1.What is the AT command.

AT command is used for controlling module. You can use AT command to configure and query the settings.

2.How to use the AT command

For USR device is in transparent mode normally, you must enter AT command mode at first. Then you can send AT command to configure or query the settings. After you configure the USR device, you should restart the USR device to make the settings take effect. Every time module restart will work in work mode rather AT command mode.

Every AT command must add character carriage return <CR> and line feed <LF>. In Hex, <CR> is 0x0D <LF> is 0x0A.

Powered successfully, we can setting the module with UART.

The default UART port parameters of the module are: baud rate1152000, no parity, data 8 and stop 1.
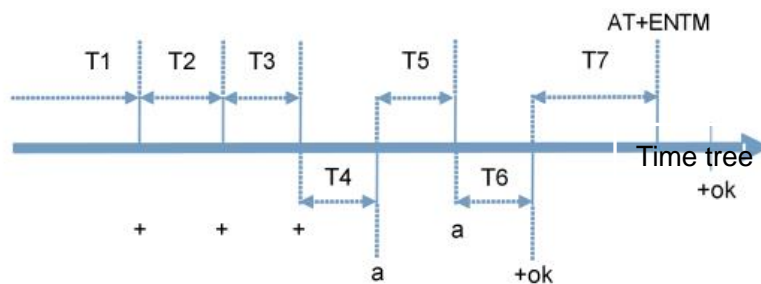
Recommend to use secureCRT software tool or testing program of USRIOT.

Below are using the secureCRT to operate AT command:

Need two step as below:
➢ Fill "+++"in the UART. After the module receive the "++++",then will return an "a" to confirm;
➢ When you receive an 'a'•, then you need to send other 'a' within 3 seconds
➢ After that, module will return "+ok" to enter into the commend mode.

Fill "+++"and "a" need to achieve in the time to reduce the chance of entering command mode while working normally accidentally. Detail requirement are as fellows.

Time requirement:
T1>the interval of serial port package
T2<300ms
T3<300ms
T5<3s

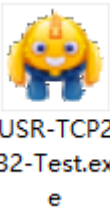Change transparent transmission mode to AT command mode :
1. Serial mode device send "+++"to module continuously. If the module received '+++' successfully then it will send "a" back.

2. When module received "a" and then user need to send other "a" to uart within 3s.

3. The module will return '+ok' when module received 'a' successfully. And enter into command mode
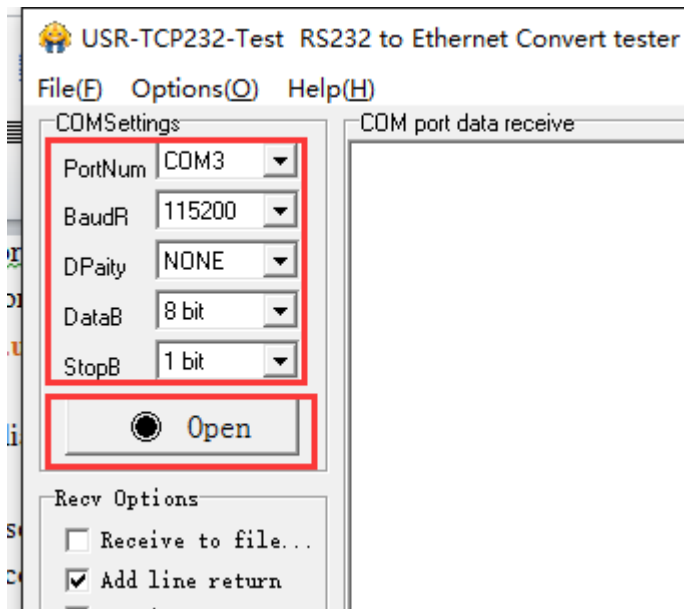
Change AT command mode to transparent transmission mode:

1. Serial device send "AT+ENTM"to module.

2. After the module receive the commend, feedback "+ok", then back to the previous working mode.
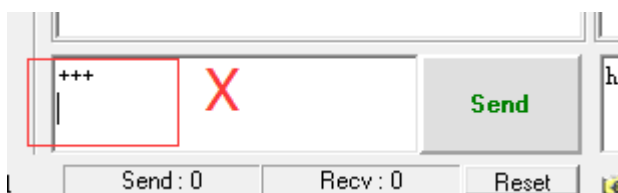
Example: Use USR-TCP232-Test.exe software to send serial command or use your own serial software or MCU send command to our module.
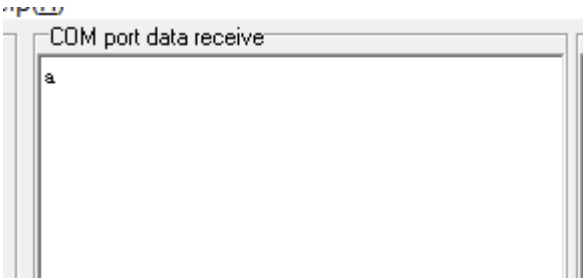

USR-TCP2
32-Test.ex
e

Open test program and configure the serial parameters. Click 'Open':
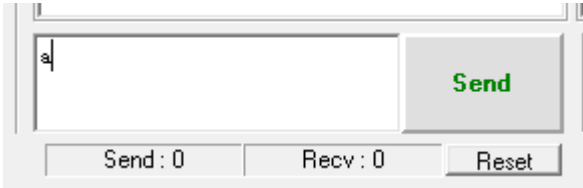

Send +++ to serial. Notes do not add a SPACE or ENTER, that will not return the correct character.

If you give a correct command, the module will return an 'a' likes this:

When you receive an 'a'•, then you need to send an 'a' within 3 seconds. You can not add any SPACE or ENTER either.

The module will return +Ok. The the module enter into the AT command mode.

Now you can send AT command to the module, but you should add an ENTER after your command.