

External clock speed: Newer Intel and AMD-based motherboards don't use this measurement anymore. But for older boards such as the DP35DP, this is the frequency of the front side bus (FSB), which connects the CPU to the northbridge on the motherboard. This is usually a variable and depends on the CPU you install. In addition, it is determined from the base clock of the motherboard. For example, the DP35DP's maximum external clock (or FSB) is 1333 MHz. Simply put, this means that it can transfer four times the amount of data per cycle as compared to the original base clock speed. $333 \text{ MHz} \times 4 = 1,333 \text{ MHz}$. Newer motherboards are less concerned with frequency and more concerned with data transfer rate. For example, the Intel Direct Media Interconnection (DMI) version 2, which replaced the FSB, runs at 20 Gb/s. But you should still understand FSB speeds for the exam, and you will see systems in the field for a while that use this technology.

My *Tower PC* motherboard, the DP35DP, uses the Intel Q8400 CPU that is rated at 2.66 GHz. The multiplier for this CPU is 8. So, $333 \text{ MHz} \times 8 = 2.66 \text{ GHz}$. This motherboard has a higher base clock in comparison to the DP67DE, but the multiplier is much less. Effectively, this means that the newer DP67DE motherboard runs more efficiently and at its core runs at a lower voltage.