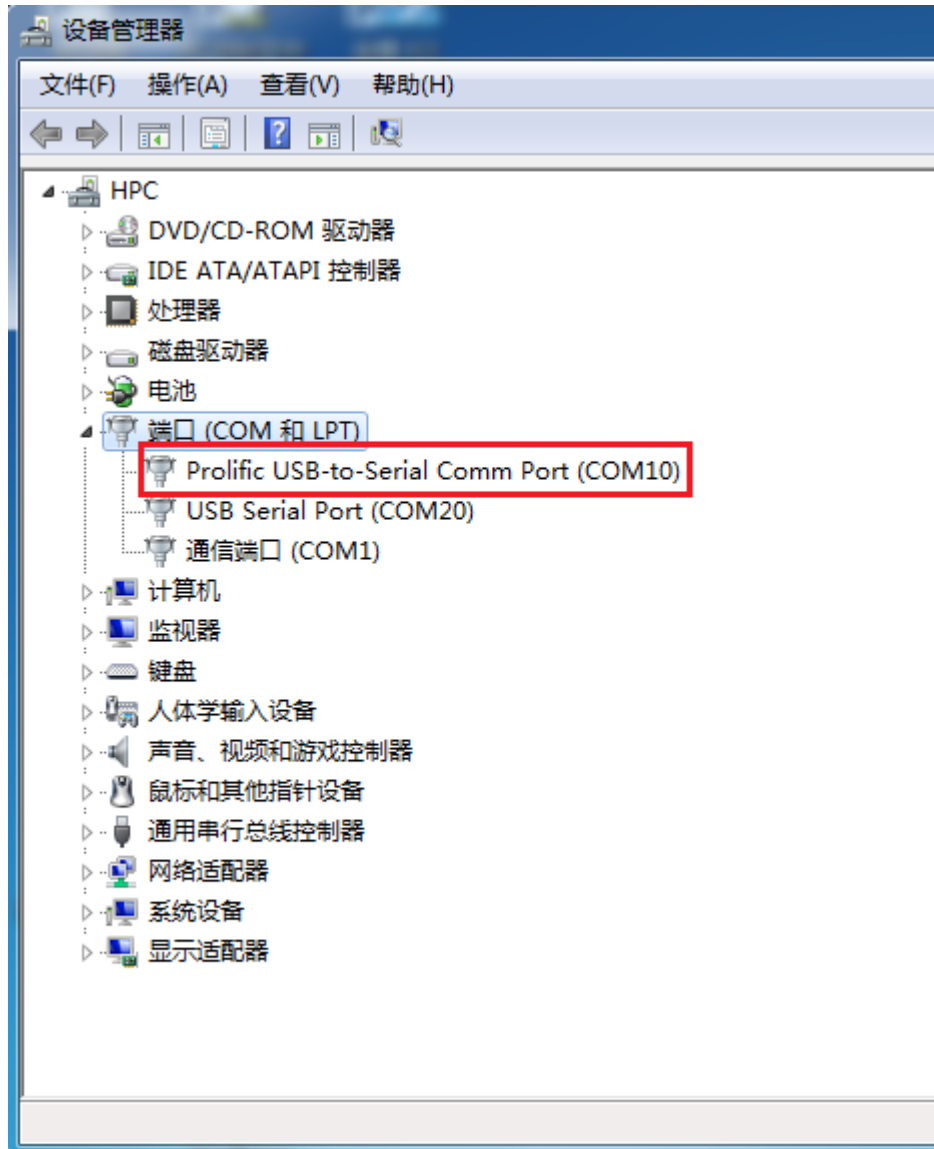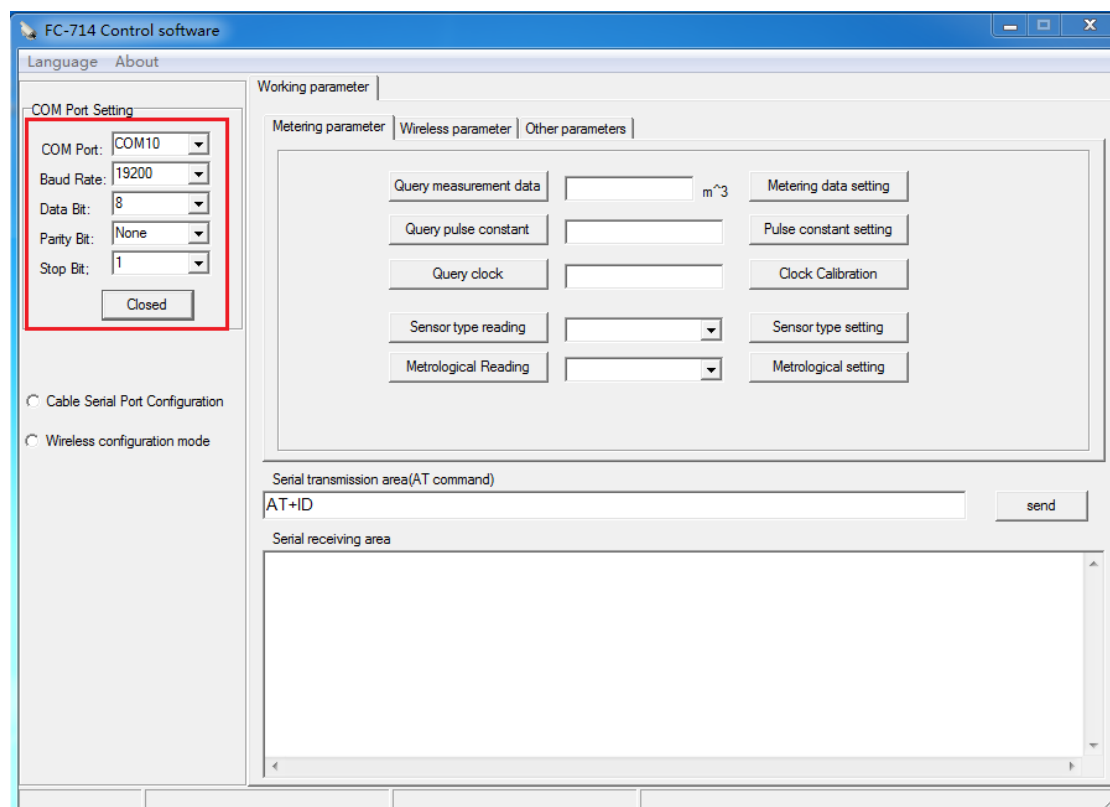**FC-714 Configuration Manual**

1. Install the USB configuration tool. Plug the USB tool into the computer's USB port, usually the computer will automatically install the driver. If the driver is not installed successfully, please install the PL2303 driver manually.

2. After the driver is successfully installed, the serial port number can be found in the Computer Device Manager.

3. Open the FC-714 configuration software, select the corresponding serial port number, select 19200, 8, None, 1, and click "open".

4. Select "Wireless configuration mode", the USB tool has entered configuration mode.
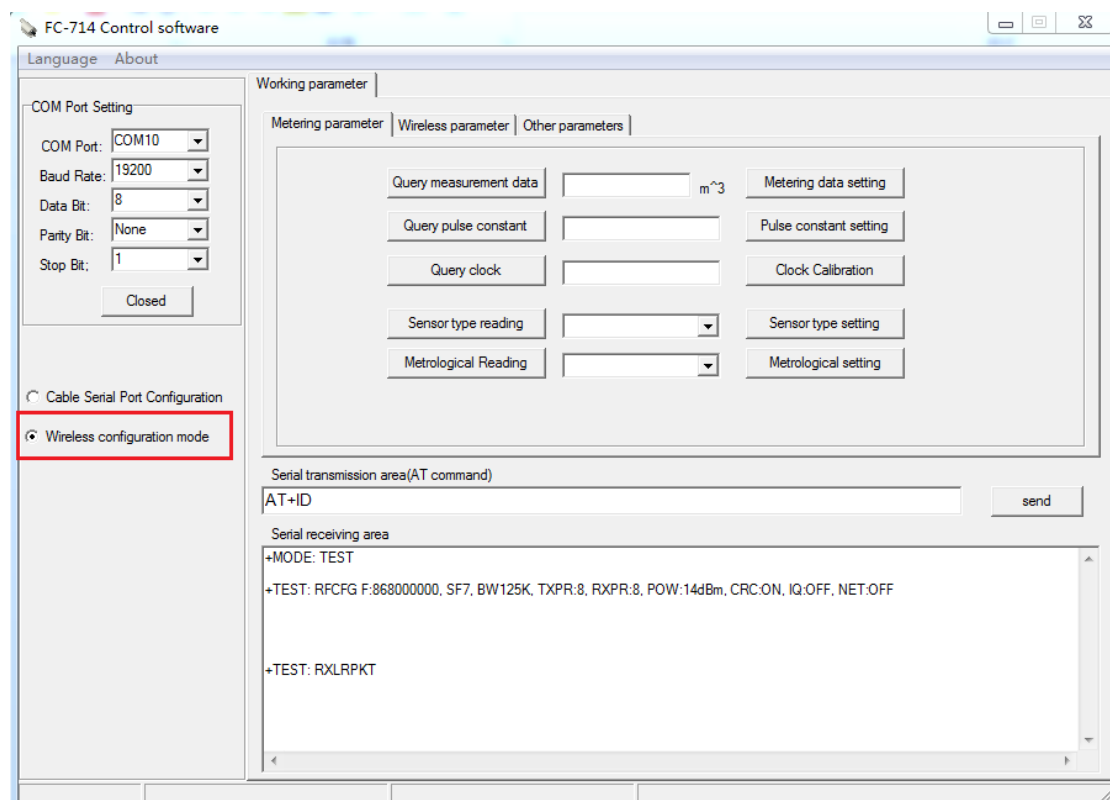

5. Let's take single Reed Switch pulse water meter as an example to describe: The first step is to connect FC-714 and pulse water meter to blue (pulse) and orange (ground) respectively.

6. Move the magnet close to the red area shown in the figure below of the FC-714. After 2 to 8 seconds, remove the magnet and the FC-714 can enter the configuration mode. (Note：The

reed switch inside the product is triggered by the magnet to put the product into the configuration mode, and then the configuration command is sent within 10 seconds. If the product does not detect the configuration command for 10 seconds, the test mode will be exited once received. The configuration command will delay the configuration mode for 10 seconds.)

The position of reed switch, and we can use the magnet close to this area to trigger it
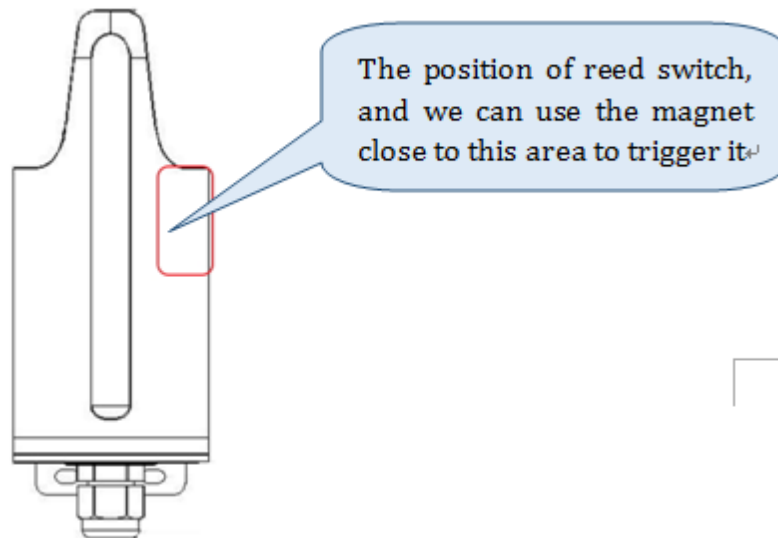
7. At this time, various commands can be configured for the FC-714 through the FC-714 configuration software. For example, clicking on various query buttons returns the corresponding value.
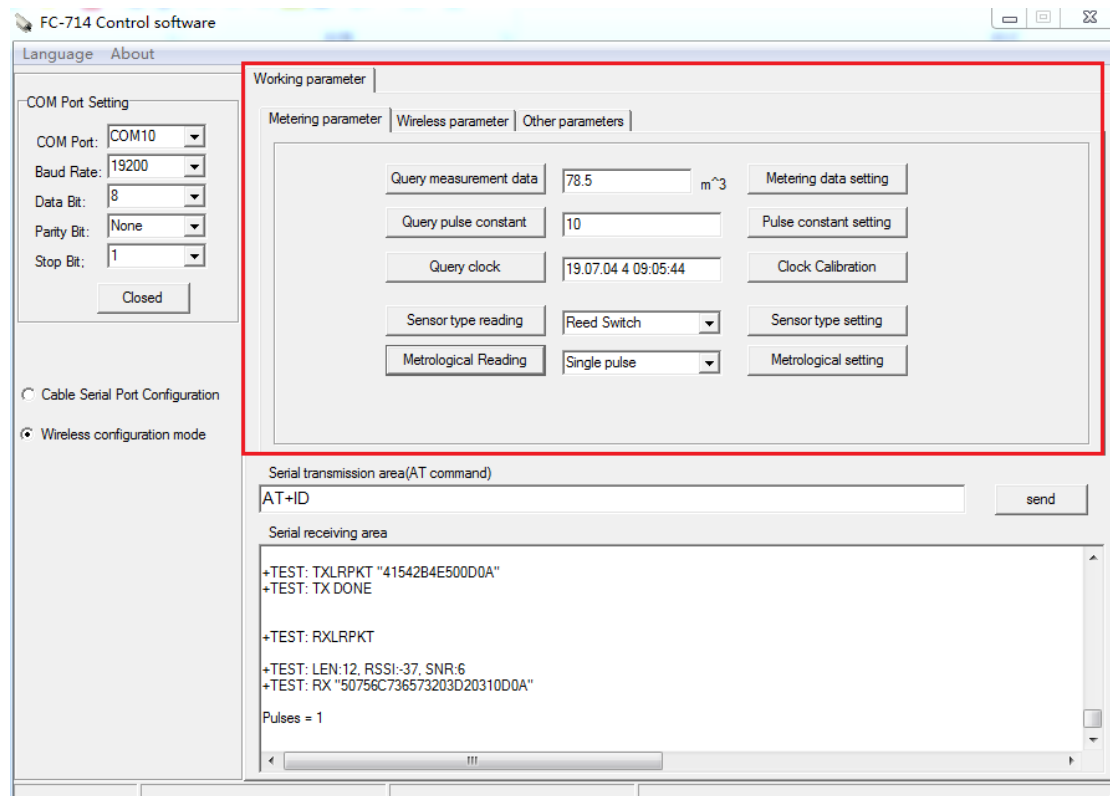

8. Set the current reading and pulse constant of the water meter:
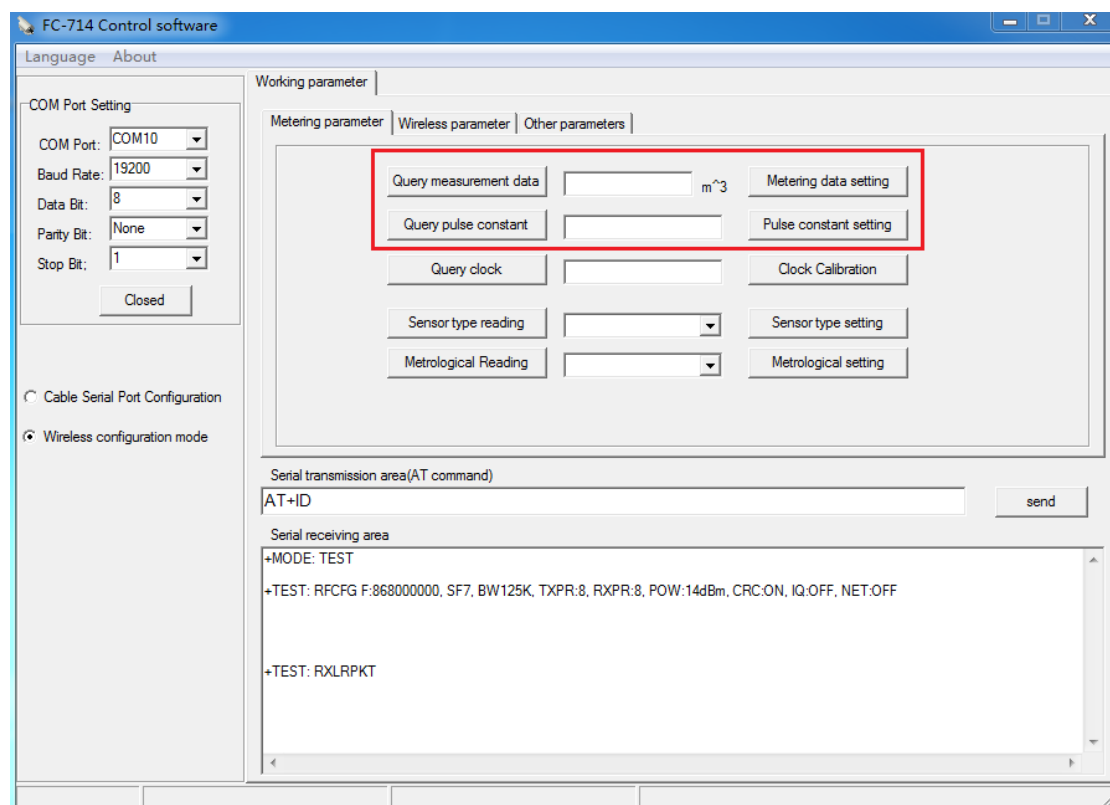
Pulse constant setting description: The number of pulses generated per 1m^3 of the water meter.

Example: Each pulse of 1 liter of water produces 1 pulse, that is, 1 m^3 of water meter will produce 1000 pulses, then the pulse constant should be 1000 (if the pulse constant is reset, the initial reading must be reset)

9. Set the sensor type and metering method. FC-714 supports two types of sensors, reed switch and Hall. It can collect single pulse and double pulse. Users can select the corresponding parameters according to their own meter.
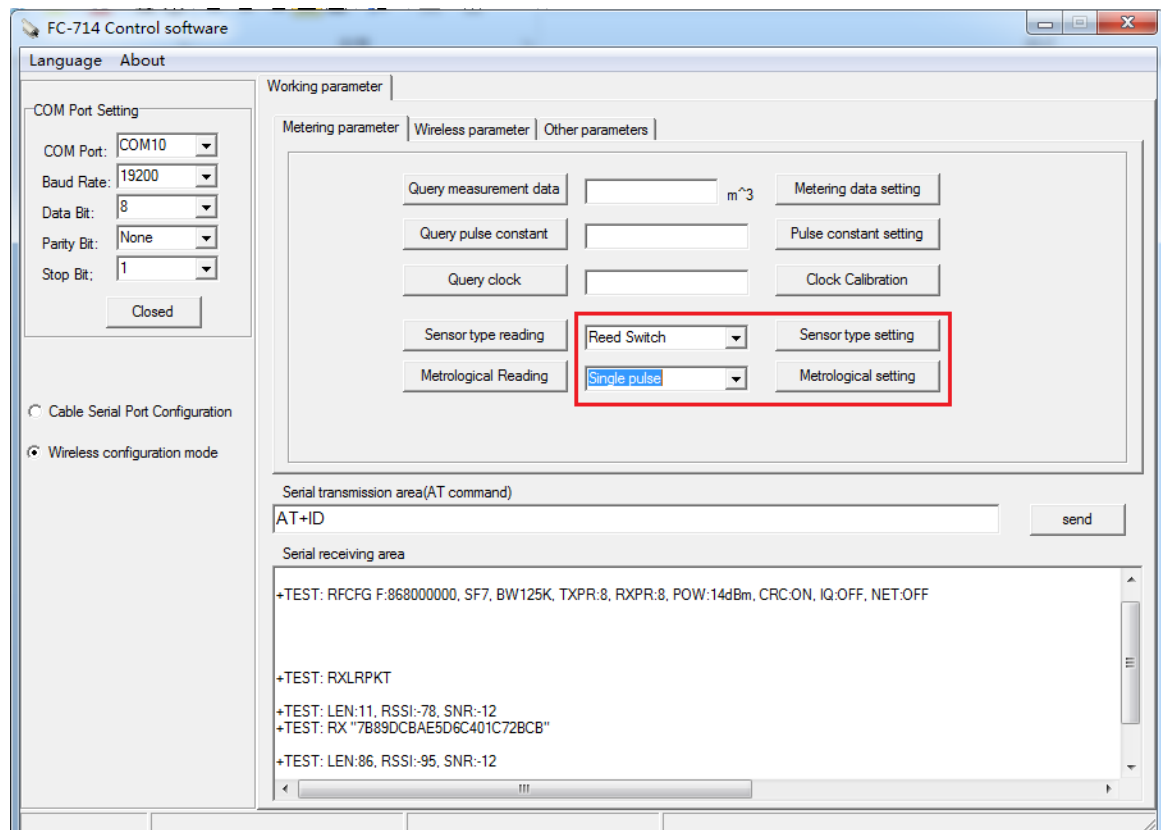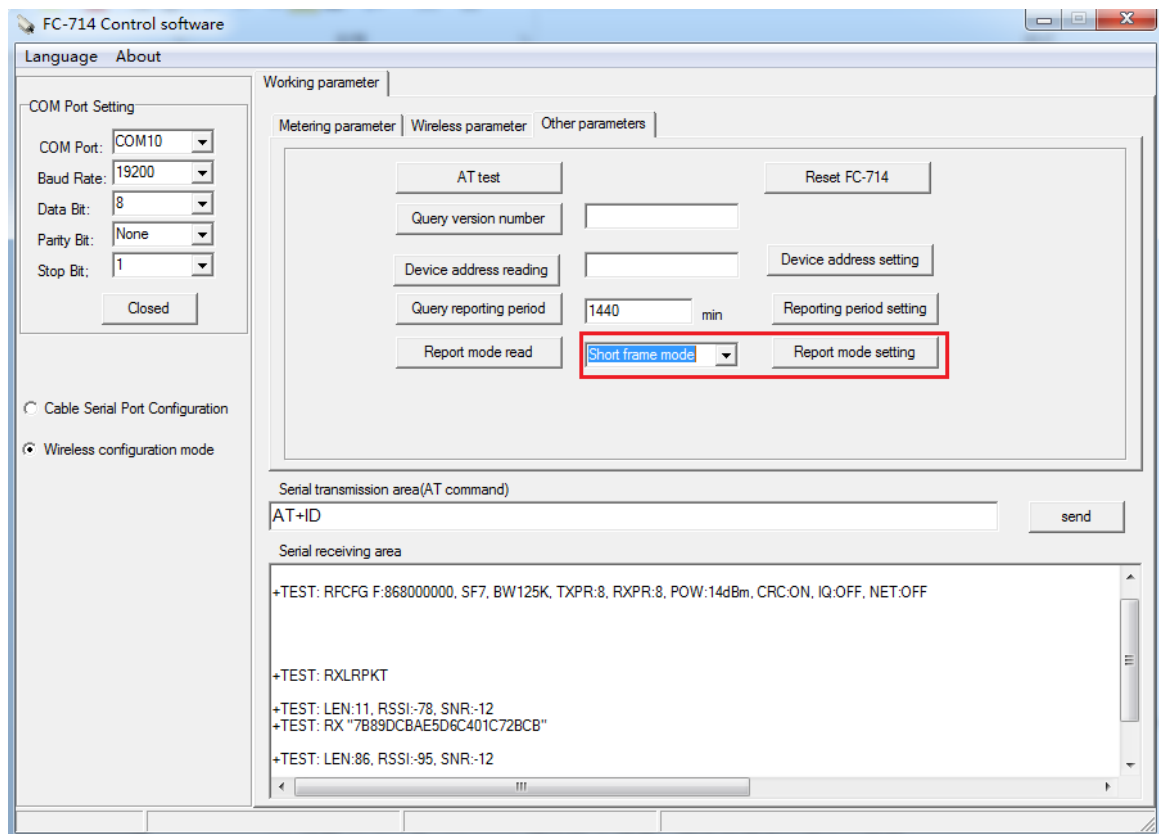
10. Set the reporting period under the other parameters tab (set according to customer requirements, the unit is minutes, for example, it can be set to 1440 once a day)
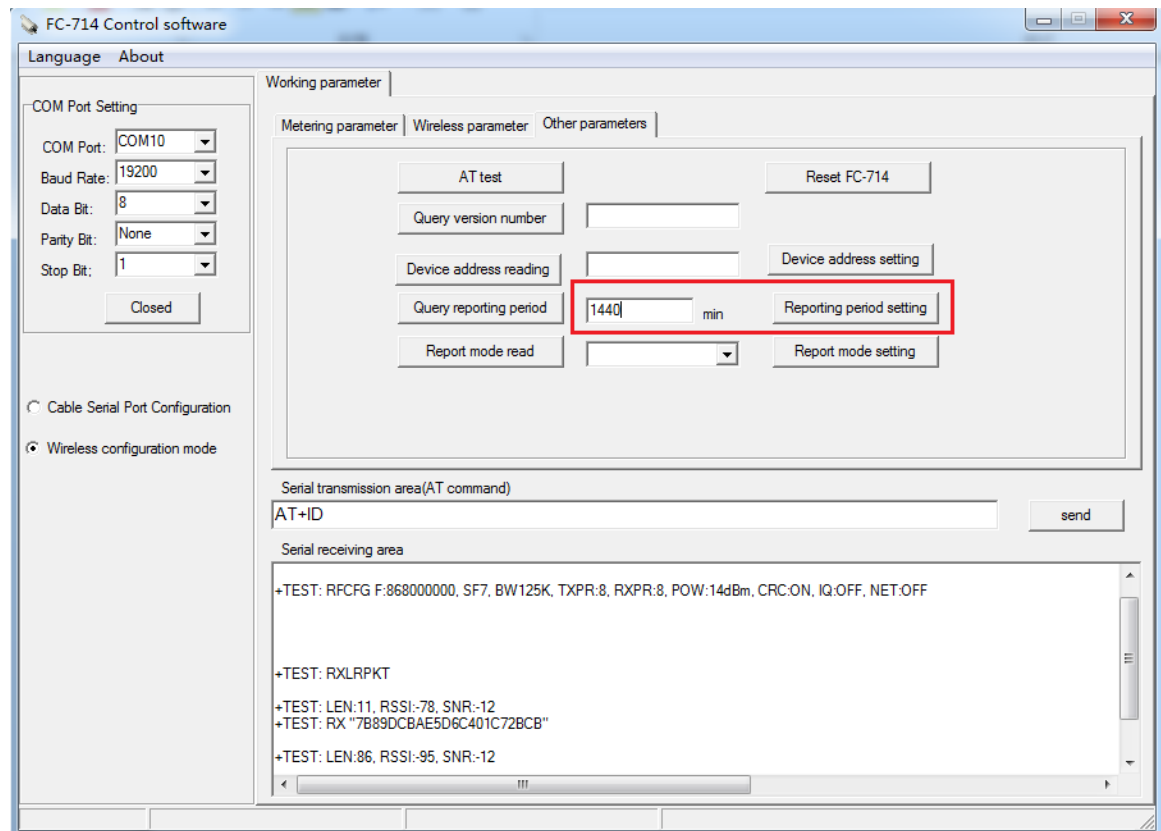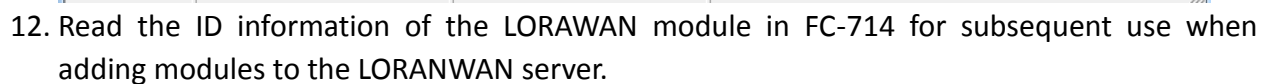

11. In the wireless parameter tab, you can set the frequency, channel and APPKEY parameters of the LORAWAN module.
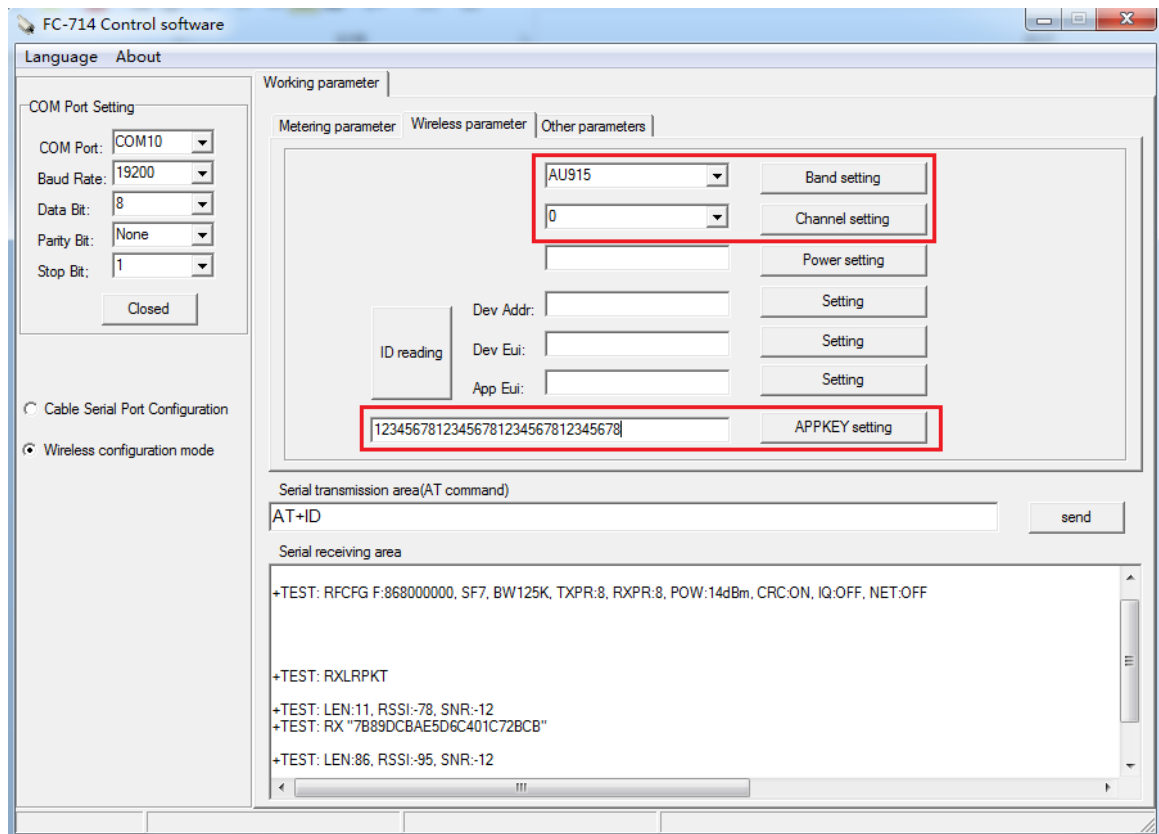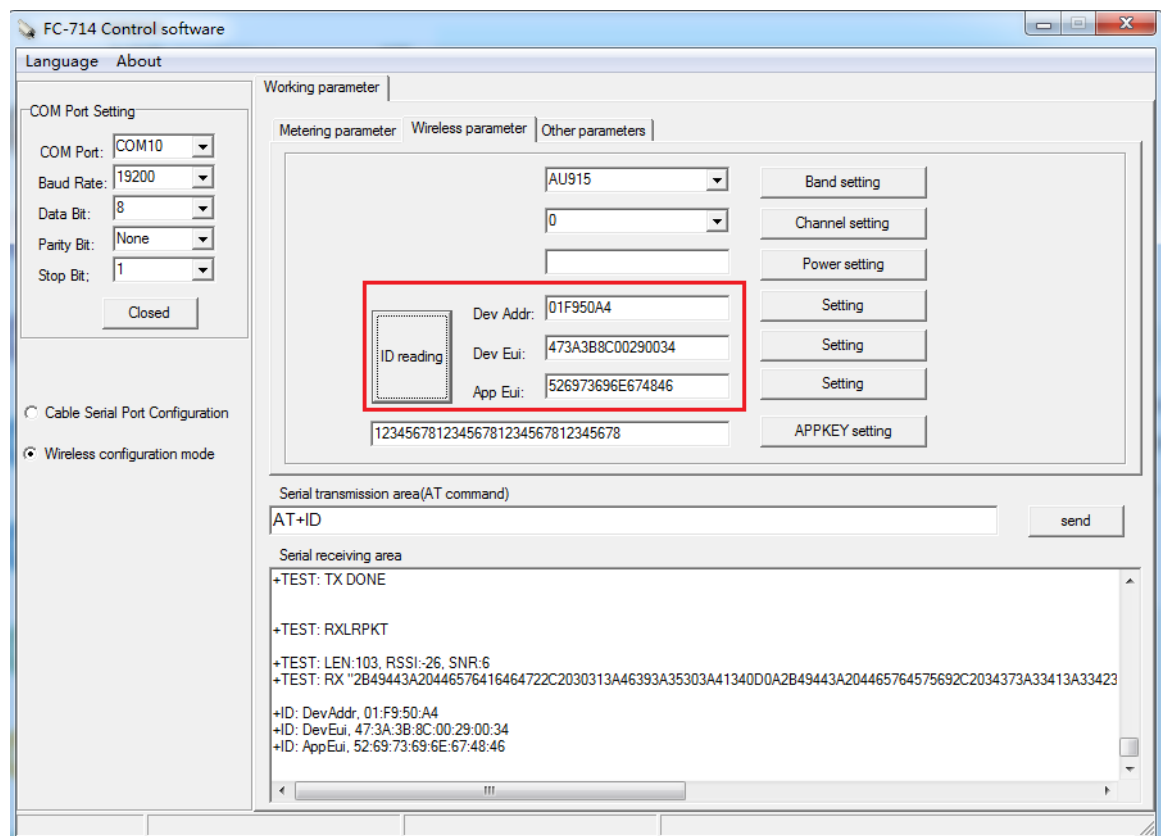
Note that if the frequency is set to US915, since the LORAWAN protocol limits the number of reported bytes, the report data mode must be set to short frame mode under the other parameters tab. Other frequencies can be arbitrarily selected as long frame mode or short frame mode.

If the user adds the module using ABP mode, you can set the two KEYs of APPSKEY and NWKSKEY by sending commands. The command is as follows:

AT+KEY=NWKSKEY, **************   (16 byte hex value)
AT+KEY=APPSKEY, **************   (16 byte hex value)

Their default valuesare 2B7E151628AED2A6ABF7158809CF4F3C.

12. Read the ID information of the LORAWAN module in FC-714 for subsequent use when adding modules to the LORANWAN server.

13. Add FC-714 to the LORAWAN server in ABP mode, taking LORIOT (https://www.loriot.io/) as an example (provided that the LORAWAN gateway has been added)
    1) After logging in, click on "Applications"-"SampleApp"-"Enroll Device"
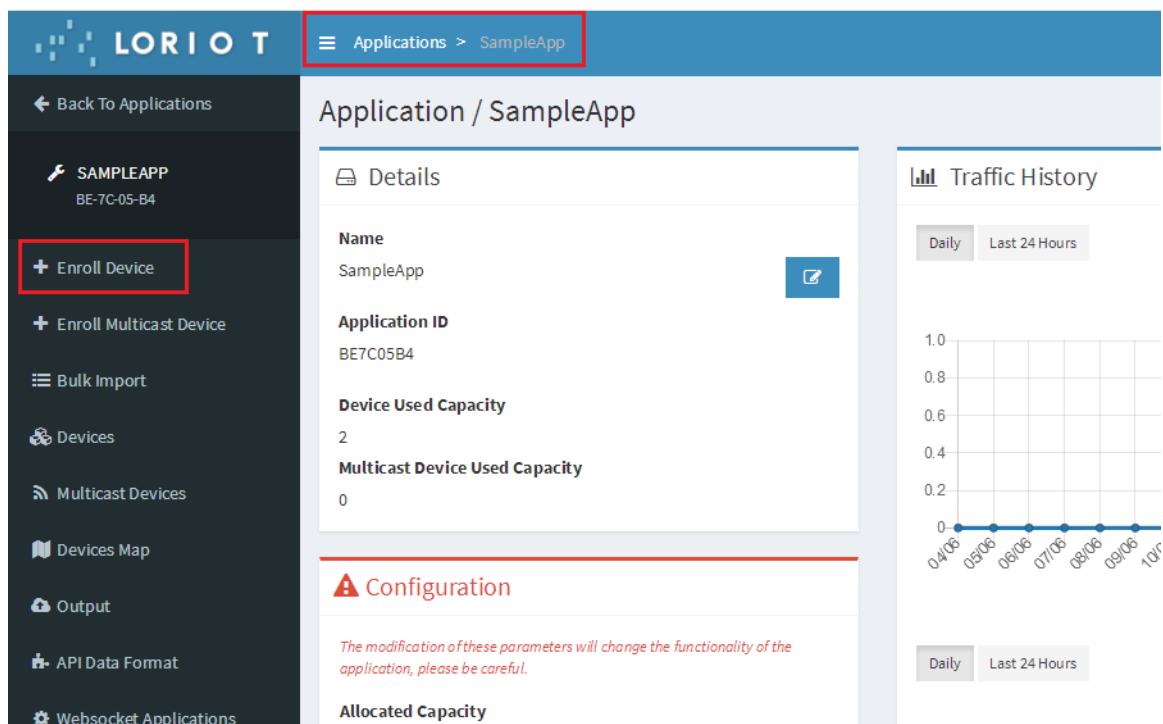
    2) Go to the Add Nodes page, LoRaWAN Version selects "LoRaWAN 1.0.x", Enrollment Process selects "ABP"

3) Copy the KEY value set in step 11 and the information read in step 12 one by one into the corresponding red frame area, fill in the other items, and click "Enroll".

4) After clicking "Enroll", "Device successfully enrolled" appears in the upper right corner.

5) Click to enter the Device Eui value to enter the node page. The module will automatically report according to the reporting interval set by the user.

The reported data received from the node page is as follows:

Last data (10 latest records)

FCntUp	Time	Port	Data
2	a few seconds ago	8	56 c2 00 29 00 34 00 07 85 00 01
1	a minute ago	8	56 b2 00 29 00 34 00 07 85 00 f1