

## 3.5.4 CPU Socket Facts

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When choosing a motherboard, you need to ensure that the board is compatible with the system CPU that you intend to use.

Your motherboard has a socket that accepts the processor. The processor socket on the motherboard must match the socket type used by the processor. Some motherboards support multiple processors and will have a socket for each one.

Processor sockets can be categorized according to how the processor makes contact with the leads in the processor socket.

- Pin Grid Array (PGA): PGA processors implement a series of pins on the underside of the processor package in an array. The pins are inserted into corresponding receptacles within the processor socket on the motherboard.
- Land Grid Array (LGA): The LGA socket moves the connecting pins from the processor package to the socket itself. Conducting pads are implemented on the bottom of the processor that contact the protruding pins from the processor socket.

Some commonly-implemented processor sockets include the following:

- Intel:
  - 775: Used with the Intel Pentium 4, Celeron D, Intel Pentium 4 Extreme Edition, Pentium D, Pentium Dual-Core, Core 2 Duo, Core 2 Extreme, Core 2 Quad, Xeon, and Celeron processors.
  - 1155: Used with the Intel Pentium 4, Celeron, Core i3, Core i5, Core i7, Core i7 Extreme, and Xeon processors.
  - 1156: Used with the Intel Pentium 4, Celeron, Core i3, Core i5, Core i7, and Xeon processors.
  - 1366: Used with the Intel Celeron, Core i7, and Xeon processors.
  - 1150: Used with the Intel Celeron Dual-Core, Pentium Dual-Core, Core i3, Core i5, Core i7, Core i7 Extreme, and Xeon processors.
  - 2011: Used with the Intel Core i7 and Xeon processors.
- AMD:
  - AM3: Used with the AMD Phenom II, Athlon II, Sempron, and Opteron processors.
  - AM3+: Used with the AMD Phenom II, Athlon II, Sempron, and Opteron processors.
  - FM1: Used with the AMD Athlon II processor along with the A-series APUs.
  - FM2: Used with the AMD A4 series, A6 series, A8 series, A10 series, Athlon X2, Athlon X4, FirePro, and Sempron processors.
  - FM2+: Used with the AMD A4 series, A6 series, A8 series, A10 series, Athlon X2, and Athlon X4 processors.

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