

# ESP-12E WiFi modul for Arduino

**Produktkode: 522**

**Tilgjengelighet: 17**



ESP-12E

**Pris: kr. 45,00**

## Short Description

ESP8266 ESP-12E Wireless Remote Serial WIFI Transceiver Board Module

## Beskrivelse

Model:ESP8266-12

ISM 2.4GHz

PA +25dBm

802.11b/g/n

## Warnings:

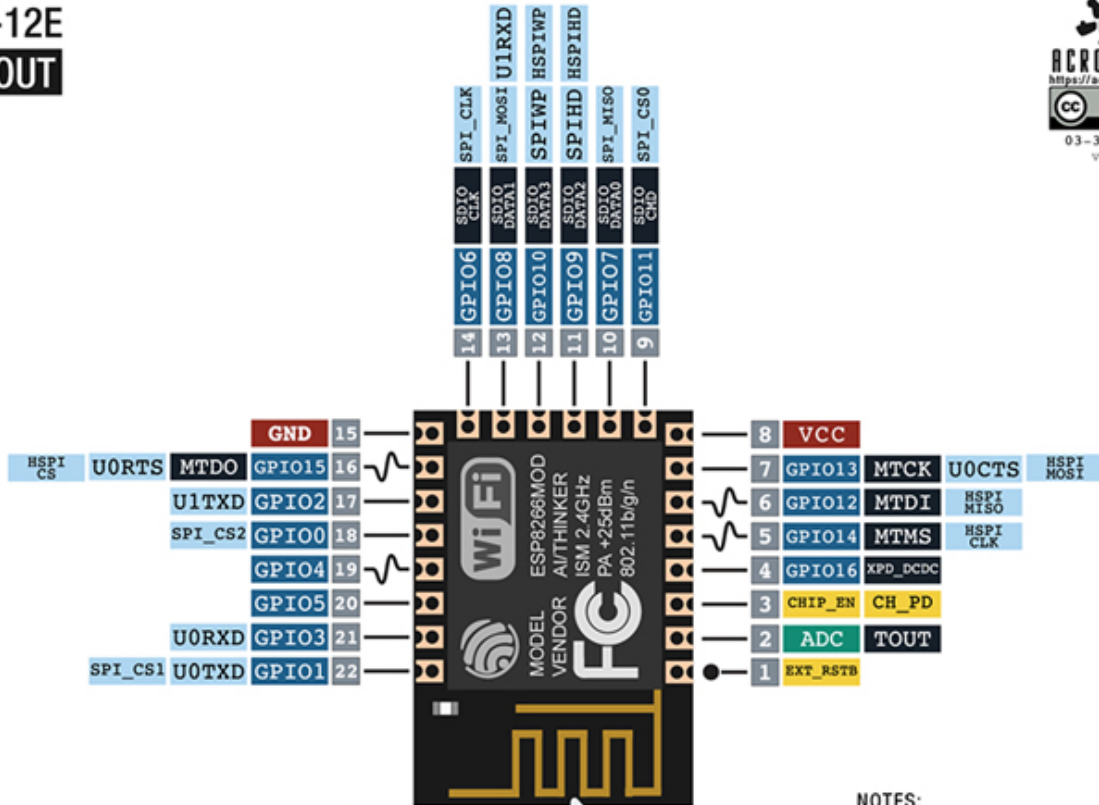
- 1.This module requires a 3.3 volt supply for VCC, and 3.3V logic.
- 2.It is not 5V tolerant,Connect RX or TX on 5V Arduino will destroy this module.
- 3.You must use a logic level converter, or a 3.3V Arduino
- 4.The 3.3V supply on the Arduino Uno has inadequate current capability to power this module.
- 5.You must provide a separate,higher 3.3V supply(about 300mA or better)

## Package includes:

1/2/5/10PCS ESP8266 ESP-12E Wireless Remote Serial WIFI Transceiver Board Module

## Pinout

### ESP-12E PINOUT



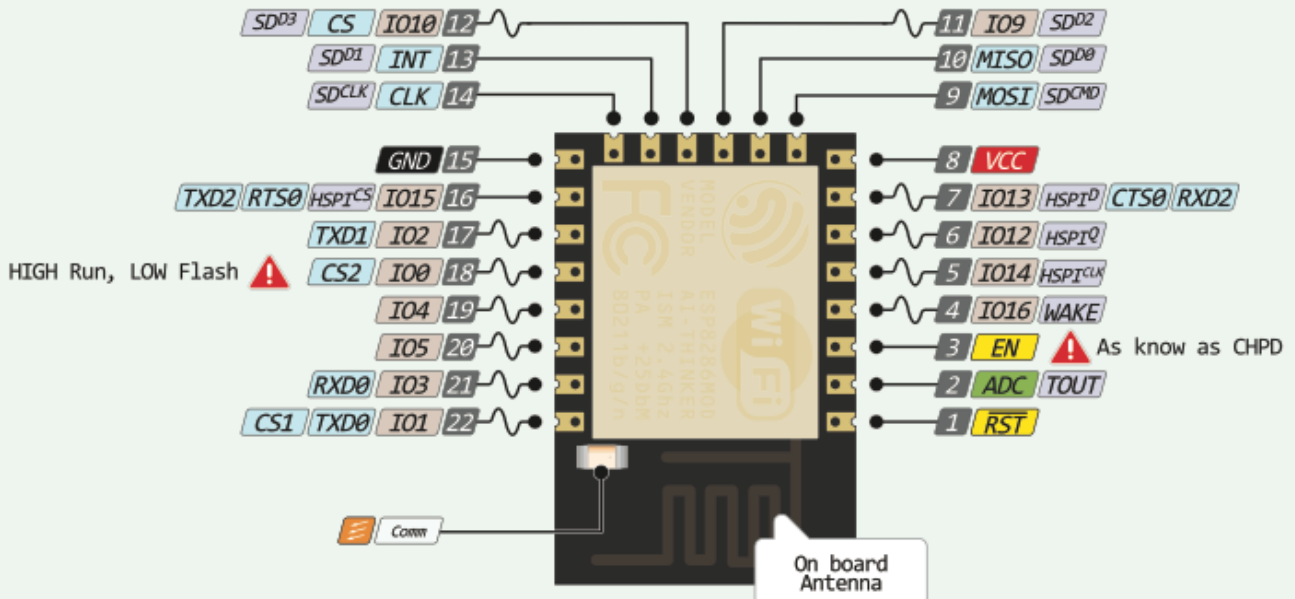
<span style="color: red;">■</span> POWER	<span style="background-color: black; color: white;">■</span> SP. FUNCTION(S)
<span style="color: blue;">■</span> I/O	<span style="background-color: lightblue;">■</span> COMM. INTERFACE
<span style="color: green;">■</span> ADC	<span style="background-color: gray;">■</span> PIN NUMBER
<span style="background-color: yellow;">■</span> CONTROL	PWM
<span style="background-color: white; border: 1px solid black;">■</span> N/C	

#### NOTES:

- ▲ Typ. pin current 6mA (Max. 12mA)
- ▲ For sleep mode, connect GPIO16 and EXT\_RSTB. On wakeup, GPIO16 will output LOW for system reset.
- ▲ On boot/reset/wakeup, keep GPIO15 LOW and GPIO2 HIGH.

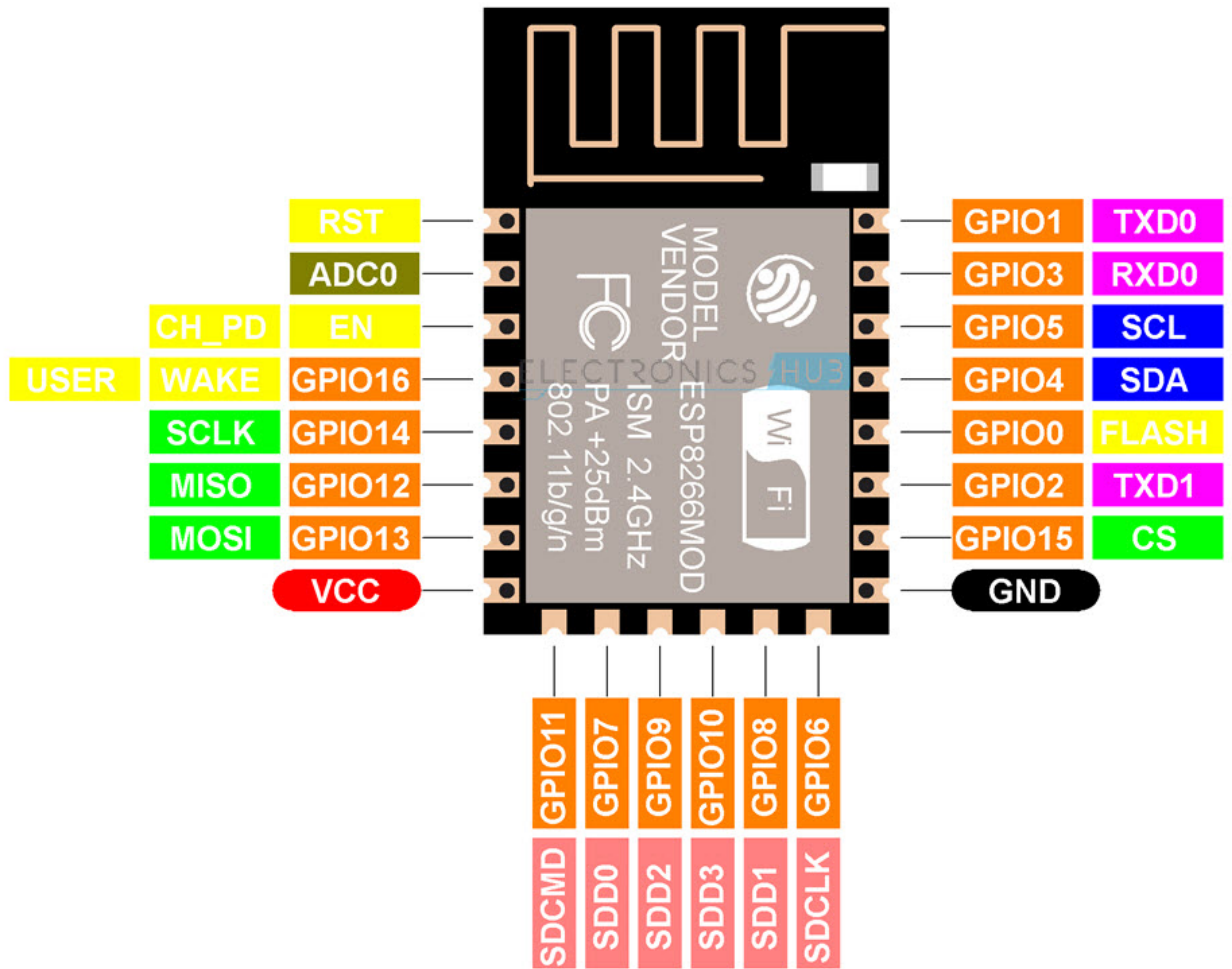
# ESP-12

**⚠ Absolute MAX per pin 12mA recommended 6mA**

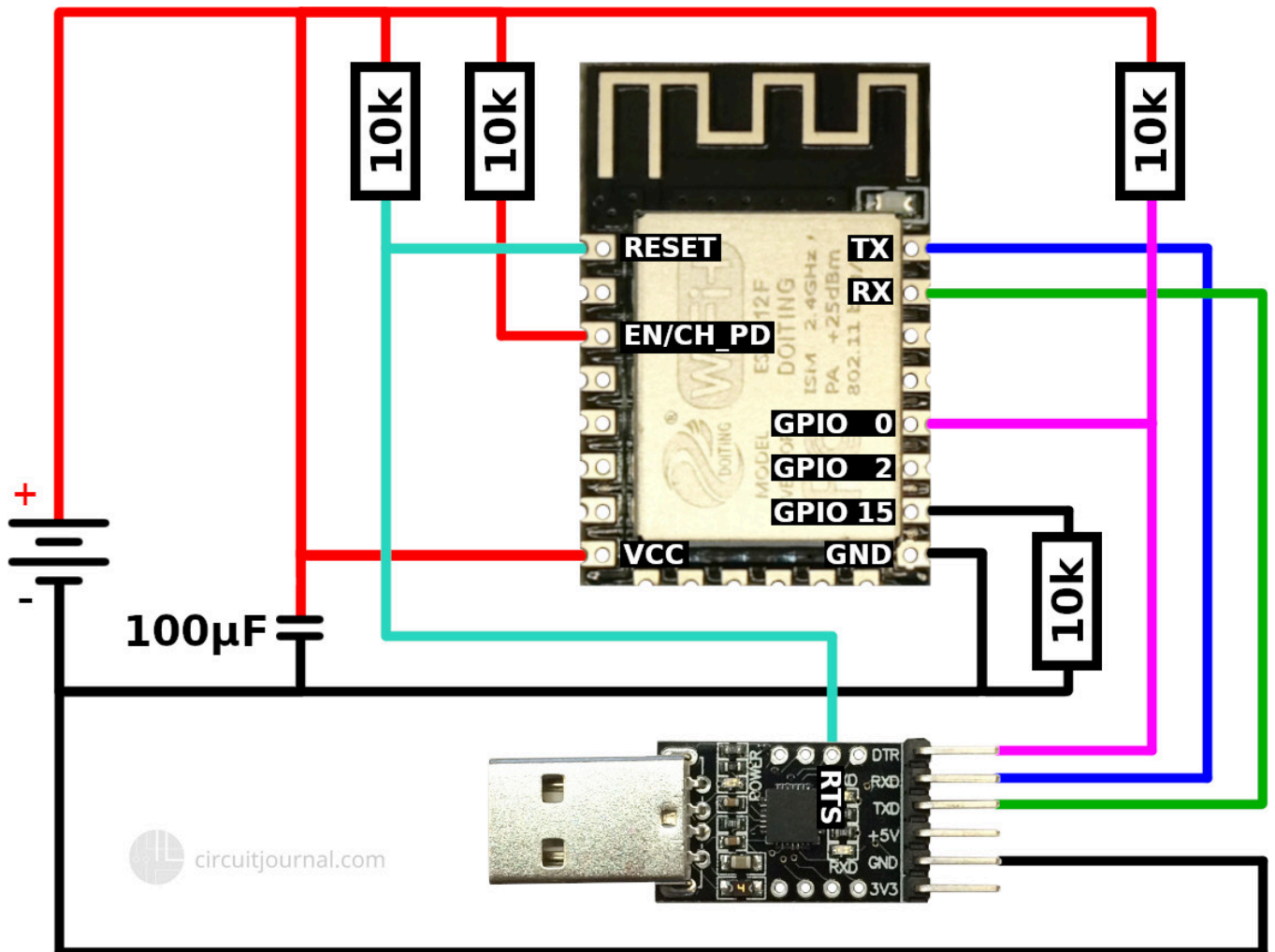
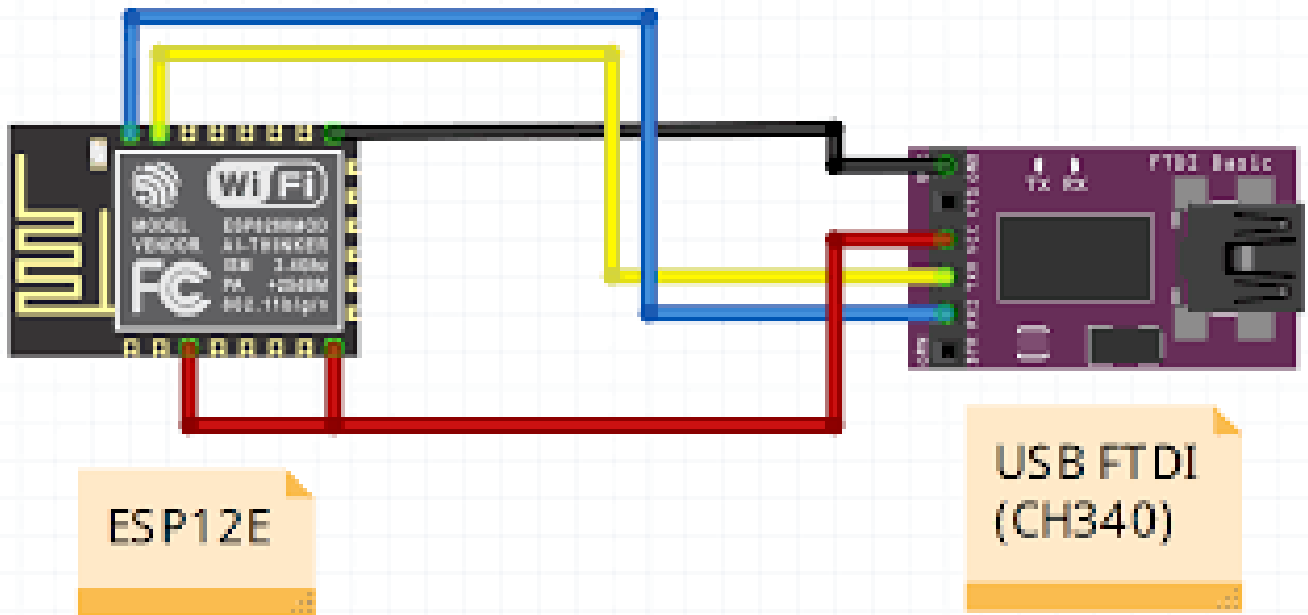


HIGH Run, LOW Flash **⚠**

- ⊘** When you use the sleep mode, I/O16 and RST should be connected and I/O16 will output LOW to reset the system at the time of wakeup.
- ⊘** On every boot/reset/wakeup I/O15 must keep LOW, I/O2 must keep HIGH.



<span style="color: red;">■</span> POWER	<span style="color: olive;">■</span> ANALOG PIN	<span style="color: yellow;">■</span> SYSTEM
<span style="color: black;">■</span> GND	<span style="color: green;">■</span> SPI	<span style="color: blue;">■</span> I2C
<span style="color: orange;">■</span> GPIO PIN	<span style="color: magenta;">■</span> UART	<span style="color: pink;">■</span> SD CARD



## Prosjekter

[Alexa kontrollert kjøkkenlys](#)

[Værstasjon](#)

[ESP8266 kan gå i sovemodus](#)

## Programmering

<https://github.com/skule1/Alexa-controlled-kitchen-light>

**IMPORTANT! The 3.3V power output of the USB-to-serial adapter is too weak to run the ESP-12E / ESP-12F module. You need to use an external 3.3V power source.**

**Full (automatic reset)** - if your USB-to-serial adapter has RTS output available, you can wire up fully automatic connections. It means that you can click "Upload" in the Arduino IDE, then it will automatically reset the ESP module and enter into programming mode. After a successful upload, it will reset again, and your program will run.

**Simple (manual reset)** - some simpler adapter modules do not bring the RTS signal out as an accessible output (even though the USB-to-serial chip on the board probably has it). In that case, you need to connect the GPIO\_0 pin to the ground and then reset the device manually. After successful upload, you need to disconnect the GPIO\_0 pin from the ground and reset again.

**The ESP8266 has three different boot modes selected by the state of GPIO\_15, GPIO\_0, and GPIO\_2 at start-up.**

MODE	GPIO_15	GPIO_0	GPIO_2
SDIO (Boot SD Card)	1	x	x
UART (Upload Code)	0	0	x or 1
FLASH (Normal Running)	0	x or 1	x or 1

**1. SDIO (Boot SD Card)** - this mode is irrelevant for us. Since we never want to use it, we can connect the GPIO\_15 to GND via a 10k resistor.

Note: technically, you could also connect the GPIO\_15 directly to the ground without a

resistor. But if you accidentally define GPIO\_15 as output in your Arduino code and now set the pin to HIGH, it will create a short circuit and probably damage the microcontroller.

**2. UART (Upload Code)** - we need to activate this mode to upload new code. Both GPIO\_15 and GPIO\_0 pin need to be pulled down to the ground at the boot-up time. GPIO\_2 may be left unconnected (or pulled up to 3.3V).

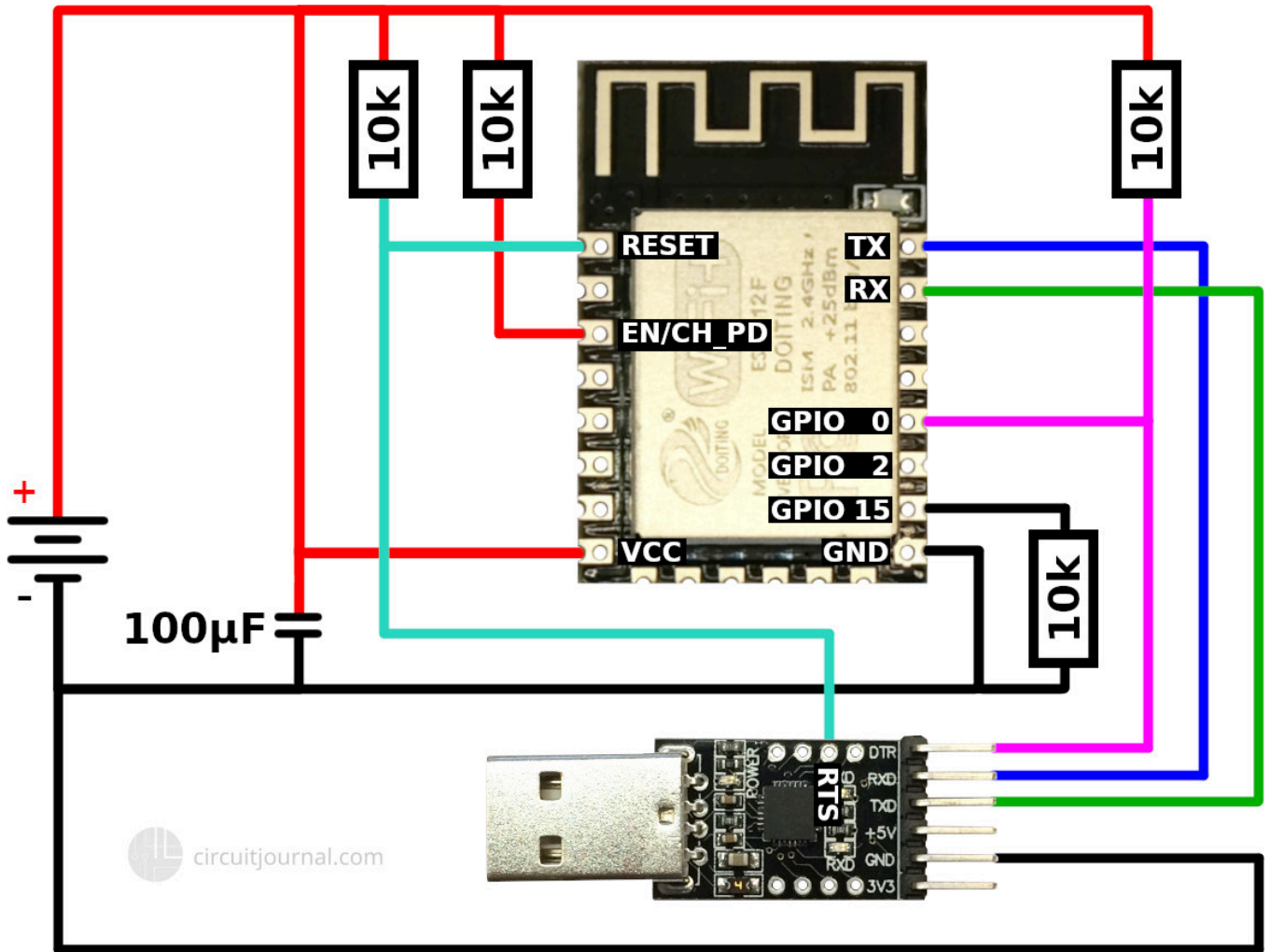
**3. FLASH (Normal Running)** - this mode is for running your code. GPIO\_15 must be pulled to the ground, and GPIO\_0 and GPIO\_2 must be left either floating or pulled up to 3.3V.

Please note that the RX and TX signals need to be crossed:

USB-to-serial TX -> ESP's RX

USB-to-serial RX -> ESP's TX

The "chip enable" (EN/CH\_PD) pin has to be pulled up to 3.3V. Otherwise, the ESP8266 will not run



## Product Gallery

