

Electronics Single Board Computers

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- *Single board computers* are small systems for this purpose

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- Non-volatile (typically flash) program memory
- Some amount of RAM
- I/O pins (and typically interfaces) to communicate with external devices
- Some mode of communication for downloading software and testing

Arduino Uno vs. Raspberry Pi 2

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Raspberry Pi
900MHz

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16MHz
2kB RAM

Raspberry Pi
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Raspberry Pi
900MHz
1Gb RAM

Arduino Uno vs. Raspberry Pi 2

Arduino

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2kB RAM

32 kB flash

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Why such a big difference?

Raspberry Pi

900MHz

1Gb RAM

SD card

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The Raspberry Pi has a Linux operating system running. The Arduino only runs the user program.

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- More reliable operation, especially timing
- Various versions for speed, voltage, and size

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- Access to operating services such as networking
- User interaction possibilities including GUI