

## Upgrading Your System Memory

One of the most common shortcuts computer manufacturers take so that they can shave £100 off the purchase price of a new budget laptop or desktop computer is to put a small amount of memory (RAM) into the machine.

While these computers seem like a bargain buy at the time, many of them do not have enough memory to run smoothly. In this article we look at how you can tell if your computer would benefit from a RAM upgrade.



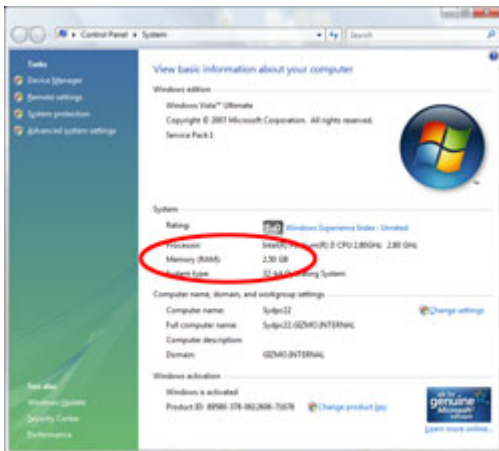
Most people buying lower cost computers usually want something they will only use for surfing the web, downloading digital photos and sending the occasional email. As such, a lower cost machine is appealing. The problem is that many find that their computer is frustratingly slow or even suffers from error messages caused when too many programs compete for the same scarce system resources. The unhappy computer owners find themselves wishing they had spent that extra £100 at the time of purchase.

Fortunately, upgrading the memory in your computer is one of the most cost effective and easy ways to boost performance.

### Check your memory

The first step required to work out whether or not a memory upgrade is worthwhile, is to do a bit of investigation.

Once your computer has booted up, right click on the **My Computer** icon, click on **Properties** and look for the number indicated in the picture (note: the screen is different in XP and Vista). This tells you how much RAM you have in your computer.



If you have Windows XP, JS Group recommends that you have a minimum of 512MB of RAM and suggests that if you use more than one program at a time, you may want to consider upgrading to 1GB or above.

If you have Windows Vista, a minimum of 2GB is recommended, however you may wish to consider upgrade to more if you play games or use resource intensive applications.

## Can you upgrade or not?

Most computers have the physical space to install 2 “sticks” of RAM. Desktops can sometimes fit up-to 4. In most laptops, both of these sticks are usually present meaning that in order to upgrade the amount of memory you have, you will need to discard one, or both, of your sticks in favor of a higher capacity replacement. Unfortunately the only way to tell what size memory chip you have is to open up your computer and physically inspect each stick – something we’d definitely recommend you get a JS Group technician to do for you. In most cases, both chips will have the same amount of memory, but if one is larger, you would discard the smaller one and replace it with a nice big new chip.

## Something to remember about memory

It is important to know that memory chips come in different types and capacities. If you have an older computer, you will probably have what is known as “DDR” memory which comes in the following sizes:

- 128MB
- 256MB
- 512MB
- 1024MB (or 1GB)

If you have a newer laptop, you will probably have “DDR2” or “DDR3” memory which comes in sizes including:

- 512MB
- 1024MB (1GB)
- 2048 (2GB)

**Note:** DDR RAM cannot be combined with DDR2 or DDR3 RAM as the chips will not physically fit.

The goal of your memory upgrade is to get the most RAM possible using the sticks you already have and the sticks you can afford to buy. It is always a good idea to have your memory replaced by a professional as memory has a few more technical specifications that can influence compatibility.