



NETGEAR ReadyNAS Ultra 4 Bay Multimedia NAS Server



Performance	<div style="width: 94%; background-color: #ccc; height: 10px;"></div>	94%
Ease of Use	<div style="width: 95%; background-color: #ccc; height: 10px;"></div>	95%
Features	<div style="width: 96%; background-color: #ccc; height: 10px;"></div>	96%
Value	<div style="width: 95%; background-color: #ccc; height: 10px;"></div>	95%
Overall Rating	<div style="width: 95%; background-color: #ccc; height: 10px;"></div>	95%

95%

Manufacturer: NETGEAR

Model: Ultra 4

MSRP(RNDU4000): \$599

Price as Reviewed: \$825

Date Reviewed: August 14, 2010

Link to Product: [ReadyNAS Ultra 4](#)

NETGEAR launches ReadyNAS Ultra 4 Multimedia NAS Server

It's very difficult to proclaim major advances in the world of Network Attached Storage these days and grab the attention of the media let alone users. Our review of both the ReadyNAS Ultra 4 and Ultra 6 products go a long way to substantiate the claims made by Netgear of a new breed of NAS devices for the hardcore digital enthusiast. Features, it appears, have always been the driving force behind the incessant need for Netgear to design products with an emphasis on being innovatively unique. The recent launch of the ReadyNAS Ultra series bears witness to this with a few 'firsts' proclaimed by Netgear.

The ReadyNAS Ultra series are designed to store large volumes of video, music, and images in a single centralized device and stream multimedia content to TiVo boxes, TVs, desktop, mobile PCs, digital cameras

and virtually any other networked device. Some of the new features are a direct result of the valuable feedback sought from its user community, which has a tremendous mix of users from the business community as well as home and enthusiasts dating back to the launch of the ReadyNAS product range in 2004. Netgear appears to have listened attentively and designed around its user community, and credit to the manufacturer for taking heed.





ReadyNAS Ultra 4 Bay Multimedia NAS Server

ReadyNAS storage devices already have about every feature you can think off as far as network storage goes. The ReadyNAS Ultra series extends these features and are specifically designed to fill the ever growing gap in the convergence of networked storage with media integration. The ReadyNAS Ultra appears to be a huge step in the direction of closing this gap with the addition of DVR compatibility for TiVo, transcoding capabilities courtesy of Orb for mobile devices and, significantly, it uses media shifting features from Skifta.

The ReadyNAS Ultra consists of a 4-bay unit ReadyNAS Ultra 4 and the 6-bay ReadyNAS Ultra 6. Little distinguishes the two except for the obvious difference in the number of bays and processor platform.



The current availability now includes the diskless model that previously Netgear refused to offer as a result of their selling pre-installed systems with varying capacity options based on disks already installed by Netgear. It seems Netgear has now had a change of strategy and offered the diskless unit for users or system integrators like us to install and provide users with extended options to meet their exacting needs.

Out of the Box

Out of the box, the ReadyNAS Ultra 4 we used was the diskless version RNDU4000. Packed well and housed in a standard brown box with the Netgear label seal. The normal combination of Ethernet and power cables are provided, with the system CD and the screws for the hard disk drives are taped onto one of the HDD removal trays. That is all as far as content is concerned. Nothing spectacular.

NOTE: eAegis also provides customers with a comprehensive QA checklist detailing all the product serial numbers for asset and warranty management. This is only for systems supplied with pre-installed drives.

The outer design

The resemblance between the ReadyNAS Ultra 4 and the ReadyNAS NVX is uncanny. The outer case is totally identical we were not able to find any differences. The ReadyNAS Ultra 4 consists of hot-swap drive trays with a simple click mechanism that opens the drive latch allowing for removal of the drive. This design does not suffer from the 'lockout' suffered in the previous NV and NV+ models when not used for a long period of time. The drive bays are covered by an elegant door that has a magnetic locking mechanism to keep it shut, no clunk or clink and no clips to break or need to pull and pry open!

Vertically mounted drive bays normally point to a clearer airflow and this was very evident as the 2TB drives installed stayed at a decent average temperature of maximum 95°F at all times in our air-conditioned labs kept at a constant room temperature of 75°F.



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ReadyNAS Ultra Top LCD Panel

LCD monitoring is accomplished with a panel on the top that subtly lights up to depict the number of drives installed and the status thereof. If a problem occurs with one of drives the light configuration will change, prompting further investigation. The panel at the bottom at the face of the unit provides a stream of critical system operational information to assist in maintaining and monitoring the system without being forced to load the management user interface to perform simple monitoring tasks in cases of possible issues, this also includes obtaining the IP address, and the name of the NAS. The cooling of the unit is achieved by the software controlled 92 mm chassis fan, and this seems to suffice, unless of course, the unit will be housed in an environment with excessive heat or dust - not advised at the best of times. The overall size of the unit is impressive same as the NV+ and NVX – The Ultra 4 measures in at (H x W x D): 134 x 205 x 223 mm (5.28 x 8.07 x 8.78 in), and with an overall weigh of 4.70 kg (10.35 lb), without hard disks, with the addition of 4 x 2TB drives this jumps to 19.85 lbs.



ReadyNAS Ultra 4 Bottom LCD Panel

Inside the ReadyNAS Ultra 4

ReadyNAS Ultra 4 has continued with the Intel tradition at Netgear by adopting the 64bit Intel® Atom 1.66 GHz Single-core CPU, Intel's smallest and lowest power processor. The 45nm Intel® Atom™ processors pack an astounding 47 million transistors on a single chip measuring less than 26mm², making them Intel's smallest and lowest power processors. All this while delivering the power and performance you need for accomplishing any task at hand. Based on an entirely new micro architecture, the Intel® Atom™ processor was developed specifically for targeted performance and low power while maintaining full Intel® Core™ micro architecture instruction set compatibility. Intel® Atom™ processors also feature multiple threads for better performance and increased system responsiveness. Coupled with a generous 1GB DDR2 SODIMM memory, the unit packs a pretty hefty punch. Netgear has stipulated the unit to be twice the speed of the old NV+, our performance tests puts it slightly above twice the speed. Compatibility should not be an issue, as Intel has diligently worked to ensure backward compatibility of the processor on the x86 core. The OS is embedded within a 128 MB Flash Memory chip.

The Power Supply is a 120W server-rated AC small form factor power supply designed to follow the Intel Flex ATX power design with dual +12V rails and no minimum load requirements on +3.3V output. Providing a peak power of 275W and operating temperatures of 0°C to 40°C. We will be doing a long-term load test on the unit to check the reliability of the power supply, at this time loading 4 x 2TB drives was not an issue. Power consumption was monitored at 54.5W typical with 4 x 2TB disks and 48W idle.



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The structured and compact design of the unit means accessibility is a challenge and one we would not advise you take on unless specifically requested by Netgear to do so. Access to memory is easy and can be upgraded if the need arises. We would suggest following the compatibility list for supported memory manufacturers.

Connectivity Suite

The ReadyNAS Ultra 4 has three (3) USB 2.0 ports with one on the front and rest at the back of the unit. Support for a whole host of USB peripherals is provided and was tested by us when we connected 3 differing USB external HDD units and a variety of printers for sharing. The USB on the front is used for the configurable One Touch Copy Button feature offering backup convenience.



Ethernet connectivity is via two RJ-45x2(10/100/1000) BASE-TX Auto MDI/MDI-X WOL supported ports that facilitate Link Aggregation for 802.3ad, load balance and fail over. Load Balancing, which allows you to balance traffic across the two ports to maximize transfer rates, as well as Failover which in turns allows you to have the luxury of the second port taking over in case the first port fails. Netgear also supports a Multi-IP feature, allowing the NAS to be deployed with two different IP settings for sharing among different workgroups in two different subnets.

There is a distinct lack of eSATA ports only to the extent of further enhancing the possibility of carrying out a backup of a backup using the eSATA port.



Salient Features

The ReadyNAS product range has a tremendous installed base within the home sector, the introduction of the ReadyNAS Ultra and its strong emphasis on media should allow Netgear to consolidate its positioning and further increase its market share in the home arena. The Ultra series could almost be seen as unchallenged in the Media arena as a result of its latest feature set.

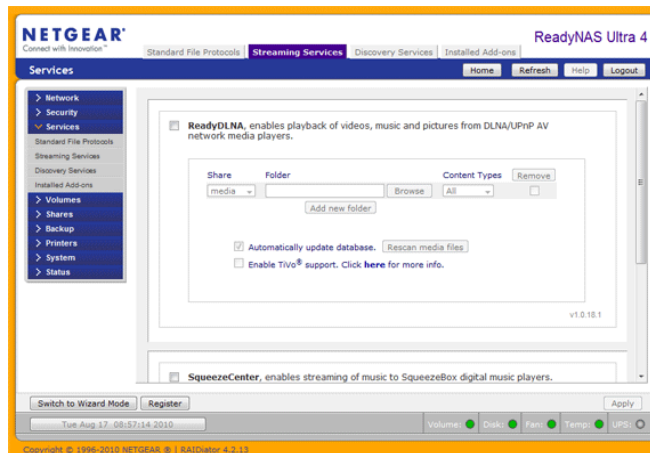




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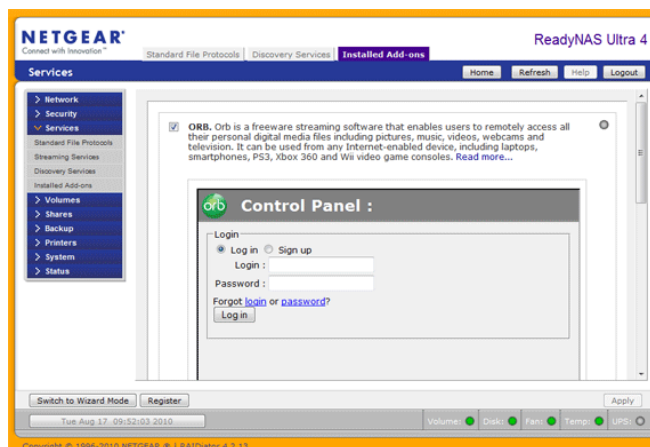
TiVo® Integration

NETGEAR ReadyNAS is the very first NAS to be certified TiVo compatible and that's because NETGEAR owns ReadyDLNA. TiVo users have had the option of playing back video streams (along with photos and music) from the ReadyNAS in the past, but with the Ultra, you can now save your favorite programs to your ReadyNAS for future playback by just using your TiVo remote control. TiVo owners will relate to this as often we have deleted programs we wanted to keep as we constantly ran short of space, now these can be saved on the ReadyNAS Ultra.



Mobile media access with Orb

The ability to partner with Orb has allowed Netgear ReadyNAS Ultra to transcode and stream just about any video, photo, and music remotely to your mobile device no matter where you are. Need a video or movie fix no matter where you are - it seems the Ultra will oblige directly to your mobile.



Remote media streaming with Skifta and ReadyDLNA

The ReadyNAS product range was an early adopter of the DLNA standard allowing it to find its way into many homes and thus finding a home for itself in the process. All the main entertainment and popular network media playback devices all support DLNA, as do many of the new TV and hi-fi receivers. The support for Skifta will allow users to remotely access private media libraries from any DLNA-certified device. This is a real boon for users that wish to share their media files with family and friends, with the Ultra at the heart of it all.



A full set of features supported can be found on our [Product page for the ReadyNAS Ultra 4](#).



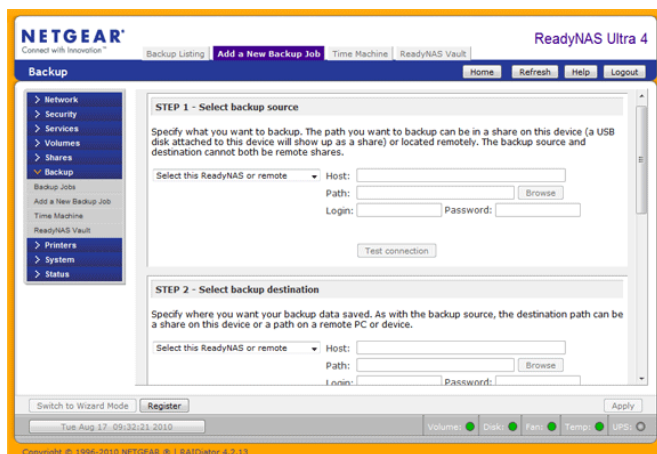
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Expanding and Exploring RAID

One of the endearing features that set the ReadyNAS apart from its competitors in the early days was the design and deployment of X-RAID, a proprietary redundancy methodology designed by Infrant and extended by Netgear allowing users to expand capacity of their ReadyNAS by merely adding drives and expanding without loss of data. NETGEAR has extended this to Auto-Expandable X-RAID2 whilst still offering the standard Flex-RAID mode for RAID levels 0, 1, 5, and 6.

Data Backup

The ReadyNAS Ultra has a comprehensive set of backup features that will also appeal to the business users as well.



The Integrated backup option is a web-based backup manager built within Frontview. The options include scheduling backups to or from any of the shares located on the ReadyNAS, to a remote site over CIFS, NFS, FTP, HTTP or RSYNC protocols, backup to another ReadyNAS at a remote site. Backup using any of the USB ports provided or simply backup to another ReadyNAS. A programmable backup button at the front of the unit

allows defined backups set within the backup manager for any folder at a touch of a button.

Mac users will be pleased by the Time Machine support, totally independent of Time capsule, all you need to do is enable the Time Machine service on the ReadyNAS and start backing up on your LAN via Time Machine.

The ReadyNAS comes with a 3-user license of Memeo Backup Premium. This software resides on the CD that ships with the ReadyNAS. Backup Premium utilized CDP and versioning to give you instantaneous backup of your PC or Mac data, and allows you to revert back to any of the earlier version of a file.

Users that require and want to utilize Cloud Storage as a solution can use the ReadyNAS Vault. With ReadyNAS Vault, all your backups and restores are controlled in the cloud, so you're never more than a quick Internet access from managing or accessing your backups. This is a service that is not free and is subscription based.

Performance

The ReadyNAS Ultra 4 ought to do well on the media platform and with an Intel Atom single-core processor with 1GB memory we would be disappointed if it failed to impress.

Test Environment

ReadyNAS Ultra 4 (4x1000GB – Enterprise Class)
Firmware Revision: July 7, 2010 – Version 4.2.13
RAID: X-RAID25 Configuration

Network

NETGEAR FSM726 10/100Mbps + 1000Mbps ProSafe Managed Switch

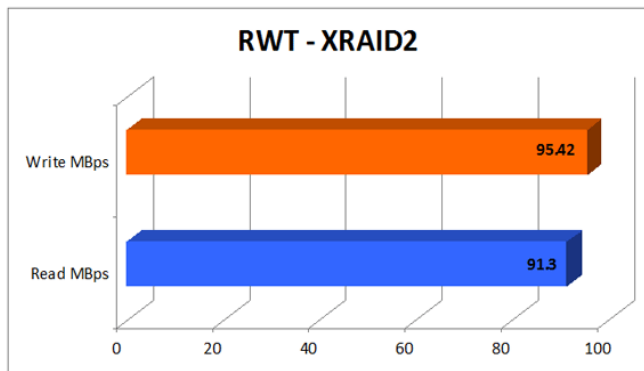


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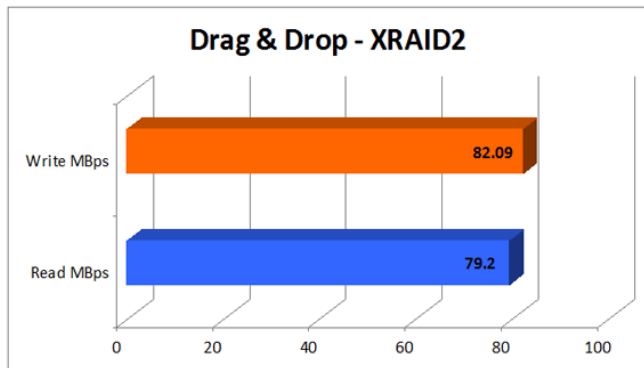
Test Method

There are two tests that we used to measure performance on the Windows platform:

Real-World testing utility that consist of workload traces gathered from typical digital home applications, traces of high definition video playback and recording, office productivity applications, video rendering/content creation as well as a broad range of different applications, using 1024 KB sequential block reads and writes on a 2 GB test file, as well as Drag & Drop of a 2 GB file over CIFS, Windows default network protocol.



The Real World Test performances results are an average of twelve full test cycles. The ReadyNAS Ultra 4 does hold its own, whilst it may not be the fastest we have tested, it is most certainly in the top tier as far as performance is concerned. Read and Write speeds are a credible 82.09MB/s and 79.20MB/s respectively.



Drag and Drop is a methodology used by a majority of users to move data back and forth on their individual systems. As such, we feel this method should form an integral part of our testing of products and to ensure a return in results depicting a realistic process. Drag and Drop results are consistent with other market competitors in the six and seven bay categories. The ReadyNAS Ultra 4 fares well and clearly does not disappoint.

Overall Conclusion

The ReadyNAS Ultra 4 is a great addition to the Netgear Storage portfolio. It is clear Netgear has aimed the Ultra series to the serious media home users who demand huge storage capacity as well as a convergence with all their other media devices within the home. The ReadyNAS Ultra 4 has a decent turn of performance, with extended media features and backup options that will appeal to business users as well as the home enthusiast. The RNDU4000 is a diskless model with a price tag of \$599.00, which is very reasonable comparatively to other NAS devices in the market.

This review is courtesy of: eAegis.com Product Testing and Evaluation Division.