

Why do you want the best acquisition media money can buy

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If you ever paid more (out of your own pocket) than you make in two months, just because you cheapskated on acquisition media, lost all of your data and now re-shoot a whole day, maybe it's time to think about the quality and reliability of SSD drives. And don't ask me how I know that.



There is a ton of drives out there and every company claims that they are super fast and reliable – yeah, right. But most drives are made for the use in computers, not in cameras. That means a lot of the transfer speed numbers are regarding compressed (or compressible) data, not video files. So a lot of guys made the – rather unpleasing – experience of dropped frames, because the drive was not able to sustain the data rate over the whole shot, though on paper the drive should absolutely be able to handle the load.

Sometimes – in the heat of the shot – you don't realize, the “rec” sign is flashing (that means you dropped frames) just to find out later in editing, when everything is already said and done – that's when you got that “Homer Simpson DOH! moment”.

Also ever changing guts and firmware revisions of drives, that still bear the same name, number and sticker, can be a culprit, regarding dropped frames. For more information on this, you may have a look at [my article on flash media](#).

Also SSDs are somewhat prone to die a sudden death – some from careless mishandling on set – remember, they are made to live a warm and cozy life in the belly of a computer, and not be tossed around in a camera bag – while some drives are just suicidal. I lost more SSDs in the last 2 years, than I lost HDD in my whole computer life. It was a OCZ Vertex3, two Agility and a Kingston. They worked just fine in camera, recording happily along. But when I wanted to dump the data at home, they just gave up their ghost. No warning, no signs, no rough handling from my side, just BAM! – dropped dead.

I started using 240GB SanDisk Extreme drives and was pretty happy with them. No dropped frames, no hick-ups, no problems at all. But when I needed more drives, they were not available anymore. SanDisk came out with a new version, that has a different (thinner) form factor. It comes with a little plastic square, that you can stick on the drive, but it is still not a snug fit in the camera as the old drives were. The new drive is wobbling around and can lose contact – asking for disaster. It baffles me, that the SanDisk engineers are able to build a rugged and reliable drive, but totally fail to make a precise fitting plastic frame.

Anyway, SanDisk was off the table, and I needed a solution for more drives. I wish there would be a drive that is made with cameras, instead of computers in mind.

- snug fit form factor
- reliable
- rugged,
- made to withstand the permanent connecting and de-connecting from cameras and docking stations
- fast enough for 2.5k and 4k raw data
- available and consistent in firmware and controller – at least over the life of my camera

Well actually there is such a drive, and it is made in Campbell, California by a company called [Digistor](#)

It is called, “Professional Video Series SSD Drives” and they are especially designed for uncompressed, raw video capture with reliable long term recording. They are certified and designed for the Blackmagic 2.5K and 4K Cinema Cameras, and also for the HyperDeck Studio and HyperDeck Shuttle.

They come for about a Dollar per GB, which is in the ballpark, what I paid for my first SanDisk, when I received my BMC 2 years ago. Today, the prices for off-the-shelf computer SSDs are lower, but as I said at the beginning, data loss or failure could be much more expensive, since the most expensive stuff of most productions is going on IN FRONT of the camera, and if you have to re-shoot, just because you saved a few bucks on a drive, that’s a really bad experience.

If you look at the [Digistor web site](#), they got the usual marketing talk about their drives, and it all sounds fine, but I wanted to know, what EXACTLY makes the difference and is the premium worth it. So I asked Murray Ellis at Digistor, who was in charge of the product design and works very closely with Black Magic on certifications and lab testing.

Here is what he said:

This is a real passion for us, and building the SSD's for Blackmagic hardware has been an art form in itself. We came to learn there was a balance of NAND speed, intelligent controller technology and Firmware that these cameras required to work well.

We've locked our BOM and build these drives specifically for the Blackmagic market. We pre-format the SSDs in exFAT for immediate use with Blackmagic hardware right out of the box, as well as maximum compatibility with whatever your post production system might be, Mac or PC.

When working with Blackmagic we found they don't want to force users to reformat the SSD after every offload. We kept this in mind while testing. In our labs and in Blackmagic's labs using our SSDs we never reformat the drives. Users who are accustomed to formatting may do so as a quick format, but it is not a requirement. After a quick format or simply erasing all the files our SSD will perform the same in a Blackmagic camera because of some advanced features we use in our controller.

We utilize many of the features of our chipset partner LSI called DuraClass Technology. Some of the technologies include improvements extending the endurance of the SSD with intelligent block management and wear leveling as well as advanced garbage collection when files are deleted. We keep our SSD build high quality in the form of a controlled BOM, including PCB, NAND, Controller and even Firmware revision.

A controlled BOM is rare in the SSD world. Most manufactures will try to down cost without warning or throw in a new firmware that could cause issues with Blackmagic hardware without any warning to the user.



I use a Digistore drive for a while now – still religiously formatting after dumping though, mostly because it is quicker than deleting on the laptop I use in the field. The drive performs

excellent at 2.5k and 4k,raw and ProRes, fast download, no hick-ups, no strange behavior, no blinking “rec”, no dropped frames – I’m a happy camper again, and In August I have scheduled a feature film, that will be shot on 4 BM cameras in raw, and only on Digistore drives, cause it’s a extensive production and the they would probably cut off my head and feed it to the lions, if I would loose any data.

I’m also looking forward to test the new Kinefinty Mini and KineMax cameras with those drives. Kinefinity makes their own proprietary drives, but I want to see, how the Digistor SSDs handle the data rates, when you shoot in high resolution or high frame rates.