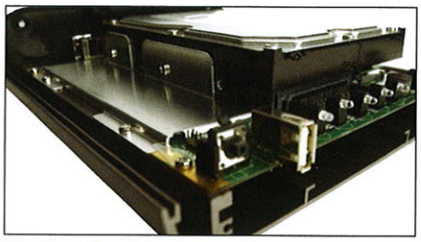


A simple mounting solution for the hard disk, and notice the metal casing which stands in as a heat sink too.

Extensive Competence

QNAP TS-109 Pro Turbo Station

BY ANDY SIM

In late April this year, QNAP Systems introduced their TS-100 Turbo Station, a NAS solution tenaciously designed to target home users. Now, just barely two months forward, QNAP makes public the TS-109 Pro honed for the SMB and SOHO working environments. The new NAS server's most obvious enhancement would be its ability to support an internal SATA disk of up to 1TB, compared to the TS-100's SATA limitation of 750GB, and is now extendable to 2TB by the ever efficient eSATA connection at the rear.

While demonstrating similar looks to conventional NAS servers, TS-109 Pro's dark brushed-metal chassis is aesthetically pleasing. The status lights are situated conveniently on the front panel, with a handy Copy button for ripping data off attached USB drives. Inclusively, two base clips can be used for vertical or horizontal mounting. The back panel is where all its ports are situated, including an eSATA port if an external hard disk add-on is required.

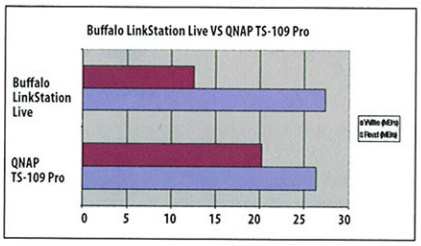
The TS-109 Pro uses a Marvell 500MHz processor, compared to the TS-100's paltry XScale 200MHz workhorse. Touted as a 12-in-1 NAS server, the TS-109 Pro offers a plethora of resources such as a MySQL server, or Print server amongst others. Professionals who operate in a Windows domain environment will be pleased to know that Windows ADS is supported (unlike the TS-109 model); primarily to ease the management of shared data across the network. If data recovery is a concern, the Q-RAID 1 mirroring function allows for backups replicas to be made to the external disks, through USB or eSATA.

We've used a Seagate Barracuda 500GB SATA drive for test purposes. Installing it was a breeze, for all it takes are four mounting screws to hold the disk in place. To achieve a better noise reduction, QNAP has chosen not to install fans with this product. Being so, the flat aluminum plane the hard disk sits on is also used for thermal dissipation. Putting the chassis cover back on however, proved to be a little tricky and some effort is needed to screw it in place.

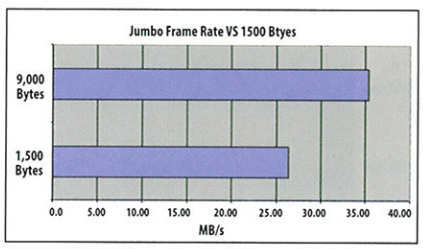
It was relatively easy to set up the TS-109 Pro. We hooked up the NAS up to our test rig via a 5-Port Gigabit Network Switch to simulate a mini-network. Detecting the drive was made painless with the packaged QNAP Finder, and we mapped out the drive once the configurations are done. Going through some of the settings, we believe Bit Torrent junkies would be relieved to know that the Download Station is still in place, so there's no need to leave your PC on while your downloads are in progress. The TS-109 Pro's NetBak Replicator application actually does real-time synchronization or scheduled backups from the various desktop clients to the NAS itself, a valuable function to have for enterprise users.

Using CrystalMark as a benchmark for sequential read and write speeds, we've pit QNAP's TS-109 Pro against Buffalo's LinkStation Live since they both incorporate a 1-Gigabit Ethernet port and are using a similar hard disk class (500GB, 7,200RPM). As evident from the charts, the TS-109 Pro has a comparable read rate of 26.32MB/s, however, it trumped the Buffalo at sequential write speeds with a showing of 20.20MB/s, nearly 7MB/s more on average. When the packets size is increased from the default 1,500 bytes (for a basic network layer) to 9,000 bytes, it demonstrated an impressive 34 percent increase in throughput levels.

Succinctly, the QNAP TS-109 is a little expensively priced at S$537 with no bundled hard drive to show. However, given its extensive array of features, this NAS server will hold its appeal for network enthusiasts across the SOHO or small business milieu.



Sequential write and read speeds of the LinkStation Live and TS-109 Pro compared on CrystalMark.



A significant boost of approximately 7MB/s was clocked when we upped the MTU to a jumbo frame rate.

SPECIFICATIONS

RAID	Operating System	Weight	Warranty	Price
Q-RAID 1	Linux embedded system	2.1kg (gross weight)	1 year	S$537

Model: TS-109 Pro
Memory: 128MB DRAM, 8MB Flash
LAN Port: 1 x Gigabit RJ-45 Ethernet port
Interface: 3 x USB 2.0, 1 x eSATA
HDD Capacity: 1 x 3.5-inch SATA I/II HDD, up to 1TB, expandable to 2TB via eSATA/USB
Buttons: Intelligent USB auto copy button, Power Button, Reset Button
Power Consumption: 14.4W (Operational)
Dimensions: 210 x 60 x 182 mm
Principal site: www.qnap.com.tw

HWM'S VERDICT

Physique: **8.5**
Features: **9.0**
User-friendliness: **9.0**
Performance: **8.5**
Value: **7.5**

8.5
Out of 10

The QNAP TS-109 Pro's comprehensive features will definitely entice, although its lack of a bundled drive could be its drawback.