Zoom, Zoom, Zoom: SSDs Bring Sports Car Performance to the Masses!

By Jeff Verry

"Can you make my computer faster?" We hear this all the time. Whether it is upgrading an existing computer or looking at a new one. Make it fast.

The great news is that there is an upgrade that will dramatically improve your computer's performance on just about anything you ask it to do: the **Solid State Drive (SSD)**. We put SSDs in existing systems and BAM! Everything goes faster. Customers get a new system with an SSD built in and POW! It just screams. Imagine booting up in seconds and programs opening almost as fast as you can click.

The truth is this technology has been around for a while. Unbelievably, the first SSD came out in 1976. Now it is so commonplace, you might even have a small version of one in your pocket right now. It's called a flash drive (or thumb drive)! An SSD is basically a bunch of flash drives connected together on a big chip. And there is a reason they call it "flash…"

Getting a Bit Technical

It's called flash memory for a reason besides the fact that it's speedy. It has to do with how data is accessed. Traditional hard drives mechanically work a lot like a record player with a stack of records. The reader head moves back and forth while the disk(s) spin and reads the information electronically. The speed of reading and writing data is related to how fast the drive can physically spin and how well the reader can keep up.

Flash memory stores information on a tiny chip. Data can be pulled from any part of the device more or less randomly. Think of spinning up a record or CD player versus queuing up an MP3 playlist. It isn't just somewhat faster. It is faster by a factor. SSDs are the same way. Windows, your programs, finding and opening files. Everything goes faster. Plus there are no moving parts to wear out and break, so chances of a crash go down a bit too. (NOTE: SSDs can and do malfunction, so always have a good backup!)

Getting a Bit More Technical

There are a variety of different options when choosing a Solid State Drive. Most SSDs are built around an architecture called NAND, while others utilize other ways of physically laying out the memory chips (DRAM, V-NAND, RAIN, etc…the alphabet soup of acronyms makes for a pretty long list). There are also different ways that the SSD is connected to your computer (called an interface). Some connect using the same kind of cable that a traditional hard drive uses. Others use something called M.2 where the drive is connected directly to the main board of the computer. Some benchmarks report performance of up to 2 to 3 times faster than regular SSDs, which are tens of times faster than ordinary drives.

For each gain, there is an increase in price. And as always in technology, cutting edge is the most expensive. The technology has been around in some form for decades, but it has been only recently that the cost of manufacturing solid state memory has become reasonable to the average business or even home user.

Navigating this landscape can be daunting. Do faster numbers on paper lead to faster performance? If so, by how much? Is spending 50% or 100% more on a drive for a 10% gain in speed worth it? What if it was a 200% gain? Many of these concerns can be answered on a case by case basis by a *CCS* technician after we know more about your needs and budget. For most business systems we have made it the default with the systems we sell, unless there is a specific reason not to do it.

Even if you do not have specific needs and just want to see your computer work dramatically faster, we can advise you on an SSD upgrade that can be surprisingly economical and get things moving right along. Either way, our friendly techs can walk you through making your computer fly. Talk about zoom, zoom, zoom…

"Relax...we're on IT"

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