

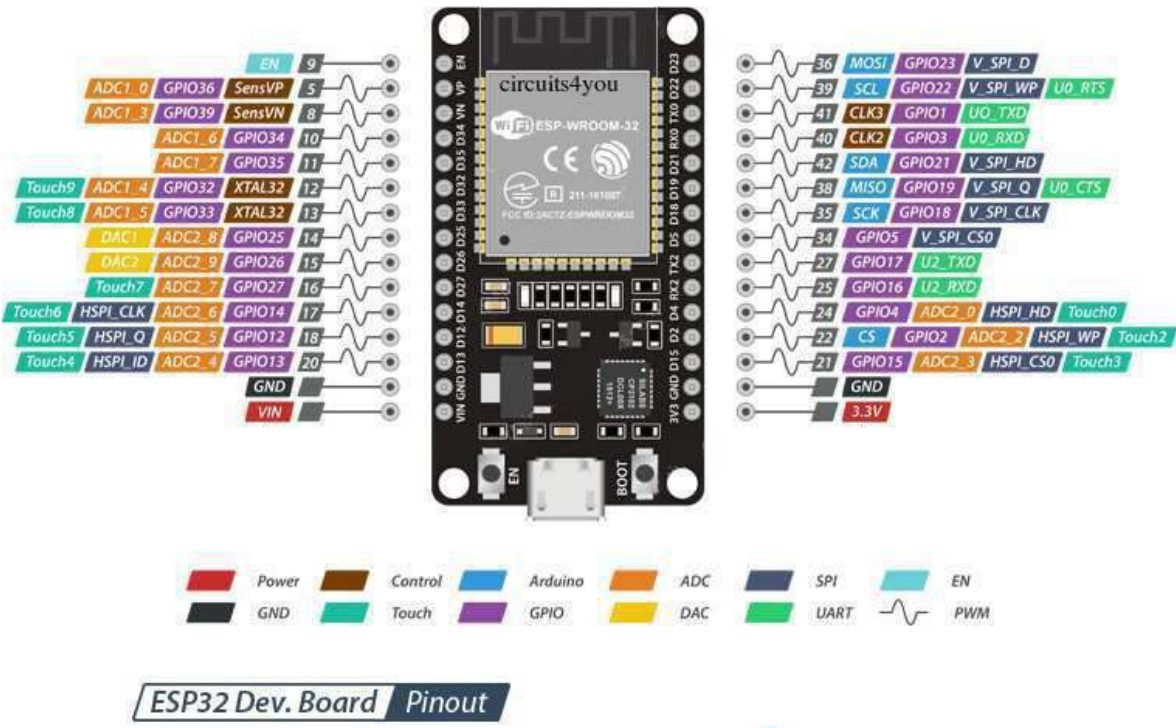
Connection table:

| | |
|---|----------------------|
| ESP32 Vin | Buck Module Out + |
| ESP32 Gnd | Buck Module Out - |
| | |
| ESP32 D21 SDA | LCD I2C Expander SDA |
| ESP32 D22 SCL | LCD I2C Expander SCL |
| | |
| ESP32 D17 TX2 | RS485 Module DI |
| ESP32 D16 RX2 | RS485 Module RO |
| ESP32 D25 | RS485 Module DE |
| ESP32 D26 | RS485 Module RE |
| | |
| ESP32 D19 MISO | SDMMC Module MISO |
| ESP32 D18 SCK | SDMMC Module SCK |
| ESP32 D23 MOSI | SDMMC Module MOSI |
| ESP32 D5 | SDMMC Module CS |
| | |
| ESP32 D32 | RELAY IN1 |
| ESP32 D33 | RELAY IN2 |
| | |
| LCD I2C Expander 16 Pins with LCD from the back | |
| LCD VCC | Buck Module Out + |
| LCD GND | Buck Module Out - |
| | |
| RS485 Vcc | Buck Module Out + |
| RS485 Gnd | Buck Module Out - |
| | |
| SDMMC Module Vcc | Buck Module Out + |
| SDMMC Module Gnd | Buck Module Out - |
| | |
| RELAY Module Vcc | Buck Module Out + |
| RELAY Module Gnd | Buck Module Out - |
| | |
| Buck Converter In + | Main Battery 12V |
| Buck Converter In - | Main Battery Gnd |
| | |

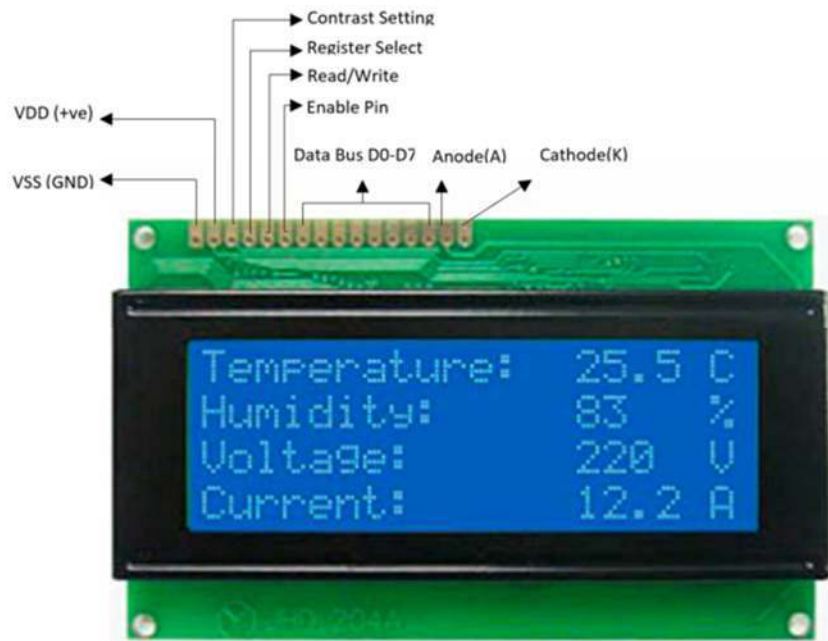
Important Notes:

- Make sure to set the buck converter output voltages to 5V before attaching all the devices
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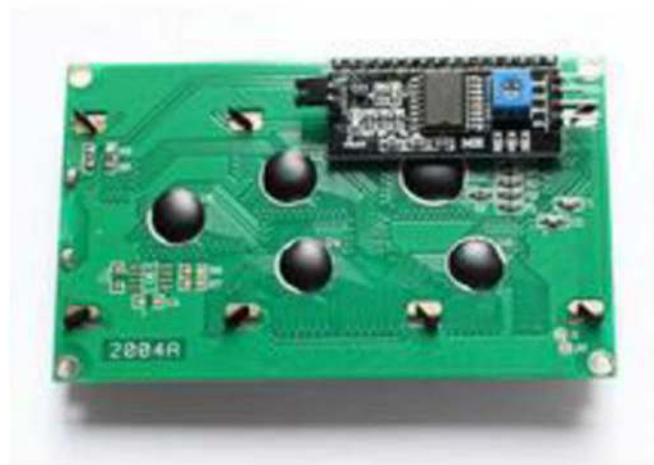
Pinout reference for ESP32:



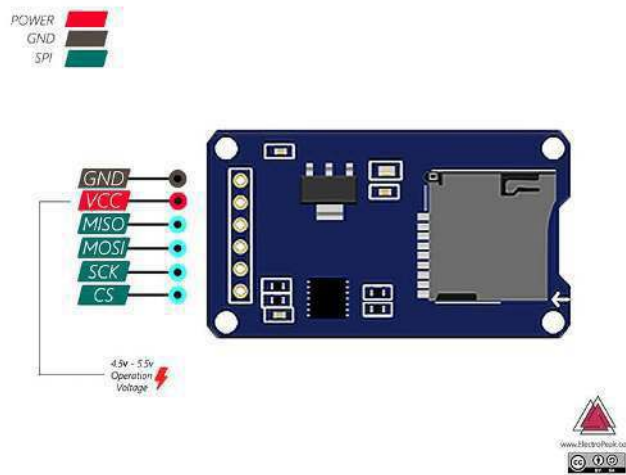
Pinout reference for LCD 2004:



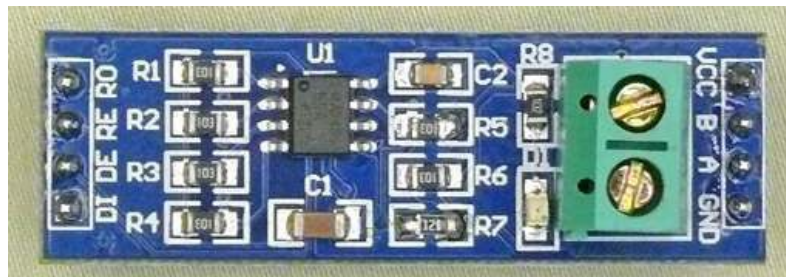
After attaching LCD with I2C expander:



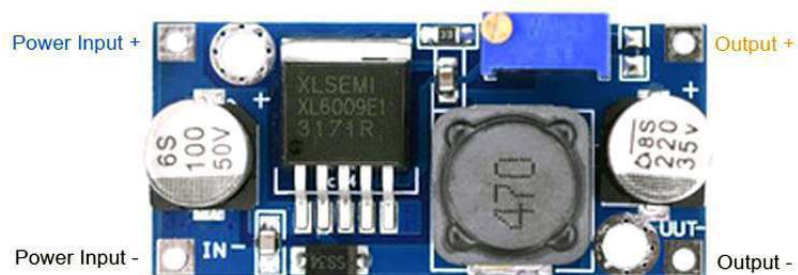
Pinout reference for SDMMC Module:



Pinout reference for RS485 module:



Pinout reference for Buck converter module:



Pinout reference for Relay module:

