

RAK475 Use Guidance

Communicating via HTTP

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1. Connecting the Module with the HTTP Server for Communication

1.1 Overview

This section describes how to use HTTP GET and HTTP POST to request web pages from and submit web content to the server.

1.2 Operating instructions

Tips:

1. This demo is done on the RAK475 development board.
2. The module in this demo is under factory settings.
3. When sending command to control the module via MCU, enter “\r\n” to complete the command;
4. When sending command to control the module via the serial port tool, press Enter to complete the command;
5. For ease of viewing, the information returned by the send command is presented in ASCII value. Special characters or Chinese characters in the returned information might result in the information being partially displayed or unreadable. In these cases, please view the returned information in hexadecimal form.

Please keep in mind the abovementioned points, for they will not be mentioned later.

1.3 Setting up the Server

Download and install XAMPP to create a virtual server. Open the installed XAMPP and start the server.

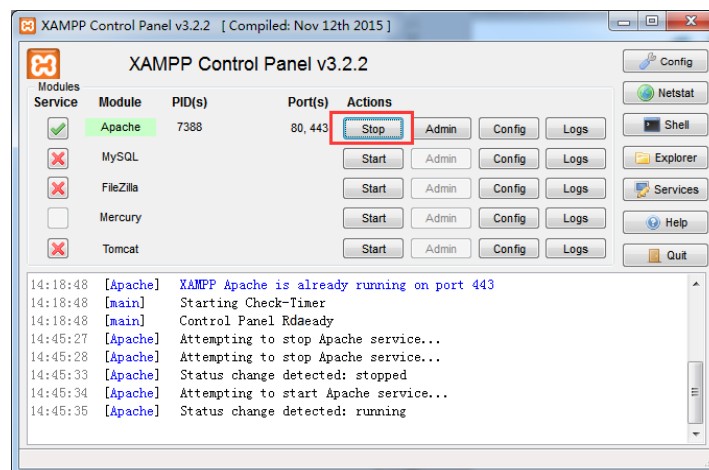


Figure 1-1 XAMPP Server Interface

1.4 Setting the Parameters of the Socket and Joining the Router

1. Go to the configuration page of the module and set its Socket parameters first, and then configure the module to the specified router to make sure that the module and PC are connected to the same router. Now the TCP_Client is created. For the abovementioned configuration steps, please refer to guide documents including “**RAK475 User Guide – Configuring the Router via Web**” and “**RAK475 User Guide – TCP Communication in Transparent Transmission Mode**”.

2. Follow these steps on the **Socket Settings** page:

- 1) Set **Socket** to **Single**
- 2) Set **Socket A style** to **TCP-Client**
- 3) Enter **192.168.1.109** in the **Dest IP** field (the IP address of the TCP Server, i.e., PC's IP address)
- 4) Enter **80** in the **Dest port** field (i.e., the port of XAMPP), as shown in Figure 1-2
- 5) Set the **Local port** to **25000** (or any other legitimate port number)

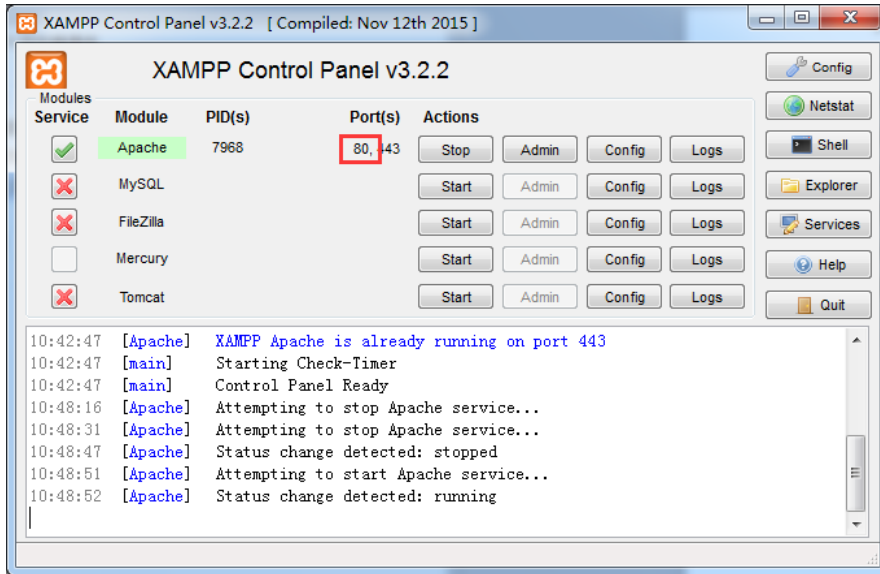


Figure 1-2 XAMPP Server Interface

1.5 Operating Steps

1. Request a web page, as shown in Figure 1-3

Send:

GET /dashboard/ HTTP/1.1\r\n

Host: 192.168.1.109\r\n (This is the PC-side IP address, i.e., XAMPP Server's IP address)

Accept: */*\r\n

User-Agent: RAKWireless\r\n

Content-Type: */*\r\n

Connection: Keep-Alive\r\n

\r\n

Return: HTTP/1.1 200 OK.....

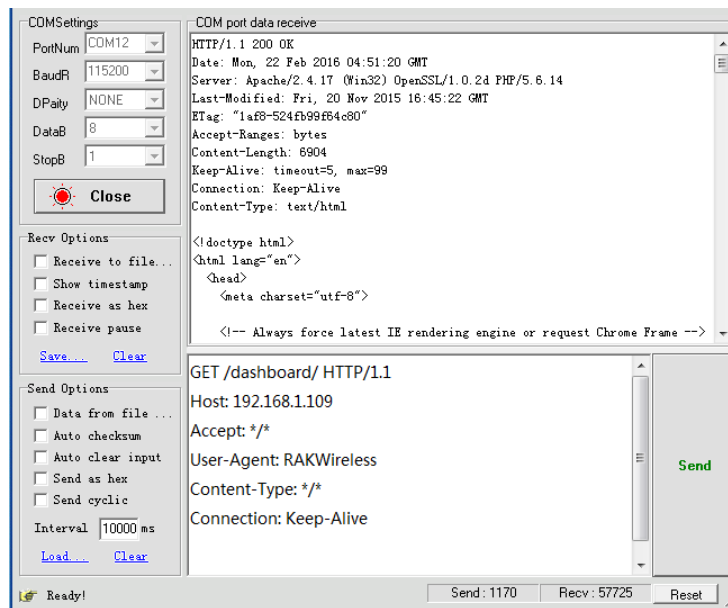


Figure 1-3 Diagram of Serial Port Sending and Receiving

2. Submit the web content, and send data “123456” to the web page, as shown in Figure 1-4.

Send:

POST /dashboard/ HTTP/1.1\r\n

Host: 192.168.1.109\r\n

Accept: */*\r\n

User-Agent: RAKWireless\r\n

Content-Type: */*\r\n

Content-Length: 6\r\n

Connection: Keep-Alive\r\n

\r\n

123456

Return: HTTP/1.1 200 OK

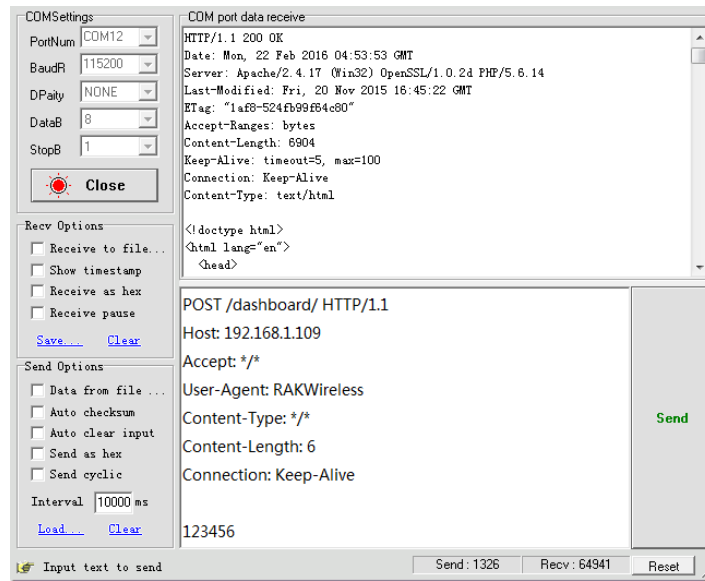


Figure 1-4 Diagram of Serial Port Sending and Receiving

Version

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