

View your options, make your choices. Australian Macworld puts latest-release hardware and software through its paces.

High performance storage

Not so much about space, but about time

Sometimes it's not so much a matter of storage space, but how quickly you can fill the space with data. This is particularly the case with video editing. You still need lots of space but more importantly you need to be able to get the video on and off the drive at high speed. And if you're out on location, you probably want to use your MacBook Pro rather than haul along your Mac Pro desktop monster. Unfortunately, the notebook's hard drive moves data only slightly better than half as fast as the desktop Macintosh.

To the rescue comes this flock of external add-on drives with a speed advantage. They all use an interface that is much faster than even FireWire 800. Most are based on the same interface found inside your Mac, known as Serial Advanced Technology Attachment (SATA), but

one uses a Mini Serial Attached SCSI (miniSAS) cable to support four SATA connections with just one cable. All but one of the models we tested also support multiple drives configured in a RAID array for even faster access to your data.

On test. Taking their places in the lab were Western Digital's My Book 1TB, LaCie's Biggest Quadra 4TB, Acard's ANS-9050E 5TB and PROAVIO's EB8ms 4TB. All except the My Book are mini-towers with multiple hot-pluggable drive bays. The LaCie holds four drives and the Acard holds five disks of up to 1TB each in a variety of configurations, from just a bunch of disks (JBOD) through striped (RAID 0), mirrored (RAID 1) and redundant (RAID 5). RAID 5 provided the best

RATINGS KEY

- Outstanding ★★★★★
- Very good ★★★★
- Good ★★★
- Flawed ★★
- Unacceptable ★
- Dangerous ☠

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My Book 1TB

High-performance desktop drive
★★★★
Portable, well priced
Not as fast as RAID
eSATA, FireWire 400/800, USB
\$480
Western Digital 0011 1800 6008 6008
Ian Yates
www.westerndigital.com



Biggest Quadra 4TB

High-performance desktop drive
★★★
Very quiet
Not very fast
eSATA, FireWire 800, USB
\$2999
LaCie Australia 02 9669 6900
Ian Yates
www.lacie.com/au



Acard ANS-9050E 5TB

High-performance desktop drive
★★★★
Also works as a NAS drive
None
GigaLAN, eSATA
\$3149
Silicon Memory Technologies 02 9417 7822
Ian Yates
www.siliconmemory.com.au



PROAVIO EB8ms 4TB + HighPoint RocketRAID 3522

High-performance desktop drive
★★★★
Screamingly fast — up to 650MB/s
None
miniSAS
\$3995
Silicon Memory Technologies 02 9417 7822
Ian Yates
www.siliconmemory.com.au



performance so that was what we used for testing each drive's raw throughput. The PROAVIO is an eight-bay mini-tower, which should provide adequate storage for most projects, and it also supports RAID 6 dual-parity configuration.

More than just drives. Just in case you thought all SATA controllers are the same, our tests proved that the HighPoint RocketRAID 3522 included with the PROAVIO box is in a different league. The PROAVIO/HighPoint combination whipped all the other drives to a virtual standstill in comparison, beating the next best drive by a factor of six in RAID 5 configuration. In fact, the PROAVIO running in RAID 0 mode was still three times as fast as the next fastest RAID 5 drive. The only downside with any of these drives is that you can't get the performance without adding an interface card to your Macintosh.

Apple Australia supplied AMW Lab with a Mac Pro fitted with dual Quad-Core Intel Xeon CPUs running at 3.2GHz and 8GB of memory, probably just the sort of machine you'd choose for video editing work. Apple also supplied a 15-inch MacBook Pro, the kind of notebook likely to be taken on location for a video shoot. Silicon Memory Technology supplied us with standard eSATA controllers — a PCI card for the Mac Pro and an Express card for the MacBook.

Both the Western Digital My Book and the LaCie Biggest Quadra include FireWire and USB ports on the back of the box, so they can be used with any Macintosh without the need to install a SATA controller card. However, the My Book drive performed about fifteen percent faster than FW800 when writing data via the SATA in-

terface. Reading the data back was about the same speed with FW800 port as the SATA controller. Of course the USB port operates at half the speed of FW800 and produced throughputs to match.

The surprise here was the LaCie Biggest Quadra, which hardly went any faster than its performance on FW800 when attached via the SATA controller, in either the MacBook or the Mac Pro. In fact the internal hard drive of the Mac Pro could move data about 50 percent faster than the LaCie drive, despite the LaCie being in a RAID 5 configuration. The LaCie drive proved faster than the internal drive on the MacBook Pro but still wasn't a match for the single drive My Book connected via SATA.

Stepping up to the Acard ANS-9050E improved the performance to about double the speed of the internal disk in the MacBook Pro and about 50 percent faster than the Mac Pro's internal drives. Although the Acard provides a GigaLAN interface, its performance via the network was not in the same league as its direct-connect performance, so this mode should be considered more for convenience of sharing data than for raw performance. However, it still makes it possible to use a single drive box to perform dual duty, giving everyone a place to store and share files while still providing better than average performance when directly connected.

Speed champ. The performance king in this lineup was the PROAVIO 8-bay tower. This impressive box isn't exactly portable, except in a road case of the type favoured by musicians and film crew, but it certainly performs when teamed with the HighPoint RocketRAID 3522 controller. Unfortunately there isn't a suitable controller for the MacBook Pro, so if you plan on taking the

Expresscard SATA controller2

Interface adapter
★★★★
Adds eSATA to notebooks
Need to download drivers
eSATA x2
\$179
Silicon Memory Technologies
02 9417 7822
Ian Yates
www.siliconmemory.com.au



PCI-E SATA Controller

Interface adapter
★★★★
Works with Intel and G5 Mac Pro
Need to download drivers
eSATA x2
\$99
Silicon Memory Technologies
02 9417 7822
Ian Yates
www.siliconmemory.com.au



eSATA PCI Express Card

Interface adapter
★★★★
Drivers for Mac on CD
None
eSATA x2
\$79
LaCie Australia 02 9669 6900
Ian Yates
www.lacie.com/au



PROAVIO on location, you need to plan on taking your Mac Pro desktop behemoth with you, along with screen, keyboard and mouse. Once set up, this combination can move data at speeds up to 650MB/s, which is over nine times faster than the Mac's internal disks can manage.

Moving large files feels almost instantaneous with this drive and this performance is highly addictive. Make sure you can afford to keep the unit should you decide to evaluate it before purchase, as you will probably resort to any means to stop the thing leaving your possession. For video editing of very large projects this drive and controller combination is far and away better value than Apple's offering of a SCSI RAID controller and four 300GB internal drives. That will set you back \$4700 and provide 1.2TB of storage operating up to 250MB/s. The PROAVIO gives you more than double the storage, more than double the throughput and costs under \$4000. You just need the extra room alongside your Mac Pro to park the eight-bay mini-tower. Unless your real estate costs are very high, this one is what they call a no-brainer.

Australian Macworld's buying advice. Get the PROAVIO if you need the best performance available, and can afford it. The base model Mac Pro costs \$3999 and adding the PROAVIO will double your investment costs. However, it still beats what Apple has to offer for bang for your buck. If you need to go on location and want to use a notebook, then the Western Digital My Book offers excellent value for money and although not as portable as the MacBook Pro it will easily fit into a backpack. If you need to go a bit faster on location and don't mind humping the Acard, then you'll get a lot more space and be able to access it a lot faster. 📁

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"NoteBook is a must-have if you're using your computer as a true digital hub."

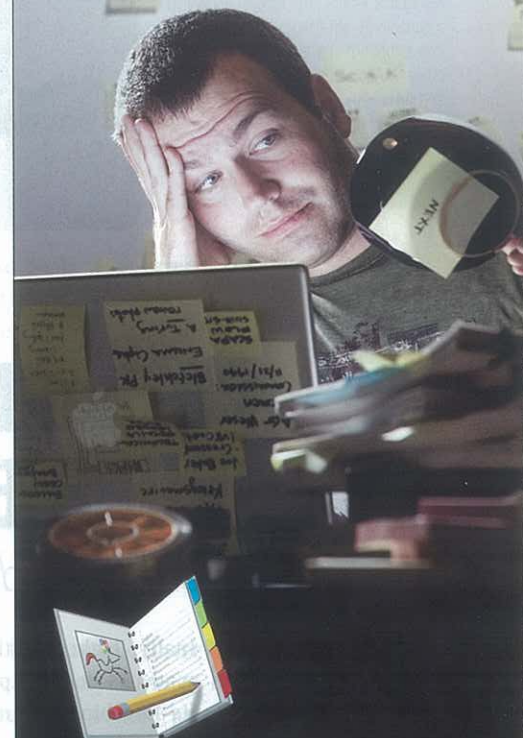
Tera Patricks, Mac360.com

"NoteBook is now open on my desktop all the time."

Shawn King, Host/Exec.
Producer, Your Mac Life

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