UWB650 PC Software User Manual

1.Locate the COM port corresponding to the module and select the correct baud rate.

2. After opening, the following interface will appear.

- The upper-right corner shows a small portion of the module parameters. Click **"Settings"** to view and modify all parameters.
- The lower-right area is the **data transmission mode**.
- The lower-left area is the **ranging mode**.
- In the far left column, you can enter the **positioning mode**.
- In data transmission mode, you can select **hexadecimal** to send and receive data packets, choose the target address, and observe the transmitted and received bytes.

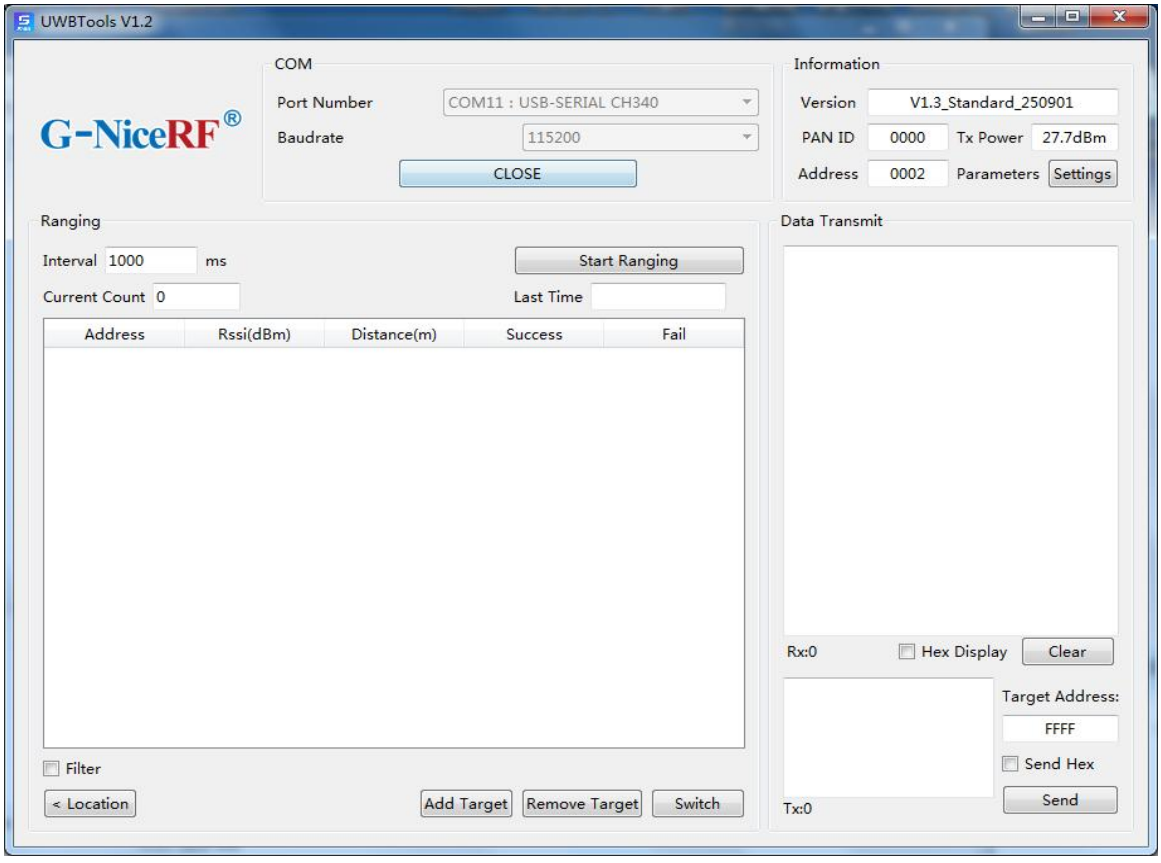
In ranging mode, there are **three options**.

- Ranging mode supports measuring distances with up to **15 targets simultaneously**.
- Positioning mode supports setting up to **8 base stations**.

Add Target: Add a target

Remove Target: Remove a target

Switch: Switch to the slave device page

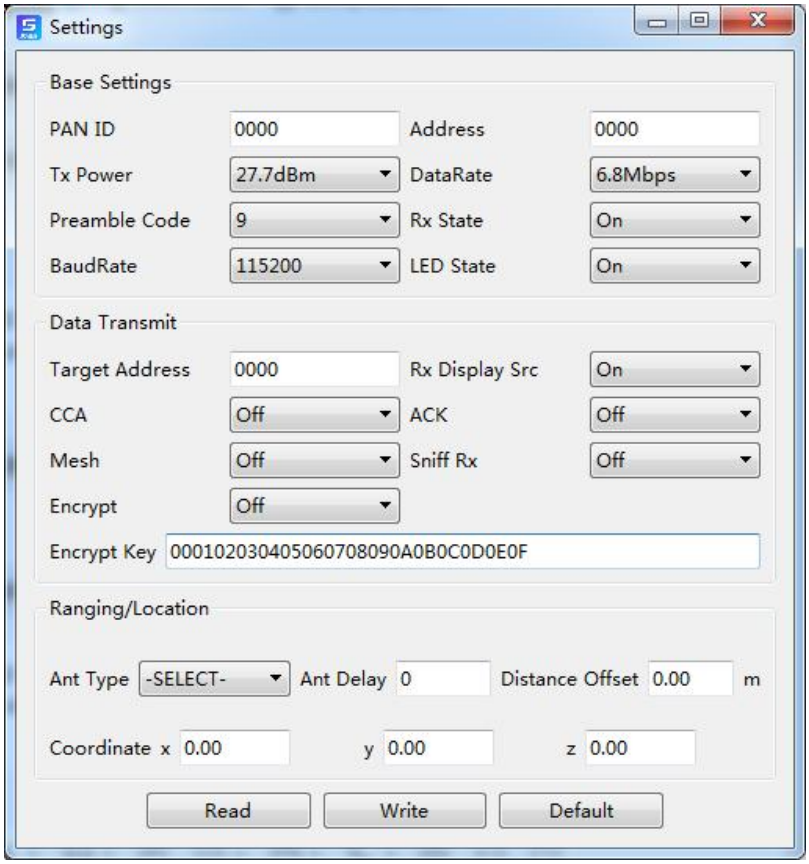


3. On this configuration page, several parameters require attention, as they are used frequently later.

If any issue occurs during use, it may also be caused by these parameters being enabled.

- **RX State:**
  As long as the module is powered, it will always remain in receiving mode, and the RX LED will keep flashing.
  If disabled, the module can only transmit data and cannot receive; the RX LED will be off.
- **LED State:**
  LEDs are enabled by default.
  When turned off, the TX and RX indicators will no longer light up, but this does **not** affect operation.
- **RX Display Src:**
  By default, the module displays the source address when receiving data.
  When disabled, the source address will not be shown.
- **Mesh:**
  Relay feature, disabled by default.
  There are three options: **Relay**, **Node**, **Relay + Node**.
- **Encrypt:**
  Encryption feature, disabled by default.
  When enabled, only modules with matching **Encrypt** option and the same **Encrypt Key** can communicate.

If you have special requirements for data transmission bytes, you may adjust the **BaudRate**.
If the ranging result is not ideal, you may adjust the **Ant Delay** and **Distance Offset** to calibrate the distance.

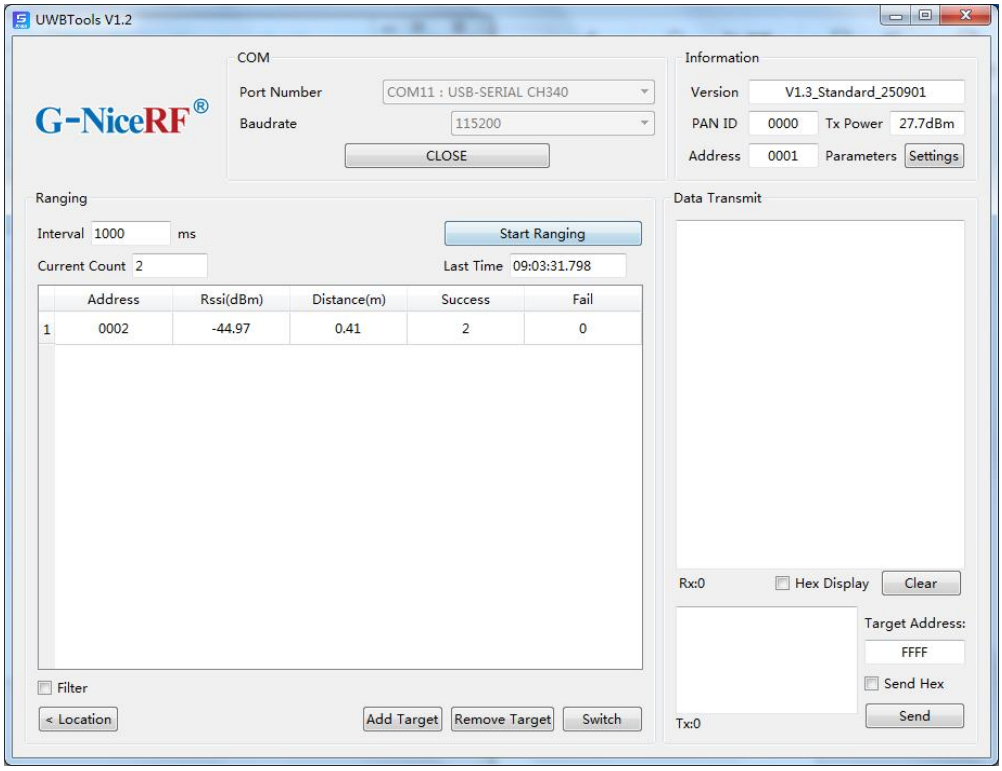


4. In ranging mode, the master and slave pages are shown below.

- **Master page:**

  From left to right:

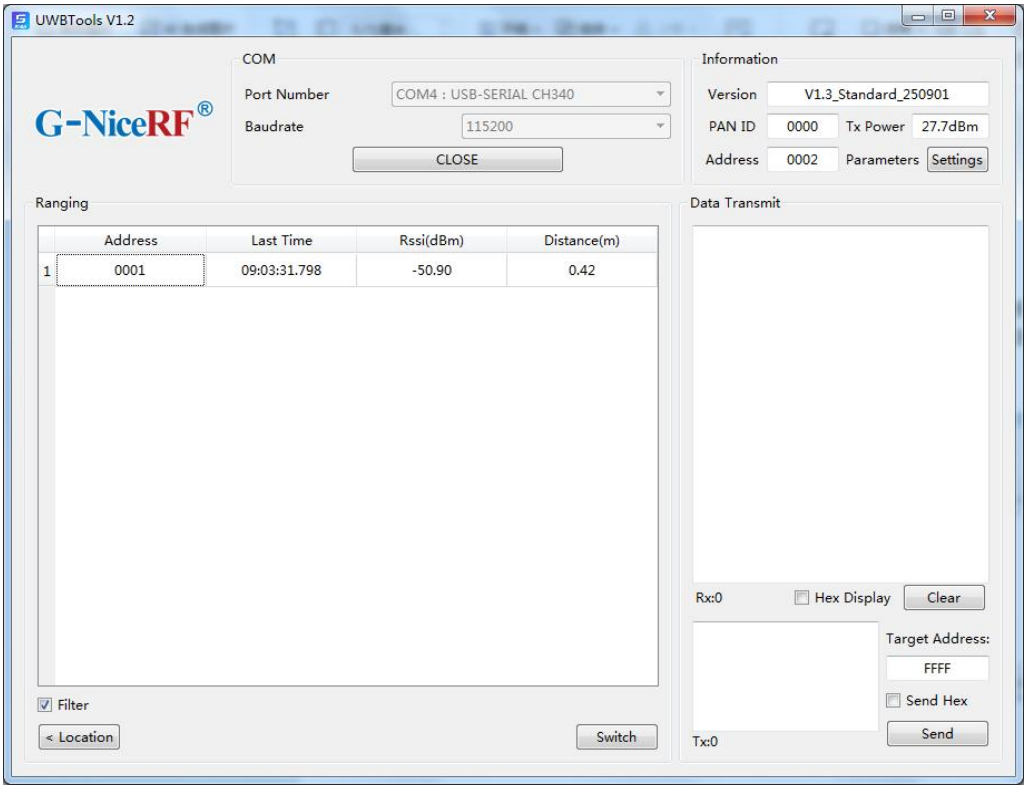
  Slave address, signal strength, measured distance, number of successful attempts, and number of failed attempts.



- **Slave page:**

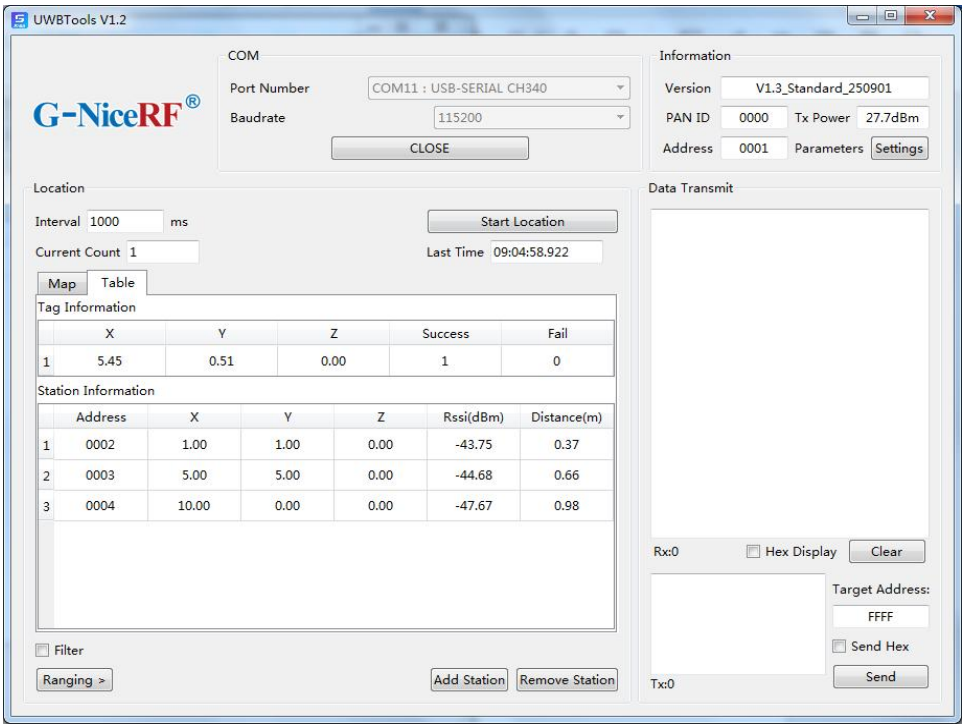
  From left to right:

  Master address, test duration, signal strength, and measured distance.

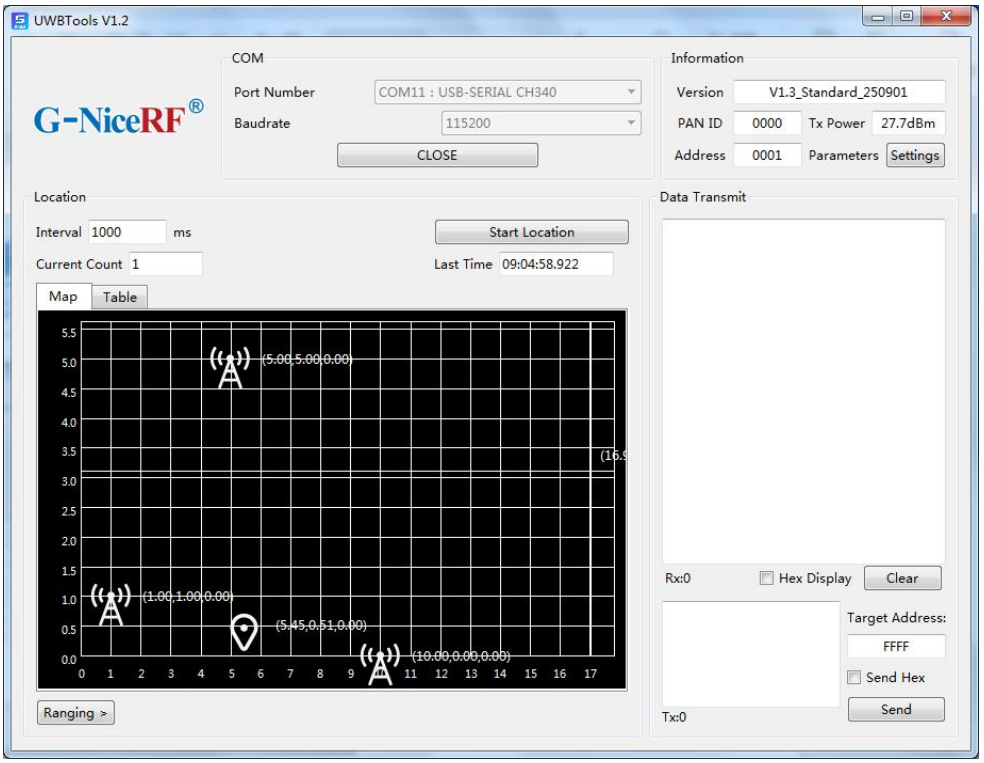


5. In positioning mode, there are two views to observe the working status and the tag location.

- **Table view:**
  Shows the positions of the tag and each base station, as well as the distances between them.



- **Map view:**
  A more intuitive coordinate-based display of the base stations and the tag.
  As the physical module moves, the tag movement can be seen in real time in both views.



- Point the mouse at the grid and slide the mouse wheel to adjust the zoom of the X-axis in the grid;
- Hold down the **LeftContrl** key and then slide the mouse wheel to adjust the scaling degree of the Y-axis in the grid;
- Click on the grid and slide the mouse to adjust the display range of the grid.

Note:
The interval for ranging and positioning can be adjusted in **"Interval"**.
A smaller interval means faster update speed, but also higher susceptibility to interference and greater data fluctuations—although the data becomes more precise.

Therefore, when using the ranging and positioning functions, it is recommended to perform tests in **open areas with low interference and stable placements**, to obtain ideal measurement results and facilitate subsequent work.