

# Data storage conversion chart

MB, GB, TB, GiB, bits and bytes. Factors are given to 7 significant figures; open the converter for full precision and the worked solution.

| Conversion factors to bits (bit) |                        |                                |
|----------------------------------|------------------------|--------------------------------|
| UNIT                             | IN BIT                 | 1 BIT IN UNIT                  |
| bit (bit)                        | 1 bit                  | 1 bit                          |
| byte (B)                         | 8 bit                  | 0.125 B                        |
| kilobyte (kB)                    | 8,000 bit              | 0.000125 kB                    |
| megabyte (MB)                    | 8,000,000 bit          | $1.25 \times 10^{-7}$ MB       |
| gigabyte (GB)                    | 8,000,000,000 bit      | $1.25 \times 10^{-10}$ GB      |
| terabyte (TB)                    | 8,000,000,000,000 bit  | $1.25 \times 10^{-13}$ TB      |
| petabyte (PB)                    | $8 \times 10^{15}$ bit | $1.25 \times 10^{-16}$ PB      |
| kibibyte (KiB)                   | 8,192 bit              | 0.0001220703 KiB               |
| mebibyte (MiB)                   | 8,388,608 bit          | $1.192093 \times 10^{-7}$ MiB  |
| gibibyte (GiB)                   | 8,589,935,000 bit      | $1.164153 \times 10^{-10}$ GiB |
| tebibyte (TiB)                   | 8,796,093,000,000 bit  | $1.136868 \times 10^{-13}$ TiB |
| kilobit (kbit)                   | 1,000 bit              | 0.001 kbit                     |
| megabit (Mbit)                   | 1,000,000 bit          | 0.000001 Mbit                  |
| gigabit (Gbit)                   | 1,000,000,000 bit      | $1 \times 10^{-9}$ Gbit        |

| GB → MB  |              |
|----------|--------------|
| GB       | MB           |
| 0.1 GB   | 100 MB       |
| 0.5 GB   | 500 MB       |
| 1 GB     | 1,000 MB     |
| 2 GB     | 2,000 MB     |
| 5 GB     | 5,000 MB     |
| 10 GB    | 10,000 MB    |
| 20 GB    | 20,000 MB    |
| 25 GB    | 25,000 MB    |
| 50 GB    | 50,000 MB    |
| 100 GB   | 100,000 MB   |
| 250 GB   | 250,000 MB   |
| 500 GB   | 500,000 MB   |
| 1,000 GB | 1,000,000 MB |

| MB → GB  |           |
|----------|-----------|
| MB       | GB        |
| 0.1 MB   | 0.0001 GB |
| 0.5 MB   | 0.0005 GB |
| 1 MB     | 0.001 GB  |
| 2 MB     | 0.002 GB  |
| 5 MB     | 0.005 GB  |
| 10 MB    | 0.01 GB   |
| 20 MB    | 0.02 GB   |
| 25 MB    | 0.025 GB  |
| 50 MB    | 0.05 GB   |
| 100 MB   | 0.1 GB    |
| 250 MB   | 0.25 GB   |
| 500 MB   | 0.5 GB    |
| 1,000 MB | 1 GB      |

Formula: **MB = GB × 1000**