Connections between the RFM95 LoRa transceiver module and the ESP32:

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| --- | --- |
|  | * ANA: Antenna * GND: GND * DIO3: don’t connect * DIO4: don’t connect * 3.3V: 3.3V * DIO0: GPIO 2 * DIO1: don’t connect * DIO2: don’t connect * GND: don’t connect * DIO5: don’t connect * RESET: GPIO 14 * NSS: GPIO 5 * SCK: GPIO 18 * MOSI: GPIO 23 * MISO: GPIO 19 * GND: don’t connect |

**Note:** the RFM95 transceiver module has 3 GND pins. It doesn’t matter which one you use, but you need to connect at least one.

The wire length depends on the frequency:

* 868 MHz: 86,3 mm (3.4 inch)
* 915 MHz: 81,9 mm (3.22 inch)
* 433 MHz: 173,1 mm (6.8 inch)

For our module we need to use a 86,3 mm wire soldered directly to the transceiver’s ANA pin. Note that using a proper antenna will extend the communication range.

**Important:** you MUST attach an antenna to the module.