

RAK473 Use Guidance

Use HTTP Communication

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1. Communication by Connecting the Module to the HTTP Server

1.1 General

In this part, it is introduced how to use HTTPS GET and HTTPS POST commands to request web page and submit web page content from the server.

1.2 Operating instruction

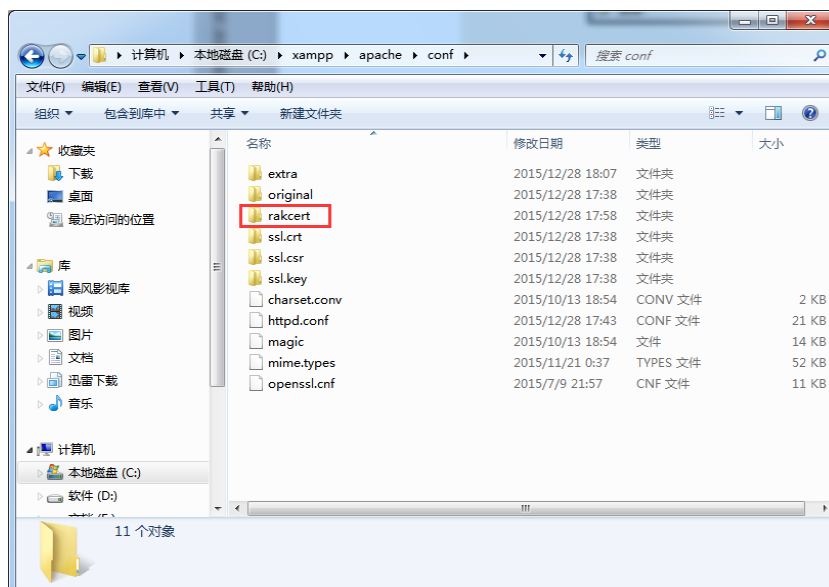
Tips:

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 Server building

Download and install xampp, to build a virtual server. After the installation is completed, open the software installation directory, to copy the rakcert folder and paste it under the path xampp\apache\conf.



Open and configure the httpd-ssl.conf file under the directory xampp\apache\conf\extra.

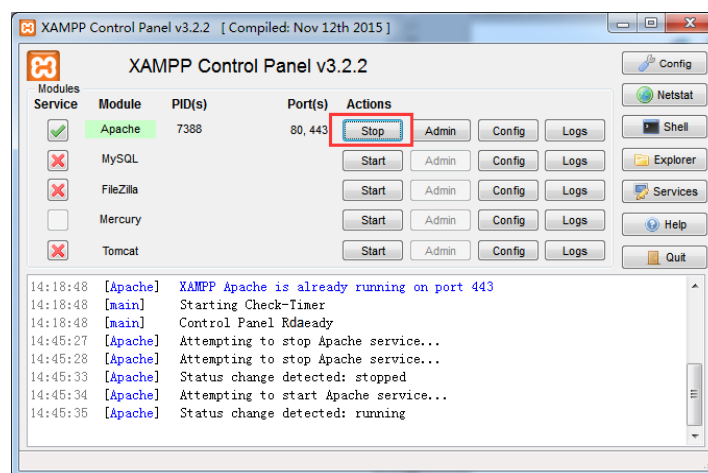
1. Modify SSLCertificateFile "conf/ssl.crt/server.crt" into SSLCertificateFile "conf/rakcert/raktest_server.key"
2. Modify SSLCertificateKeyFile "conf/ssl.key/server.key" into SSLCertificateKeyFile "conf/rakcert/raktest_server.key"
3. Modify #SSLCertificateChainFile "c:/Apache24/conf/server-ca.crt" into
 #SSLCertificateChainFile "c:/Apache24/conf/server-ca.crt"
 #SSLCertificateChainFile "conf/rakcert/raktest_ca.crt"

SSLCertificateChainFile "conf/rakcert/raktest_server.crt"

4. Modify #SSLCACertificateFile "c:/Apache24/conf/ssl.crt/ca-bundle.crt" into
 #SSLCACertificateFile "c:/Apache24/conf/ssl.crt/ca-bundle.crt"
 #SSLCACertificatePath "conf/rakcert/raktest_ca.crt"
 SSLCACertificateFile "conf/rakcert/raktest_ca.crt"

5. If setting the certificate, modify
 #SSLVerifyClient require
 #SSLVerifyDepth 10
 into
 SSLVerifyClient require
 SSLVerifyDepth 10

Open the installed and configured xampp and start the server.



1.4 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).

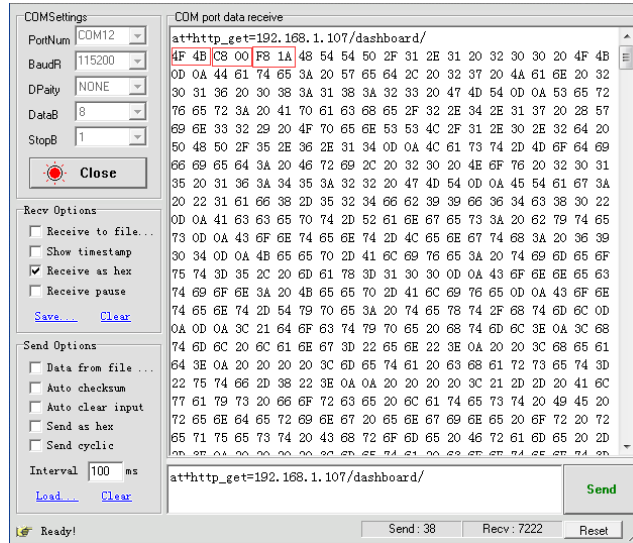
2. Refer to RAK473476 Guidance - One-key configuring the router, RAK473 Guidance - Configuring the router with WPS and other configuration modes, to configure the module to the designated router.

3. Request web page

Send: at+http_get=192.168.1.107/dashboard/\r\n

Return: 4F 4B C8 00 F8 1A 48 54 54 50

4F 4B indicates that the command is executed successfully; C8 00 represents the status code; and F8 1A represents the length of the web page

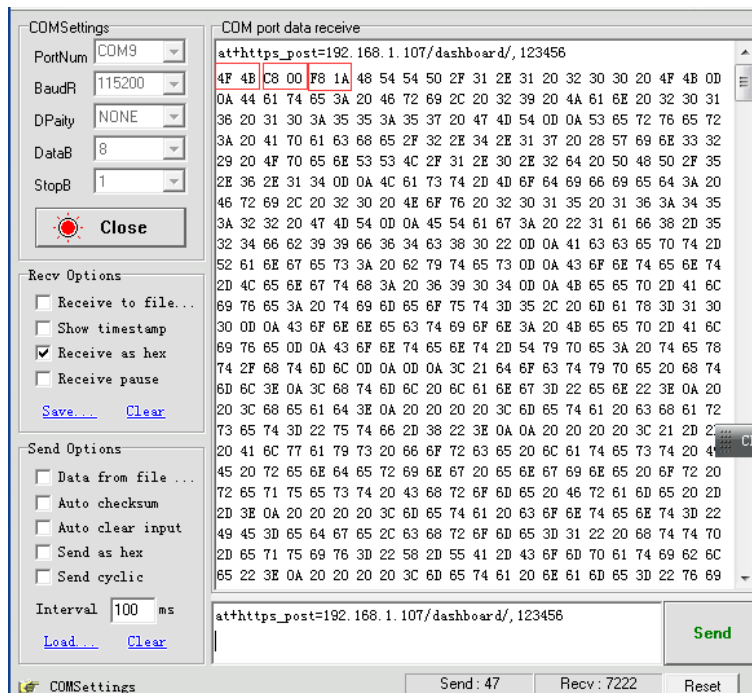


4. Submit the content of the web page

Send: at+http_post=192.168.1.107/dashboard/,123456\r\n

Return: 4F 4B C8 00 F8 1A 48 54 54 50

4F 4B indicates that the command is executed successfully; C8 00 represents the status code; and F8 1A represents the length of the web page



Version

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