

# Minicomputer Encyclopedia Article

## Minicomputer

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# Minicomputer

Minicomputers were first developed and manufactured in the 1960s; they were smaller than the then-standard mainframe computer and were usually intended for a special purpose. The *minicomputer* was defined as having a 16-bit or larger processor and one or more terminals, so that it could be used by several people at the same time. With the rapid evolution of computers, the concept of the minicomputer is obsolete in the 1990s.

The first minicomputer was the Digital Equipment Corporation 's PDP (Programmed Data Processor) series. IBM, Wang, and other manufacturers also had minicomputer lines. The PDP-1 cost \$120,000 in the early 1960s, and in the 1980s minicomputer prices ranged from about \$20,000 to near \$200,000. Even so, the price was much lower than that of mainframes, which were in the million-dollar range.

Minicomputers are part of the third computer generation, which used integrated circuits for memory and computer operations. Invented in the late 1950s by scientists at Texas Instruments, Inc. and Fairchild Semiconductor, integrated circuits have large numbers of transistors and other electronic circuits on a single computer chip. This miniaturization allowed computers to become smaller, yet more powerful. For example, it became possible to improve (upgrade) a computer by adding more memory chips.

Minicomputers became less attractive in the late 1970s, when the microprocessor--"processor on a chip"--resulted in computing's fourth generation machines. Chips became much more powerful and less expensive to manufacture because of what is called *large-scale integration* and very large-scale integration (VLSI). During the 1980s and 1990s, the personal computers and the desktop-sized workstations, such as those made by Compaq, Apple Computer, and Sun Microsystems, have provided greater computing power and operating flexibility than minicomputers. Though many minicomputers remain in use, their popularity has greatly diminished.