Microcontrollers
Integrated Circuits in 1958
The first single-chip microprocessor, circa 1971

(Intel 4004: 740kHz, 4-bit, 4KB cache, 2,300 transistors)
microprocessors, circa 2011

(Intel Gulftown Six-core processor - 1.17B transistors)
28-pin DIP
8-bit Atmel ATmega32U4 processor
16 MHz clock
25 I/O pins
12 channel 10-bit ADC
32k Flash, 1k EEPROM, 2.5k SRAM
4 independent timers with PWM
USART, I2C, SPI, JTAG, USB