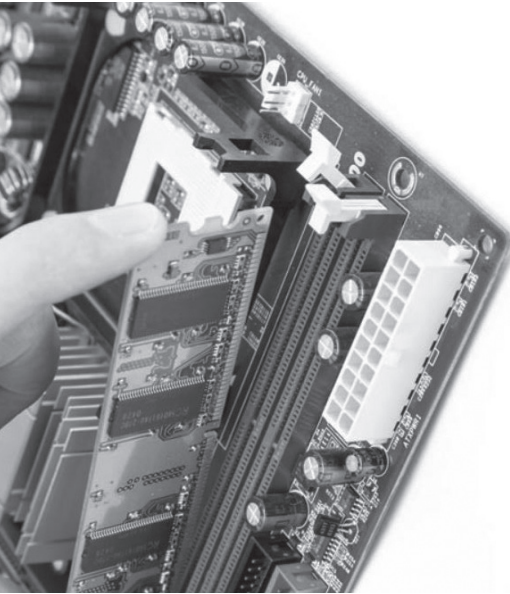


Boost the performance of your server with registered, or buffered, EEC (Error Correcting Code) memory.



With more critical data processes and complex tasks being carried out by more and more businesses finding **reliable**, and **high capacity**, memory for the server is essential.

After all, a system failure or data becoming corrupted, could be catastrophic for any organisation. But registered **ECC memory** provides a more stable environment than unbuffered which is why it is usually found in large enterprise networks. EEC memory is one of the fields we specialise in here at **Mem-Star Distribution**. This is why we've pulled together this guide to help you understand the difference between the two.

ECC Memory: What it Does.

Error Checking and Correction (ECC) memory is mostly considered essential in environments these days. Single bit error checking and correction within an 8-bit byte allows for single bit errors to be both detected and corrected when they occur.

Instead of losing usable memory capacity, memory makers tend to add an additional chip to **ECC memory** for every eight storage chips. When a single bit error is detected, the parity information is used to reconstruct the data with an error.

Unbuffered ECC versus Registered ECC Memory.

Registered ECC	Unbuffered ECC (Unregistered ECC)
A memory module in computers that have a register between the DRAM modules and the the systems memory controller	A memory module in a computer that does not have a register between the DRAM module and the system's memory controller
Also known as Registered RAM	Also known as Unregistered RAM
There is a high reliabilty in stored data	There is less reliability in stored data
Place less electrical load on the memory controller	Place more electrical load on the memory
Provides more stability	Provides less stability
Costly	Less costly
Used for servers and other mission-critical systems that require a stable operating environment	Used in server/workstation applications



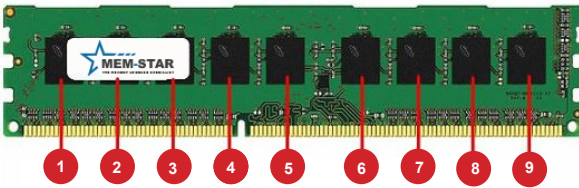
Handy Tip.

- Do **not** mix module types
- Replace Non-ECC with Non-ECC
- Replace ECC with ECC

Be aware that adding **Non-ECC** to **ECC systems** will disable the error correcting function. Systems will still operate, but ECC features will be nulified.

How to tell which type of RAM you have.

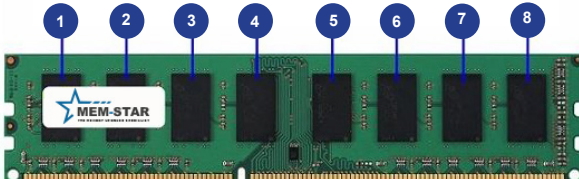
ECC RAM



You can tell if your system has **ECC RAM** by counting the number of block memory chips on each module.

ECC modules have a chip count that is divisible by 3 or 5. The extra chip is the one that checks if the data was correctly processed by the memory module.

Non-ECC memory does not have this extra error detecting feature.



NON-ECC RAM

Conclusion.

The benefits of **ECC registered memory** out way the drawbacks because servers require alot of memory which must be **reliable** which is why the vast majority of server memory is **registered**.

For businesses that has an important server that runs customer facing websites or a server that goes down regularly meaning employees can't work, **ECC memory** is a must have.

The amount of money that the business would lose from having the server down for a couple of days is alot more than a business would spend on purchasing **ECC memory**.

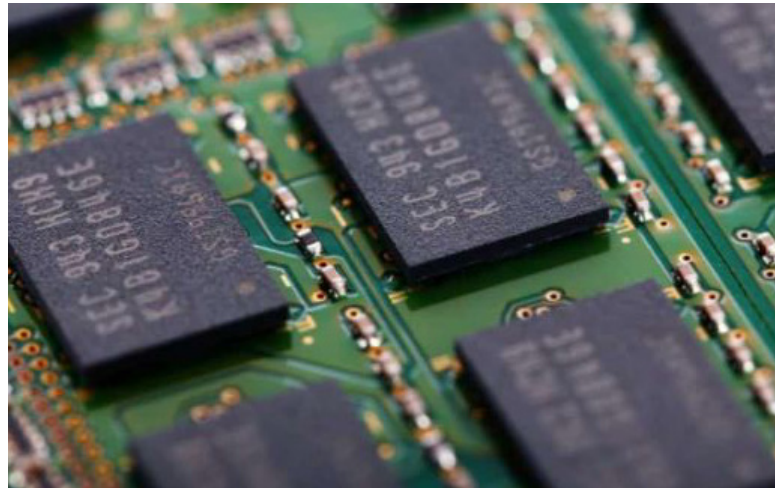
So, although not everyone needs ECC memory, it is the safe bet, a more **professional** and **reliable** option.

If you are thinking about **upgrading** your PC and need help answering any questions regarding how much **RAM** you may require, the frequency or whether to opt for any of our **ECC Modules**:

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