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microprocessor

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A central processing unit (CPU) on a single chip (integrated circuit). The microprocessor term originated in the 1970s, but today, all CPUs are microprocessors, whether in desktops, laptops, servers, tablets or smartphones (see [multicore](#)).

CPU, MPU and MP = Processor

The terms central processing unit (CPU), microprocessor unit (MPU) and microprocessor (MP) are synonymous. The MP acronym is sometimes spelled "uP" or "μP" (lower case "m" in Greek is a "μ").

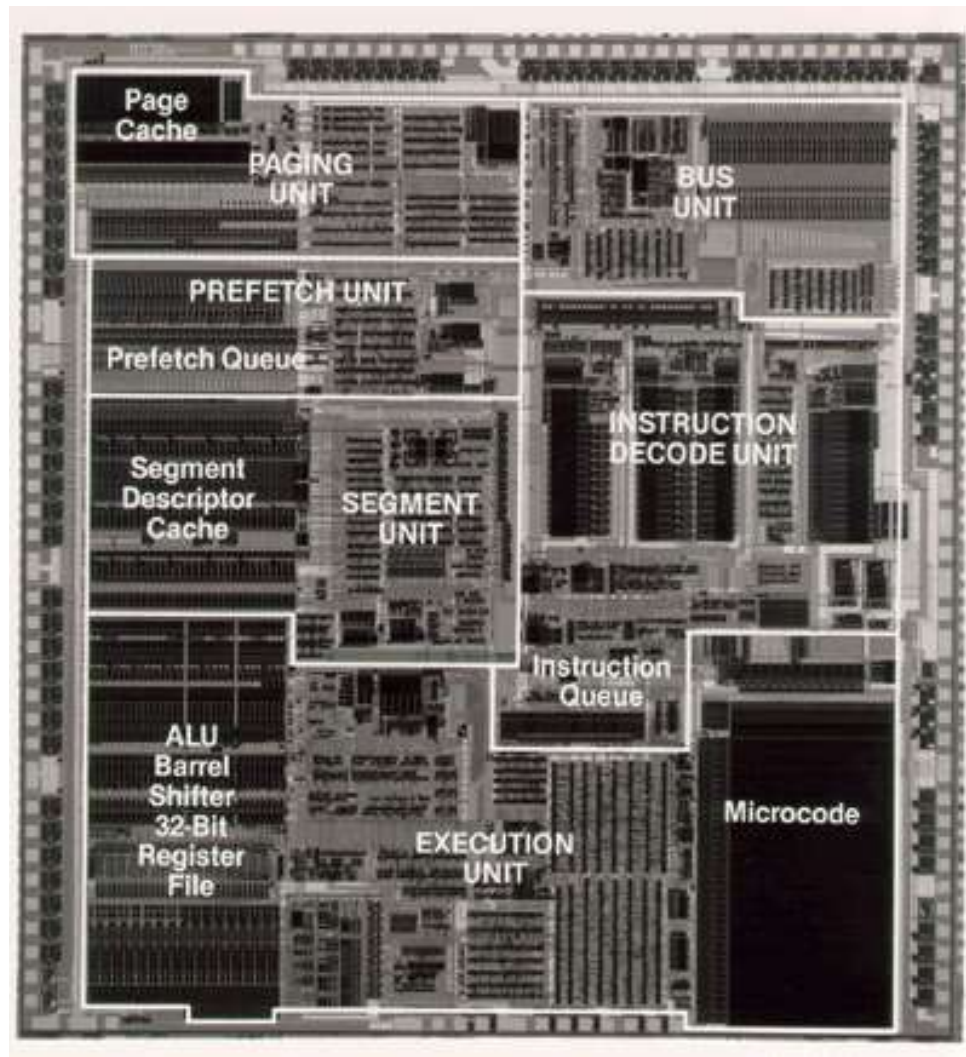


From 8-Bit to 64-Bit

The earliest microprocessors were created by Texas Instruments, Intel and Scotland-based Pico Electronics, but which was first has been debated. First-generation 8-bit microprocessor families were Intel's 8080, Zilog's Z80, Motorola's 6800 and Rockwell's 6502.

Today, the 32-bit and 64-bit microprocessors found in workstations and servers are x86, POWER and SPARC, while ARM leads the mobile market. The chips used in toys, appliances, vehicles and myriad other products are 8-, 16- and 32-bit microcontrollers, which include the microprocessor (see [microcontroller](#)). All together billions of microprocessors are made and shipped each year. See [chip](#), [embedded system](#), [process technology](#), [16-bit computing](#), [32-bit computing](#) and [64-bit computing](#).





The 386 Microprocessor

No technology is more incredible than the microprocessor. This older 386 chip contains a mere 275,000 transistors, and some slight detail can be seen. Contemporary chips at this magnification show up as a sea of gray. See [chip](#). (Image courtesy of Intel Corporation.)





From Two Thousand to Nineteen Billion

This is only a sampling of the number of transistors on a chip. Other brands have similar transistor counts.

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