

The IBM System/360 Model 91

IBM designed the System/360 Model 91 to handle high-speed data processing for scientific applications — and to compete against Control Data's 6600 and 6800 supercomputers.

The Model 91 set many precedents for the design of high-speed computers. To achieve its performance, it used high-density circuit packaging and executed operations concurrently. The CPU consisted of five autonomous units: instruction, floating-point, fixed-point, and two storage controllers for the overlapping memory units and the I/O data channels. The floating-point unit made heavy use of instruction pipelining.

The first shipped 360/91 began operating in January 1968 at the Goddard Space Flight Center of NASA.

Manufacturer: IBM	Memory technology: magnetic core
First introduced: 1966	Memory size: up to 6M bytes
CPU technology: transistor	Machine cycle time: 60 nanoseconds (16.7 MHz)

Sources: Emerson W. Pugh, et al. *IBM's 360 and Early 370 Systems*. Cambridge, MA: MIT Press, 1991. pp. 380-395
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