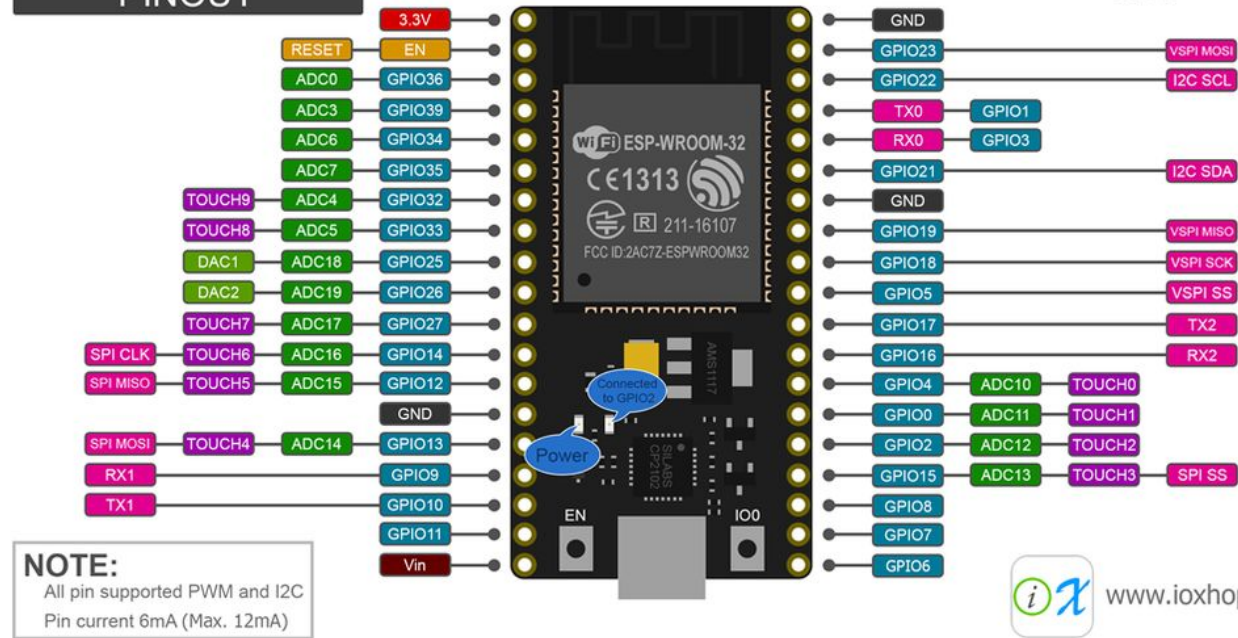


# ESP32

## NodeMCU-32S

### PINOUT



## Notes:

Don't Use

GPI06-11, these are used for integrated SPI flash.

Internal pull-up does not work on GPIOs:

- 36
- 39
- ...

Internal pull-up works on GPIOs:

- 23
- 22
- 11
- 10
- ...

## SPI

| Function | Pin |
|----------|-----|
| CLK      | 14  |
| CS       | 15  |

|      |    |
|------|----|
| MISO | 12 |
| MOSI | 13 |

# References

| Reference              | URL                                                                                                                                       |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| ESP32 Pinout Reference | <a href="https://randomnerdtutorials.com/esp32-pinout-reference-gpios/">https://randomnerdtutorials.com/esp32-pinout-reference-gpios/</a> |
|                        |                                                                                                                                           |