



WM_W60X_Firmware Upgrade Guide

V1.3

Beijing Lianshengde Microelectronics Co., Ltd. (winner micro)

Address: Floor 18, Yindu Building, No. 67, Fucheng Road, Haidian District, Beijing

Tel: +86-10-62161900

Company website: www.winnermicro.com



document history

Release	Completion Date	revision history	author	review
V1.0	Created on 2018-10-23		Zhangwl	
V1.1	2018-11-02	Add V3.1's SECBOOT to support upgrade with UART1 illustrate	Cuych	
V1.2	2018-12-13	Due to support for W601 chip, the file name was changed to W60X	Cuych	
V1.3	2019-09-19	Add serial port setting instructions	Cuych	

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1 Overview

After compiling and linking the SDK of W60X, three firmwares for burning will be generated:

1) WM_W600.FLS

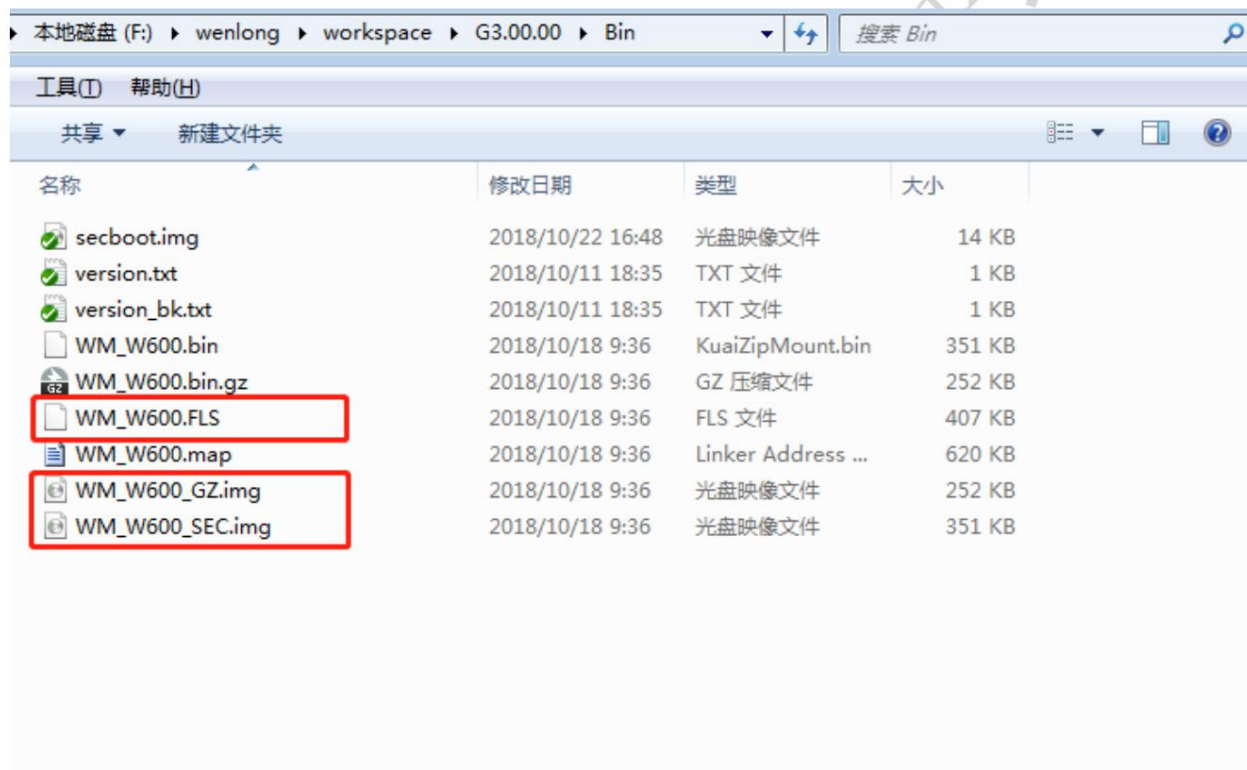
2) WM_W600_GZ.img

3) WM_W600_SEC.img ----- After version G3.04.00, this firmware will no longer be provided.

For the description of these three firmwares, see the SDK DOC document "WM_W60X_Firmware Generation Instructions".

This article mainly introduces how to use the serial port tool secureCRT to upgrade the firmware of the W60X module.

The red boxes in the figure below show the three firmwares generated after compilation.



2 Instructions for firmware upgrade under ROM

2.1 How to enter the ROM program for firmware upgrade

There are two ways to enter the ROM program for firmware upgrade

- 1) The W60X module does not have a secboot program that has passed the verification (the W60X module has no firmware, or the way to destroy SECBOOT)
- 2) Pull down the BOOTMODE (PA0) pin of the W60X module, and then power on the W60X module.

2.2 Which firmware can be upgraded in ROM

The firmware that can be upgraded in ROM is only WM_W600.FLS

2.3 Steps to upgrade firmware in ROM

- 1) Power on the device, connect the hardware serial port tool, and connect the computer serial port with the device serial port.

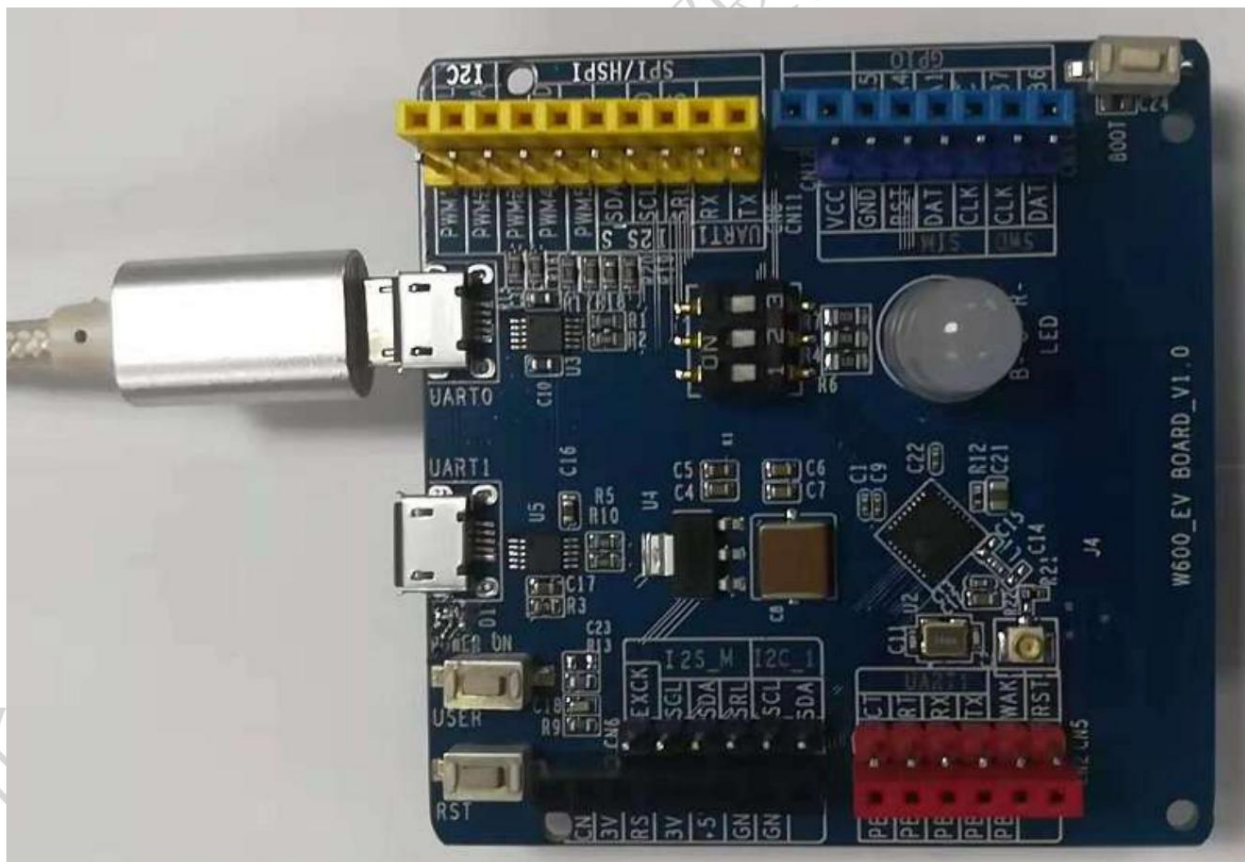


Figure 2-1

- 2) Open secureCRT and select the serial port connected to the W60X module.

Note: RTS/CTS must not be checked when setting the serial port (as shown in Figure 2-2)

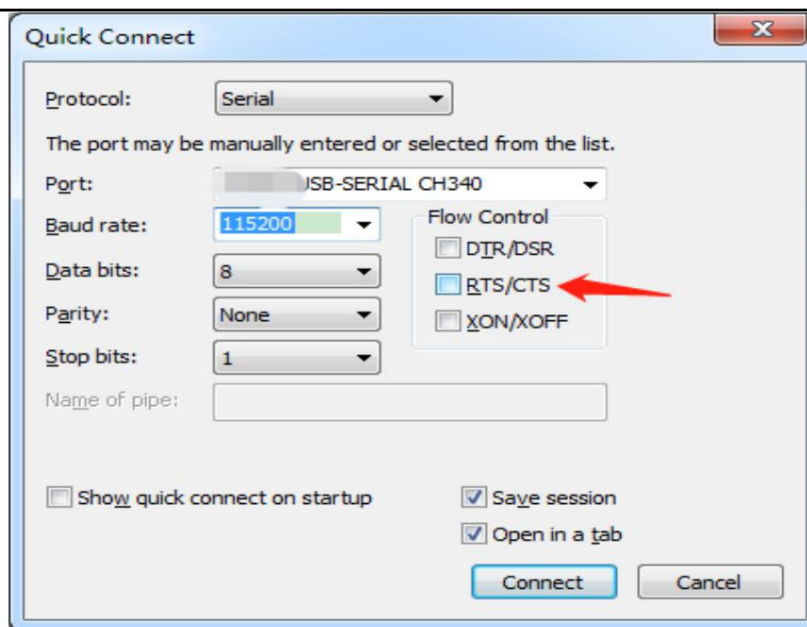


Figure 2-2

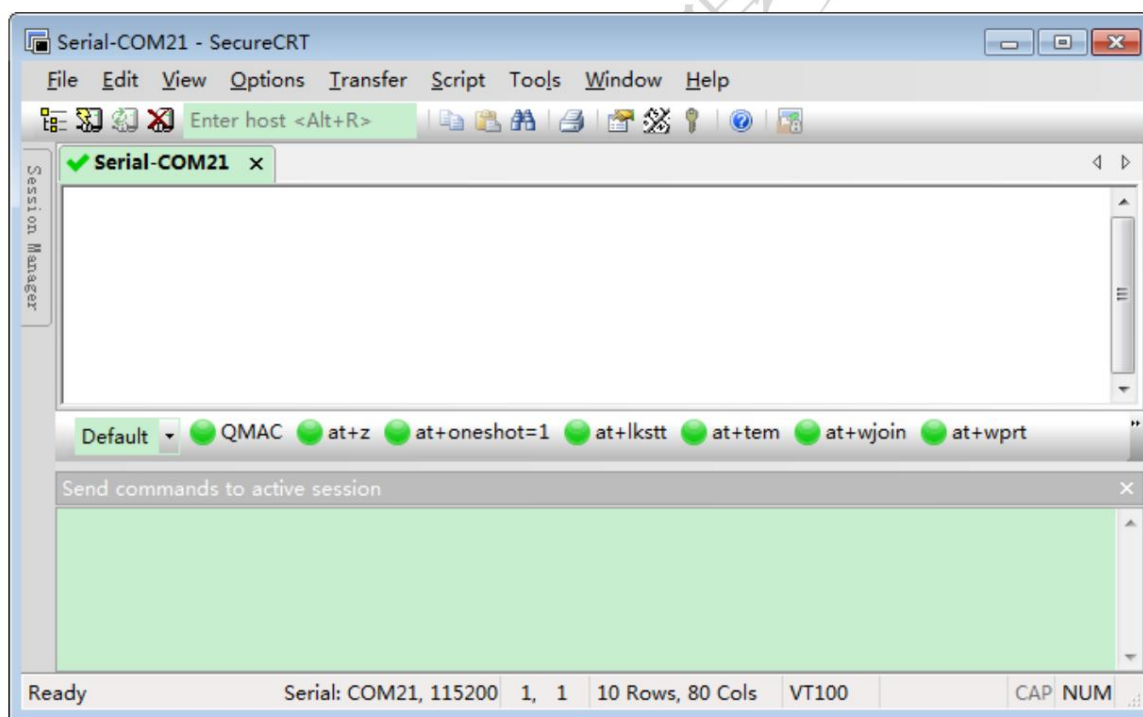


Figure 2-3

3) Pull down the bootmode pin, that is, ground PA0 of the chip. 4) Press the reset button to

reset the device. At this time, you can see that CCC is continuously printed out in the secureCRT dialog box.

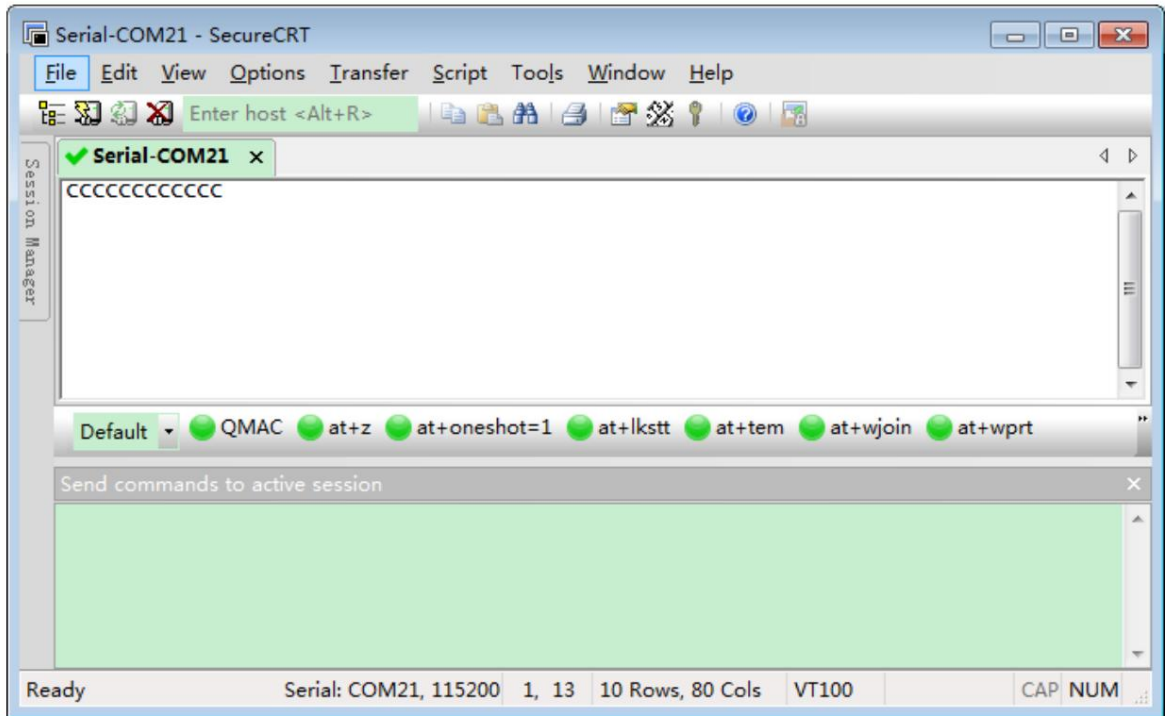


Figure 2-4

5) Drag and drop the WM_W600.FLS file into the dialog box, as shown in the figure below after the drag and drop is completed.

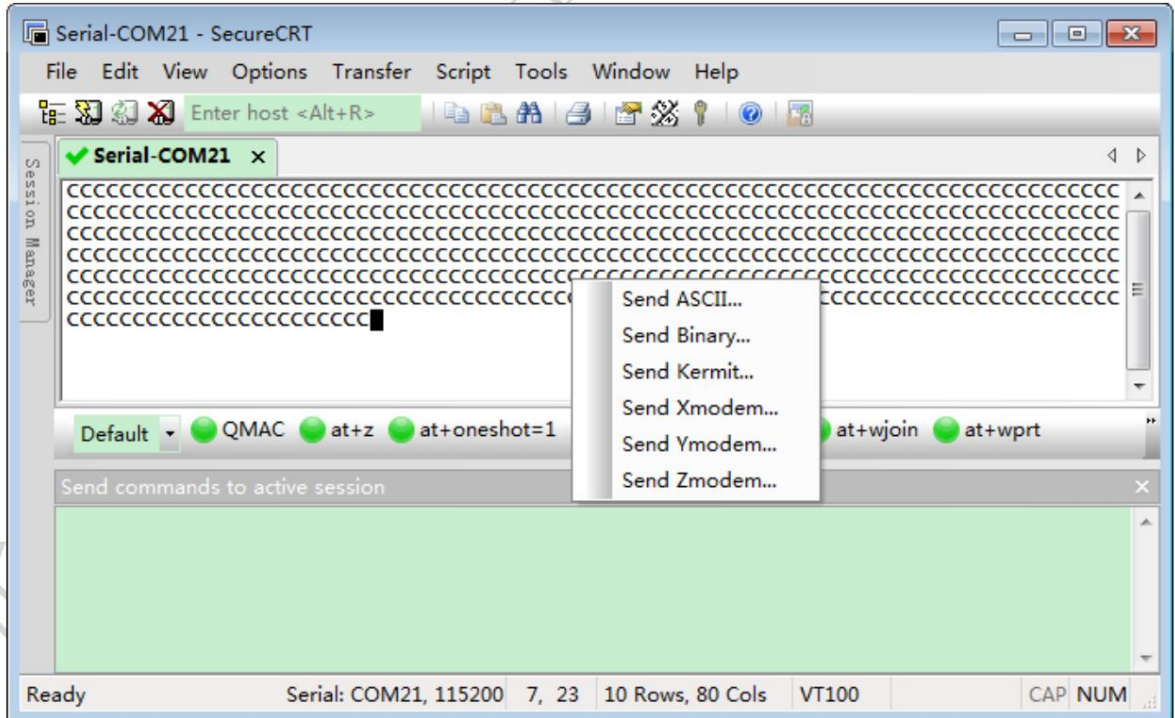


Figure 2-5

6) Select the Send Xmodem... option.

7) After clicking to select this item, the program of the device starts to upgrade the firmware, and the progress will be displayed during the upgrade.

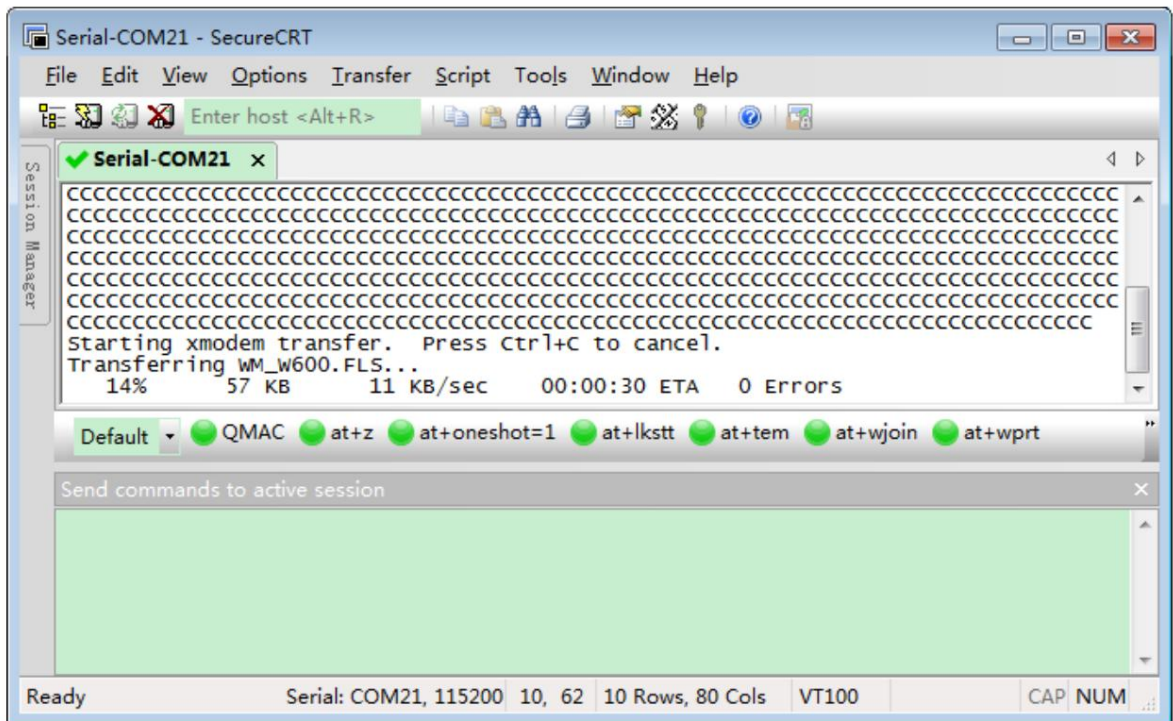


Figure 2-6

8) After the upgrade is successful, the dialog box will continue to print CCC. At this time, manually reset the device, and the device will run the new firmware file.

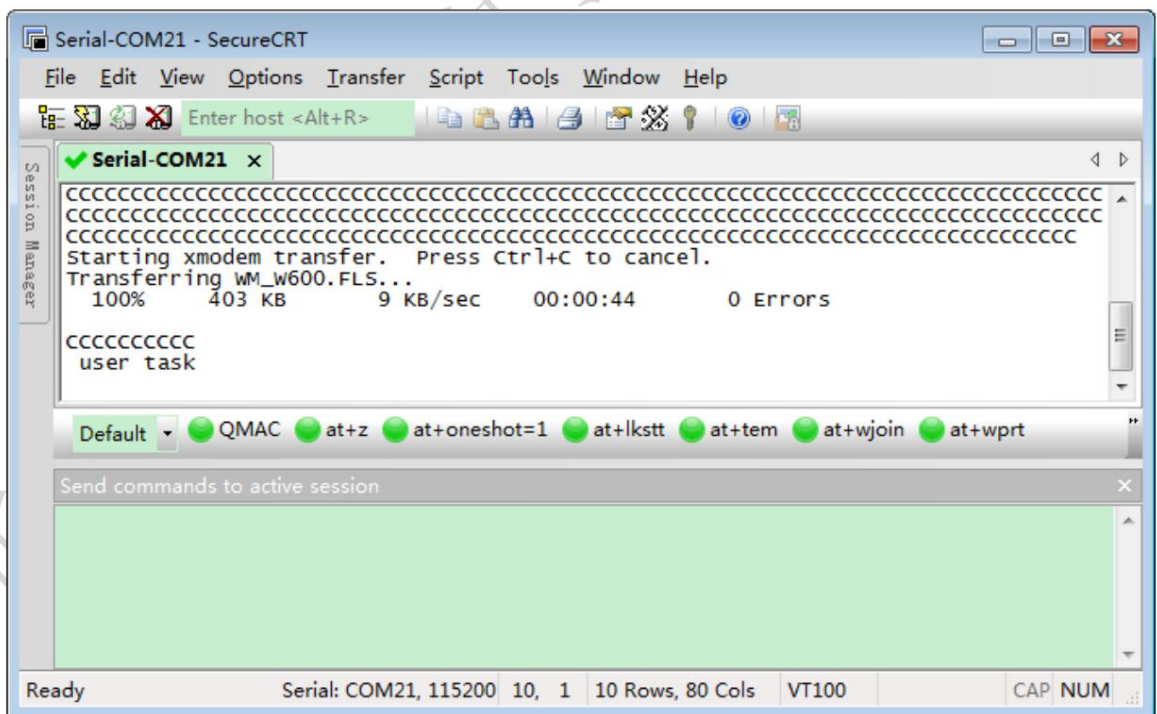


Figure 2-7

3 Firmware upgrade instructions under SECBOOT

3.1 How to enter the SECBOOT program for firmware upgrade

To enter SECBOOT, the following operations are required: 1)

Connect UART0/UART1 (SECBOOT V3.1 version) to the host computer, and open the serial port tool 2) In the serial port tool output window of the host computer, press and hold the ESC key on the keyboard, and then press the reset key of W60X to reset the W60X module, and release the ESC key after the serial port tool outputs secboot running.

3.2 What firmware can be upgraded under SECBOOT

The firmware upgrades supported under Secboot include: WM_W600_GZ.img and WM_W600_SEC.img, 1) WM_W600_GZ.img is the

compressed firmware, which is the preferred upgrade firmware under SECBOOT.

2) WM_W600_SEC.img is a non-compressed firmware, it is not recommended to use, because the firmware is too large and may destroy the user area.

3.3 Steps to upgrade firmware under SECBOOT

1. Power on the device, connect the hardware serial port tool, and connect the computer serial port with the device serial port.

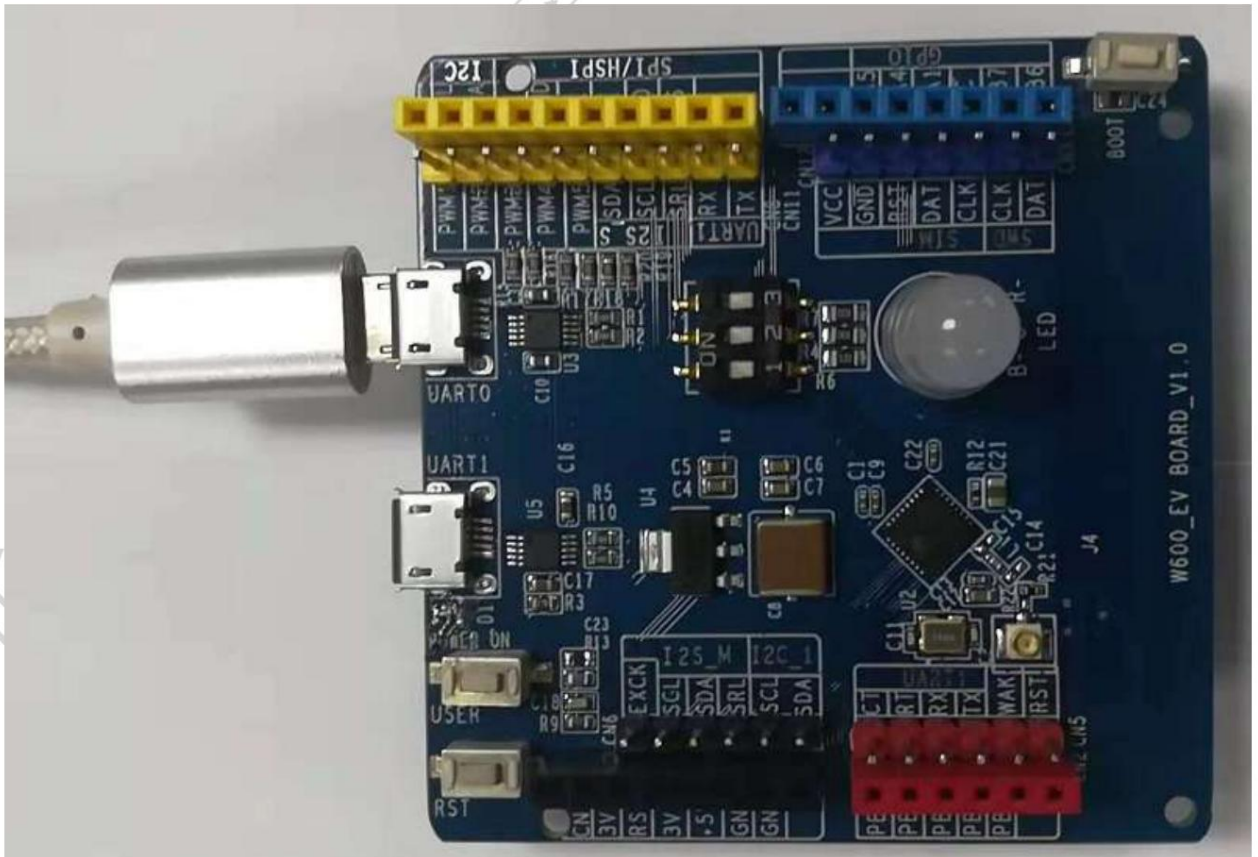


Figure 3-1

2. Open secureCRT and select the host computer serial port corresponding to the serial port connection of the module. Note: **RTS/CTS must not be checked when setting the serial port** (as shown in Figure 3-2)

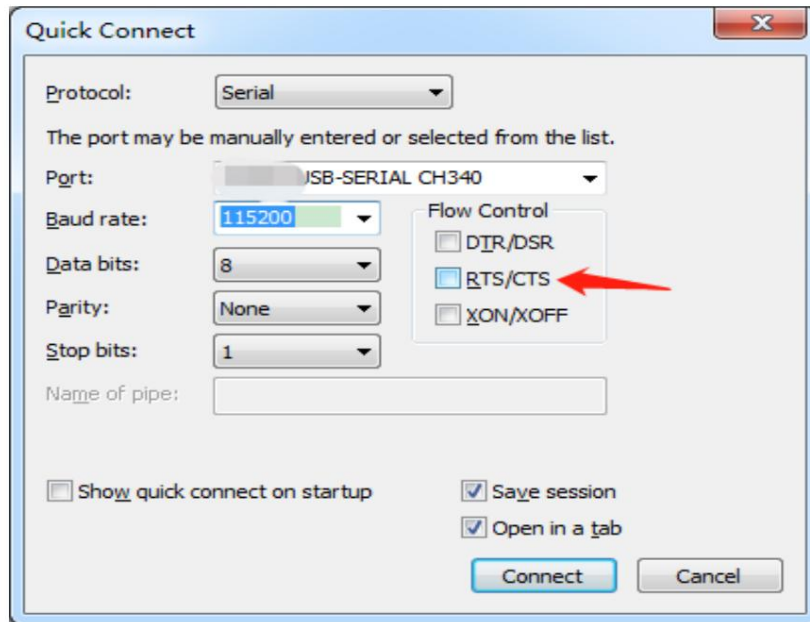
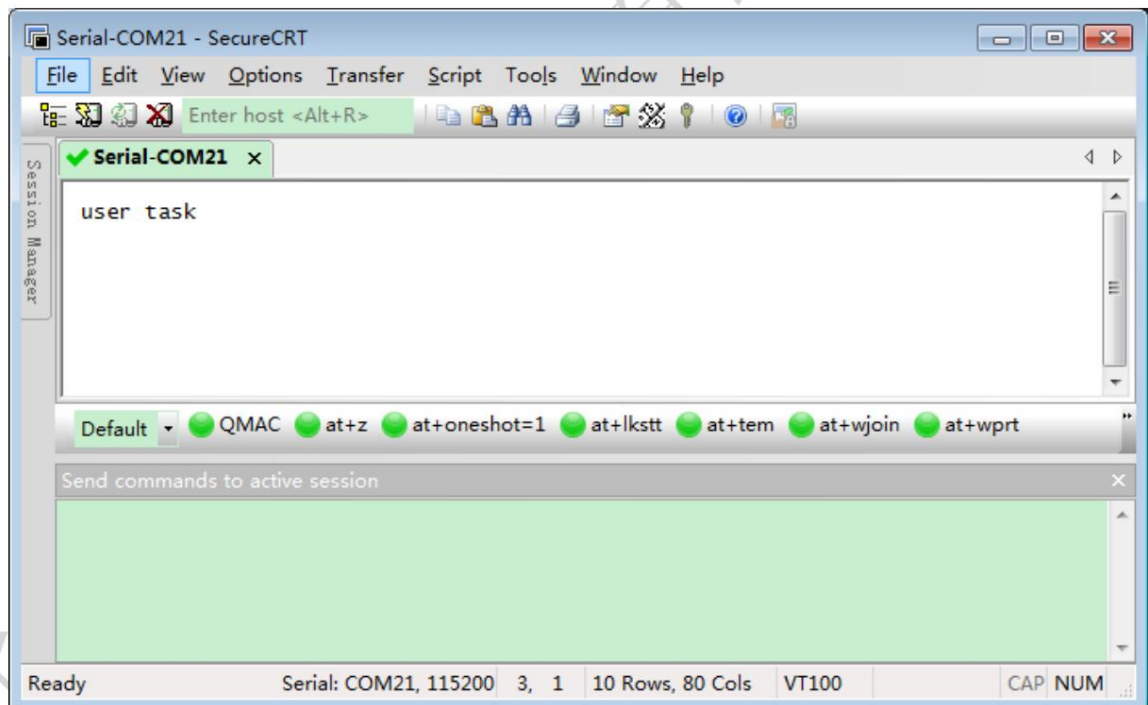


Figure 3-2



Figure

- 3-3.3. Click the dialog output box (the printing area in the upper part of the figure below) with the mouse, then press and hold the Esc key on the keyboard, and then reset the device. After the reset is complete, you can see that the dialog box has output `secboot running... CCC`.

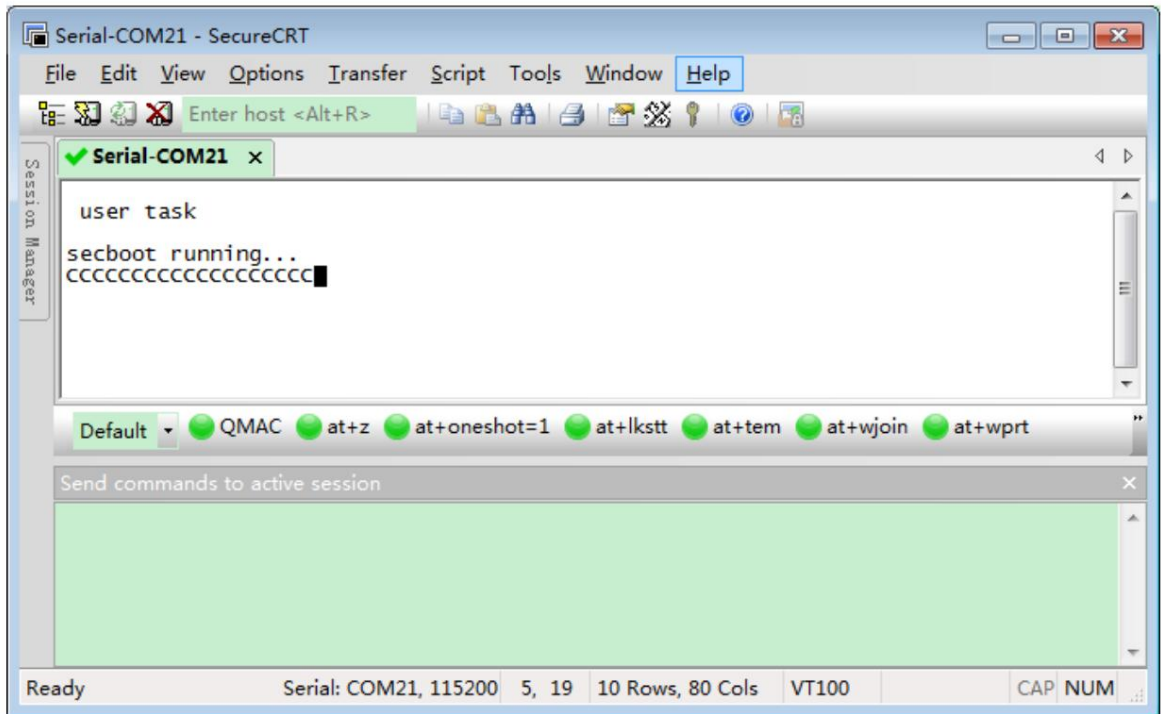


Figure 3-4

4. Drag and drop the WM_W600_GZ.img file into the dialog box, as shown in the figure below after the drag and drop is completed.

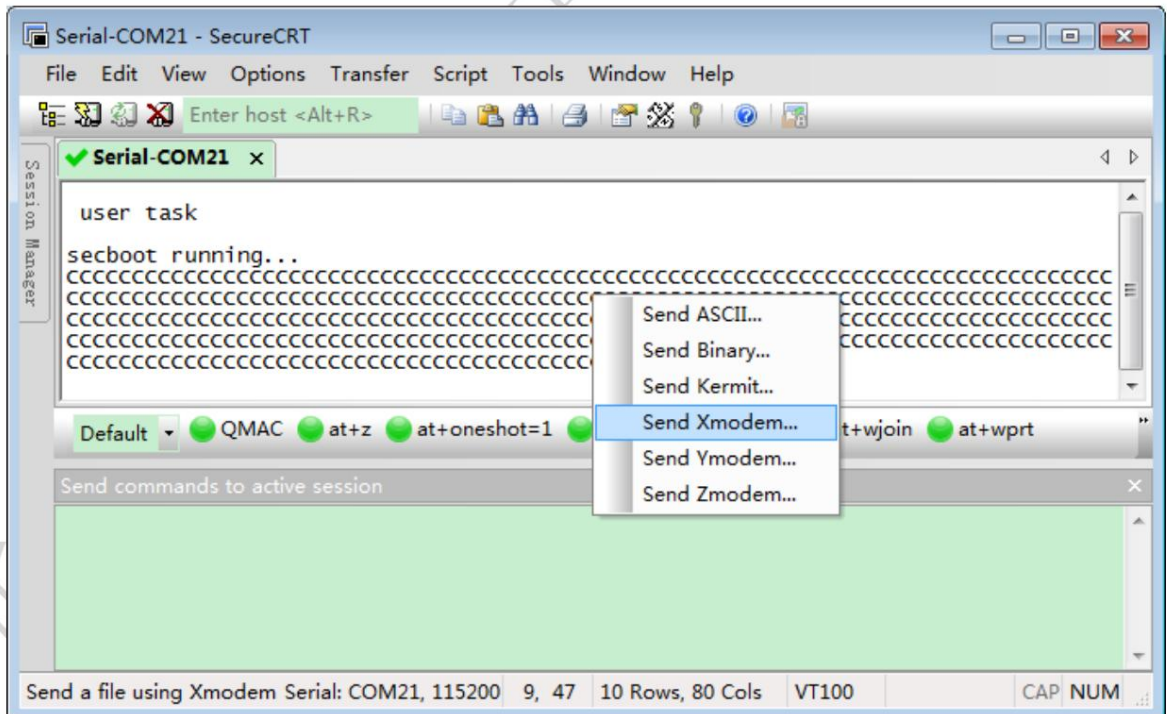


Figure 3-5

5. Select the Send Xmodem... option.

6. After clicking to select this item, the device starts to upgrade the firmware, and the progress will be displayed during the upgrade.

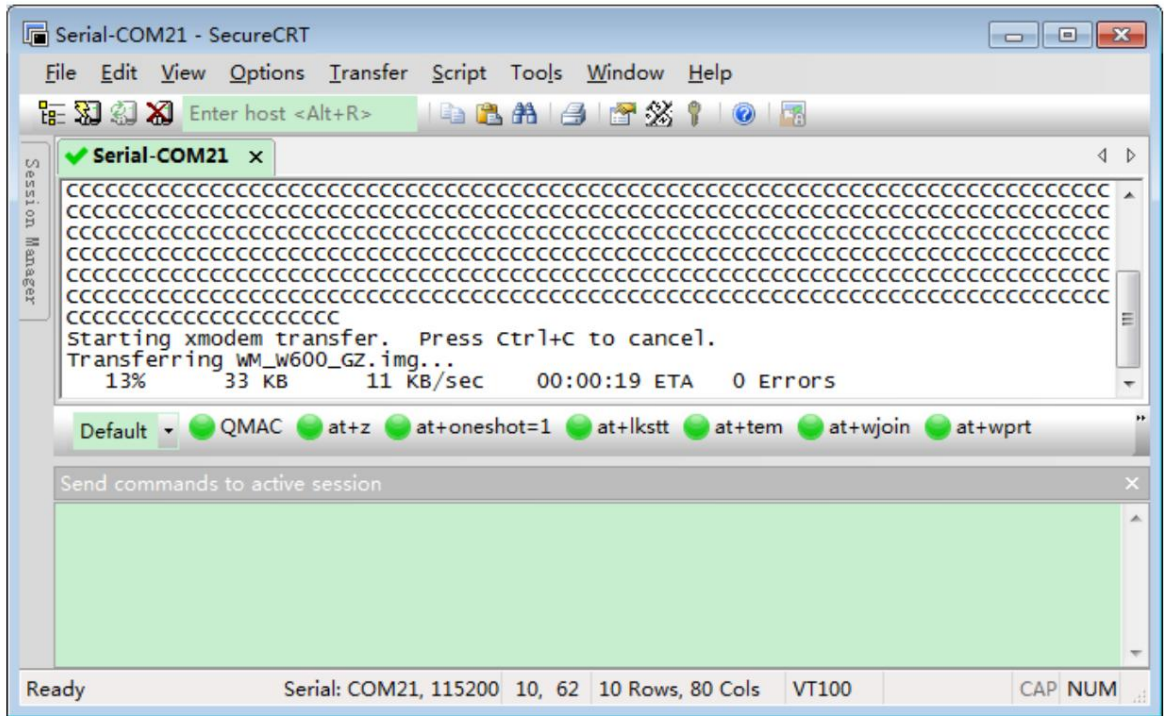


Figure 3-6

7. After the upgrade is successful, the device program will decompress the firmware first, then automatically reset and run the new firmware

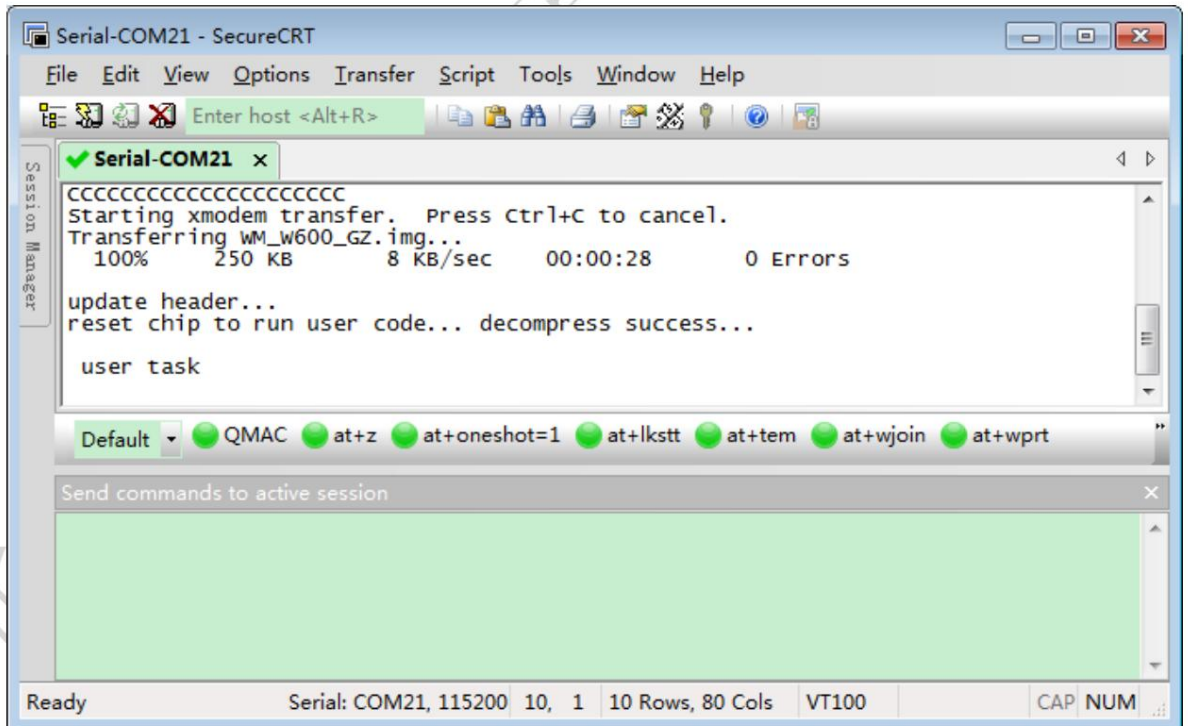


Figure 3-7