Everything that a digital computer does is based on one operation: the ability to determine: on or off, high voltage or low voltage or — in the case of numbers — 0 or 1 or do-called binary code. The speed at which the computer performs this simple act is called computer speed. Computer speeds are measured in Hertz or cycles per second. A computer with a «clock speed» of 2000 MHz is a fairly representative microcomputer today. It is capable of executing 2000 million discrete operations per second. Nowadays microcomputers can perform from 800 to over 3000 million operations per second and supercomputers used in research and defense applications attain speeds of many billions of cycles per second.Digital computer speed and calculating power are further enhanced by the amount of data handled during each cycle. Except two main types of computers, analog and digital there are eight generations of digital computers or processing units. The first generation was represented by processing unit Intel 8086.