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| --- | --- | --- |
| **Name** |  | **Link** |
|  |  |  |
| RPI 3B+ |  | <https://www.amazon.com/CanaKit-Raspberry-Power-Supply-Listed/dp/B07BC6WH7V/ref=sr_1_1?dchild=1&keywords=rpi+3b%2B&qid=1622445554&sr=8-1> |
| voltage sensor |  | <https://www.amazon.com/Diymall-Voltage-Sensor-Dc0-25v-Arduino/dp/B00NK4L97Q/ref=sr_1_5?dchild=1&keywords=voltage+sensor+module&qid=1621329483&sr=8-5> |
| ADC(MCP3008) |  | <https://www.amazon.com/Microchip-MCP3008-I-10-Bit-ADC-Pack/dp/B01HGCSGXM/ref=sr_1_1?dchild=1&keywords=mcp3008&qid=1621329411&sr=8-1> |
| Current Sensor (INA219) |  | https://www.amazon.com/HiLetgo-INA219-Bi-Directional-Current-Breakout/dp/B07VL8NY32/ref=sr\_1\_1?dchild=1&keywords=INA219&qid=1621345216&sr=8-1 |
| Temp. Sensor  (DHT11) |  | https://www.amazon.com/HiLetgo-Temperature-Humidity-Digital-3-3V-5V/dp/B01DKC2GQ0/ref=sr\_1\_3?dchild=1&keywords=dht11&qid=1622445966&sr=8-3 |

Components:

RPi will connect to ADC using SPI Protocol and ADC will connect to 4 voltage sensors, 3 of them will be the output of your circuit and 1 will be the output of DC-DC Buck Converter.

INA219 and DHT11 will directly connect to RPi to measure current and temperature, respectively.

INA219 will use I2C protocol to communicate with RPi.

Output of Buck converter will be controlled by RPi using PWM.

PWM value will change based on the function that you will provide.

Connections:

