

## FORM HISTORY OF MICROPROCESSOR

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A microprocessor is a programmable digital electronic component that incorporates the functions of a central processing unit (CPU) on a single semiconducting integrated circuit (IC). One or more microprocessors typically serve as the CPU in a computer system, embedded system, or handheld device. From the humble beginnings microprocessor as the drivers for calculators, the continued increase in power has led to the dominance of microprocessors over every other form of computer; every system from the largest mainframes to the smallest handheld computers now uses a microprocessor at its core. First types of microprocessors were three projects arguably delivered a complete microprocessor at about the same time, namely Intel's 4004, the Texas Instruments (TI) TMS 1000, and Garrett AiResearch's Central Air Data Computer (CDAC).

The 4004 was later followed in 1972 by the 8008, the world's first 8-bit microprocessor. It was these features that allowed the home computer "revolution" to take off in the early 1980s, eventually delivering such inexpensive machines as the Sinclair ZX-81, which sold for US\$99.

The first multi-chip 16-bit microprocessor was the National Semiconductor IMP-16, introduced in early 1973. An 8-bit version of the chipset was introduced in 1974 as the IMP-8. While 64-bit microprocessor designs have been in use in several markets since the early 1990s, the early 2000s saw the introduction of 64-bit microchips targeted at the PC market.

A different approach to improving a computer's performance is to add extra processors, as in symmetric multiprocessing designs which have been popular in servers and workstations since the early 1990s. In response, the microprocessor manufacturers look for other ways to improve performance, in order to hold on to the momentum of constant upgrades in the market. A multi-core processor is simply a single chip containing more than one microprocessor core, effectively multiplying the potential performance with the number of cores.

In 2005, the first mass-market dual-core processors were announced and as of 2008 dual-core processors are widely used in servers, workstations and PCs while quad-core processors are now available for high-end applications in both the home and professional environments.