

Esp32 - Lora



ESP32 (32 bits, 2 cores, 180 MHz)

- 1. -Connectivity
 - 1. -WiFi
 - 2. -BLE
 - 3. -LoRa (SX1276) 433MHz, 868MHz, 915MHz

Brochage ESP32 Lora



Liens web

[ESP32 WiFi LoRa](#)

[Diagram Pinout](#)

[Github](#)

Configuration

| | |
|-------------------------------------|----|
| Formatage automatique | ☞T |
| Archiver le croquis | |
| Réparer encodage & recharger | |
| Moniteur série | ☞M |
| Traceur série | ☞L |
| WiFi101 Firmware Updater | |
| ArduBlock | |
| Type de carte: "WiFi_Kit_32" | ▶ |
| Flash Frequency: "80MHz" | ▶ |
| Upload Speed: "921600" | ▶ |
| Port: "/dev/cu.SLAB_USBtoUART" | ▶ |
| Get Board Info | |
| Programmeur: "AVRISP mkII" | ▶ |
| Graver la séquence d'initialisation | |

Programmes

Carte1 (envoi)

Ouvrir et téléverser le programme : Exemples > LoRaLibrary > OLED_LoRa_Sender

Carte 2 (Reception)

Ouvrir et téléverser le programme : Exemples > LoRaLibrary > OLED_LoRa_Receiver

Ajouter la configuration LoRaWAN

Ajoutez les déclarations suivantes dans les 2 programmes.

[Lorawanconf.ino](https://github.com/Heltec-Aaron-Lee/WiFi_Kit_series/blob/master/esp32/libraries/LoRa/API.md)

```
...  
  
// LoRa API  
https://github.com/Heltec-Aaron-Lee/WiFi\_Kit\_series/blob/master/esp32/libraries/LoRa/API.md  
  
// LoRaWAN Parameters  
#define BAND 868100000 //you can set band here directly,e.g.  
868E6,915E6  
#define PABOOST false  
#define TXPOWER 14  
#define SPREADING_FACTOR 12  
#define BANDWIDTH 125000  
#define CODING_RATE 5  
#define PREAMBLE_LENGTH 8  
#define SYNC_WORD 0x34
```

```
void configForLoRaWAN()
{
  LoRa.setTxPower(TXPOWER);
  LoRa.setSpreadingFactor(SPREADING_FACTOR);
  LoRa.setSignalBandwidth(BANDWIDTH);
  LoRa.setCodingRate4(CODING_RATE);
  LoRa.setPreambleLength(PREAMBLE_LENGTH);
  LoRa.setSyncWord(SYNC_WORD);
  LoRa.crc();
}

String loraCfg = "Cfg:";
void displayLoRaConfig(int x, int y){
  loraCfg =
    "fr " + String(BAND/1000000, DEC)
    + " sf" + String(SPREADING_FACTOR, DEC)
    + " bw" + String(BANDWIDTH/1000, DEC)
    + " cr" + String(CODING_RATE, DEC) + "/4";
  display.drawString(x, y, loraCfg);
  loraCfg =
    + " pr" + String(PREAMBLE_LENGTH, DEC)
    + " pw" + String(TXPOWER, DEC)
    + " sw" + String(SYNC_WORD, HEX)
    ;
  display.drawString(x, y+10, loraCfg);
}

...

// should be done before LoRa.begin
configForLoRaWAN();

if (!LoRa.begin(BAND,PABOOST)) {
  display.drawString(0, 0, "Starting LoRa failed!");
  display.display();
  while (1);
}
displayLoRaConfig(0,20);
display.drawString(0, 0, "LoRa Initial success!");

...

display.display();

...
```

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