

Do I need a Solid State Drive?

In recent months I have had a lot of interest from customers in the different types of internal computer storage – we are talking about Solid State Drives (**SSDs**) versus Hard Disk Drives (**HDDs**). I have then been asked: what are they, what is the cost difference and will they improve my computer performance?

This document is concentrating on the general concept of SSD drives; we are not going into the details and specifics of the different types of SSD – this is purely to explain to our customers what a SSD is and is not about the different types of SSD available on the market at the moment.

SSDs have been out for a quite a while now and initially were very expensive when compared to the older HDDs – the main difference is how they are made and how data is stored, read and written to each of them. The older HDDs use platters (discs) and a mechanical arm with a head to read and write data, the newer SSDs have no moving parts and uses memory chips to store data and a controller to instantly read and write data.

Conventional older HDDs are much slower and cheaper – SSDs are much faster, more robust, lighter, more expensive (prices are coming down); however, the improvement in performance when using a SSD unit can be impressive. In some cases we have seen the same computer with a HDD start up in around 2 ½ minutes and when replaced with a SSD it took less than 30 seconds – a big improvement!

SSDs are around five times faster than HDDs and so not only will your computer start up quicker; it will also improve the speed of any program that is installed on it. If you take a lot of high quality pictures and edit them on a SSD unit you will complete the task much faster. If you play games or edit sound or video files on a SSD unit, you should also see a huge improvement with your computer performance as well.

Also remember that there are various types of SSD units that have different connections, different speeds, and different form factors:

- SATA SSD.
- mSATA SSD.
- M.2 SSD.
- PCIe SSD.

To sum up; SSDs are ideal for increasing computer performance and for any type of data storage and the older HDDs are ideal now for backup devices, additional data storage and CCTV systems. If you have a HDD in your computer and you want a performance increase, it is definitely worth considering replacing it with a faster SSD unit.

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