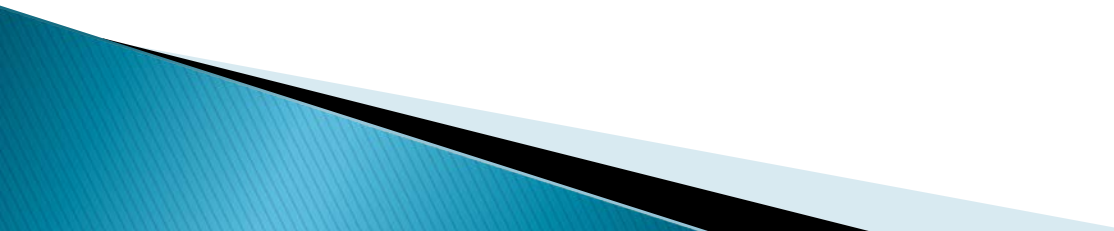


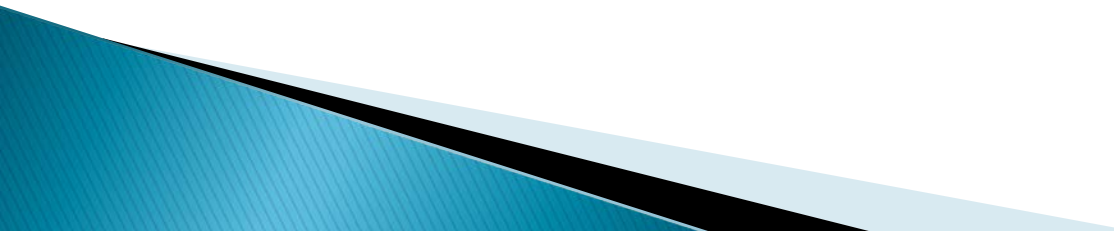
RAM Drives

By George Skarbek
9th August 2012

What is a RAM drive

- ▶ A RAM drive is a part of assigned memory that appears to the operating system as an amazingly fast hard drive.
 - ▶ It can be also called a RAM disk or sometimes a Virtual drive.
 - ▶ It is really very fast.
- 

Why use a RAM drive – 1

- ▶ This unused memory can be used to improve productivity by creating a RAM drive which appears as a physical drive that is VASTLY faster than a conventional hard disk.
 - ▶ There is no latency as you do not have to wait for the drive's sector to move over the read/write head. There is no seek time either.
- 

Why use a RAM drive – 2

- ▶ On all computers with 4 GB RAM and over and running a 32 bit operating system, typically memory over about 3.3 GB is not used due to reserved memory for the BIOS.

System

Rating:

5.0 Windows Experience Index

Processor:

Intel(R) Core(TM) i7 CPU
860 @ 2.80GHz 2.80 GHz

Installed memory (RAM):

4.00 GB (2.96 GB usable)

System type:

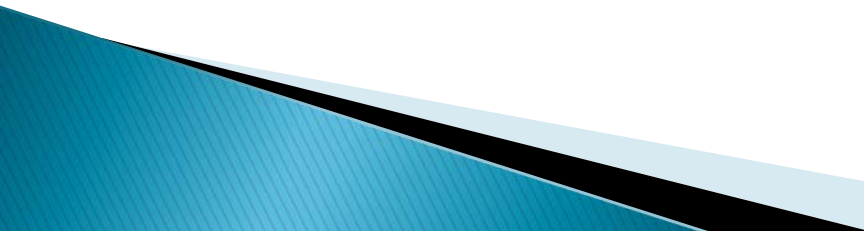
32-bit Operating System

Pen and Touch:

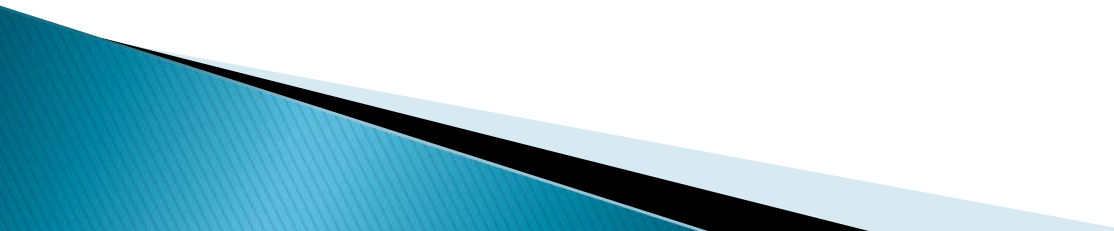
No Pen or Touch Input is
available for this Display



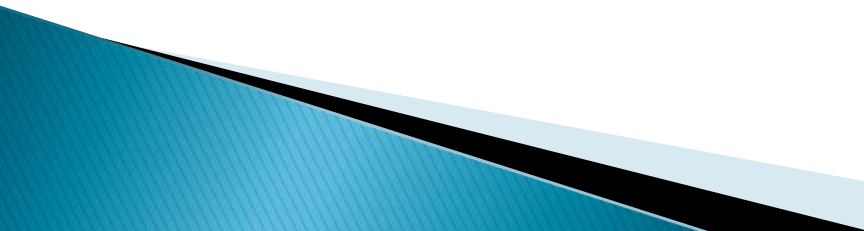
Why use a RAM drive – 3

- In all versions of Windows using RAM drive for the temp files gives the following benefits:
 - There is no contention on the read/write heads when temp files are created, such as when opening Word.
 - Very much faster file access.
 - No cleaning up required as all contents are lost on a re-boot.
 - Use it for timing HD & USB performance.
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Why use a RAM drive – 3a

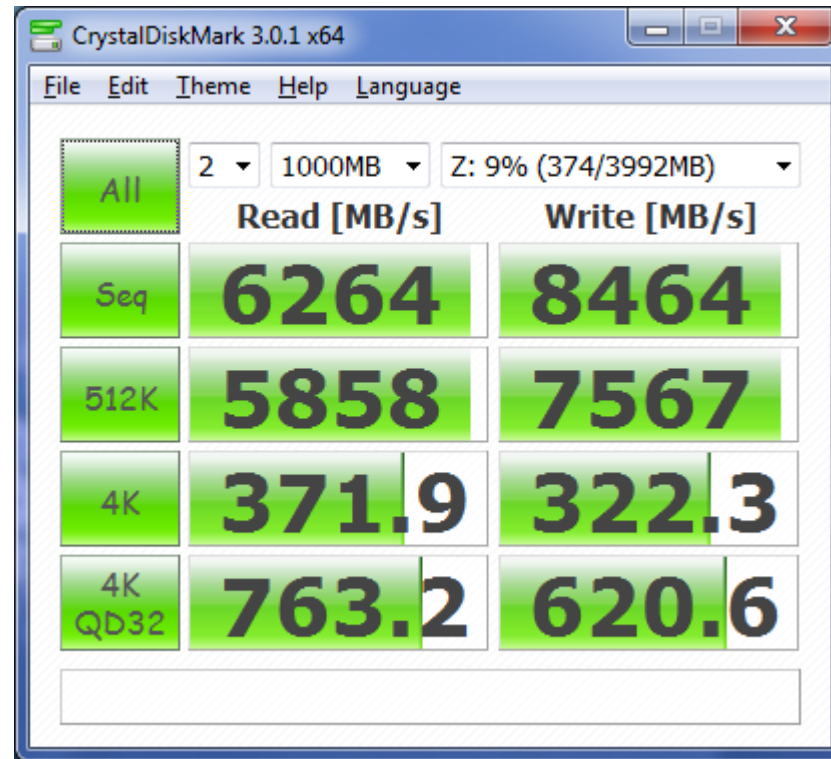
- Saves space and wear on drive C.
 - Reduces fragmentation on drive C.
 - Saves time and disk space when doing an image backup as junk files are not backed up. I have seen over 25,000+ files in Temp folders (not the Temporary Internet folders)
- 

Why use a RAM drive – 4

- ▶ Memory is cheap. 4 GB costs about \$25
 - ▶ Put not only the temp files to the RAM drive but also the cache files from IE, Firefox and Chrome (less junk to back up with Acronis).
 - ▶ You can use the RAM drive for testing software. No cleaning up afterwards.
 - ▶ When sharing folders, using a RAM drive is more secure. If a hacker gets in, drive C will not be accessible.
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How fast is it?

Insanely fast!

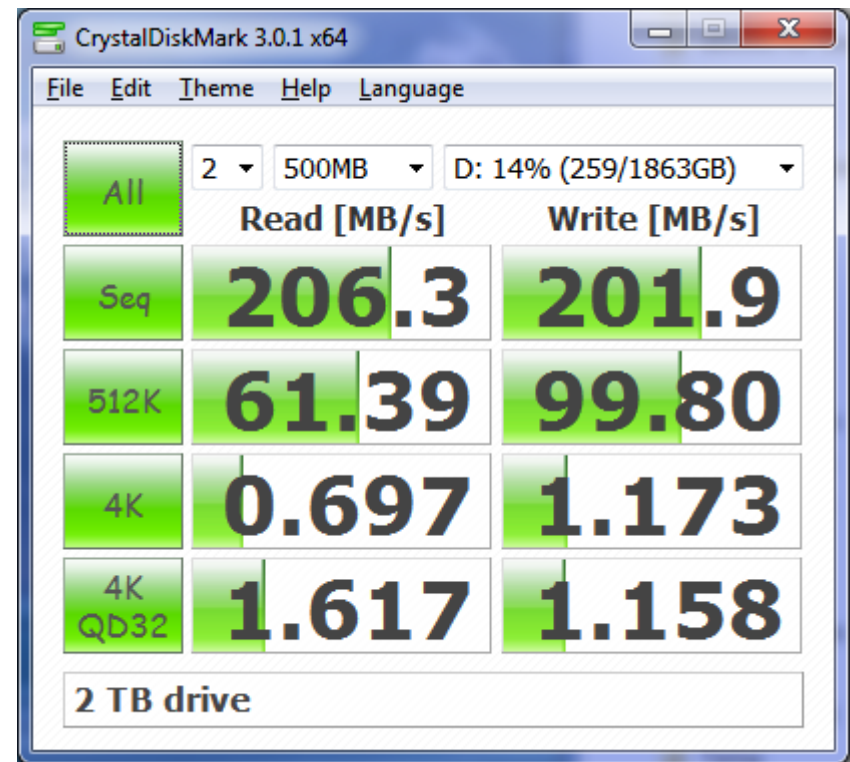
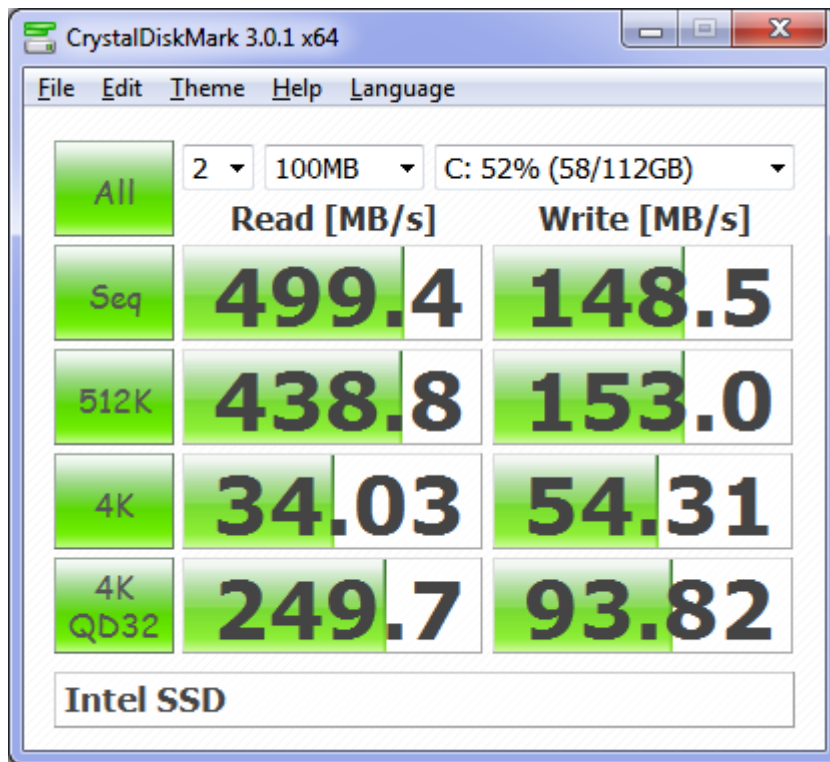


On an i7-3770

Compared to

▶ SSD

2TB drive



How do you create one?

- ▶ There are many free RAM drive programs for both 32 and 64 bit operating systems.
- ▶ The free versions are generally limited to a maximum of 4 GB.



<http://memory.dataram.com/products-services/software/ramdisk/>

Almost all have the option to automatically create a Temp folder and to alter the drive letter.

I assign my RAM drives to drive Z



Download RAMDisk
(Version V3.5.130R24)
RAMDisk for Personal Use is freeware & supports disk sizes up to 4 GB in capacity



Purchase Personal License
(\$18.99 USD)
Unlock the freeware version to support disk sizes larger than 4 GB

Putting browser temp file there

- ▶ For IE click on Tools, Internet Options, Browsing History and Move etc.
- ▶ For Firefox type *about:config* into the Firefox navigation bar and hit enter then find the *browser.cache.disk.parent_directory*. If it doesn't exist right click anywhere and select New, String. Enter **browser.cache.disk.parent_directory** in the first popup box and then the location in the 2nd popup box e.g. **Z:\tempfiles**. If the entry already existed simply right click and Modify it.
- ▶ For Google Chrome I have not found a good solution

Possible installation problem

- ▶ For some RAM drives, to install you must run HDWWIZ as in Windows 7 the *New Hardware Wizard* is not available from the Control Panel but will appear just by plugging the new device into your computer.

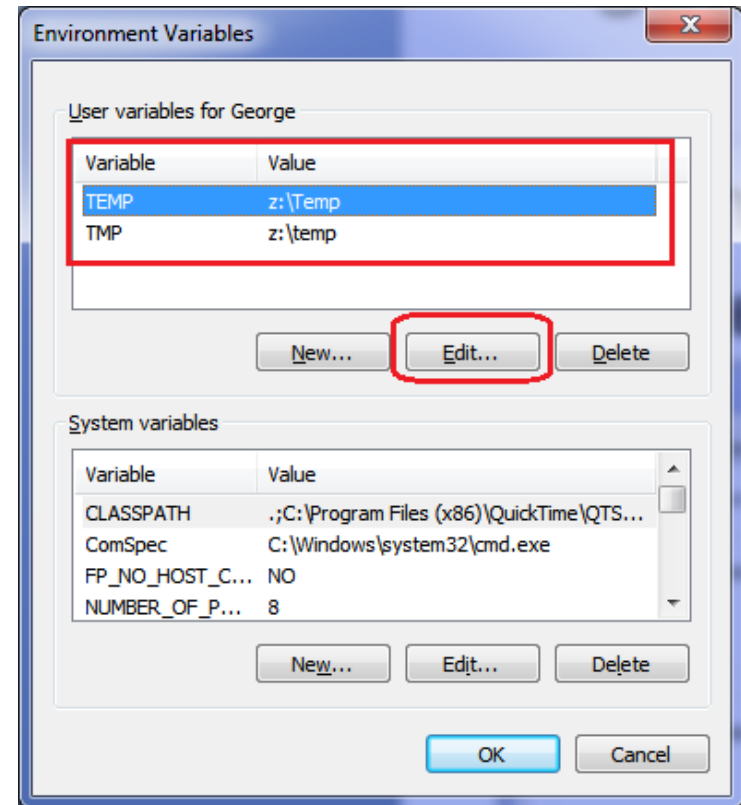
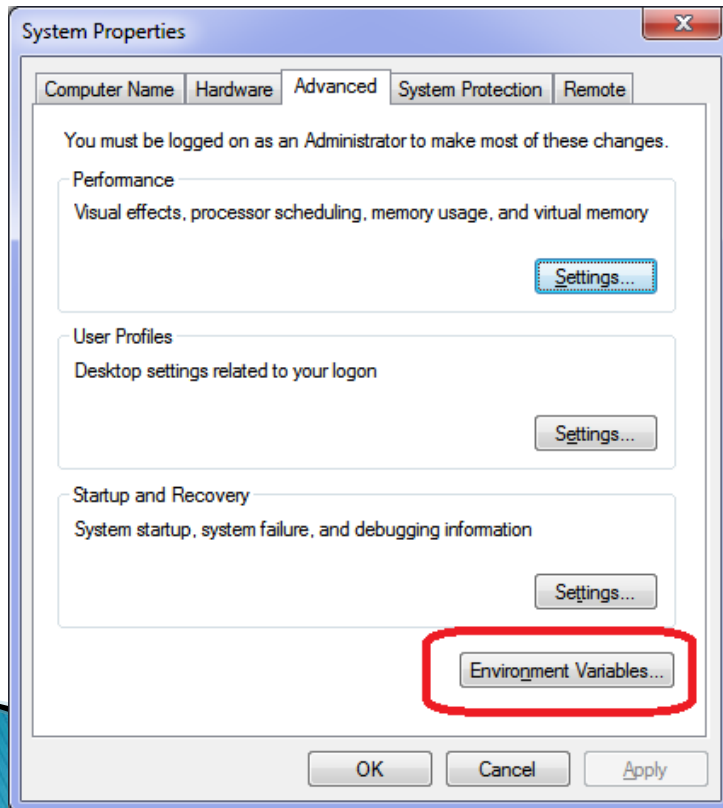


Possible operational problems

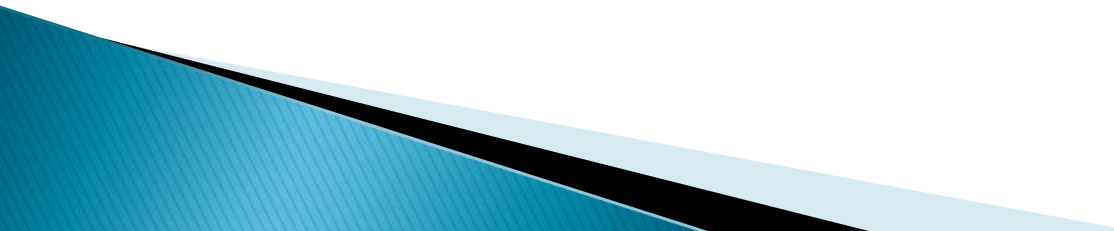
- ▶ Only possible drawback is the temp folder filling if the computer is never re-booted or if installing some massive program such as CS6 with all options. Fix by temporarily using a hard drive for temp files.
- ▶ **With a 4 GB RAM drive this is not going to be a problem.**

Setting the environmental variables

- ▶ From Control Panel, System, click on **Advanced system settings** then alter as shown



The Swapfile location

- ▶ Do **NOT** put the swapfile onto the Ramdrive if you use a 64 bit operating system.
 - ▶ With a 32 bit operating system and 8+ GB of RAM the swapfile can be placed on the RAM drive.
 - ▶ Do **NOT** set Readyboost to the Ramdrive as this will not be active until Windows starts, defeating its purpose.
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Any Questions?

