Memory

The primary benefit of DDR3 SDRAM over its immediate predecessor, [DDR2 SDRAM](http://en.wikipedia.org/wiki/DDR2_SDRAM), is its ability to transfer data at twice the rate (eight times the speed of its internal memory arrays), enabling higher bandwidth or peak data rates. With two transfers per cycle of a quadrupled [clock signal](http://en.wikipedia.org/wiki/Clock_signal), a 64-[bit](http://en.wikipedia.org/wiki/Bit) wide DDR3 module may achieve a transfer rate of up to 64 times the memory [clock](http://en.wikipedia.org/wiki/Clock_signal) speed in [megabytes](http://en.wikipedia.org/wiki/Megabyte) per second (MB/s). With data being transferred 64 bits at a time per memory module, DDR3 SDRAM gives a transfer rate of (memory clock rate) × 4 (for bus clock multiplier) × 2 (for data rate) × 64 (number of bits transferred) / 8 (number of bits/byte). Thus with a memory clock frequency of 100 MHz, DDR3 SDRAM gives a maximum transfer rate of 6400 MB/s. In addition, the DDR3 standard permits chip capacities of up to 8 [gigabytes](http://en.wikipedia.org/wiki/Gigabyte).

<http://en.wikipedia.org/wiki/DDR3_SDRAM>

Bus Speed

<http://www.cpu-world.com/CPUs/K7/TYPE-Athlon.html>

Answer <http://www.hitequest.com/Kiss/performance.htm>

<http://www.pcguide.com/index.htm>