WizFi360

W600-SDK User Guide

Version 0.0.1

WIZnet Co.,Ltd

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History

Ver	Date	Description
0.0.1	Oct.2019	Initial version

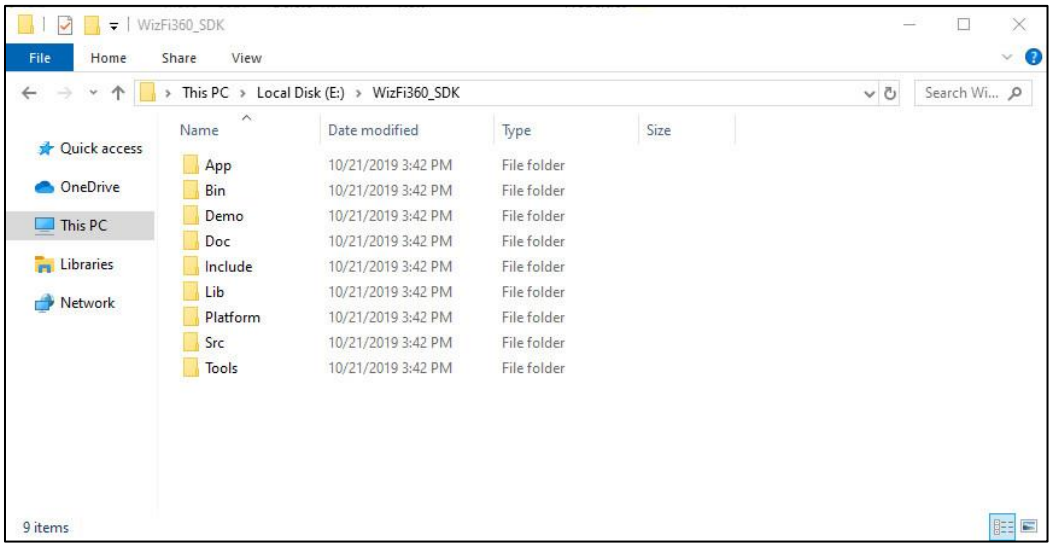
Contents

1. Overview

The WizFi360 is a module that included W600 Chip, which based on ARM Cortex-M3 and freeRTOS Kernel with 1MB flash memory. You can develop from source-level with the W600-SDK. It supports the KEIL IDE, and it includes demos like Wi-Fi Join, APSTA, TCP Client, TCP Server, UDP.

2. SDK Download

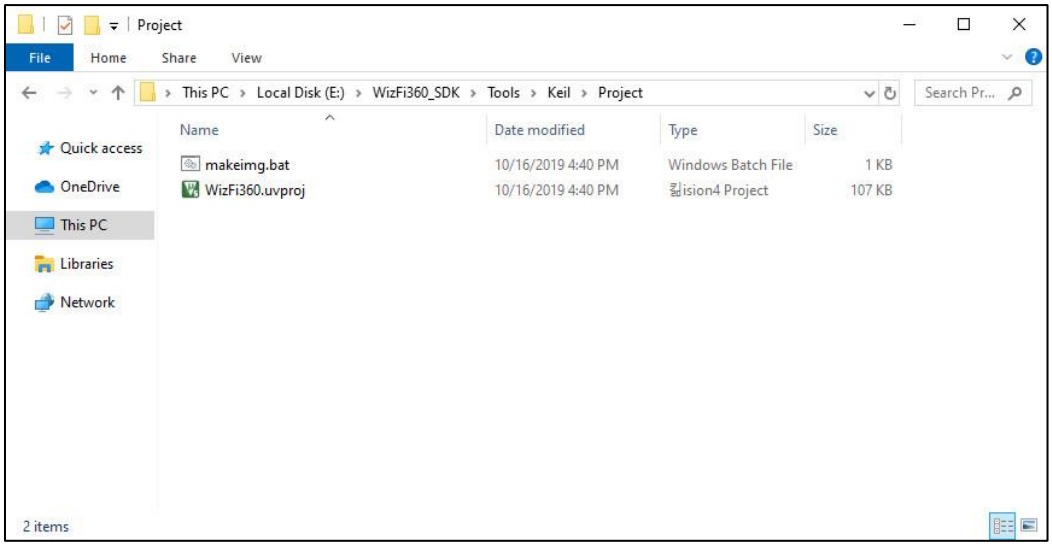
The WizFi360 SDK is released on Github, and you need to contact[1] us to use it. However, the Chip vendor's official SDK is free to use. You can download it on WIZwiki/W600-SDK[2].



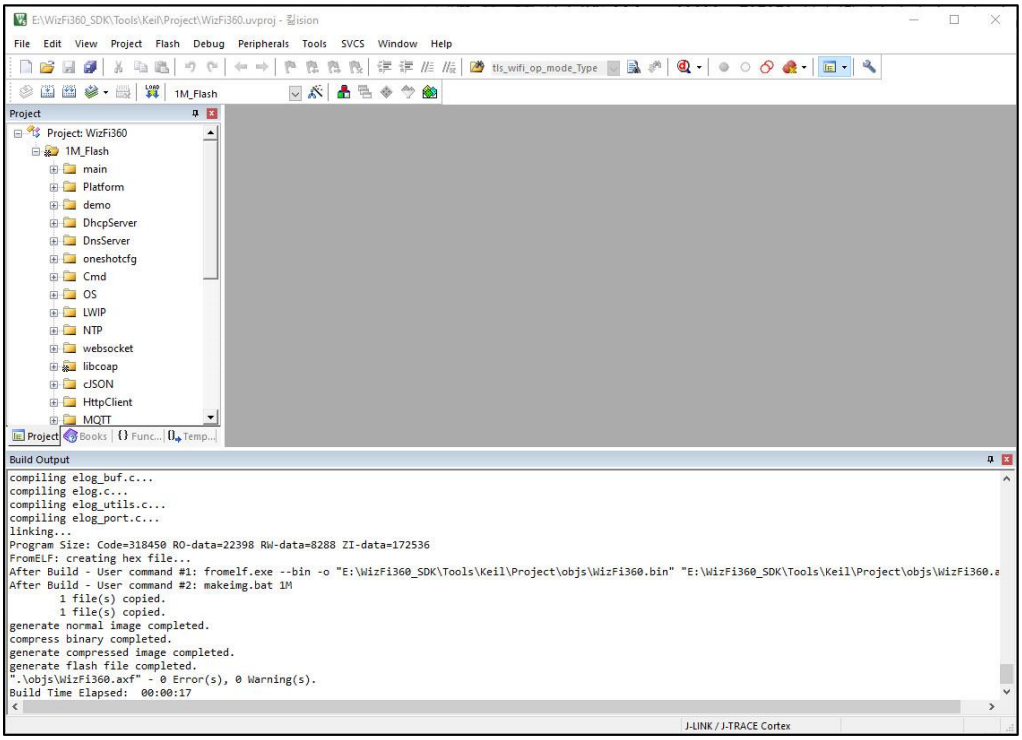
[1] wifi@wiznet.io
[2] https://wizwiki.net/wiki/doku.php/products:wizfi360:board:wizfi360sdk:start

3. Compile

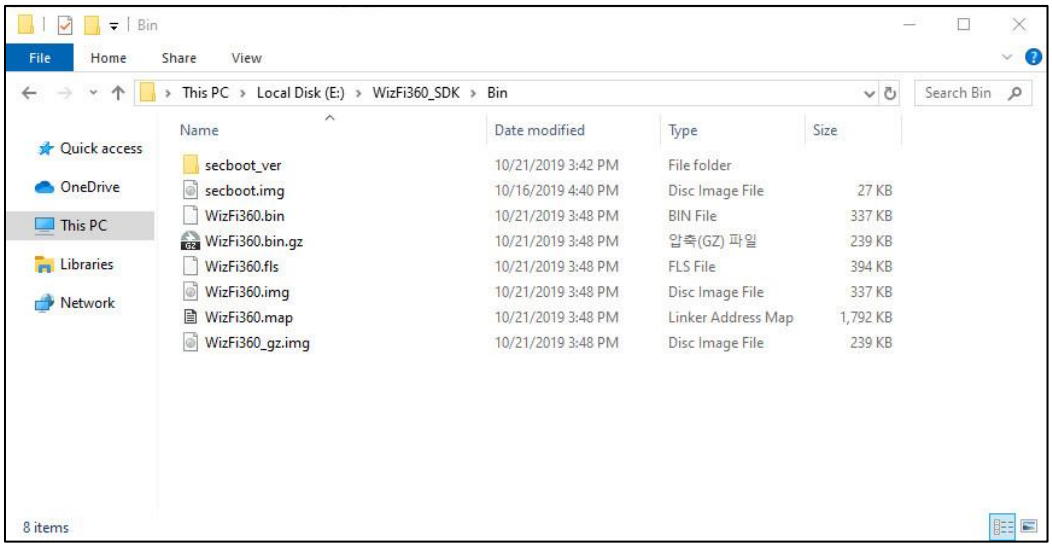
The WizFi360 SDK supports the KEIL IDE. The location of the KEIL uvision project is /Tools/Keil/Project/WizFi360.uvproj.



Open the project on the KEIL IDE and build to create the binary.



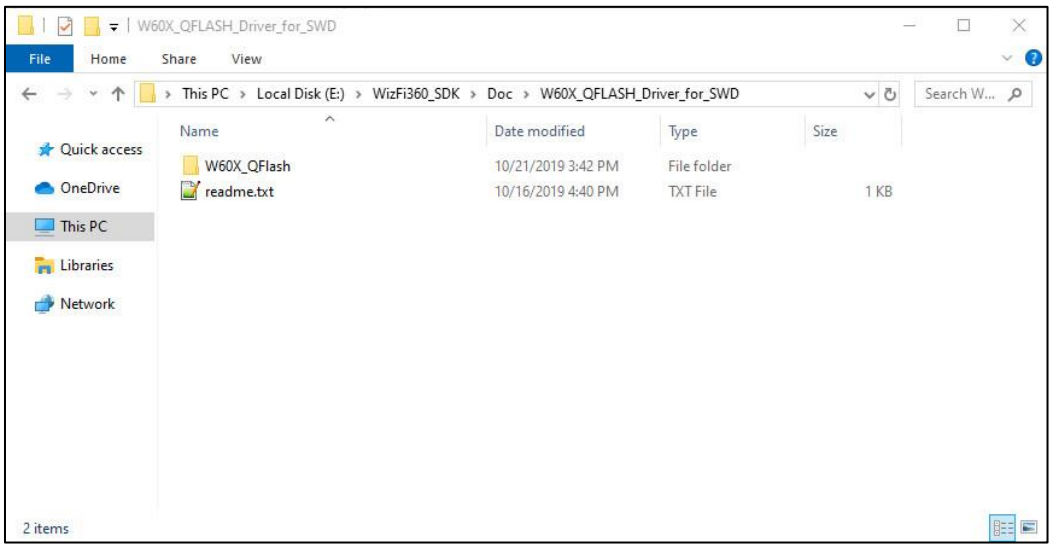
The result of a build are created on /Bin. You can download .FLS or .img file to the WizFi360. You can download .img file, which include secboot.img in Secboot Mode and you can download .FLS file in ROM Boot mode. Generally, download .img file in Secboot Mode.



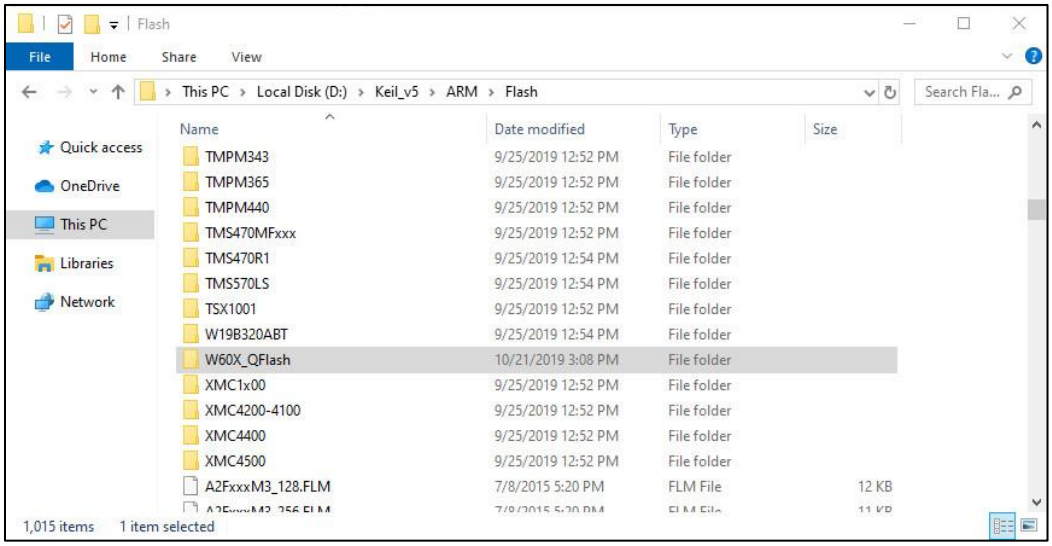
4. Binary Download

4.1 KEIL Debug

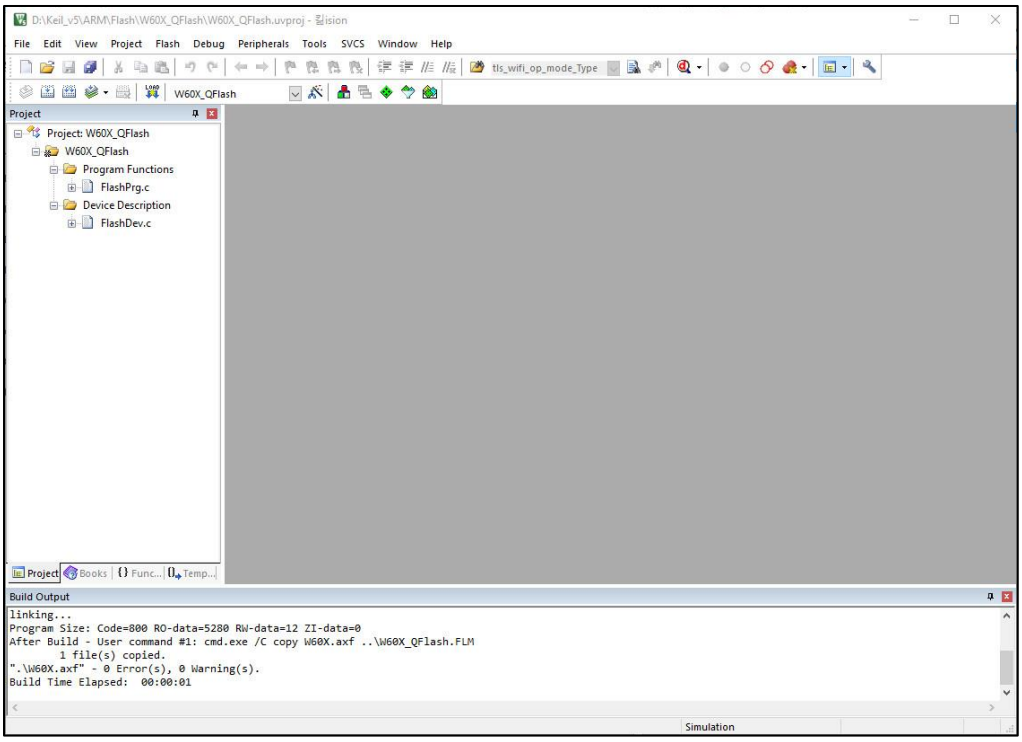
You can download it through debugger on the KEIL IDE. First of all, add flash driver of W600 Chip of WizFi360 Module.

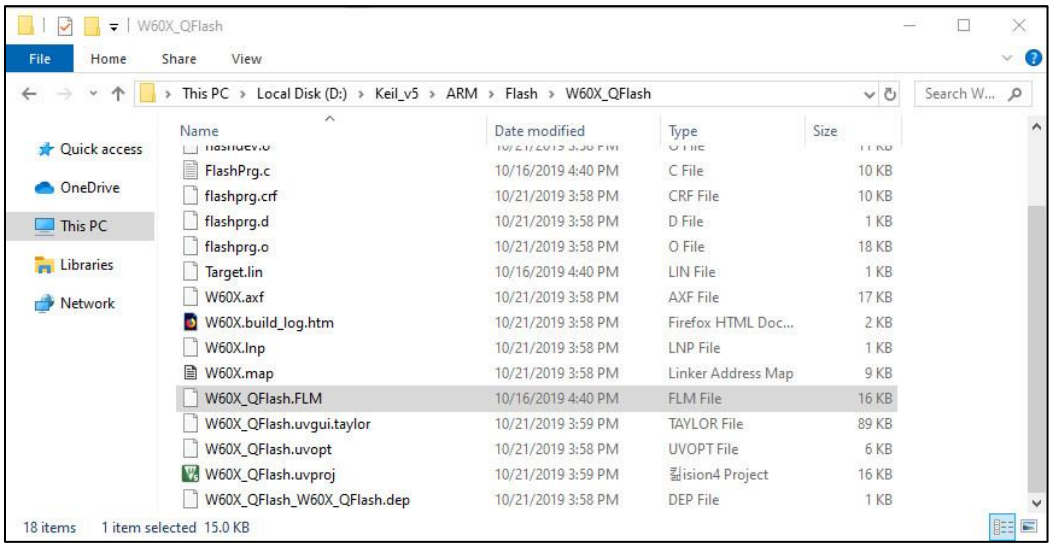


Copy this /Doc/W60X_QFLASH_Driver_for_SWD/W60X_QFlash directory and paste it to KEIL IDE like below.



Open the project W60X_QFlash.uvproj on the KEIL IDE and build to create W60X_QFlash.FLM.

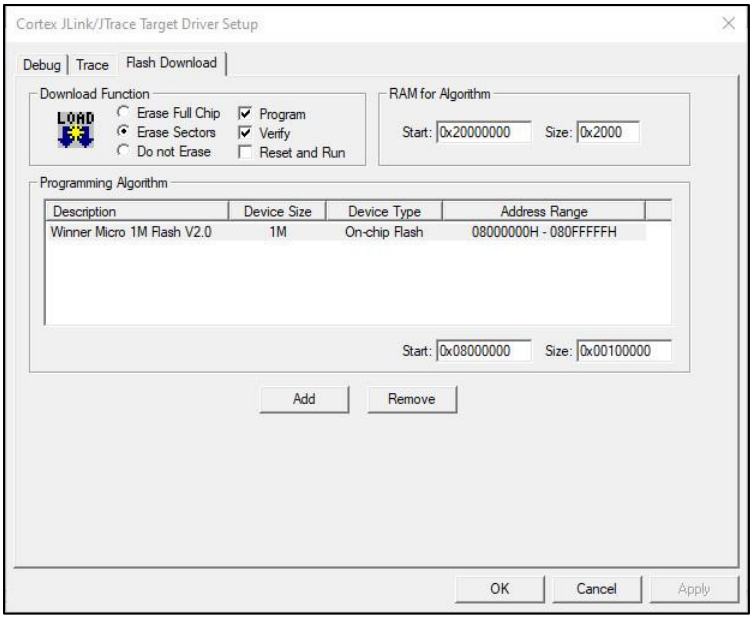




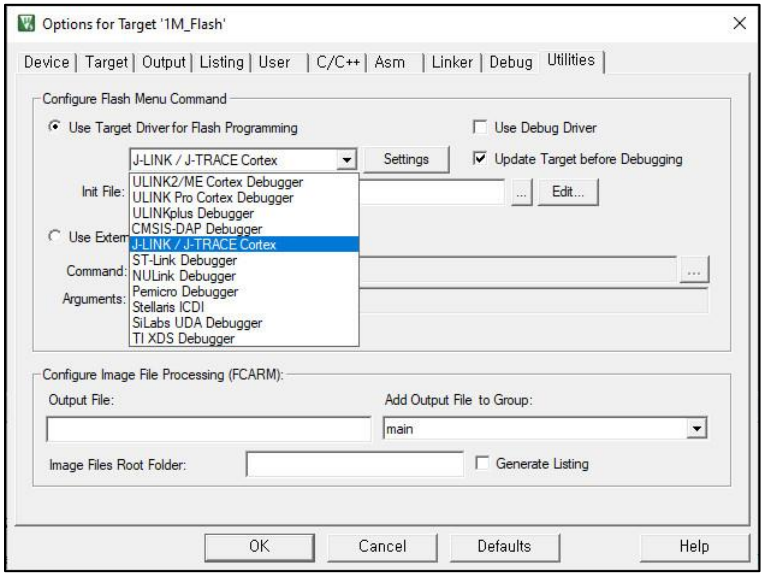
On KEIL IDE, Go Project -> Options for Target -> Utilities -> Settings -> Flash Download. and Add Winner Micro 1M Flash V2.0 with Start and Size in RAM for Algorithm like below.

Start : 0x20000000

Size : 0x2000



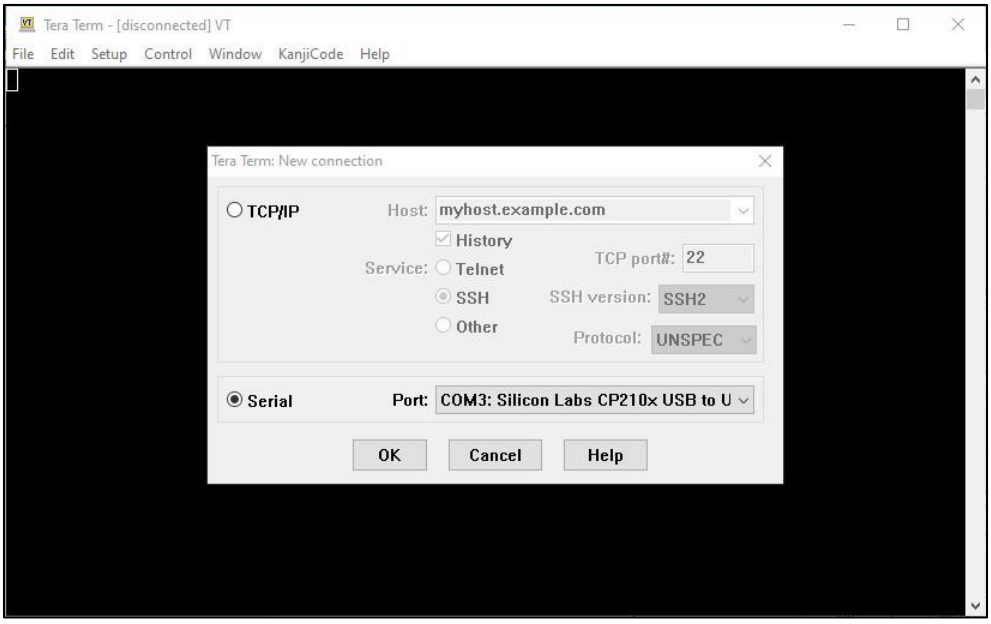
The last thing, choose your debugger and set. You can download binary and debug the code. Reference your debugger manual to set.



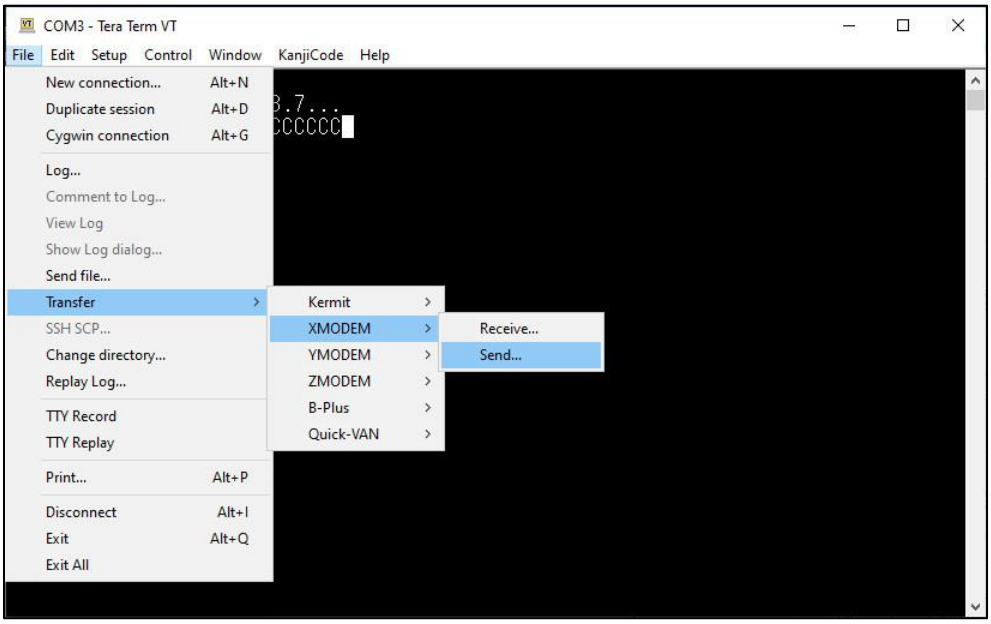
4.2 TeraTerm XMODEM

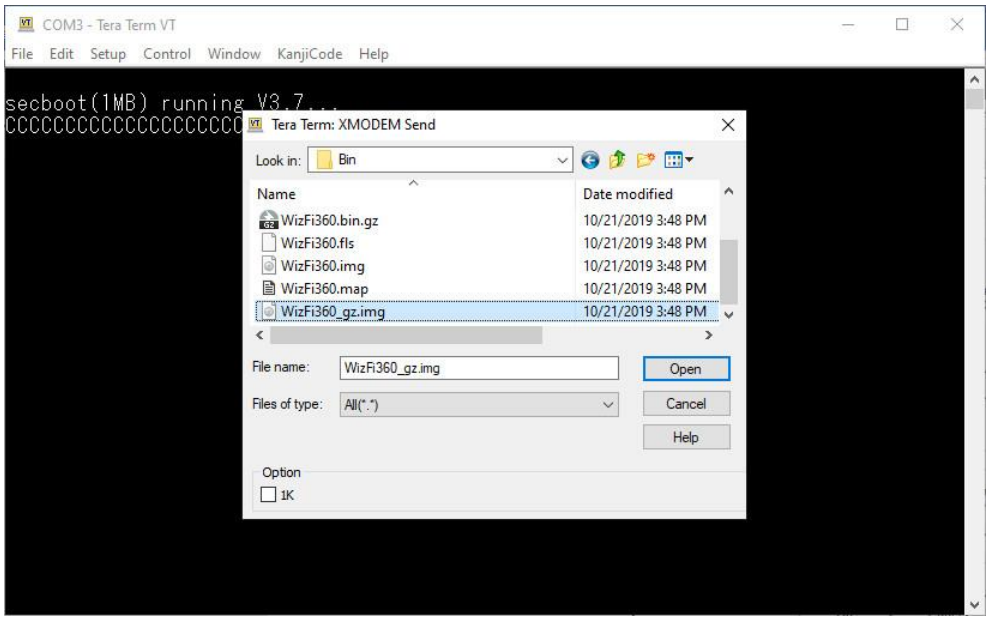
You can download binary via a serial port. Connect to pc the UART0 or the UART1. Run the Tera Term and open serial port.

Baudrate : **115200** Data: **8bit** Parity : **None** Stop : **1bit** Flow control : **none**

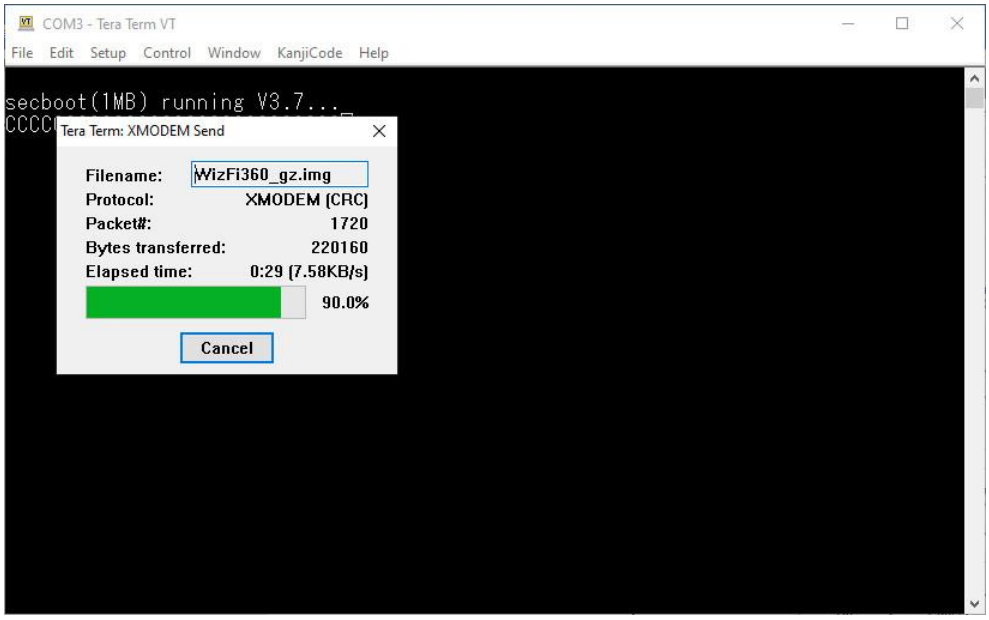


Do reset WizFi360 during the press ESC key in Tera Term. Then WizFi360 goes into a Secboot Mode. You can see a letter C printed. At this moment, send a WizFi360_gz.img file to XMODEM.

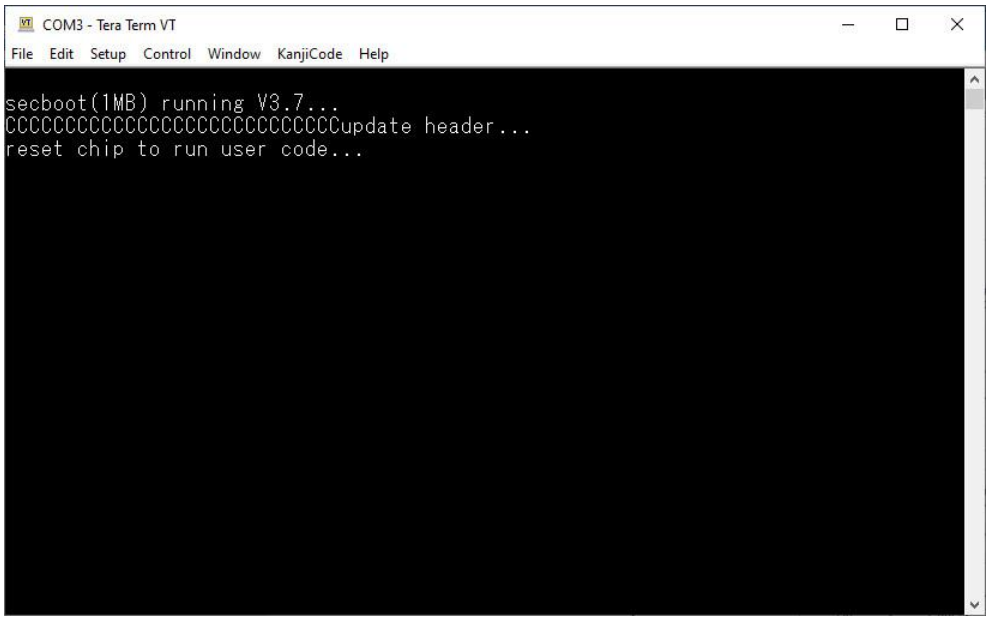




Do only choose a WizFi360_gz.img file.



You can run WizFi360 as a reset after downloading.


COM3 - Tera Term VT
File Edit Setup Control Window KanjiCode Help
secboot(1MB) running V3.7...
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCupdate header...
reset chip to run user code...

5. Demo

There are demos in WizFi360 SDK. You can set it to enable for use, then compile it and download it. There are in the Demo/wm_demo.h file. Set a DEMO_CONSOLE to DEMO_ON and each demo for use set to DEMO_ON and compile it.

5.1 Demo for SoftAP

1. Set a DEMO_SOFT_AP to DEMO_ON.
2. Compile it and download it.
3. Send a string t-softap("softap1s","1234567890",6,4,1) to UART0.
4. You can scan this AP, which the SSID is softap1s. And your other devices can connect Wi-Fii with this AP.

5.2 Demo for Wi-Fi Join AP

1. Set a DEMO_CONNECT_NET to DEMO_ON.
2. Compile it and download it.
3. t-connect
    a. Set AP manually and connect to that.
    b. Send a string t-connect("TEST_AP","1234567890") to UART0.
4. t-oneshot
    a. Receive AP information from Airkiss App.
    b. Send a string t-oneshot to UART0.
    c. Run Airkiss App and set AP information.
    d. More details reference this Smart-Config[3].
5. t-webcfg
    a. Send a string t-webcfg to UART0.
    b. Connect to Softap_XXXX(XXXX is the last 4 numbers of MAC) in Mobile device.
    c. Access to 192.168.1.1 in a browser and set SSID and password.

[3] https://wizwiki.net/wiki/doku.php/products:wizfi360:wizfi360ds:start

5.3 Demo for TCP Client

1. Set a DEMO_CONNECT_NET and DEMO_STD_SOCKET_CLIENT to DEMO_ON.
2. Compile it and download it.
3. Connect to AP and open TCP Server in PC, which connected the same AP.
4. Send a string t-sockc(PORT, IP) to UART0.
5. Send a string t-skcsnd(0,1) to UART0.
6. Send and receive data to TCP Server via UART1.

5.4 Demo for TCP Server

1. Set a DEMO_CONNECT_NET and DEMO_STD_SOCKET_SERVER to DEMO_ON.
2. Compile it and download it.
3. Connect to AP, and open TCP Server through sending a string t-socks(PORT) to UART0.
4. Open TCP Client in PC, which connected the same AP and connect to TCP Server.
5. Send a string t-skssnd(1,0,1) to UART0.
6. Send and receive data to TCP Client via UART1.

5.5 Demo for UART1

1. Set a DEMO_UARTx to DEMO_ON.
2. Compile it and download it.
3. Send a string t-uart(115200,0,0) to UART0.
4. Send data received via UART1. The UART1 is set as baudrate 115200, parity none, data 8bit, stop 1bit, flow control none.