

# RAK475 Use Guidance

## Configuring the Router in WPS Mode

Shenzhen Rakwireless Technology Co., Ltd.

[www.rakwireless.com](http://www.rakwireless.com)

[info@rakwireless.com](mailto:info@rakwireless.com)

© RAK copyright. All rights reserved.

Companies and product names referred in the instruction belong to trademarks of their respective owners.

Any part of this document may not be reproduced, and may not be stored in any retrieval system, or delivered without RAK's written permission.

The document will be updated without prior notice.

# 1. Configuring the Router in WPS Mode

## 1.1 Overview

This section describes how to use the WPS function of the router to quickly configure the module to the specified router.

## 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 Operating Steps

### 1.3.1 Entering WPS Mode

There are two ways for the module to enter WPS Mode. Once entered, the **Link indicator** will start quick flashing.

Method 1:

#### 1) Enabling Assistant Command

Enabling the assistant command interface in Transparent Transmission Mode is done in a similar way to “handshake”. As shown in Figure 1-1.

1. The host computer (master MCU) requests to enter Command Mode by sending “+++”.
2. Set the timer for 200ms and wait for the module to return a “U” (0x55) within this specified time. If the module did not return a “U” when the timer expires, send “+++” again until a “U” (0x55) is returned. Now the module is ready to enter Command Mode, and it is waiting for the final confirmation (wait for 3s).
3. After receiving the “U” (0x55), the host computer (master MCU) has to send a “U” (0x55) to the module as the last confirmation message within 3 seconds. If the module successfully received the confirmation message, it would return an “OK” and enter Command Mode. Otherwise, the module would exit the READY status and would be waiting for the next REQUEST command. In this case, repeat steps 1-3.

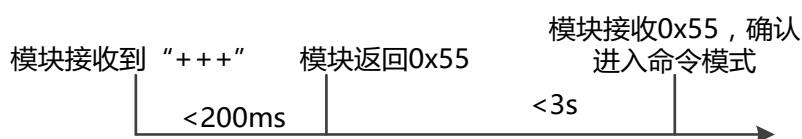
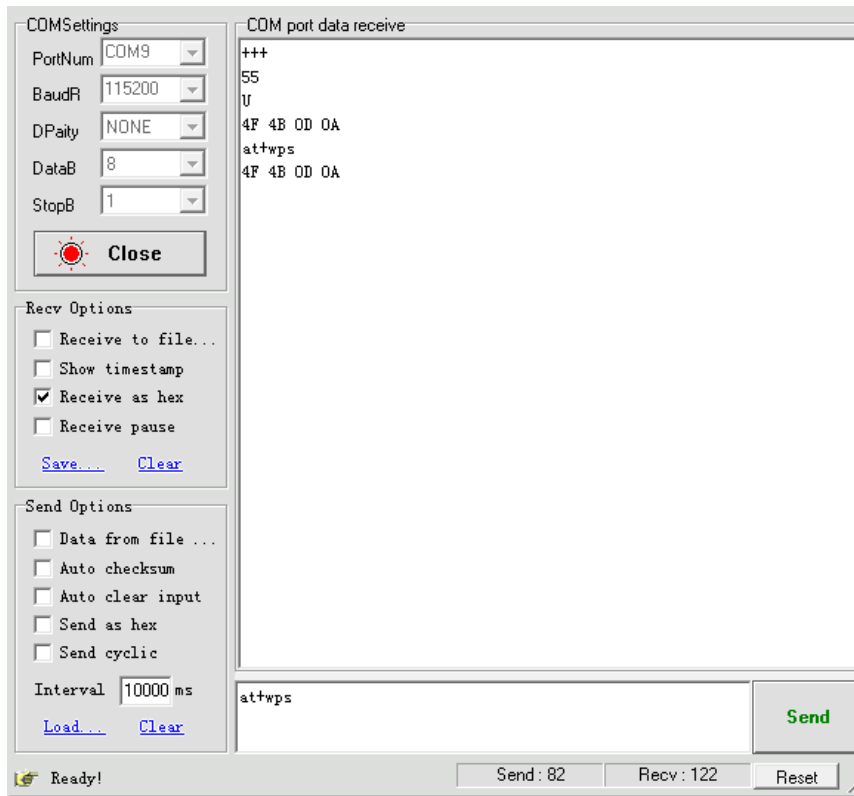


Figure 1-1 Enter command timing

2) Module **Enters WPS Mode**

Send: at+wps\r\n

Return: OK



Method 2:

When you press the **WPS** button on the development board, the module will enter WPS Mode and initiate a WPS connection.

1.3.2 Starting WPS Configuring

After the module enters WPS Mode, press the **WPS** button on the router (some routers do not support the WPS function), and wait until the **Link indicator** light of the module turns solid. Now the module is successfully configured onto the specified router.

## Version

Version	Author	Date	Content modification
V1.0	RAK	2016/11/21	Create a document