Videomaker's 2009 Best Storage Device:

Proavio EditBOX EB8MS Disk Array

The Stacker: Professionals agree that disk speed is the biggest bottleneck in any computer system. Power-hungry users – video professionals included - eagerly snap up computers with fast buses, as well as fast disks. Proavio has capitalized on the ability to pair a fast bus...

Charles Fulton | February 2009

The Stacker

Professionals agree that disk speed is the biggest bottleneck in any computer system. Power-hungry users - video professionals included – eagerly snap up computers with fast buses, as well as fast disks. Proavio has capitalized on the ability to pair a fast bus with a fast controller, not to mention fast disks, with the EditBOX EB8MS. This version of the array utilizes a Mini-SAS drive connection, which provides direct connections between the drives and the controller, keeping performance amazingly high.

Mule Variations

When you configure an EditBOX for purchase, you choose disk capacity, the type of power supply and the type of interface. The interface choices are eSATA port multiplier, multi-lane (SFF8470) and Mini-SAS (SFF8088). Each of these drives connects to the computer with two interface cables. Theoretically, the multi-lane and Mini-SAS versions should be equally speedy, and the eSATA port multiplier version would likely incur a performance penalty (since eSATA has full bandwidth for only one disk, and the port multiplier would be using that amount of bandwidth for four disks).

Our EditBOX shipped with eight Seagate ST3500320AS hard drives. The unit came to us with a HighPoint RocketRAID 3522 SATA RAID controller card utilizing Mini-SAS ports. The card plugs into a PCI Express x8 slot and includes 256MB of DDR2 ECC memory - in other words, this card means business and will put forth some serious, but stable, speed. The case is a work of art unto itself - a very solid, well-designed device. There are only two LEDs up front: power and disk activity.

The Hookup

When we first unpacked everything, we saw two Mini-SAS cables. At first, our unfamiliarity with the interface (up to that point), along with a lack of something saying "Plug in both cables!" in large-enough text for us to notice it, led us to do our first testing with only one cable connected.

The HighPoint card has a web interface for administration, which will probably be easier for most users to navigate through than the BIOS-level (text mode) configuration utility, which is accessible after POST. It's also easy to get to - you just fire up your web browser and type in the URL as outlined in the documentation.

(When you install the driver, you can also have the software create a quick link to the web interface.)

We had begun setting up an array with just four drives. Then we realized that we did need both cables connected. We re-connected and were on our way, but we had to re-create the array. Creating an array can take a while, but it is a background operation and won't interfere with anything on the system. However, the operating system can't format the array until the array creation process is finished. The format operation can be time-consuming on its own as well, but generally it doesn't interfere with anything else running on the system. The good part, though, is that you will probably format the array only once.

Quick

We did the bulk of our testing in RAID 5 mode. A folder with 100MB of files landed on the disk (from the computer's internal stripe set) lickety-split - Windows Vista barely had a chance to update the progress window before the copy operation was complete. Video capture was as smooth as could be, with no dropped frames, just as we expected.

After testing was complete (see the results table), we came to the conclusion that absolutely any mode that you want to use will be able to keep up with as much video, whether SD or HD, as you can throw at it.

So it's your choice - it won't be hard for you to strike your preferred balance of speed, capacity and data protection. However, we note that the mode that HighPoint describes as JBOD (just a bunch of disks) would be better described as concatenated.

There's not a tremendous amount more we can say about the EB8MS. The fan is very quiet - that's something we forgot to mention. We wouldn't mind keeping this one on our desk for quite a while.

Editor's Note: Proavio notes that ioStor is offering a discount on the EditBOX EB8MS to all Videomaker readers.

TECH SPECS

Marketed Raw Capacity: 4TB
Formatted Capacity: 931.5GB-3726GB, depending on mode
Internal Interface: SATA 3.0Gbps
External Interface: Mini-SAS (SFF 8088)
Network Protocols: N/A
Drive Specification: 8 Seagate ST3500320AS 500GB 7200rpm
drives, each with 32MB cache
OS: Mac OS X, Windows XP/Vista officially supported by array;
card also supports Windows 2000/2003/2008, Linux and FreeBSD
Dimensions: 11.5"H x 5.75"W x 17.5"D
Weight: 29 lbs.

Strengths
- Insanely fast
- Quiet

Weaknesses
- First-time setup confusion
-

SUMMARY

The fastest disk subsystem we've seen to date... need we say
more?

*Charles Fulton is **Videomaker**'s Technical Editor.*

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$3,200

*Tested with HighPoint RocketRAID 3522 SATA RAID controller
card:* **HighPoint Technologies, Inc.**
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**$649 (enclosure only); $1,851 (including controller, cables and
drives)**