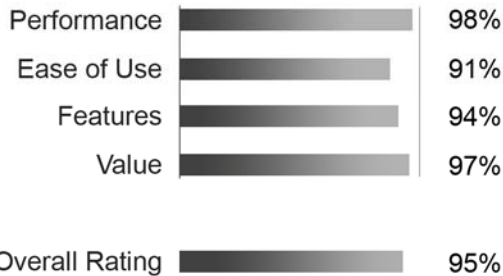




## Thecus N5500 5 Bay Dual DOM NAS



# 95%

**Manufacturer:** Thecus  
**Model:** N5500  
**MSRP(diskless):** \$899  
**Price as Reviewed:** \$899  
**Date Reviewed:** August 5, 2009  
**Link to Product:** [N5500](#)

### Background

THECUS began manufacturing NAS products with a meager handful of products back in 2004. Very low key, whilst the market began its education in trying to grapple with exactly what was a NAS and what it could do. The market perception changed along with the level of Thecus awareness when Thecus launched its killer NAS, the N5200 5-bay NAS that looked and felt the part of a unit that would be a real boon to small and professional businesses that required a solution based on a strong value for money ratio. The N5200 did not disappoint, after a year or so, this configuration was updated to the N5200 PRO consisting of a CPU, memory and a handful of feature updates that included the popular iSCSI. At the time a first of its kind offered by any manufacturer within the SMB NAS design architecture.

Thecus recently announced a new 5-bay product in the form of the THECUS N5500, a 5-bay unit with a twist of innovation that may appeal to those who take redundancy and downtime as serious issues. The inclusion of a Dual DOM that provides double protection in cases of failure is a smart and strategic addition. The Thecus N5500 is joining an impressive host of other award winning NAS arrays, and as such the Thecus N5500 needs to be special to be able to make an impression. The innovative style deployed by Thecus has clearly had a major influence in becoming a leading player within the SMB, Educational, Governmental and Enterprise sectors.





## Thecus N5500

### 5 Bay Dual Dom NAS

### Initial Scope

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At first glimpse the exterior of the unit is taken over by the door that protects the hot-swappable drive bays, it is somewhat an acquired taste and we clearly have not acquired it, we are not keen supporters of the door. Press the middle section of the door and it comes away from its clip, displaying a familiar drive bay design and configuration as is on the N5200PRO. It seems the chassis of the Thecus N5500 chassis is similar or the same as the Thecus N5200PRO. The only advantage we can glee for having a door apart from an esthetic one is to protect the drive bays, which is a valid one.

The N5500 seems to lend itself well within the grasp of the Small and Medium size businesses that will most certainly show keen interest as will the enterprise inter departmental users, and of course the home users that have an innate hunger for digital applications, high definition video / audio playback and recording, as well as video rendering/content creation. A hearty greeting awaits the N5500 from these and many other potential users. Whilst the Thecus N5200PRO is powered with an Intel® Celeron M 1.5GHz Processor and 512MB DDR system memory, the Thecus N5500 sports an Intel® Celeron™ M 1.86GHz processor coupled with a 1GB DDRII memory, Dual 128MB redundant DOM modules.

### Progress Monitoring

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The usual LCD panel (BLUE) is included first deployed by Thecus for their own NAS and followed suite by many other manufacturers the features are typically, Status- System Busy/Fail, HDD1-5 Activity/Fail, WNA/LAN Activity and IP Address designation, USB and eSATA connectivity and progress status. The unit like others can be controlled from the front panel with menu based option allowing selection of appropriate features for overall management.





## Thecus N5500

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### Ease of Connectivity

The Thecus N5500 has Six (6) USB 2.0 Ports spread over the front and back. Support for a whole host of USB peripherals is provided and tested by us when we connected 4 differing USB external HDD units, a variety of printers for sharing. The N5500 also has a unique first for Thecus, a USB Target port allowing direct connection via USB thus allowing the N5500 to be a DAS unit. This is a welcome for those requiring the versatility of using it as a NAS and a DAS. 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.



### Redundancy via Raid

Supported RAID modes - RAID 0, 1, 5,6,10, JBOD, that is good start and the RAID features that it supports are Auto-rebuild, Hot-Swap, Hot-Spare, Global Hot-Spare and this in combination with Multiple RAID support allows a host of RAID permutations that will blow any random number combination sky high! Currently the Thecus N5500 will support up to 10TB of storage in the combination of 5 x 2TB drives. The limitation of 8TB for a single volume is no longer an issue with the Thecus N5500, which along with its other companions now supports multiple file system support, inclusive of XFS, ZFS (both support volumes greater than 8TB) and the traditional EXT3. Any of these file systems can be used in a multiple volume environment. All RAID volumes can also be encrypted for ultimate data protection and added security.

**Wikipedia Definition of ZFS:** In [computing](#), ZFS is a [file system](#) designed by [Sun Microsystems](#) for the [Solaris Operating System](#). The features of ZFS include support for high storage capacities, integration of the concepts of Filesystem and [volume management](#), [snapshots](#) and [copy-on-write](#) clones, on-line integrity checking and repair, and [RAID-Z](#). ZFS is implemented as [open-source software](#), licensed under the [Common Development and Distribution License](#) (CDDL).

**Wikipedia Definition of XFS:** XFS is a high-performance [journaling file system](#) created by [Silicon Graphics](#), originally for their [IRIX operating system](#) and later ported to [Linux kernel](#). XFS is particularly proficient at handling large files and at offering smooth [data transfers](#).



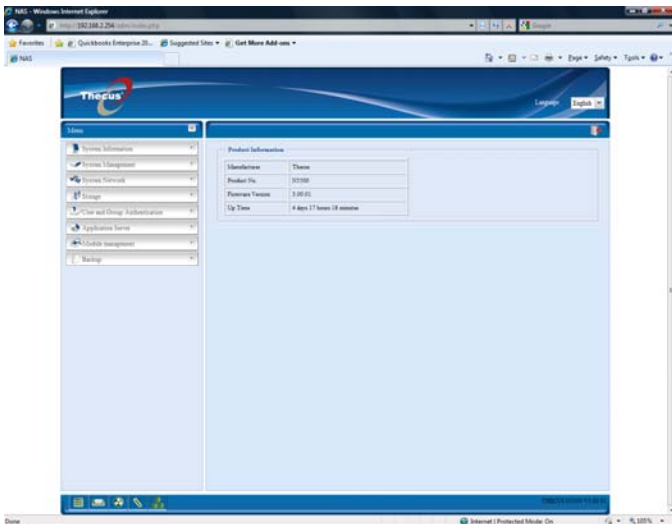
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## 5 Bay Dual Dom NAS

## Special Extra Features

Thecus N5500 has a few hidden surprises that they have been a little coy about and these whilst not ready as soon to come.

**NEW FRONT END** – Finally the Thecus Web Interface (Management panel) has received a much needed uplift in the form of a new AJAX-based web interface. The look and feel is a tremendous effort on behalf of Thecus and is first implemented on the Thecus N5500.



**iSCSI Thin Provisioning (available August 2009)** – Allowing the ability to efficiently manager storage within a central repository.

**eMULE (available August 2009)** - A file sharing peer to peer service.

## Easy Backup

Backup is via FarStone Drive Clone PRO 5.0 which is schedule based with incremental backup services. Furthermore disaster recovery can be facilitated using the same software to ensure rapid recovery as times of

disaster. NAS remote replication can be achieved via Thecus proprietary Nsync service.

Take a look at the features of the [FarStone Drive Clone PRO 5.0 by clicking here](#) and downloading the features that make the package a useful addition to the N5500.

## Performance

The THECUS N5500 seems to have been designed with a high priority given to performance. The new AJAX based Web GUI and latest firmware combines well with hardware design that is fully optimized to leverage the highest possible performance from the unit. The proceeding results clearly emphasize this and should make Thecus proud as it vindicates the efforts exerted by its R&D team in re-designing a 5-bay that will not only dominate the 5-bay market but, give its competitors a run for their money. This is the first NAS we have had to repeatedly run tests to ensure the results we obtained were for real. We were simply blown away by the results.

### Test Environment

THECUS N5500 2.5GB with 5 x 500GB Enterprise drives

Firmware Revision: v 3.00.01

RAID LEVEL TESTED: RAID 5 (one drive parity)

### Network

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

### Test Method

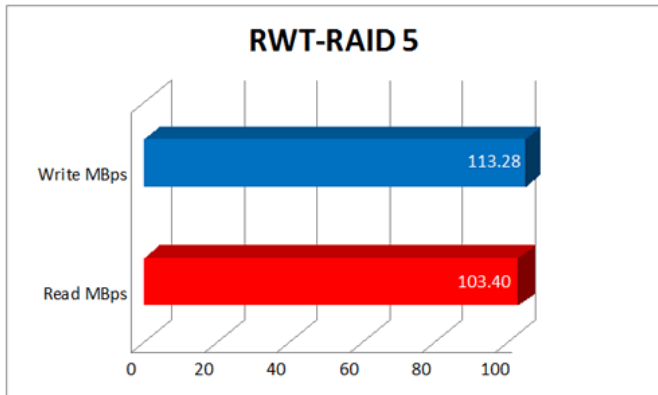
**We use a Real-World testing utility as well as a realistic Drag & Drop procedure as depicted in everyday normal operations.**



# Thecus N5500

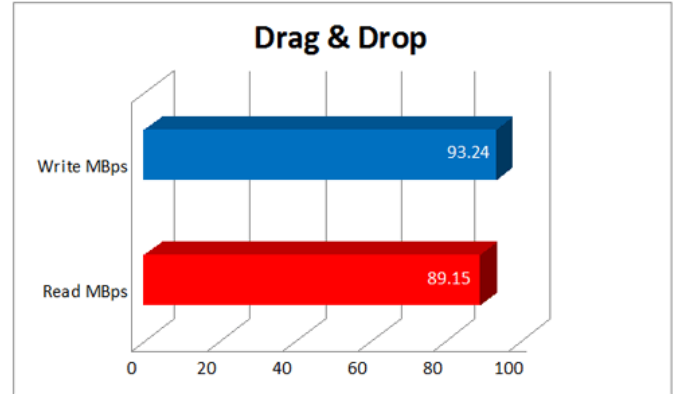
## 5 Bay Dual Dom NAS

**NOTE:** 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 and clearly show the outstanding performance returned by the Thecus N5500, it is blazingly fast! Read and Write speeds are a credible 103.40MB/s and 113.28MB/s respectively, the Thecus N5500 did manage to reach up to 115MB/s write, but seem to be hindered by the Ethernet bottleneck, and hence compromised. Thecus N5500 is clearly not going to disappoint in the area of performance.

**NOTE:** Drag and Drop is a methodology used by a majority of users to move data back and forth on a Windows workstation mapped to the array of the NAS device. We strongly believe this process should become a cornerstone of all our tests as it emulates what occurs in real life.



Drag and Drop clearly highlight the N5500 is far superior to many we have tested. The Thecus N5500 has clearly passed with flying colors in the performance benchmarks, as this section results are impressive. Read and Write speeds are a credible 89.15MB/s and 93.24MB/s respectively.

### Overall Conclusion

Thecus N5500 with its redundant DOM, enterprise features, performance that will blow you away, sleek looks with fine build quality, and a price tag that will not burn a hole in your budget, makes the N5500 a class act to follow. If its features, quality, performance, and functionality are what you require, then the Thecus N5500 will deliver! Overall, the highest points awarded by us to date have been earned by the Thecus N5500, and it takes our Oscar for overall top points earned by any NAS in this class. The N5500 has no peers in this category. This one has to be on your shortlist and at \$899.00 for a diskless, buy one before they change their minds!

This review is courtesy of eAegis Product Testing and Evaluation Division. Please email [reviews@eaegis.com](mailto:reviews@eaegis.com) for any comments you may wish to share with us. We welcome customer feedback. August 5<sup>th</sup>, 2009.