RAK473/476 User Guidance
Test the Packet Loss Rate of the Module

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1. Test the Packet Loss Rate of the Module

1.1 Overview

In this part, it is introduced how to test the packet loss rate of the module, taking the 473 module in the case with the baud rate of 115200 bps as an example. Test the packet loss rate here, taking UDP communication as an example.

1.2 Steps

1. Configure the module into AP mode, create UDP Sever, with the port as 25000, and close the serial port of the tool after the configuration is completed. Configuration method is shown in Figure 1-1, and it can also be configured with the command referring to part of "RAK473 (476) Guidance - Using UDP to communicate".

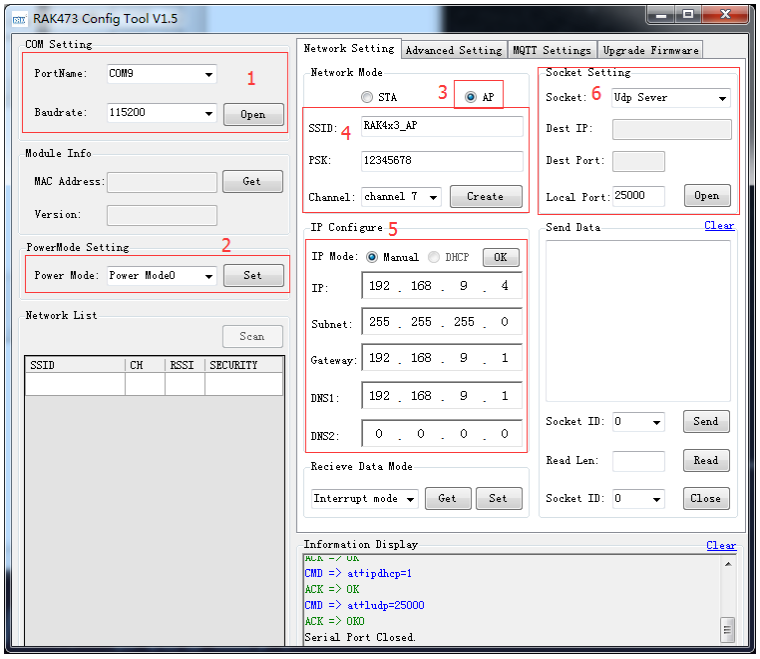

Figure 1-1 Configure the module in AP mode and create UDP Sever

2. Connect the PC to AP network RAK4x3_AP created by the module, to create UDP Client corresponding to the module with TCP&UDP test tool and open the connection.

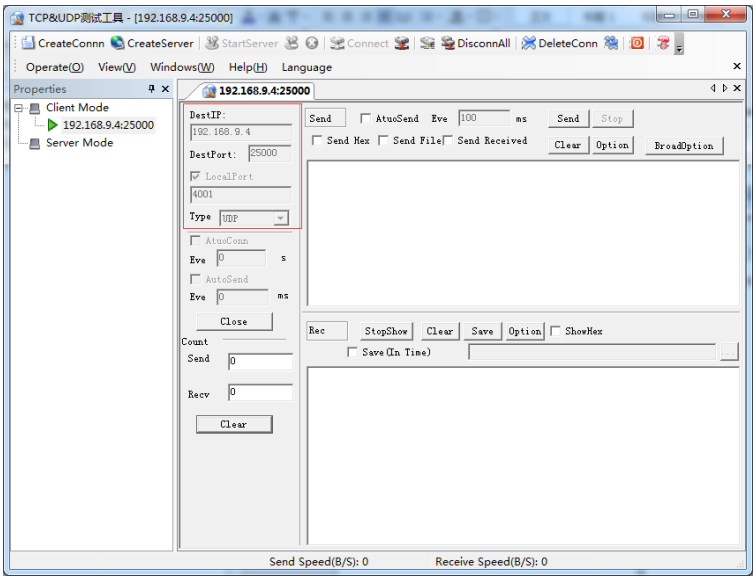

Figure 1-2 Create UDP Client with TCP&UDP test tool

3. Send a command accessing "Data mode" with the serial port tool.
   Send: at+data_mode\r\n
   Return: OK

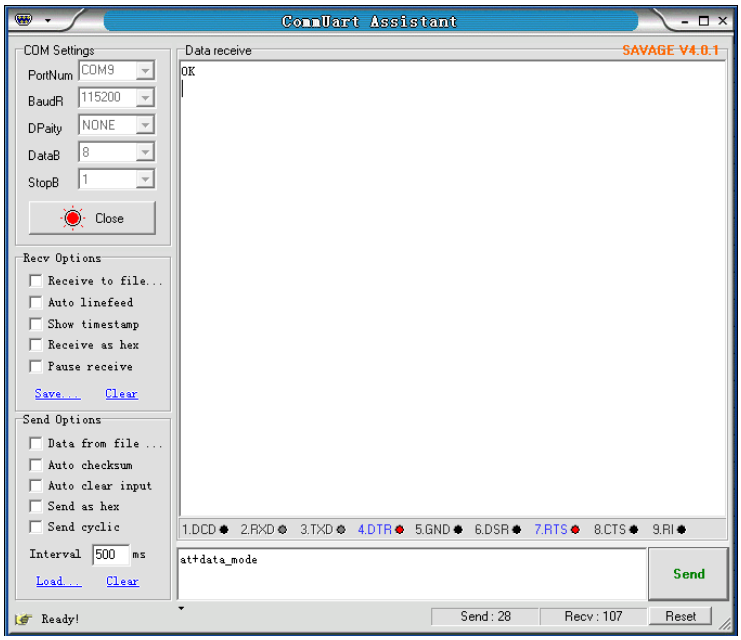

Figure 1-3 Access "Data mode"

4. Before transmitting and receiving data, make sure that data counts of the test tool and serial port tool are cleared to zero, so as to interfere the calculation of the packet loss rate.

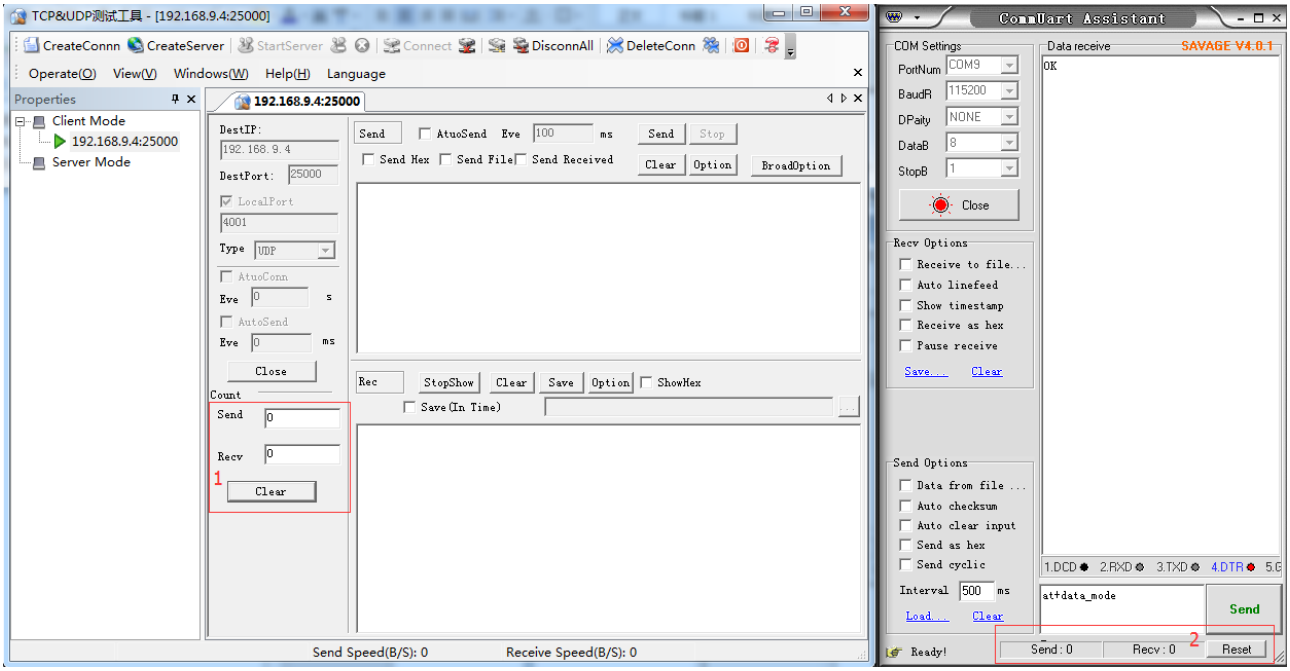

Figure 1-4 Clear the count to zero

5. Test the packet loss rate of swallowing data of the module, namely, send the data from the test tool to the serial port tool. Because the baud rate at this time is 115200 bps, so the theoretical maximum speed is 115200/8 = 14400 B/S. In order to ensure less packet loss, it is needed to make sure that data speed sent is not greater than this value. Here, send data automatically at a speed of 1200B/100ms, and the packet loss can be seen; the maximum receiving is 10 KB/S.

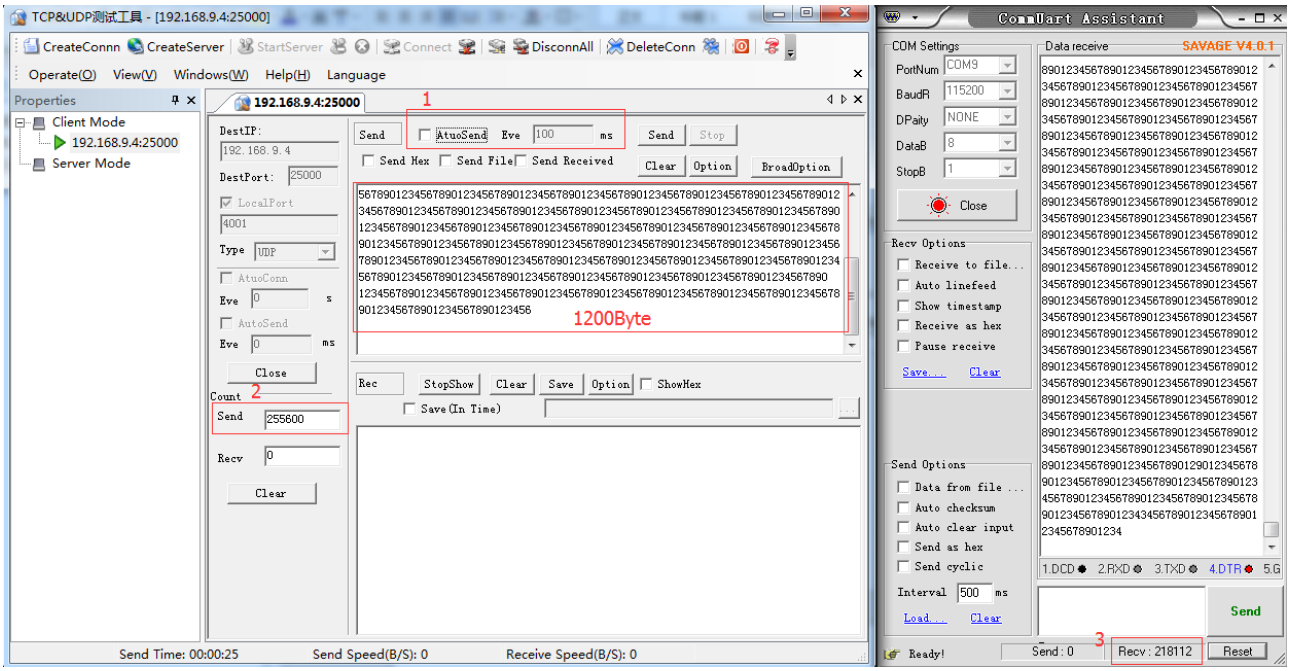

Figure 1-5 Test the packet loss rate of swallowing data of the module

6. Test the packet loss rate of spitting speed of the module, namely, send the data from the serial port tool to the test

tool.

Here, send data automatically at a speed of 1200B/100ms.

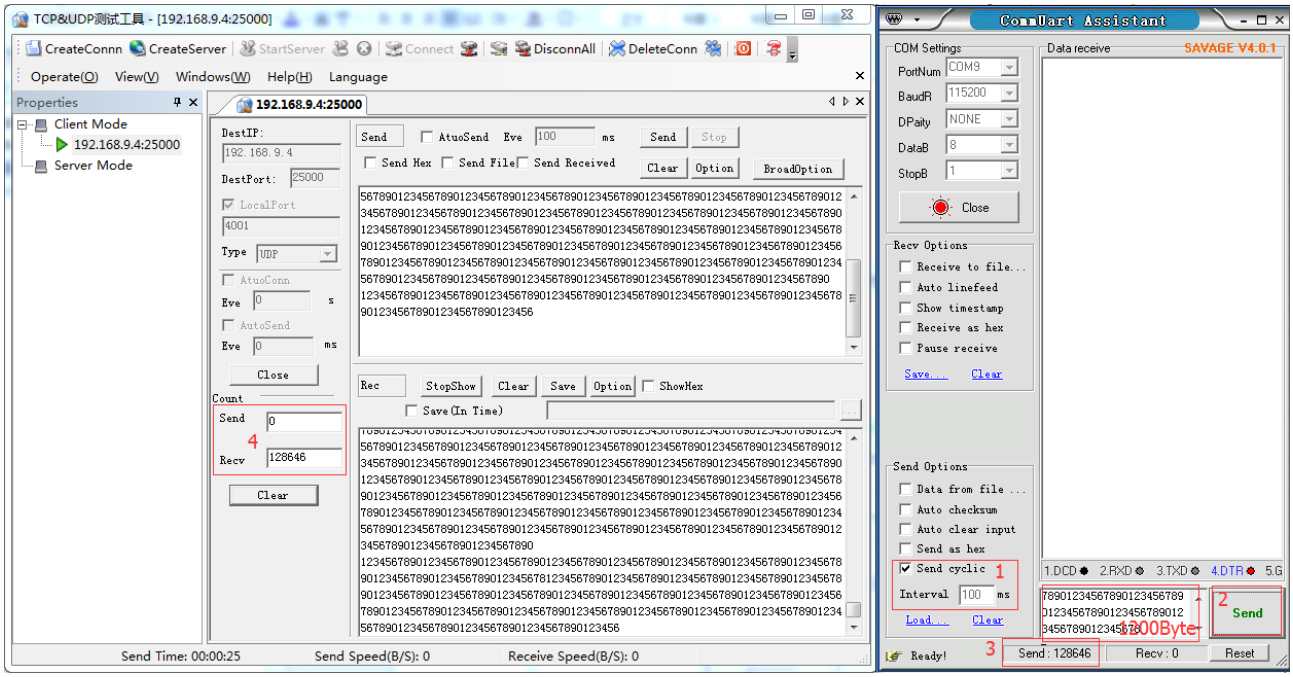

Figure 1-6 Test the packet loss rate of spitting speed of the module

Version

Version	Author	Date	Content modification
V1.0	Lianbo Wang	2016/02/16	Create a document
V1.1	Xiaocheng Cao	2016/11/16	Modify some of the details