

**A mini computer with ROM,
RAM and programmable
peripherals**

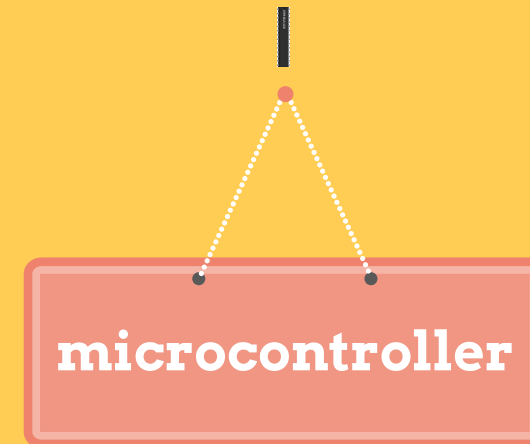
Why we need them ?



By CHG, via Wikimedia Commons



By Oleg Alexandrov, via Wikimedia Commons





4GB RAM

3GHz & Cores

32 Bit / 64 Bit



128B to ~MB

4MHz to ~200MHz

8 Bit mostly



8 Bit

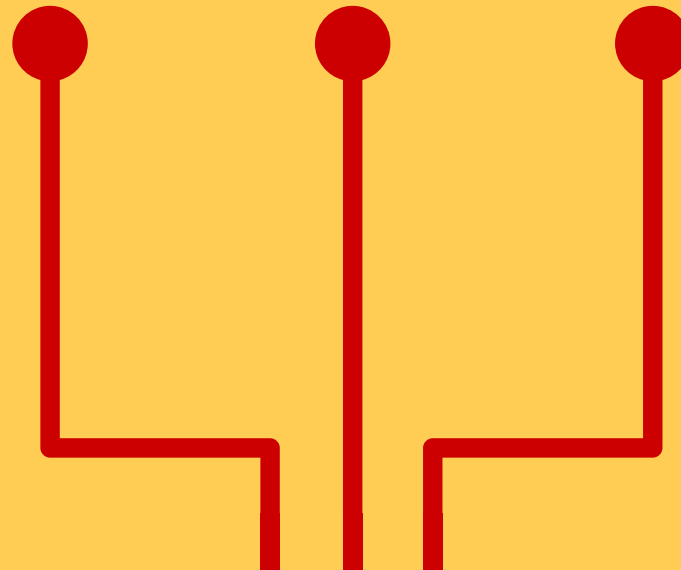
*sensors, motors,
low res displays ,relays
8051, Arduino UNO*

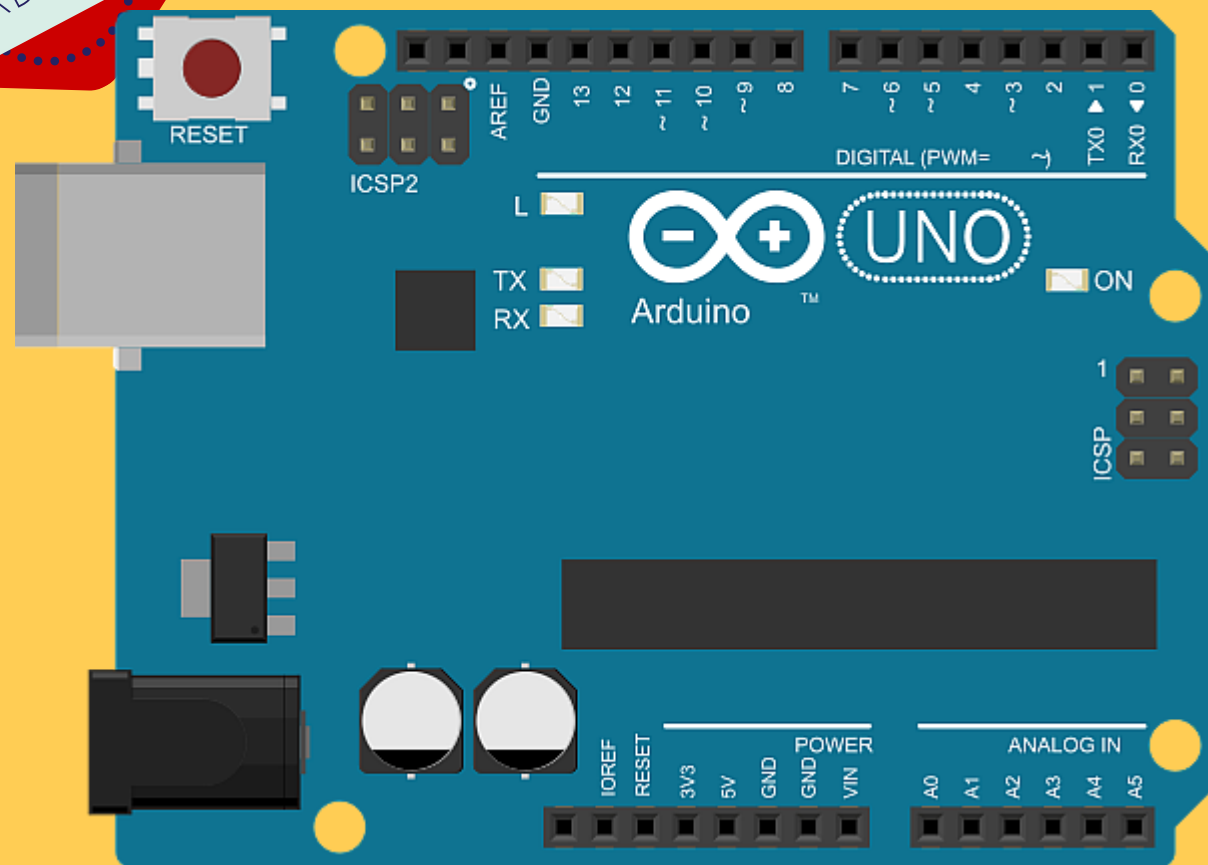
16 Bit

*audio, networking,
printers, graphic display
PIC24, AVR-XMEGA*

32 Bit

*GPiOs, Graphics, routers,
RTOS, Multitasking
PIC32MZ, LPC21XX*





**What is SoC / SBC? Are they 32
bit microcontrollers?**

System on Chip
= microcontroller - (RAM and ROM)

SOC / SBC

