

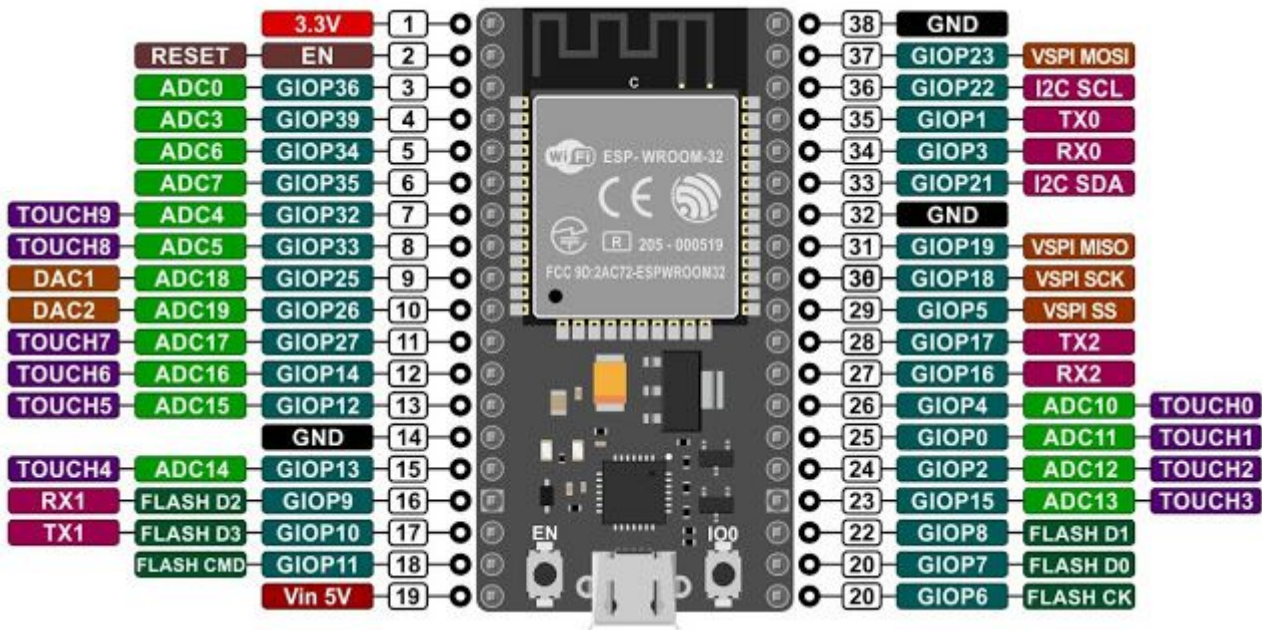
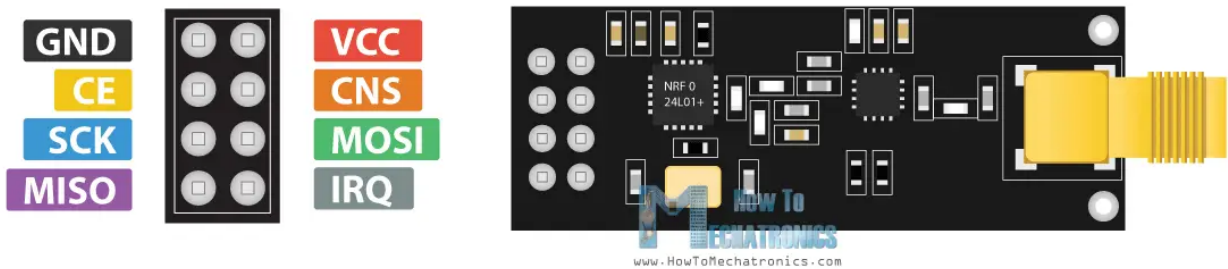
BlueJammer

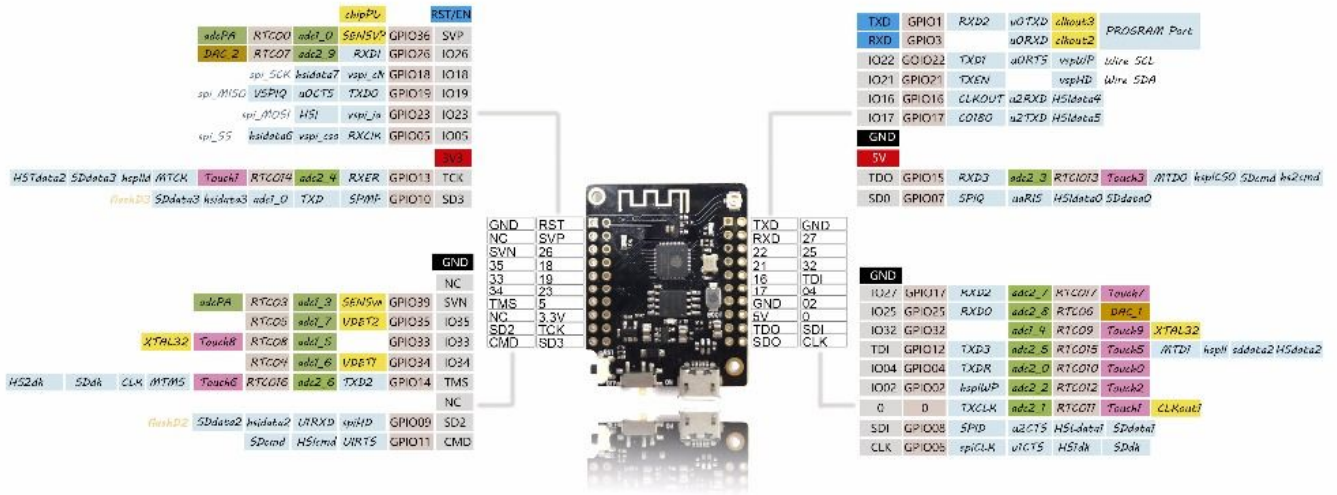
- <https://github.com/EmenstaNougat/ESP32-BlueJammer> → solo binarios
- <https://github.com/cifertech/RF-Clown> → código

NRF24L01 Pinout



NRF24L01+ PA/LNA Pinout





WiFi + Bluetooth Board
4MB Flash MINI 32 v2.0

Power
 ESP32 VCC range: 2.2V-3.6V
 VBAT: direct to battery (and charger)
 VUSB: direct to USB (5V)
 VCC: Output of regulator 3.3V/600mA
 Up to 250mA during RF transmissions

Wireless
 Wifi: 802.11 b/g/n/e/i
 WPA/WPA2/WPA2-Enterprise/SPS
 Bluetooth: Bluetooth 4.2/BLE

ESP32
 Dual-core Xtensa 32-bit LX6
 Up to 240MHz
 520kB internal SRAM
 4MB external flash

Multiplexed I/Os allow up to
 18 ADC channels
 3 SPI interfaces
 3 UART interfaces
 2 I2C interfaces
 16 LED PWM outputs
 2 DACs
 10 Capacitive Touch Inputs

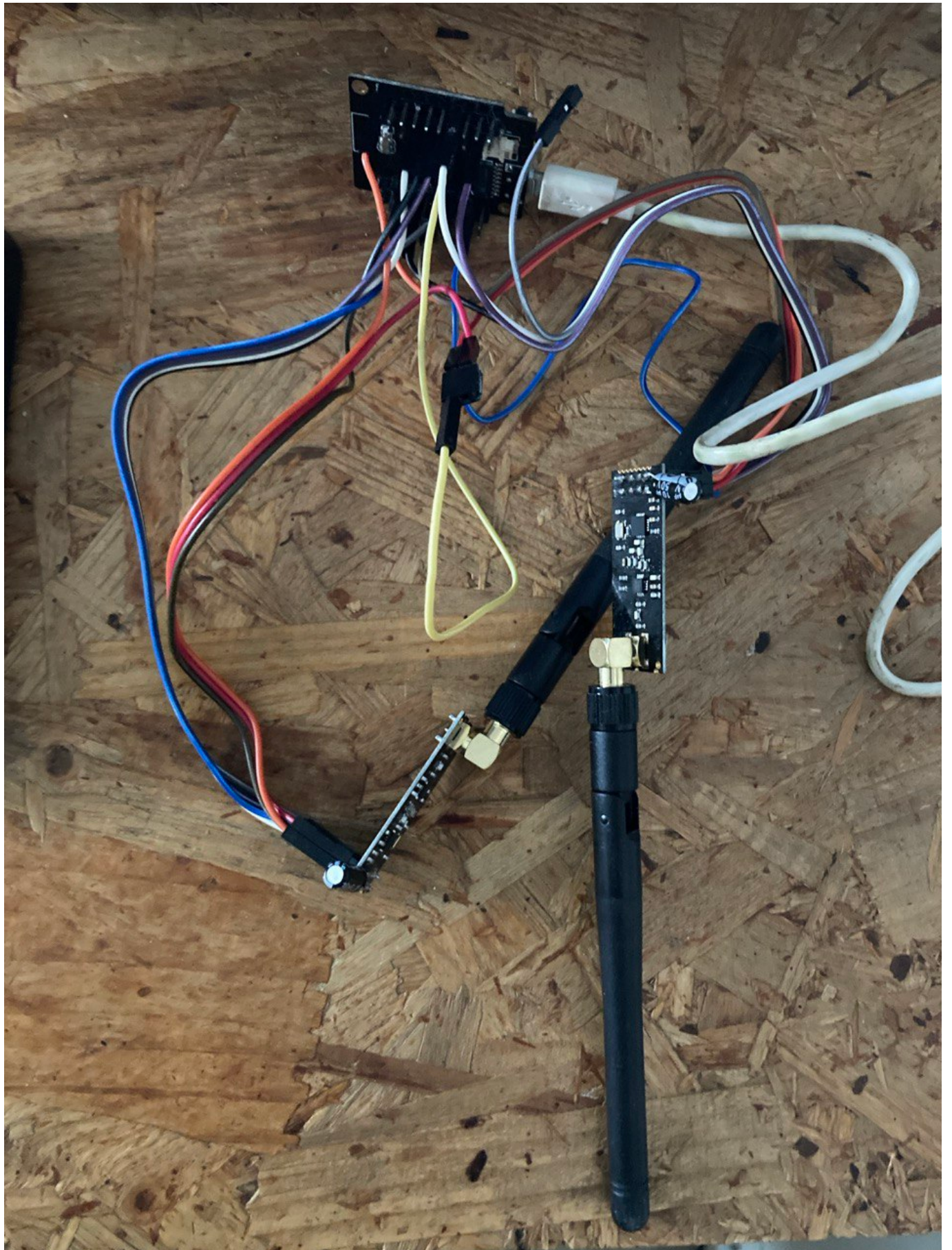
ADC Preamp
 GPIO pins 36, 37, 38, and 39 are able to be used as a low noise analog pre-amplifier

Other*
 Hall Sensor
 Temp sensor (-40C to 125C)
 SD/SDIO/MMC Host Controller
 CAN Bus

*On datasheet, but may not be supported yet

Name	ADC
Power	DAC
GND	SPI
Control	UART
Arduino	Touch
GPIO	Misc

*GPIO: Port Input Only
 *ADC: Pre-amplifier ADC
 GPIO 3.3V tolerant only



Firmware upload

- Descarga binarios para bootloader, particiones y firmware de <https://github.com/EmenstaNougat/ESP32-BlueJammer/archive/refs/tags/ESP32-BlueJammer-v2.zip> dentro de la carpeta Firmware_Files están los archivos
- El instalador web no funcionó (<https://esp32-bluejammerflasher.pages.dev/>)
- Se sube el firmware usando esptool

```
↳λ # Upload with bootloader and partitions (if you have separate files)
    esptool --chip esp32 --port /dev/ttyUSB0 --baud 921600 \
      --before default_reset --after hard_reset \
      write_flash 0x1000 bootloader.bin \
      0x8000 partitions.bin \
      0x10000 firmware.bin
```

El firmware una vez cargado de manera exitosa arranca pero presenta errores al momento de leer los chips nRF24

```
#####  
ESP32-BLUEJAMMER  
#####  
Firmware : Combo-Channel-Select (BT-BLE-WiFi-RC)  
BY EME NSTA  
#####  
!Educational purposes only!  
  
https://github.com/EmenstaNougat/ESP32-BlueJammer  
  
I'm not responsible for your actions!  
#####  
#####  
VSPI - FAILED  
!!! SP (standard power) start failure! VSPI nRF24 module could NOT be initialized! #####  
#####  
HSPI - FAILED  
!!! HP (high power) start failure! HSPI nRF24 module could NOT be initialized! #####  
State 1: Bluetooth
```

Referentes

- <https://lastminuteengineers.com/nrf24l01-arduino-wireless-communication/>
- <https://grabcad.com/library/nrf24l01-pa-lna-1>
- <https://github.com/Steffen-W/Import-LIB-KiCad-Plugin#use-of-the-application>

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<https://wiki.unloquer.org/> -

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