

## HowStuffWorks.com's Big List of Computer Memory Terms

Print this as a reference guide for memory terms. Learn how these terms apply to your computer by reading "How Memory Works" ([www.howstuffworks.com/computer-memory.htm](http://www.howstuffworks.com/computer-memory.htm)).

- **Bit** - In the binary system, either a one or a zero. It is the smallest piece of data.
- **Byte** - A unit of 8 bits.
- **Kilobit/megabit/gigabit** - Used to describe bandwidth speeds. For example, 56Kbps means that data is capable of traveling at 56 kilobits per second. Ethernet networks transmit data at either 10Mbps (10 megabits per second) or 100Mbps (100 megabits per second).
- **Kilobyte** - The standard unit of measurement for file sizes.
- **Megabyte** - The standard unit of measurement for RAM.
- **Gigabyte** - The standard unit of measurement for hard drives.
- **Terabyte, exabyte** - Extremely large storage capacity typically found in enterprise-level operations for large companies.
- **RAM** - Random access memory is fast, temporary storage for your computer.
- **ROM** - Read-only memory is fast, permanent storage for your computer.
- **Flash memory** - A type of ROM that can be altered quickly and without special tools.
- **BIOS** - Flash memory inside your computer that provides the necessary information for your computer to work.
- **Hertz** - Unit of measurement that list the number of times a device cycles through a process per second.
- **Kilohertz** - Unit of measurement equal to 1,000 hertz or 1,000 cycles per second.
- **Megahertz** - Unit of measurement equal to 1,000 kilohertz or 1,000,000 cycles per second.
- **Nanosecond** - One billionth of a second. Used to measure the speed of memory chips.

| Term/<br>Abbreviation    | Number<br>of bits | Number<br>of bytes | Number of<br>kilobytes | Number of<br>megabytes | Number of<br>gigabytes |
|--------------------------|-------------------|--------------------|------------------------|------------------------|------------------------|
| Bit                      | 1                 | -                  | -                      | -                      | -                      |
| Byte                     | 8                 | 1                  | -                      | -                      | -                      |
| Kilobit<br>Kb            | 1024              | 128                | -                      | -                      | -                      |
| Kilobyte<br>KB or K      | 8192              | 1024               | 1                      | -                      | -                      |
| Megabit<br>Mb            | 1048576           | 131072             | 128                    | -                      | -                      |
| Megabyte<br>MB, meg or M | 8388608           | 1048576            | 1024                   | 1                      | -                      |
| Gigabit<br>Gb            | 1073741824        | 134217728          | 131072                 | 128                    | -                      |
| Gigabyte<br>GB, gig or G | 8589934592        | 1073741824         | 1048576                | 1024                   | 1                      |
| Terabyte<br>TB           | 8796093022208     | 1099511627776      | 1073741824             | 1048576                | 1024                   |
| Exabyte<br>EB            | 9007199254740992  | 1125899906842624   | 1099511627776          | 1073741824             | 1048576                |