

Building your own Personal Computer

What are Microprocessors?

A Microprocessor is a miniature device that incorporates all the functions of a Central processing unit or CPU onto a single integrated circuit chip. They were first invented in the late 1960's. The first microprocessor was the Intel 4004. The microprocessor has developed over the years to become a very powerful icon in the computing industry. The microprocessor undergoes a change in architecture every eighteen months and each time it takes the industry by storm. A microprocessor is the heart of any computer. It is a small normally square chip that fits on a specially designed slot on the motherboard. The microprocessor controls all basic functions in the computer. It has several components within namely the arithmetic and logic units and the memory units. The arithmetic and logic unit or ALU for short performs all basic logical operations within the microprocessor. The memory unit provides for some memory space for the information used in the processes.

The first microprocessor that was used in a home computer was the Intel 8080 in 1974. It was not a great success until the Intel 8088 Microprocessor was introduced in 1979. It was fixed in an IBM PC. After this success, microprocessors evolved over the years with the 80286, 80386, 80486 series of processors. Later the Pentium series of processors were introduced with the Pentium, Pentium2, Pentium3 and then the Pentium4 which still is on sale now. The Pentium 4 processor currently is the best selling processor closely followed by AMD's Athlon series of microprocessors. The processors started with two megahertz of processing power and today the Pentium processors exhibit processing speeds of around 3 gigahertz. Intel also has a cheaper range of microprocessors for the personal computer known as Celeron. Their server range of microprocessors is known as Xeon.

The microprocessor consists of a component called the transistor. The number of transistors determines the processing capability of the microprocessor. With greater processing power the CPU can take up the requirements of Video and sound cards as well. Many modern microprocessors have multiple instruction decoders which allow for more than one instruction cycle to be completed during one clock cycle. This vastly improves the information processing speed of the processor. The trend till now has been 32 bit Arithmetic Logic Units in the microprocessors. But with the need for greater speeds, focus has now shifted and new microprocessors are being developed with 64 bit cores which process information so much faster.

Even more recent developments include the utilization of not just one core or two cores but even four cores in one microprocessor. This development by Intel known as the quad core microprocessor gives mind blowing processing speeds. The amount of information that can be processed and the kind of performance that can be obtained by using a high end video or sound card along with this processor set is just unimaginable. The future of the microprocessor is just beyond the realm of human knowledge or even imagination.

About the Author

Jeffrey Frasco is the author of this article on [Computer](#). Find more information about [CPU](#) here.

Source: <http://www.tntarticles.com>