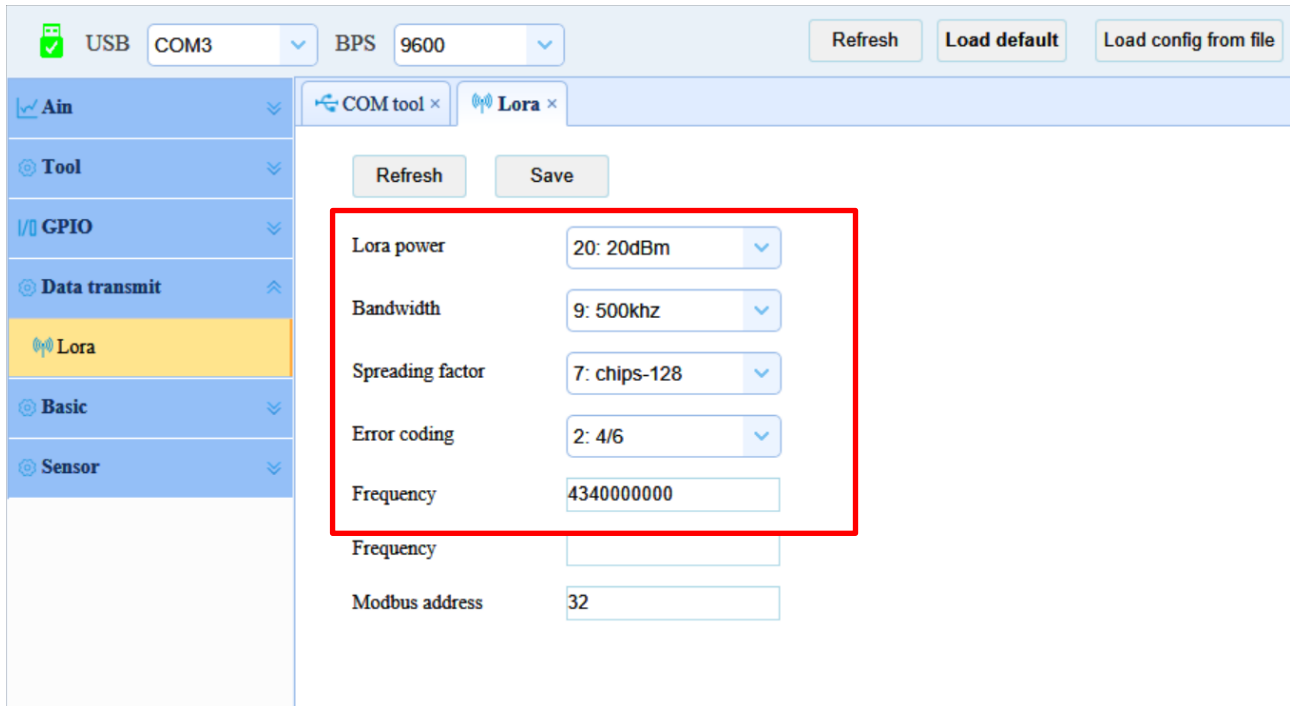


## How to adjust Lora communication distance



USB COM3 BPS 9600 Refresh Load default Load config from file

COM tool × Lora ×

Refresh Save

Lora power 20: 20dBm

Bandwidth 9: 500khz

Spreading factor 7: chips-128

Error coding 2: 4/6

Frequency 4340000000

Frequency

Modbus address 32

**the Lora parameters of RTU and Modem must be same**

### Lora communication distance depends on many factors

If need to increase Lora communication distance, the below items can be adjusted:

1. decrease Bandwidth
2. increase Spreading factor

notice if distance is increased, the sensitivity of data acceptance will be down

#### [Power(dBm)]

LORA transmitted power, The larger the value, the farther the distance

#### [Bandwidth]

Increase BW can improve the effective data rate to shorten transmission time

#### [Spreading Factor (SF)]

Increase spreading factor can improve anti-interference capability, but data transmission speed will be gone down

#### [Error Coding]

The proportion of useful parts of data stream.

In the case of interference, forward error correction can effectively improve the reliability

#### [Frequency (Hz)]

support 410-525MHz