Microcontroller

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| Microcontroller | Arduino ATmega2560 | Arduino ATmega328P (ONE) | Rapsberry Pi ZERO | Rapsberry Pi 3 Model B |
| Opering Voltage | 5V | 5V | 5 V | 5 V |
| Input Voltage (recommended) | 7-12V | 7-12V | 5 V | 5 V |
| Input Voltage (limit) | 6-20V DC | 6-20V DC | 5 V DC | 5 V |
| Digital I/O pins | 54 (of which 15 provide PWM output) | 14 (of which 6 provide PWM output) | 40-pin GPIO header | 40-pin GPIO header |
| Analog Inputs Pins | 16 | 6 | 0 | 0 |
| Current fro 3.3V Pin | 50 mA | 50 mA | 50 mA | 50 mA |
| Flash Memory | 256 KM of which 8 KB used by bootloader | 256 KM of which 0.5 KB used by bootloader | Up to 64 GB | Up to 64 GB |
| SRAM | 8 KB | 2 KB | 512MB of LPDDR2 SDRAM | 1 GB RAM |
| Clock Speed | 16 MHz | 16 MHz | 1 GHz | 1,2 GHz |
| Price | €44 | €19 | €5 | €35 |

The two Rapsberry microcontrollers have many benefits, such as big SRAM and Flash memories; also they have a faster Clock than the Arduino microcontrollers, but they haven’t analog inputs pins and could be important for our project to have analog inputs to connect the sensors.

In the other hand the arduino microcontrollers have fewer benefits, but they have analog inputs pins. The ArduinoMega 2560 have 16 analog inputs pins and the Arduino ONE have 6 analog inputs pins.

**Conclusion:**

We have to value how many pins requires our project because the prices between the both Arduino boards are different, and we can save some money. How ever it is also important that there is enough digital pins to connect the GPRS module.

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