

# Storage space on the SSD Drive of the Fujitsu W530 DCG Workstations.

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## Questions:

Why does the Flash Drive on the Fujitsu W530 DCG Workstations show only 105GB of space rather than the specified 128GB?

## Answer:

The reason for this apparent discrepancy is due to the different formula that is used to calculate storage space on a hard drive and partitions allocated to the operating system.

Manufacturers will calculate 1 Gigabyte as 1000 Megabytes and 1 Megabytes as 1000 Kilobytes, Kilobytes are also calculated as 1000 bytes.

Microsoft however calculate 1 Gigabyte as 1024 Megabytes and 1 Megabyte as 1024 Kilobytes, they also calculate Kilobytes as 1024 bytes. Microsoft are actually using a different counter called Gibibytes. Most operating systems like OSX calculate the space correctly to the power of 1000.

This is one of the causes of what appears to be missing space on the drive.

$$128,000,000,000 \text{ bytes (128 Actual Gb)} / (1024 * 1024 * 1024) = 119.209 \text{ (Microsoft GB).}$$

Note: If you google what is the formatted size of a 128Gb drive this will display the same results.

In addition the operating system (Windows) requires 2 separate Partitions in order to run, a System partition on the C Drive and it may have one or more Recovery Partitions which will not show in Windows Explorer if they are not mounted.

Response provided by Smartschools.ie