RAK473 Use Guidance
Use TLS Communication

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1. Create TLS Client Communication with the Module

1.1 General

This part gives out an example flow of AT command, to connect the module to the router whose SSID is RAK and PSK is rakwireless, and then create the TLS Client, to connect to the TLS SEVER PC created at PC end and transmit data.

Note: If SSL can be enabled, the ssL server packet must be smaller than 8 K.

1.2 Operating instruction

Tips:

1. When the command control module is sent via MCU, the characters "\r\n" are as the ending characters for the command;

2. When the command control module is sent via the serial port tool, press the Enter key as the ending character for the command;

3. The information returned following the command can be presented in ASCII code for easy viewing. If the information display is not comprehensive or garbled, there may be special characters, Chinese characters and so on in the returned information, so please view in the hexadecimal form.

Please bear in mind the points above, which will not be repeated any more.

1.3 Operation steps

1.Power up the module

Return: Welcome to RAK473. The returned information can also be viewed in hexadecimal system form.(57 65 6C 63 6F 6D 65 20 74 6F 20 52 41 4B 34 37 33 0D 0A).

2.If the certificate is set, refer to "RAK473 Guidance - How to set the module certificate", to complete setting the module certificate, and open server.bat under the directory OpenSSL\bin. If not setting the certificate, open server_nssl.bat under the directory OpenSSL\bin.

3.Refer to RAK473 (476) Guidance - One-key configuring the router, RAK473 Guidance - Configuring the router with WPS or RAK473 Guidance - Configuring router with web page and other configuration modes, to configure the module to a designated router (the same router with the computer).

4.Query the IP address of the PC, and create the TCP Client at the module end with the destination port number 443

Send: at+tcp=192.168.1.102,443,25000,1\r\n

Return:4F 4B 0D 0A

5.TCP Sever of the PC end sends character string "abcd" to TCP Client of the module end, and the module end returns

61 74 2B 72 65 63 76 5F 64 61 74 61 3D 00 BB 01 66 01 A8 C0 06 00 41 42 43 44 0D 0A 0D 0A

6.TCP Client of the module end sends character string "ABCD" to TCP Sever of the PC end

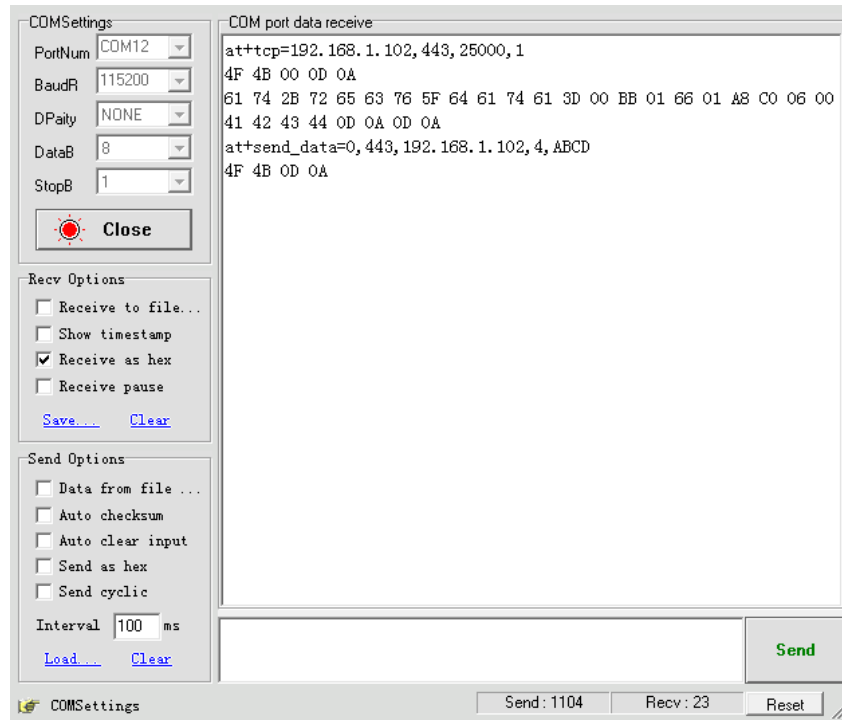Send: at+send_data=0,443,192.168.1.102,4,ABCD\r\n

Return: 4F 4B 0D 0A

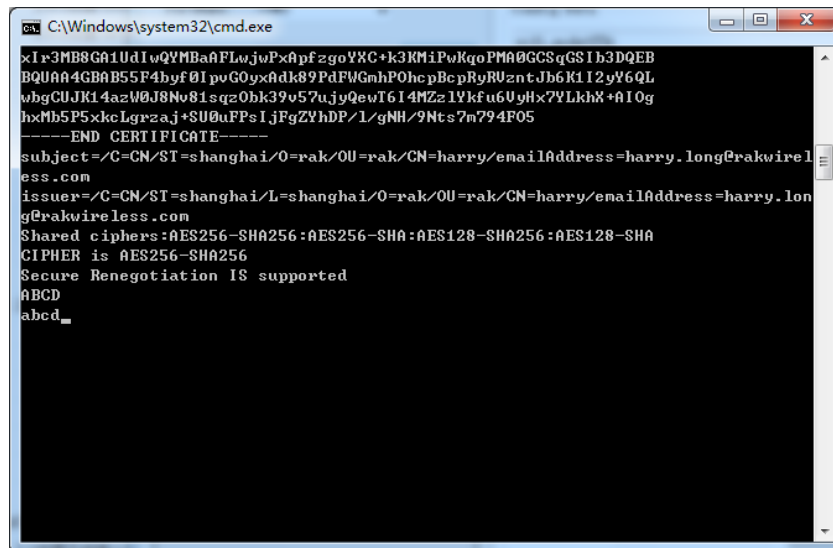Figure 1-1 Schematic of the serial port to send the command

Figure 1-2 Schematic of TLS SEVEV communication

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Version

Version	Author	Date	Content modification
V1.0	Lianbo Wang	2016/02/02	Create a document
V1.1	Xiaocheng Cao	2016/10/13	Modify some of the details