MBps), X-RAID2 automatic volume management, secure drag-and-drop remote access (ReadyNAS Remote), optional online backup solution (ReadyNAS Vault), replication (Rsync), and RAID 0/1/5 for data protection.



Choosing a Setup Location

The ReadyNAS Ultra is suitable for use in a home or small office environment where it can be free-standing. The small, compact size makes it suitable for sitting on a desk, or on shelf in a closet.

When deciding where to locate the unite, ensure that:

- It is accessible and cables can be connected easily.
- Water or moisture cannot enter the case of the unit.
- Airflow around the unit 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 using an uninterruptable power supply (UPS) for protection, the power cable can be securely and safely connected to the UPS.

System Requirements

- For LAN setup: An Ethernet connection
- Microsoft® Windows® 7, Vista™, XP, 2000, Mac OS®, UNIX®, or Linux®
- Microsoft® Internet Explorer® 7.0+, Apple® Safari®, 2.0+, Mozilla Firefox® 2.0+, Opera® 9.5+
- Hard Disk Drive(s) — NETGEAR recommends the HDD from the NETGEAR HDD Compatibility List only. See <http://www.readynas.com/hcl>.

Initial Setup and Default Login

Installation

To install your ReadyNAS Ultra, follow the instructions in the *NETGEAR ReadyNAS for Home Installation Guide* that came with your unit.

An electronic copy of the installation guide is located on the product CD.

You can also find it on the NETGEAR ReadyNAS Community support page at <http://readynas.com/documentation>.

Estimated setup time is about 20 minutes.

Default Login

To log in to your unit:

1. Open a web browser and enter the following URL in the address field:
The default IP configuration is set to DHCP; if the unit does not automatically get an IP address, it defaults to 192.168.168.168.
2. At the login prompt, enter the authentication information:
 - a. Default administrator user name: **admin**
 - b. Default password: **netgear1**

Both the user name and password are case-sensitive.

For information about using ReadyNAS RAIDar and FrontView software to log in, configure, and manage your system, see the *ReadyNAS for Home Software Manual*.

Diskless Units

If your unit did not come with disks already installed (a diskless unit) you will need to install the disks and then install and configure RAID before proceeding.

Go to <http://www.readynas.com/hcl> for a list of supported disks. Refer to the *ReadyNAS for Home Software Manual* for instructions on installing disks and configuring RAID.

The RAIDar Setup Utility

The RAIDar utility acts as a discovery tool for the ReadyNAS device or devices on your network, and enables easy setup and management of all your ReadyNAS units.

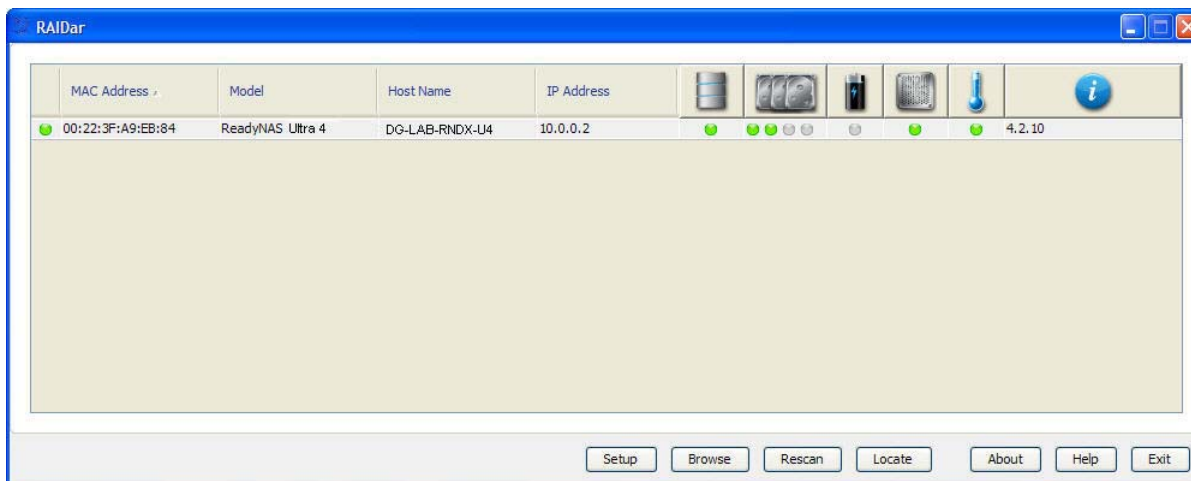
RAIDar Installation

To install RAIDar:

1. If not already installed, install the RAIDar utility from your product *Resource CD*. RAIDar installation options are provided for Windows, MAC, and Linux.
2. Once installed, connect your ReadyNAS to the network and launch the RAIDar Setup Utility. RAIDar automatically locates the units in the network without needing its IP address, and makes it easy to see the status of your units. You should see one or more of your ReadyNAS devices listed.

The default IP configuration is set to DHCP; if the unit does not get an IP address, it defaults to 192.168.168.168.

Note: If you are running RAIDar on Windows XP before SP2, disable the Internet connection firewall.



If no ReadyNAS device is detected, check the following and click the **Rescan** button to try again.

- Make sure the ReadyNAS device is powered up and is connected to your network.
- Make sure that the PC in which you have installed RAIDar is on the same subnet as the ReadyNAS device.

RAIDar Commands

Use the following RAIDar commands to monitor your devices.

Setup

Clicking the **Setup** button launches the FrontView Management Console for the highlighted device. FrontView is a web-based utility used to set up, configure, and manage your devices. If this is a first-time installation, or the device has been reset to the factory default settings, the Setup Wizard launches so that you can configure the device.

Browse

Click **Browse** to see the shares available on the highlighted device. This only works with Windows operating systems.

Rescan

Click **Rescan** to update the ReadyNAS device list and status.

Locate

Click **Locate** to cause the LEDs on the ReadyNAS device to blink. This is useful if you have multiple ReadyNAS devices and you need to correlate the RAIDar entries to physical devices.

About

Click **About** to display RAIDar info.

Help

Click the **Help** button to shows the Help screen.








Exit

Click the **Exit** button to exit the RAIDar utility.

RAIDar LED Descriptions

The first column (LED) lists the status that informs you if the ReadyNAS device is in normal operating mode, or if it is in a warning or failure condition.

The other columns display device-specific status, which tells you exactly what devices might need attention.

LED	Description
 Not present	No disk or device is attached.
 Normal	Device is in normal operating mode.
 Warning or Dead	The device has failed or needs attention.
 Inactive spare	This disk is a spare disk on standby. If a disk fails, this disk will take over automatically.
 Awaiting resync	This disk is waiting to resync to the RAID volume. If the LED is blinking, this disk is currently resyncing. During the resync process, volume is in degraded mode; performance is affected by the resync process, and another disk failure in the volume will render it dead.
 Life support mode	The volume has encountered multiple disk failures and marked dead. However, the ReadyNAS has blocked it from being marked dead if someone accidentally pulled out the wrong disk during runtime. If the wrong disk was pulled out, shut down the ReadyNAS immediately, reconnect the disk, and power on the ReadyNAS. If you reconnect the disk during runtime, the ReadyNAS marks it as a newly added disk and you will no longer be able to access the data on it.
 Background task active	A lengthy background task such as a system update is in progress.

Log in to Your ReadyNAS

To use RAIDar to log in to the unit:

1. Select a unit from the list on RAIDar, and click the **Setup** button.

RAIDar opens your default browser and connects you to the selected ReadyNAS. You are prompted for the user name and password you will use to log in to FrontView.

2. Enter the default authentication:
 - a. Default administrator user name: **admin**
 - b. Default password: **netgear1**

Both user name and password are case-sensitive.

When you are logged in, the RAIDar utility connects to the FrontView Management Console, which is used to configure and manage your ReadyNAS systems.



FrontView Management Console

Once logged in using the RAIDar utility, the FrontView Management Console appears.

FrontView operates in two modes:

- Setup Wizard mode
- Advanced Control mode

When the unit is installed for the first time, or is in its factory default state, FrontView opens in Setup Wizard mode. The Setup Wizard guides you step-by-step through the configuration process, assisting you in quickly integrating the ReadyNAS unit into your network.

Note: For the initial setup, NETGEAR strongly recommends using the Setup Wizard so that all of the necessary settings are configured. FrontView automatically switches to the Advanced Control mode once the Setup Wizard is complete.

Setup Wizard Mode

The Home screen provides detailed information about your unit.

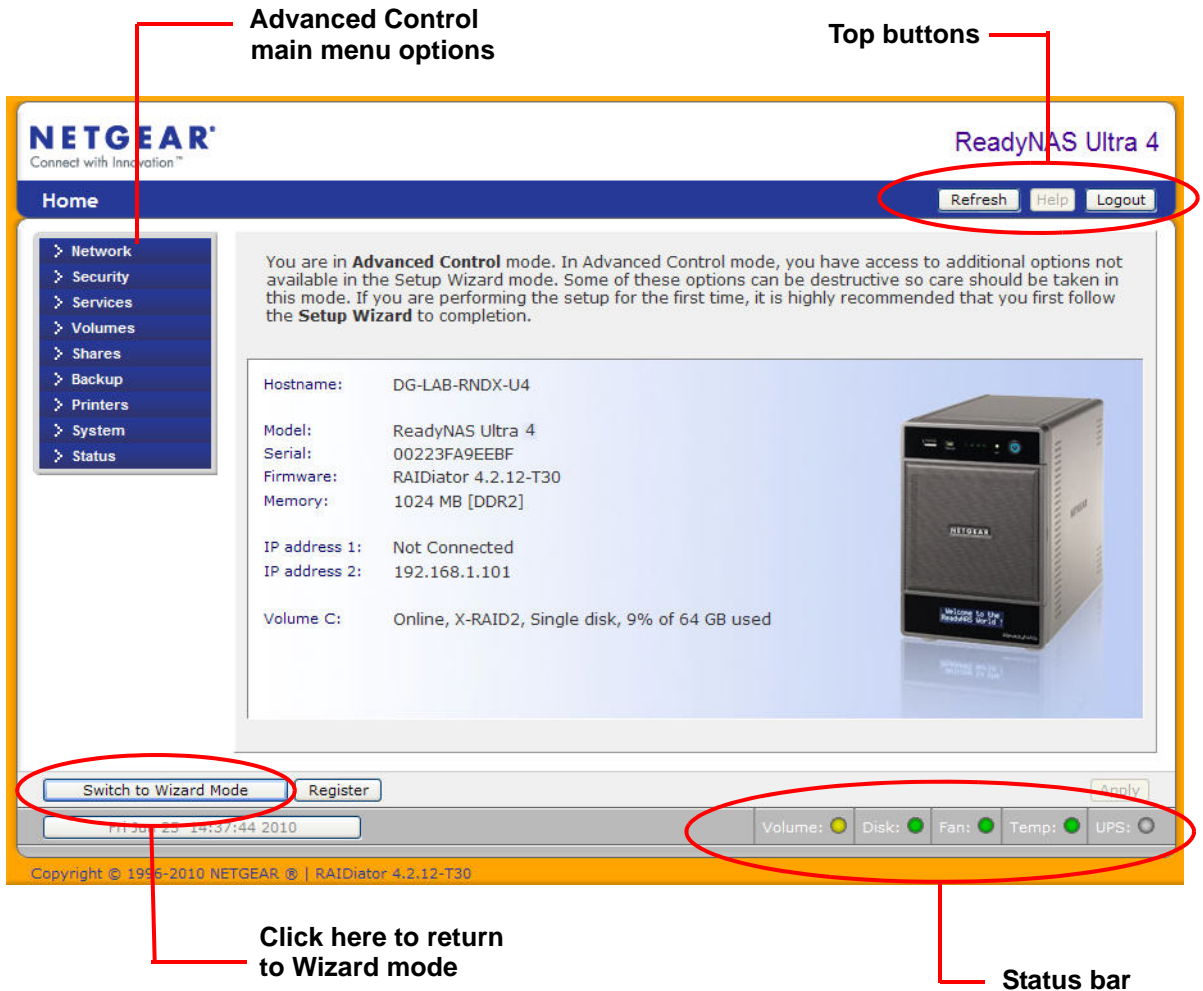
The screenshot shows the NETGEAR FrontView Management Console interface. At the top, the NETGEAR logo and 'Connect with Innovation™' are on the left, and 'ReadyNAS Ultra 4' is on the right. Below the logo is a 'Home' tab and buttons for 'Refresh', 'Help', and 'Logout'. The main content area features a message: 'The Setup Wizard will guide you step-by-step through the configuration process assisting you in quickly integrating this ReadyNAS into your network.' Below this is a table of system information and a photo of the ReadyNAS Ultra 4 unit. At the bottom of the main area, there are buttons for 'Switch to Advanced Control' (circled in red), 'Register', '<< Back', 'Next >>', and 'Apply'. A status bar at the very bottom shows system health indicators for Volume, Disk, Fan, Temp, and UPS, along with a copyright notice: 'Copyright © 1996-2010 NETGEAR © | RAIDiator 4.2.12-T30'.

Click here to switch to
Advanced Control mode

Advanced Control Mode

The FrontView Advanced Control mode provides access to all available settings. In this mode, the menus on the left allow you to quickly jump to the screen you want.

The bar at the top provides options to return to the Home screen, refresh the browser window, display **Help** where available, or to log out of the session. To securely log out of a session, use the **Logout** button.

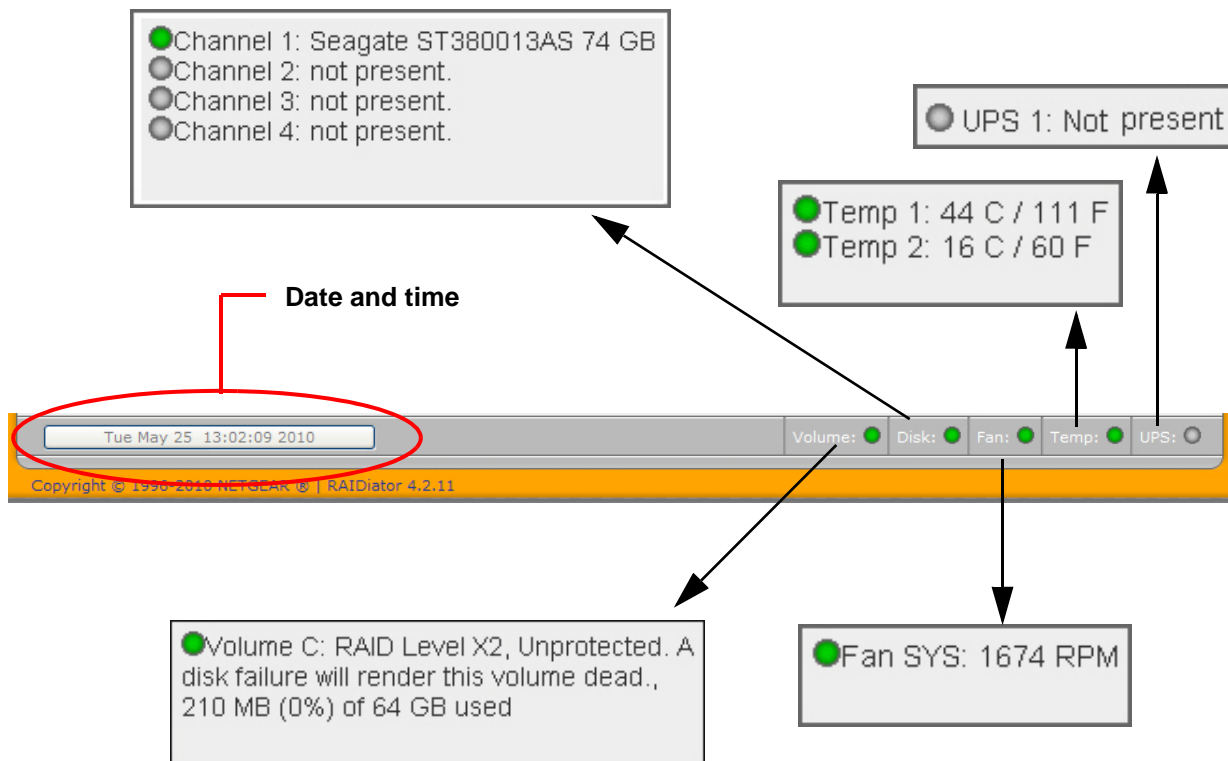


Status Bar

The status bar at the bottom of the screen gives a quick glimpse of the system status and provides access to the following information:

- Data and time. When clicked, the date button opens the Clock screen.
- Volume
- Disks
- Fan
- Temperature
- UPS

Move your mouse over the status light to display device information, or click a status light to open the related FrontView screen.



ReadyNAS Ultra 4

2

This chapter provides an overview of the unit's physical features and includes the following sections:

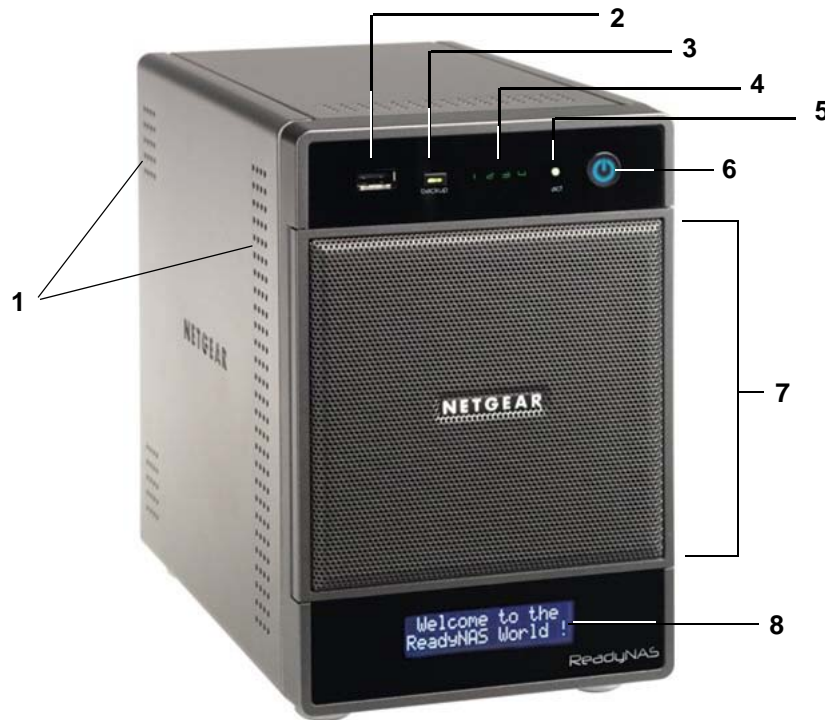
- **Front and Side Panel**
- **Drive Bay**
- **Rear Panel**
- **LED and Status Information**
- **System Shutdown**



ReadyNAS Ultra 4

This section introduces the physical attributes of the ReadyNAS Ultra 4.

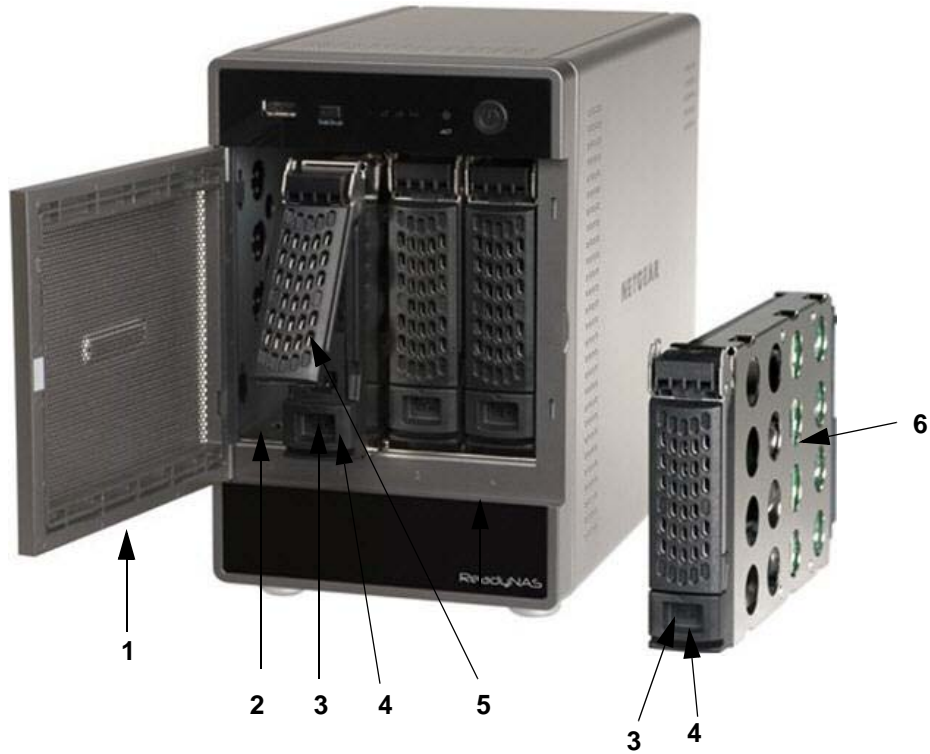
Front and Side Panel



1. Air flow exhaust vents
2. Front USB port
3. Backup button/backup LED
4. Disk LEDs
5. Disk activity light
6. Power button/power LED
7. Drive bay door
8. Status display screen

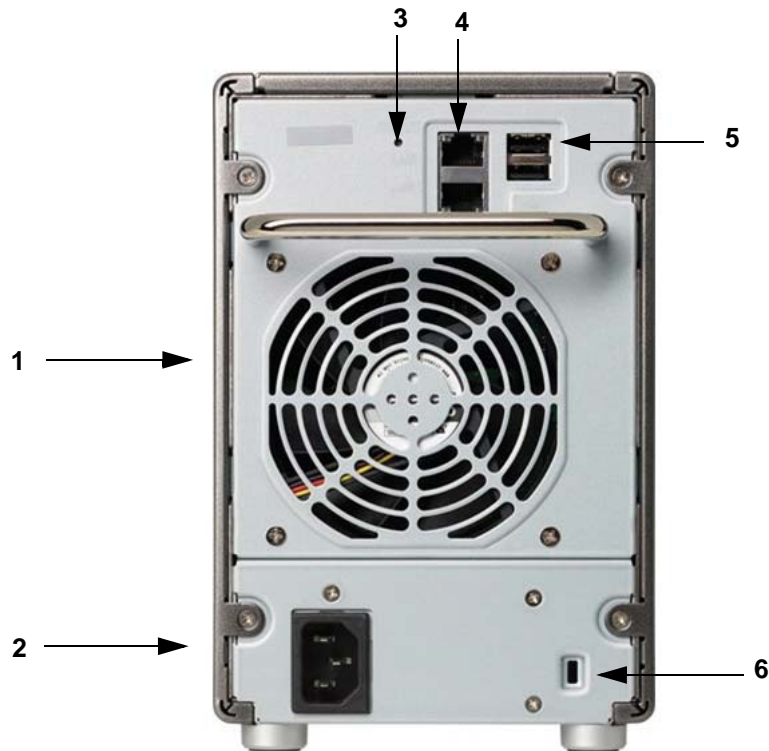
Note: The status display screen goes to sleep to prevent burn-in; to wake it, press the power button. When the unit is reporting an abnormal operation or error, the status display screen stays on.

Drive Bay



1. Drive bay door
2. Four disk bays
3. Recessed disk tray locking mechanism; slide button to lock/unlock
4. Disk release latch; press down to release disk tray
5. Disk tray latch handle; pops open when disk release latch is pressed
6. Disk tray

Rear Panel



1. Disk and system exhaust fan
2. Power cable socket
3. Reset button. Recessed button provides access to the diagnostic startup menu: Normal, Factory Default (which erases all data), OS Reinstall, Tech Support remote diagnostics, Skip Volume Check, Memory Test, Disk Test.
4. LAN1 and LAN2 Gigabit Ethernet ports
5. Two USB ports
6. Kensington lock to prevent unauthorized removal of the unit

LED and Status Information

The status information for the ReadyNAS Ultra 4 is shown on the bottom of the unit. Each function is described in the following table.

Item	Description
Power button / LED	<p>Push the button to turn on the ReadyNAS. The Power LED blinks while the ReadyNAS is booting.</p> <p>Blue: The unit is powered on. Off: The unit is powered off.</p> <p>Preferred shutdown: If the unit is running, pressing the power button once begins the graceful shutdown blink pattern on the LEDs. Pressing the power button a second time within 5 seconds confirms and initiates the graceful shutdown.</p> <p>Forced shutdown: If the unit is hung, you can press and hold the power button for 5 seconds to force shutdown.</p>
Disk LEDs (1, 2, 3, 4)	<p>On: Power is on and disks are operating normally. Blinking: Resync is ongoing or disk failed on the channel.</p>
Disk Activity LED	<p>Blinking: Indicates disk activity. Off: No activity is detected.</p>
Ethernet Link LED	<p>Green: The port is operating at 1,000 Mbps. Amber: The port is operating at 100 Mbps. Off: The port is operating at 10 Mbps.</p>
Rear panel USB ports	No associated LEDs.
Reset button	<p>When used to access the boot menu:</p> <ol style="list-style-type: none"> 1. Power off your ReadyNAS. 2. Using a paper clip, press and hold the Reset button. 3. Power on the ReadyNAS. 4. Continue to press the reset button until "Boot Menu" is shown on LCD display. 5. Use Backup button to select desired boot mode. 6. Press and release Reset button to confirm boot menu selection, system will boot into selected boot mode.

System Shutdown

You can shut down the unit using the power button, or from the FrontView browser user interface.

Using the Power Button

There are two ways to shut down the unit using the power button:

- **Preferred shutdown:** Pressing the power button twice initiates a graceful shutdown.
- **Forced shutdown:** If the unit is hung, hold the power button for 5 seconds to force shutdown.

Using the FrontView Browser User Interface

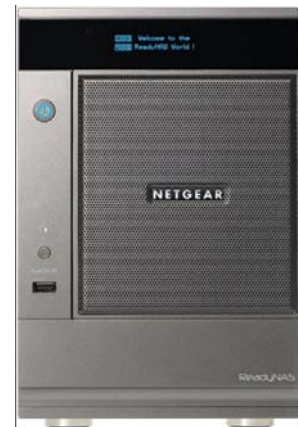
From FrontView, the **Shutdown Options** screen offers the option to power off or reboot the ReadyNAS. You also have the option of performing a full file system check or a quota check on the next boot.

ReadyNAS Ultra 6

3

This chapter provides an overview of the unit's physical features and includes the following sections:

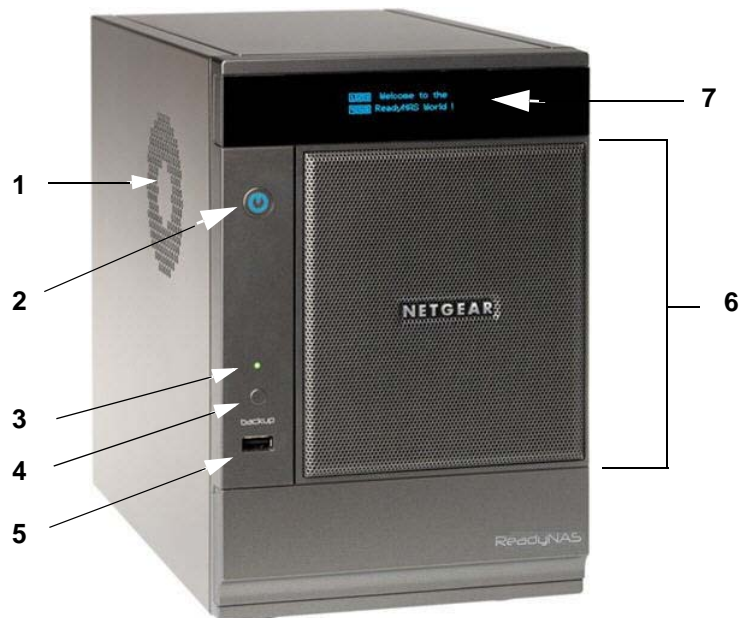
- **Front and Side Panel**
- **Drive Bay**
- **Rear Panel**
- **LED and Status Information**
- **System Shutdown**



ReadyNAS Ultra 6

This section introduces the physical attributes of the ReadyNAS Ultra 6.

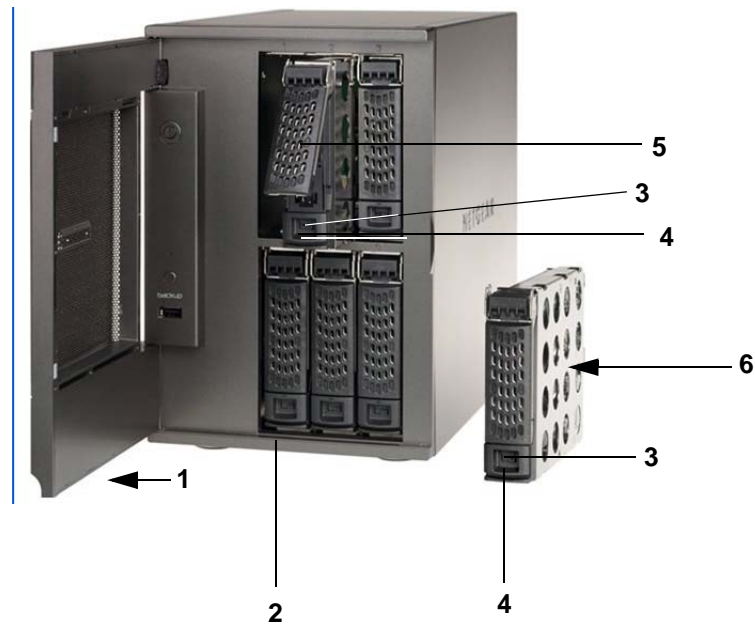
Front and Side Panel



1. System exhaust vent
2. Power button/power status LED
3. USB/Backup status LED
4. Backup button
5. Front USB port
6. Drive bay door
7. Status display screen, including the disk activity status light

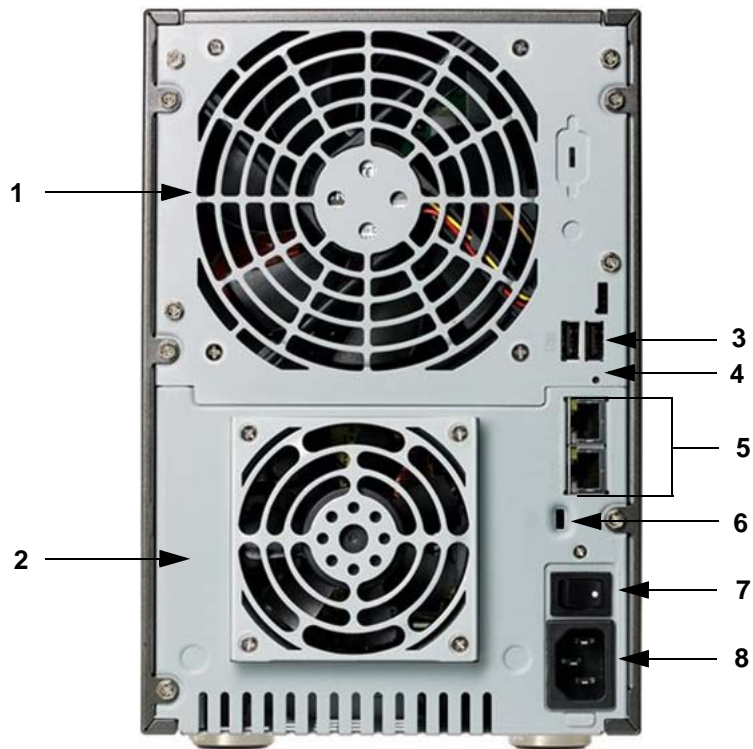
Note: The status display screen goes to sleep to prevent burn-in; to wake it, press the power button. When the unit is reporting an abnormal operation or error, the status display screen stays on.

Drive Bay



1. Drive bay door
2. Six disk bays; three upper and three lower
3. Recessed disk tray locking mechanism; slide button to lock/unlock
4. Disk release latch; press down to release disk tray
5. Disk tray latch handle; pops open when disk release latch is pressed
6. Disk tray

Rear Panel



1. Disk and system exhaust fan
2. PSU exhaust fan
3. Two USB ports
4. Reset button. Recessed button provides access to the diagnostic startup menu: Normal, Factory Restore (which erases all data), OS Reinstall, Tech Support remote diagnostics, Skip Volume Check, Memory Test, Disk Test.
5. LAN1 and LAN2 Gigabit Ethernet ports
6. Kensington lock to prevent unauthorized removal of the unit
7. Power switch
8. Power cable socket

LED and Status Information

The status information for the ReadyNAS Ultra 6 is shown on the bottom of the unit. Each function is described in the following table.

Item	Description
Power button / LED	<p>Push the button to turn on the ReadyNAS. The power LED blinks while the ReadyNAS is booting.</p> <p>Blue: The unit is powered on. Off: The unit is powered off.</p> <p>Preferred shutdown: If the unit is running, pressing the power button once begins the graceful shutdown blink pattern on the LEDs. Pressing the power button a second time within 5 seconds confirms, and initiates the graceful shutdown.</p> <p>Forced shutdown: If the unit is hung, you can press and hold the power button for 5 seconds to force shutdown.</p>
Disk LEDs	Disk icons are shown on the LCD display.
Activity LED	<p>Blinking green: Indicates disk activity. Off: No activity detected.</p>
Rear panel Ethernet ports	<p>Green: The port is operating at 1,000 Mbps. Amber: The port is operating at 100 Mbps. Off: The port is operating at 10 Mbps.</p>
Rear panel USB ports	No associated LEDs.
Reset button	<p>When used to access the boot menu:</p> <ol style="list-style-type: none"> 1. Power off your ReadyNAS. 2. Using a paper clip, press and hold the Reset button. 3. Power on the ReadyNAS. 4. Continue to press the reset button until "Boot Menu" is shown on LCD display. 5. Use Backup button to select desired boot mode. 6. Press and release Reset button to confirm boot menu selection, system will boot into selected boot mode.

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Using the Power Button

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Using the FrontView Browser User Interface

From FrontView, the **Shutdown Options** screen offers the option to power off or reboot the ReadyNAS. You also have the option of performing a full file system check or a quota check on the next boot.

Disks and Disk Replacements

4

This chapter includes the following topics:

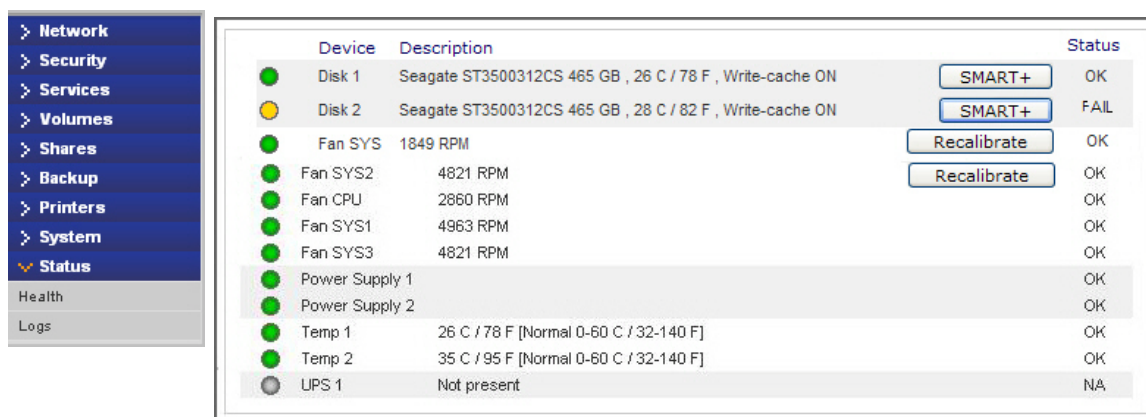
- **Failed Disk Notification**
- **Adding or Replacing Disks**
- **Hardware Compatibility List**













Failed Disk Notification

When a disk fails in your ReadyNAS, you are notified of the failure by e-mail. The FrontView **Health** screen provides information about the failed disk.

Note: Email alerts must be set up for notifications to be sent. See the *ReadyNAS for Home Software Manual* for information on setting up alerts.

As a visual reference, each ReadyNAS disk tray includes an LED that turns amber when the disk in the tray fails.



Device	Description	Status
	Disk 1 Seagate ST3500312CS 465 GB , 26 C / 78 F , Write-cache ON	SMART+ OK
	Disk 2 Seagate ST3500312CS 465 GB , 28 C / 82 F , Write-cache ON	SMART+ FAIL
	Fan SYS 1849 RPM	Recalibrate OK
	Fan SYS2 4821 RPM	Recalibrate OK
	Fan CPU 2860 RPM	OK
	Fan SYS1 4963 RPM	OK
	Fan SYS3 4821 RPM	OK
	Power Supply 1	OK
	Power Supply 2	OK
	Temp 1 26 C / 78 F [Normal 0-60 C / 32-140 F]	OK
	Temp 2 35 C / 95 F [Normal 0-60 C / 32-140 F]	OK
	UPS 1 Not present	NA

Choosing a Replacement Disk

On the FrontView main menu, select **Status > Health**. Take note of the disk vendor and model used in your unit. It is best to replace a failed disk with the same disk model.



WARNING!

Regardless of how many hard drives are installed, all drive trays must remain in the drive bays to maintain adequate airflow.

Hardware Compatibility List

Go to <http://www.readynas.com/hcl> for a list of supported disks. Refer to the *ReadyNAS for Home Software Manual* for instructions on installing disks and configuring RAID.

Adding or Replacing Disks

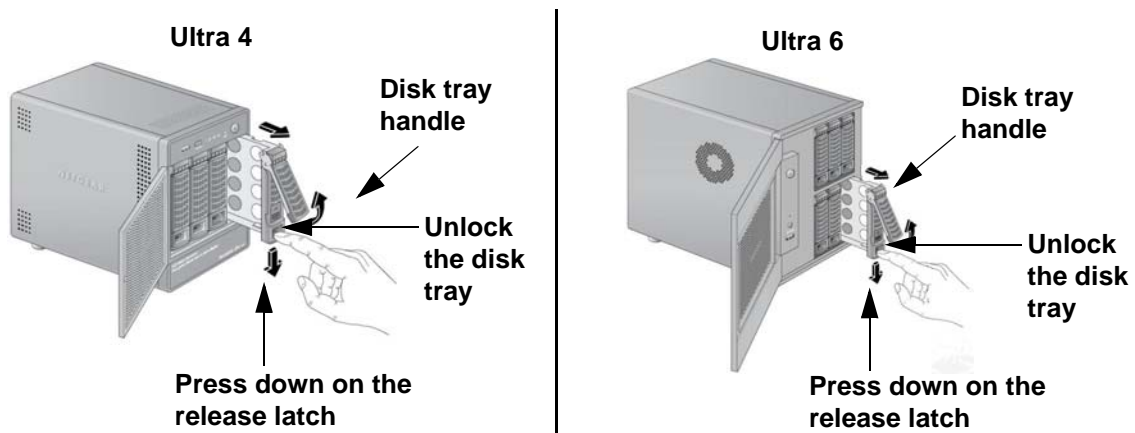
Adding and replacing failed disks are similar processes.

Note: Check the Hardware Compatibility List on the NETGEAR Support site for a list of disks qualified for use with the ReadyNAS to assure that you use a suitable disk.

Adding a New Disk

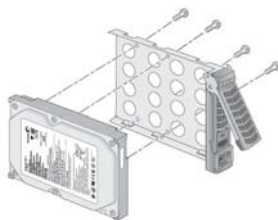
To add a new disk:

1. Slide the recessed locking mechanism to unlock the disk tray.
2. Press down on the disk tray release latch. The tray handle pops out.



3. Pull out the disk tray, and assemble the new disk on the tray.

Make sure that the hard disk connectors face the interior of the disk bay when you reassemble the disk.



4. Slide the disk tray back into the ReadyNAS and press the handle to secure the disk.

The volume automatically synchronizes with the new disk in the background. This could take several hours depending on the disk size. The ReadyNAS can continue to be used, although access will be slower until the volume synchronization finishes. You are notified by e-mail when the process is complete.

Replacing a Failed Disk

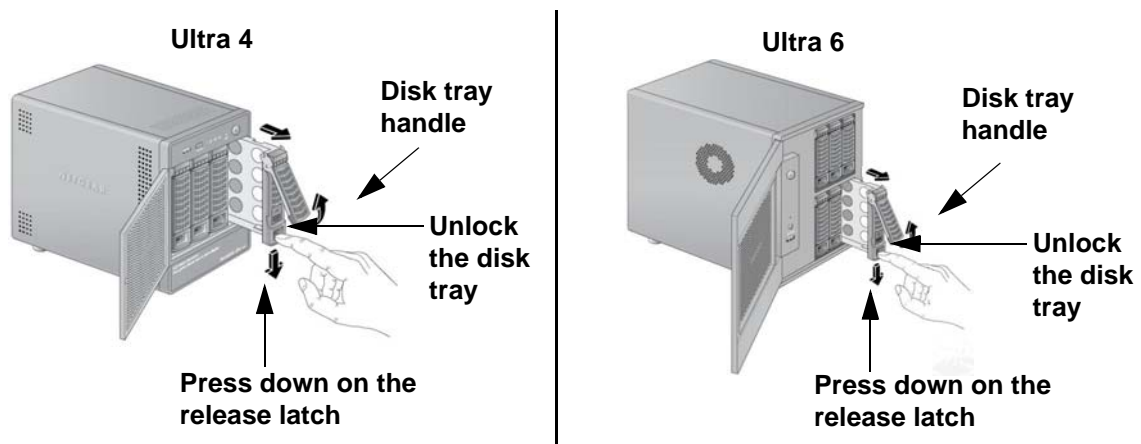
In the case of a failed disk, the unit provides email alerts and status messages about the need to replace the disk. In addition, as a visual reference, each ReadyNAS disk tray includes an LED that turns amber when the disk in the tray fails.

ReadyNAS supports hot-swap bays, so there is no need to power it down when a disk fails.

To replace the failed disk:

1. Locate the amber LED on the disk tray to identify the failed disk.
2. In the same way as when you add a disk, pull the disk tray pull release switch.

The disk tray handle pops out.



3. Pull out the disk tray, and replace the failed disk.

Make sure that the hard disk connectors face the interior of the disk bay when you reassemble the disk.



4. Slide the disk tray back into the unit and secure the handle.

The volume automatically synchronizes with the new disk in the background. This could take several hours depending on the disk size. The ReadyNAS can continue to be used, although access will be slower until the volume synchronization finishes. You are notified by e-mail when the process is complete.

Defaults and Technical Specifications



This appendix provides the factory default settings and system specifications.

- **Factory Default Settings**
- **Technical Specifications**
- **Safety Warning**

Factory Default Settings

ReadyNAS Ultra 4

Feature	Default
Login	
User login URL when the ReadyNAS is not connected to a DHCP server	https://192.168.168.168
Admin user name (case-sensitive)	admin
Admin login password (case-sensitive)	netgear1
Management	
System configuration	FrontView web-based configuration and status monitoring
Discovery, multi-unit status monitoring, and RAID formatting utility	RAIDar for Windows, Mac, and Linux
LAN Connections	
MAC address	Default address
MTU size	1500
Ports	2 Auto Sense 10/100/1000BASE-T, RJ-45
LAN IP address	DHCP acquired

ReadyNAS Ultra 6

Feature	Default
Login	
User login URL when the ReadyNAS is not connected to a DHCP server	https://192.168.168.168
Admin user name (case-sensitive)	admin
Admin login password (case-sensitive)	netgear1
Management	
System configuration	FrontView web-based configuration and status monitoring
Discovery, multi-unit status monitoring, and RAID formatting utility	RAIDar for Windows, Mac, and Linux
LAN Connections	
MAC address	Default address
MTU size	1500
Ports	2 Auto Sense 10/100/1000BASE-T, RJ-45
LAN IP address	DHCP acquired

Technical Specifications

ReadyNAS Ultra 6

- 6-bay storage with RAID 0, 1, 5, 6 data protection
- 1.66 GHz Intel® Atom™ dual-core processor
- 1 GB DDR2 DIMM
- Delivers over 90 MBps throughput
- Includes two Gigabit Ethernet ports
- Includes three USB 2.0 ports



6-BAY



SPEED
90 MBPS



USB 2.0



RAID
0,1,5,6

Physical Dimensions (w x h x d):

- 170 x 250 x 285 mm
- 6.7 x 10.0 x 11.2 in

Physical Weight:

- 6.76 kg / 14.90 lb without disks

Power Consumption:

- 75W (with 4 x 2 TB)*
- * Using Seagate® 2 TB LP drives, with system in idle state

Electrical:

- 300W server-rated AC power supply
- Input: 100-240V AC, 50/60 Hzz

Thermal:

- Software controlled 120 mm chassis cooling fan
- High temperature email alert with auto-shutdown

Environmental Compliance:

- 32° - 104° F
- 20% - 80% Humidity (non-condensing)
- FCC, UL, CE, RoHS, C-tick, VCCI, CCC, K CC compliance

Available configurations:

- Diskless

- Half-populated

ReadyNAS Ultra 4

- 4-bay storage with RAID 0, 1, 5 data protection
- 1.66 GHz Intel® Atom™ single-core processor
- 1 GB DDR2 SODIMM
- Delivers over 80 MBps throughput
- Includes two Gigabit Ethernet ports
- Includes three USB 2.0 ports



Physical Dimensions (w x h x d):

- 134 x 205 x 223 mm
- 5.28 x 8.07 x 8.78 in

Physical Weight:

- 4.70 kg / 10.35 lb without disks

Power Consumption:

- 48W (with 4 x 2 TB)*

* Using Seagate® 2 TB LP drives, with system in idle state

Electrical:

- 120W server-rated AC power supply
- Input: 100-240V AC, 50/60 Hz

Thermal:

- Software controlled 92 mm chassis cooling fan
- High temperature email alert with auto-shutdown

Environmental Compliance:

- 32° - 104° F
- 20% - 80% Humidity (non-condensing)
- FCC, UL, CE, RoHS, C-tick, VCCI, CCC, K CC compliance

Available configurations:

- Diskless
- Half-populated


Safety Warning

1. The equipment contains no operator access areas and is certified for installation only by trained personnel, according to the installation instructions provided with each unit.
2. The socket outlet shall be installed near the equipment and shall be easily accessible.
3. Observe the on board battery precautions.



DANGER:

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THEIR INSTRUCTIONS.

4. The units and their associated LAN connections shall be interconnected only with equipment within the same building.
5. Slide or rail-mounted equipment is not to be used as a shelf or a work space. 

Electrical Safety Precautions

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

- Be aware of the locations of the power on/off switch on the chassis as well as the room's emergency power-off switch, disconnection switch, or electrical outlet. If an electrical accident occurs, you can then quickly remove power from the system.
- Do not work alone when working with high-voltage components.
- Always disconnect power from the system when removing or installing main system components, such as the main board or memory modules. When disconnecting power, you should first power down the system with the operating system and then unplug the power cords of all the power supply units in the system.
- When working around exposed electrical circuits, another person who is familiar with the power-off controls should be 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.
- The power supply cords must include a grounding plug and must be plugged 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 Ultra unit.
- On board battery: This battery must be replaced only with the same or an equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.



DANGER:

There is a danger of explosion if the on board battery is installed upside down, which will reverse its polarities.

- Main board replaceable soldered-in fuses: Self-resetting PTC (positive temperature coefficient) fuses on the main board must be replaced by trained service technicians only. The new fuse must be the same as or equivalent to the one replaced. Contact Technical Support for details and support.

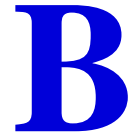
Electrostatic Discharge (ESD) Precautions

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



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

Notification of Compliance



ReadyNAS Ultra

Regulatory Compliance Information

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

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

FCC Requirements for Operation in the United States

FCC Information to User

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

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

FCC Guidelines for Human Exposure

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

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

FCC Declaration Of Conformity

We, NETGEAR, Inc., 350 East Plumeria Drive, San Jose, CA 95134, declare under our sole responsibility that the NETGEAR ReadyNAS Ultra complies with Part 15 of FCC Rules.

Operation is subject to the following two conditions:

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

FCC Radio Frequency Interference Warnings & Instructions

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

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

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

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

Canadian Department of Communications Radio Interference Regulations

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

European Union

The NETGEAR ReadyNAS Ultra complies with essential requirements of EU EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC as supported by applying the following test methods and standards:

- EN55022: 2006 / A1: 2007
- EN55024: 1998 / A1: 2001 / A2: 2003
- EN60950-1: 2005 2nd Edition
- EN 61000-3-2:2006
- EN 61000-3-3:1995 w/A1: 2001+A2: 2005

Index

A

about ReadyNAS Ultra **6**
advanced control **16**

B

battery **39**

C

community website **7**
compliance **41**

D

default IP **10**
default login **10**
disk failure **31**
diskless unit **10**
disks, add **32**
disks, failure **31**
disks, replace **32, 33**

E

electrical safety **39**
electrostatic discharge **40**
ESD **40**

F

factory default settings **35**
FrontView **15, 23, 29**

G

general safety **40**

H

hardware compatibility **31**

L

LED descriptions **13**
login, default **10**

M

management console **15**

P

password, default **10**
power **23, 29**
power switch **23, 29**

R

RAIDar
11
 commands **12**
 LED descriptions **13**
RAIDar. log in **14**
ReadyNAS Ultra 4 **8**
ReadyNAS Ultra 6 **8**
replacement disk **31**
resynchronizing volume **32**

S

safety **39, 40**
setup **10**
setup location **9**
Setup Wizard **15**
socket-outlet **39**
status bar **17**

T

technical support **2**
trademarks **2**

U

Ultra 4 **8, 18**
Ultra 6 **8, 24**
utility, RAIDar **11**