WizFi360

Firmware Update Guide

Version 1.2.4

WIZnet Co.,Ltd

Copyright© 2019

History

Ver	Date	Description
1.0.0	2019.07.29	Initial version
1.1.0	2019.08.01	Added explanation about firmware updates using the cloud
1.2.0	2019.08.09	Modified explanation about Upgrade tool
1.2.1	2019.08.30	Modified explanation about UART
1.2.2	2019.09.02	Added explanation about UART1
1.2.3	2019.09.20	Modified typing error and github link
1.2.4	2019.10.16	Modified to WizFi360-EVB-Shield from WizFi360-EVB

Contents

1. THE method of firmware update

Wizfi360 firmware update는 Serial을 이용하는 방법과 AT command를 이용하여 Wi-Fi로 update하는 방법이 있다.
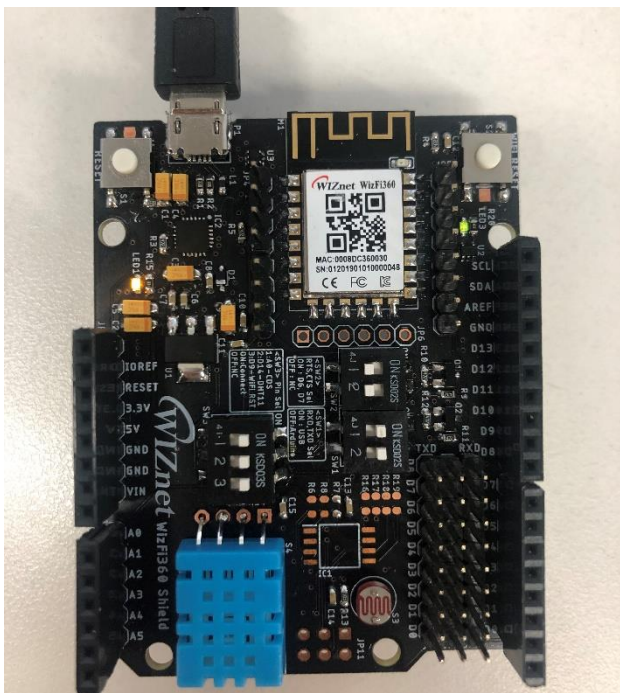
1.1   Tera Term 을 이용하는 방법 (Serial)

1.1.1   Required hardware and software
- **WizFi360-EVB-Shield**
- **Tera Term**
- **USB cable or TTL to USB module**
- **WizFi360 Firmware: WizFi360_SDK.img**
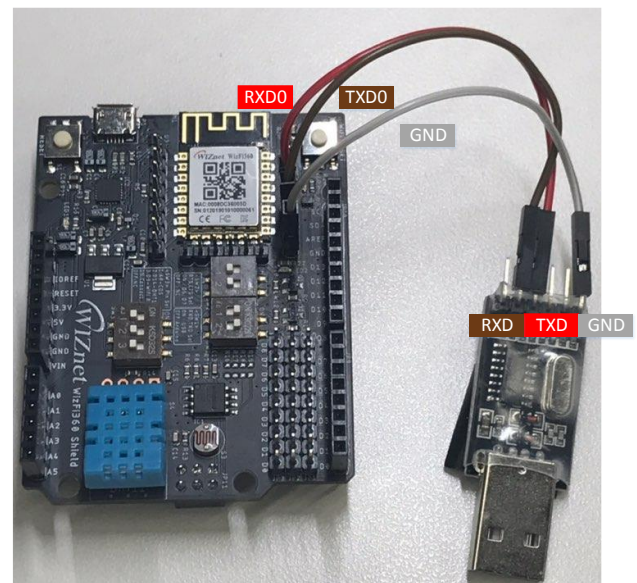 - **https://github.com/wizfi/Release/tree/master/Binary**

1.1.2   How to download the firmware using the Serial

1. Serial을 통해 Tera Term과 통신하여 Firmware를 update한다. Serial 통신을 위해 UART0 또는 UART1을 사용한다. UART1의 경우 USB cable을 통해 연결하며, UART0의 경우 TTL to USB module을 이용해 연결한다.
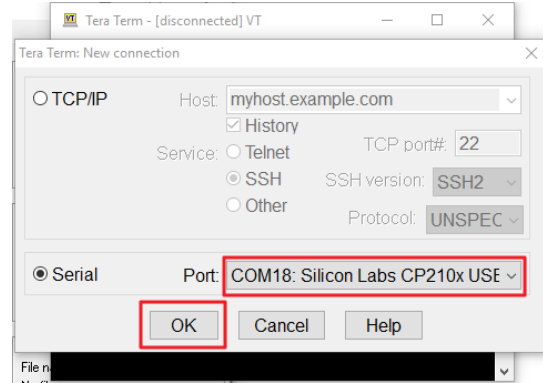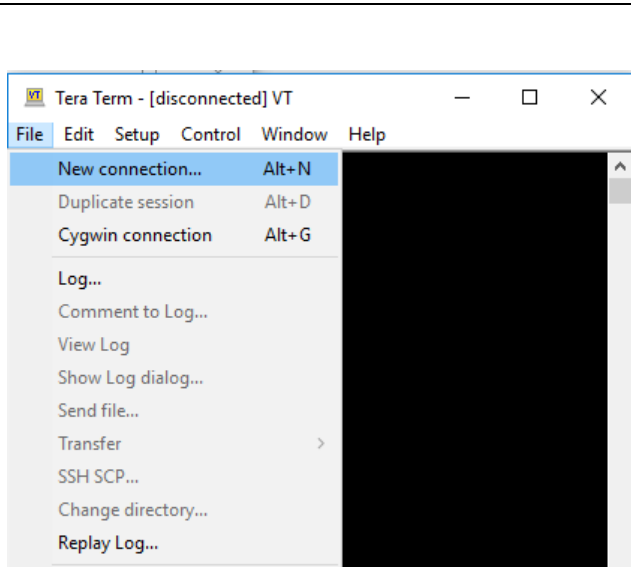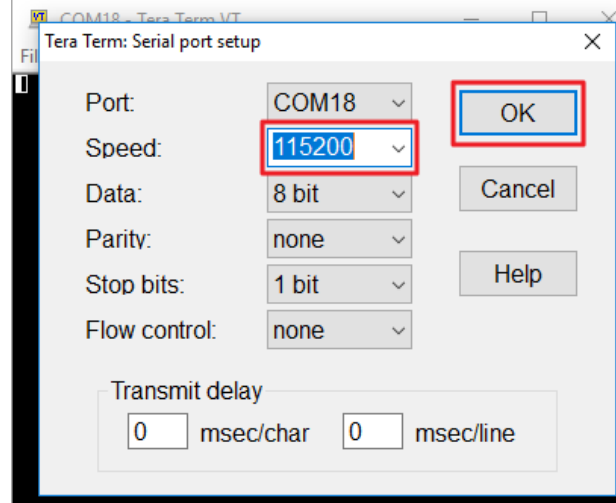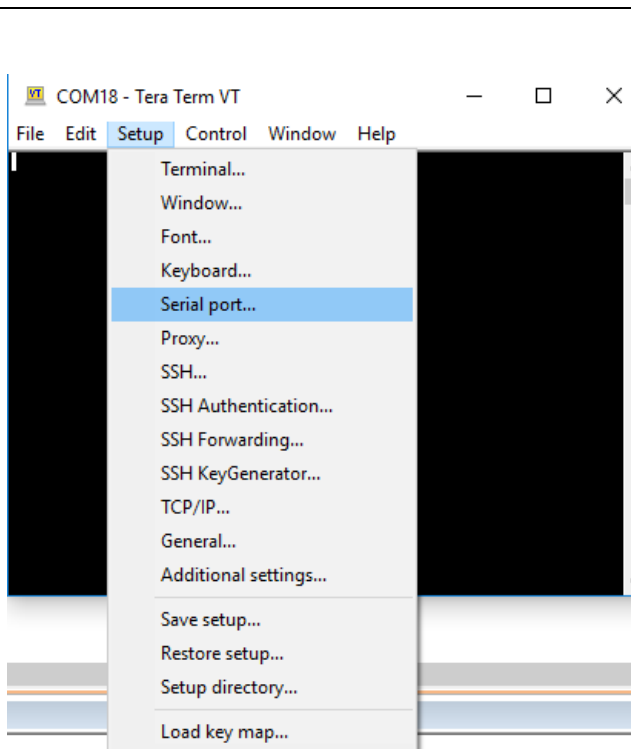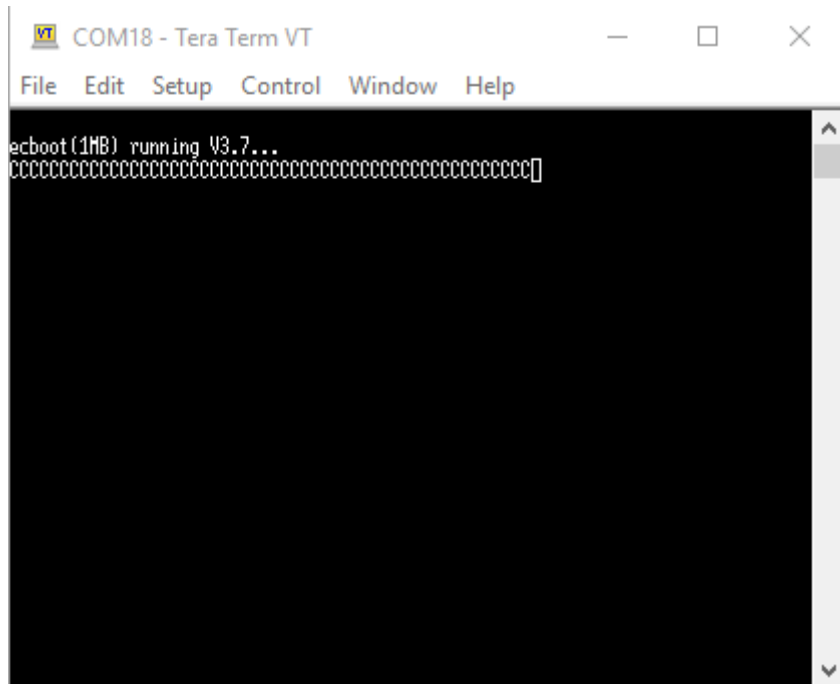
UART1	UART0

2. Tera Term을 실행하고 'File - New connection' 메뉴로 진입하여 Serial을 선택하고, WizFi360이 연결된 시리얼 포트를 선택한다.
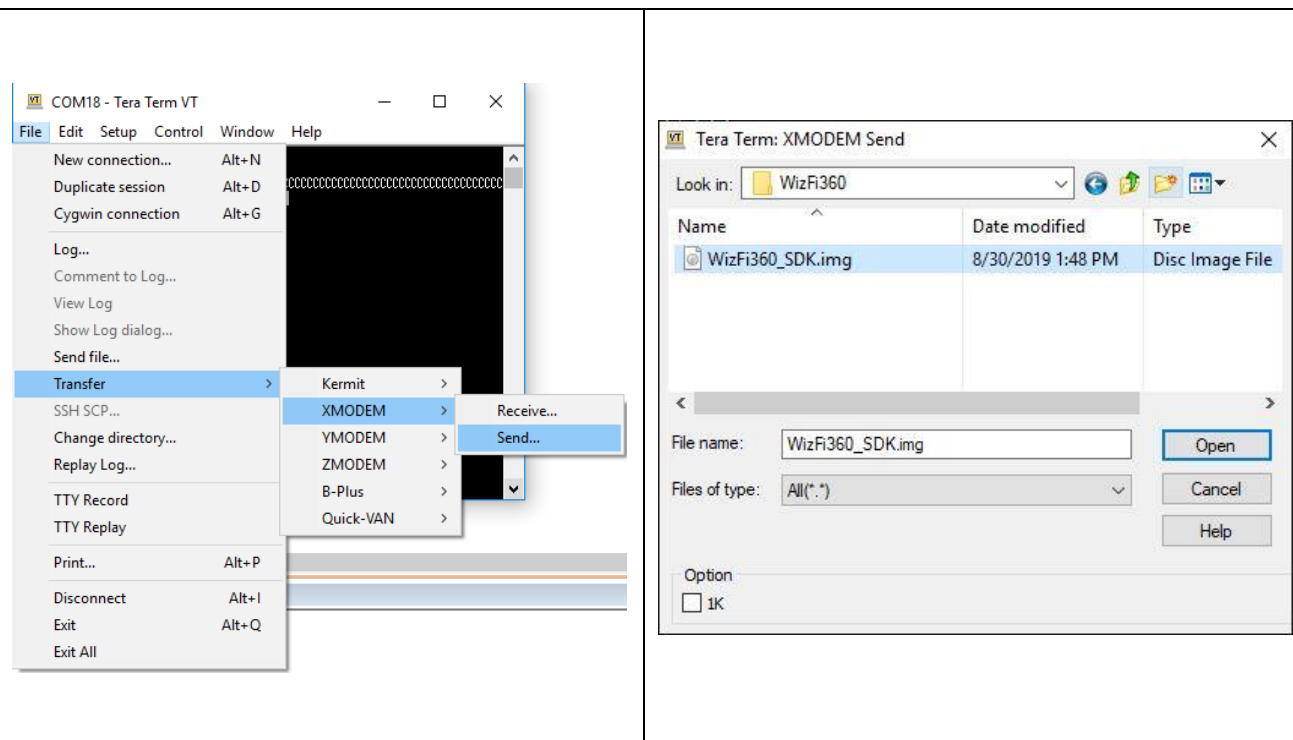

3. 'Setup - Serial port' 메뉴로 들어가서 Serial port의 통신 속도를 115200bps로 설정해 준다.

4. 키보드의 ESC key를 누른 상태에서 WizFi360의 reset 버튼을 눌러 Boot 모드로 진입한다. Boot 모드로 진입 되면 아래와 같은 화면이 출력된다.

5. 'File - Transfer - XMODEM - Send' 메뉴로 진입해서 업데이트 할 binary 파일을 선택 후 확인을 눌러 업데이트를 진행한다.

6. Firmware 업데이트가 완료되면 터미널에 'ready'가 출력된다.

1.2 Cloud 를 이용하는 방법 (Wi-Fi)

1.2.1 Required hardware and software

- **WizFi360-EVB-Shield**
- **USB Cable or TTL to USB module**

1.2.2 How to download the firmware using the Cloud (Wi-Fi)

1. WiFi를 통해 Cloud와 연결하여 Firmware를 Update한다. PC와 WizFi360, Router를 다음 그림과 같이 연결한다. Router는 인터넷에 연결된 상태여야 하며, Router의 DHCP 서버로부터 WizFi360과 PC의 IP를 할당 받는다.
   AT Command를 사용하기 위하여 Serial 통신을 이용하며 UART0 또는 UART1을 사용한다. UART1의 경우 USB cable을 통해 연결하며, UART0의 경우 TTL to USB module을 이용해 연결한다.
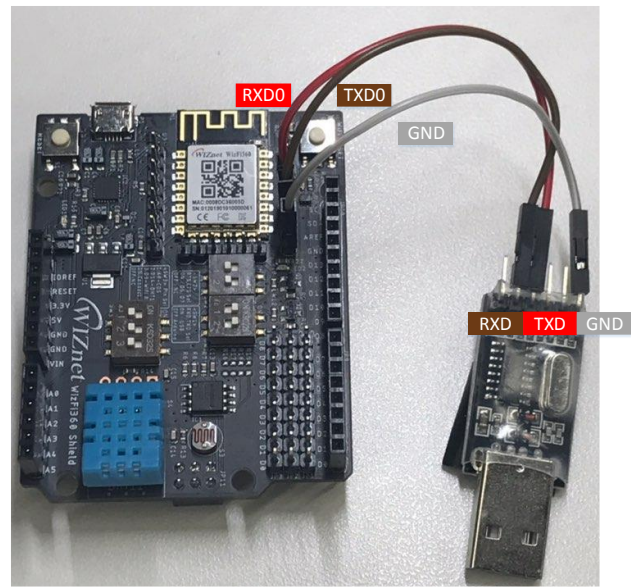

Connect and LAN or Wi-Fi

Serial Interface
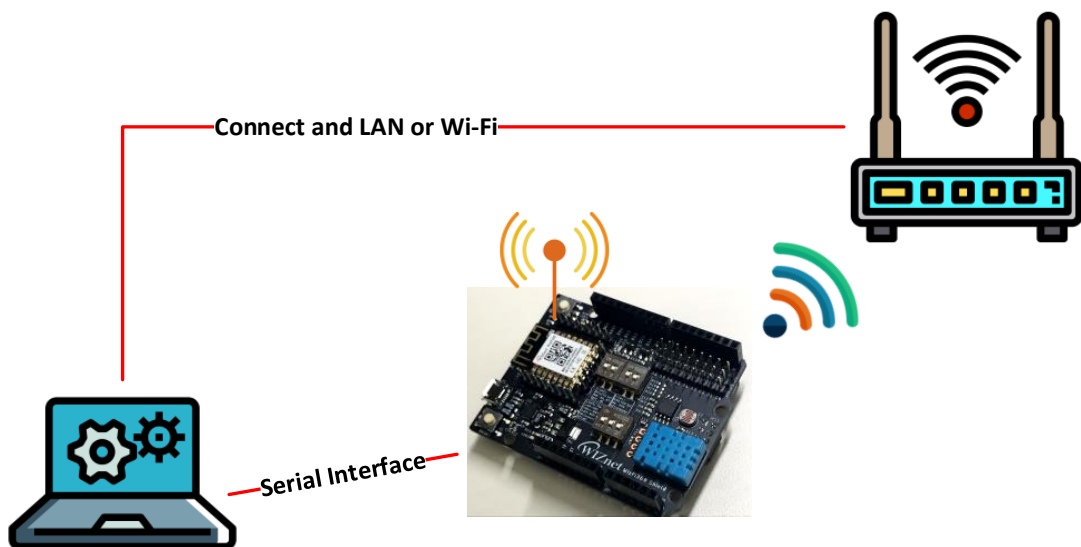
Automatically assigns temporary IP address to PC by DHCP server.
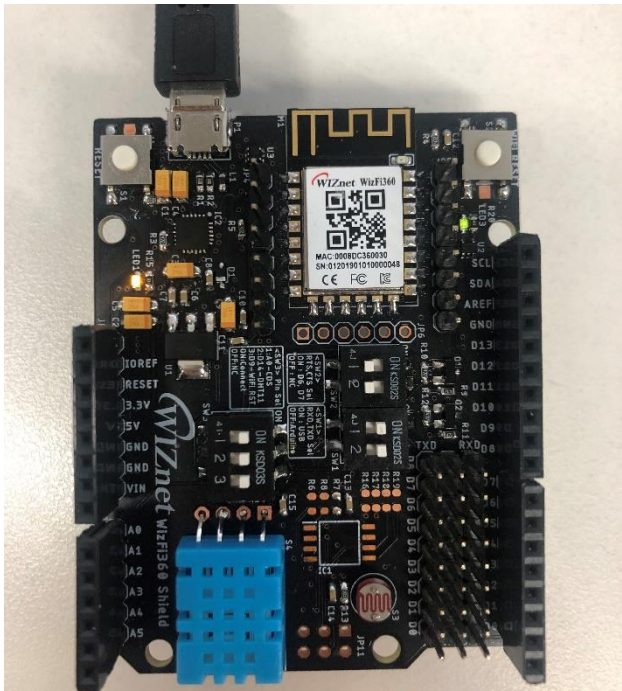
UART1	UART0

2. AT command를 사용해 firmware upgrade를 진행한다.

```
(10:09:15.104) ready<CR><LF>
(10:09:21.898) AT+CWMODE_CUR=1<CR><LF>
(10:09:22.039) AT+CWMODE_CUR=1<CR><LF>
(10:09:22.039) <CR><LF>
(10:09:22.039) OK<CR><LF>
(10:09:22.932) AT+CWLAP<CR><LF>
(10:09:23.081) AT+CWLAP<CR><LF>
(10:09:24.769) +CWLAP:(3,"##WIZnet_irina",-53,"64:e5:99:b8:60:5a",1,1)<CR><LF>
(10:09:24.854) +CWLAP:(4,"DIR-815_Wiznet",-59,"14:d6:4d:cf:fa:a7",1,1)<CR><LF>
(10:09:24.854) +CWLAP:(3,"Matthew2.4",-61,"88:36:6c:be:8a:3a",2,1)<CR><LF>
(10:09:24.854) +CWLAP:(0,"iptime",-69,"88:36:6c:7d:79:44",4,1)<CR><LF>
(10:09:24.854) +CWLAP:(3,"Dap",-57,"88:36:6c:e8:32:9e",3,1)<CR><LF>
(10:09:24.854) +CWLAP:(4,"Teddy_AP",-38,"90:9f:33:21:e5:00",5,1)<CR><LF>
(10:09:24.854) +CWLAP:(0,"WizFi630S_AP_57985E",-57,"00:08:dc:57:98:5e",6,0)<CR><LF>
(10:09:24.854) +CWLAP:(4,"DLINK-IPv6",-51,"cc:b2:55:d2:19:a2",7,1)<CR><LF>
(10:09:24.854) +CWLAP:(3,"WIZnet_Scott",-44,"18:a6:f7:56:73:2e",6,1)<CR><LF>
(10:09:24.854) +CWLAP:(3,"rena",-53,"88:36:6c:6e:ac:28",9,1)<CR><LF>
(10:09:24.854) +CWLAP:(3,"wizms1",-61,"e8:fc:af:fd:a2:85",11,1)<CR><LF>
(10:09:24.854) +CWLAP:(0,"iptime",-71,"64:e5:99:a4:e3:6c",11,1)<CR><LF>
(10:09:24.854) +CWLAP:(0,"ESP_577CC7",-85,"2e:f4:32:57:7c:c7",11,0)<CR><LF>
(10:09:24.854) <CR><LF>
(10:09:24.854) OK<CR><LF>
(10:09:25.523) AT+CWJAP_CUR="Teddy_AP","12345678"<CR><LF>
(10:09:25.669) AT+CWJAP_CUR="Teddy_AP","12345678"<CR><LF>
(10:09:29.122) WIFI CONNECTED<CR><LF>
(10:09:29.122) WIFI GOT IP<CR><LF>
(10:09:29.122) <CR><LF>
(10:09:29.122) OK<CR><LF>
(10:09:38.905) AT+CIUPDATE<CR><LF>
(10:09:39.052) AT+CIUPDATE<CR><LF>
(10:09:39.161) +CIPUPDATE:1<CR><LF>
(10:09:39.781) +CIPUPDATE:2<CR><LF>
(10:09:39.781) +CIPUPDATE:3<CR><LF>
(10:09:54.538) +CIPUPDATE:4<CR><LF>
(10:09:54.645) <CR><LF>
(10:09:54.645) OK<CR><LF>
(10:10:01.939) <CR><LF>
(10:10:01.939) ready<CR><LF>
```
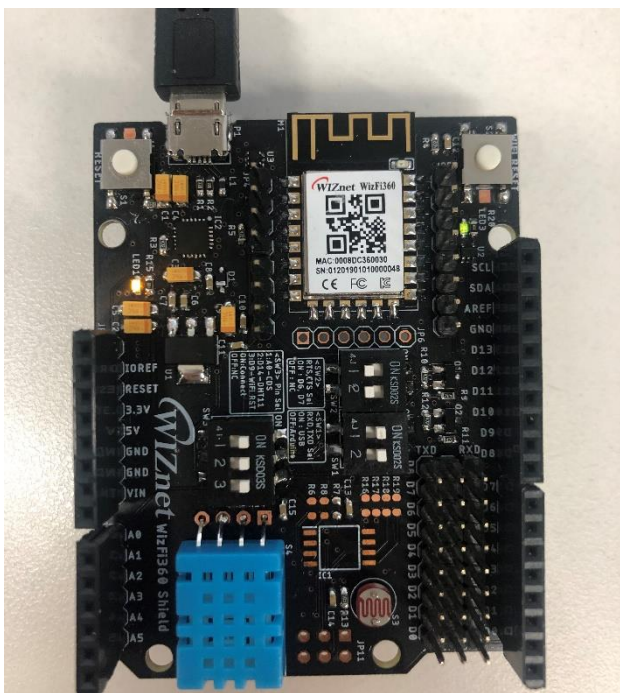
1.3 Upgrade tool 을 이용하는 방법 (Serial/WiFi)

1.3.1 Required hardware and software

- **WizFi360-EVB-Shield**
- **WizFi360 Upgrade Tool**
- **USB Cable or TTL to USB module**
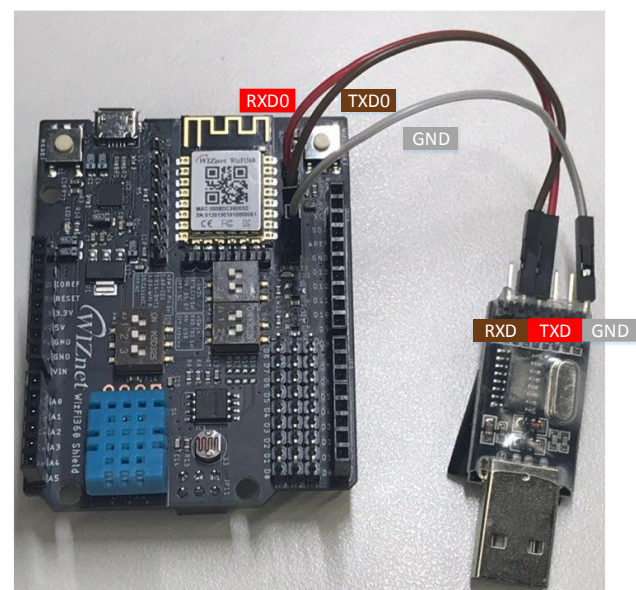- **WizFi360 Firmware: WizFi360_SDK.img**

1.3.2 How to download the firmware using the Upgrade Tool(Serial)

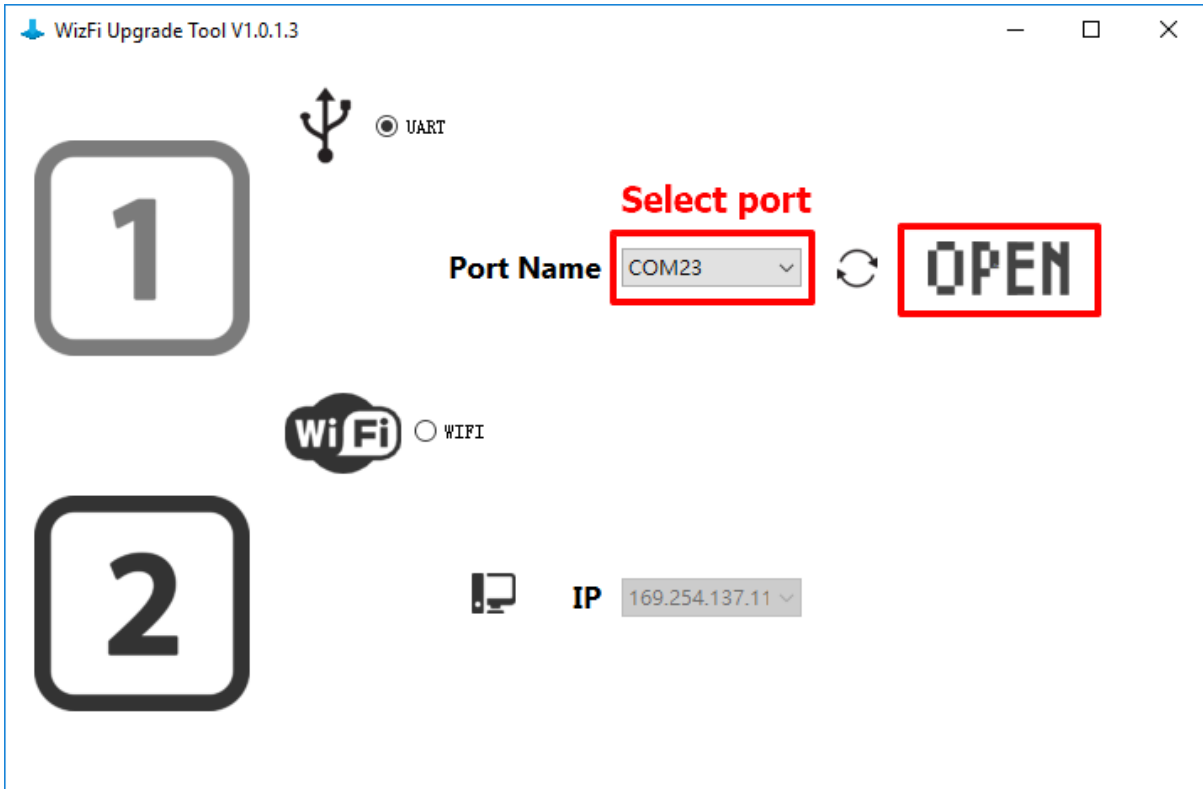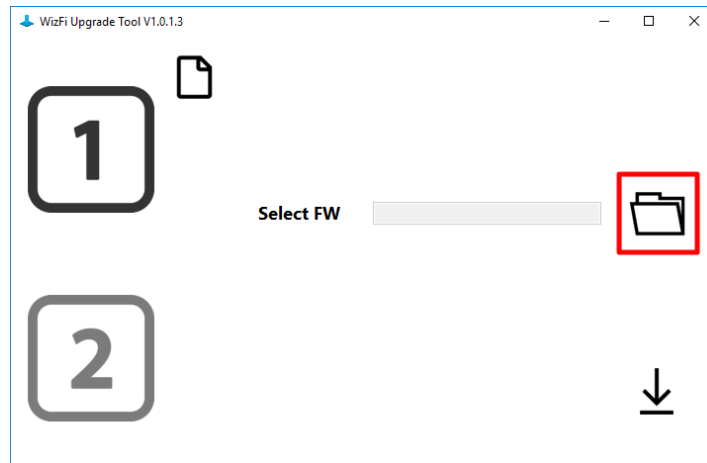| |
|---|
| 1. Serial을 통해 Upgrade tool과 통신하여 Firmware를 Update한다.
Serial 통신을 위해 UART0 또는 UART1을 사용한다. UART1의 경우 USB cable을 통해 연결하며, UART0의 경우 TTL to USB module을 이용해 연결한다. |

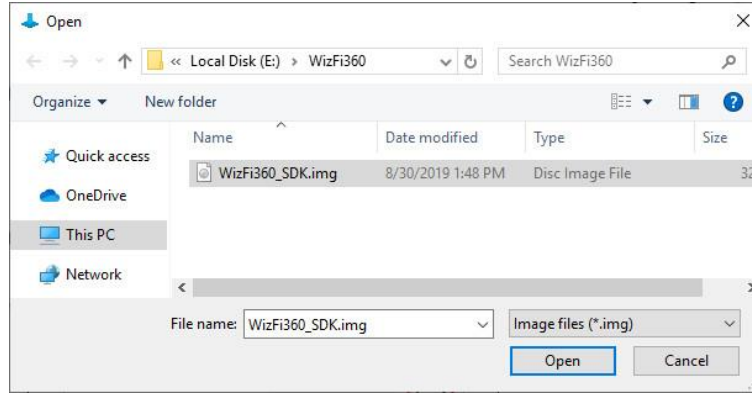| UART1	UART0

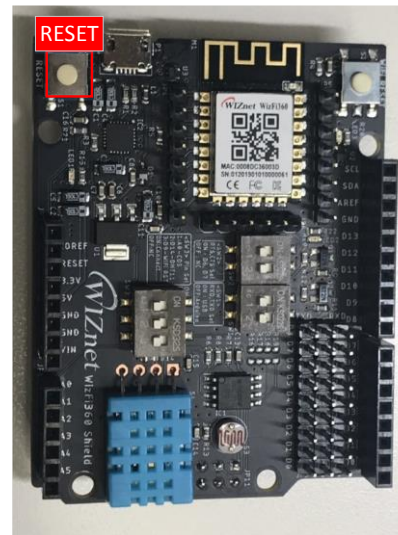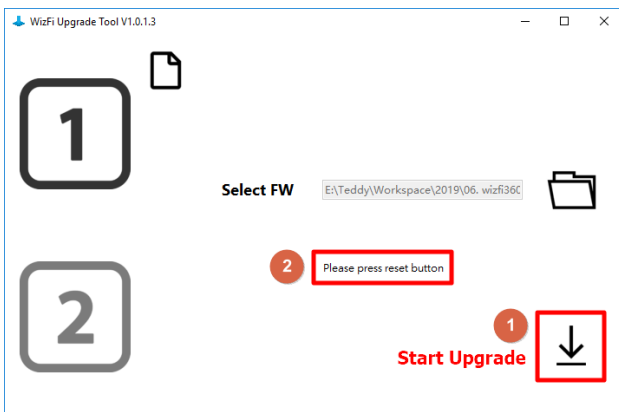2. WizFi Upgrade Tool를 실행하고, WizFi360 UART Port를 선택한 뒤 오픈한다.

3. Select FW에서 폴더 모양의 아이콘을 클릭해 WizFi360 Firmware binary 파일을 선택한다.
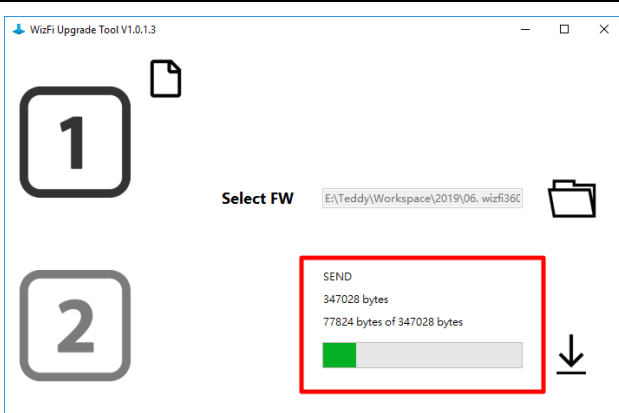   (WizFi360_SDK.img)

4. Start Upgrade 버튼(화살표 아이콘)을 클릭한 다음 'Please Press reset button message'를 확인한다.


5. WizFi360의 Firmware upload가 진행되며, 완료 시 upload 된 firmware size가 나타난다.

1.3.3 How to download the firmware using the Upgrade Tool(Wi-Fi)

1. WiFi를 통해 Upgrade Tool과 통신하여 Firmware를 Update한다. Upgrade Tool에서 Update할 Firmware binary File을 선택하고, WizFi360에서 AT Command (AT+CIUPDATE)를 사용하여 Firmware를 Update한다. AT Command를 사용하기 위하여 Serial 통신을 이용하며 UART0 또는 UART1을 사용한다. UART1의 경우 USB cable을 통해 연결하며, UART0의 경우 TTL to USB module을 이용해 연결한다.
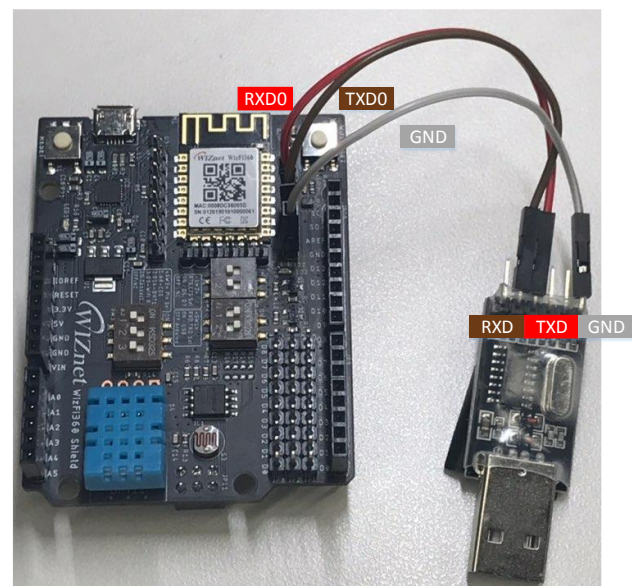

Connect and LAN or Wi-Fi

Serial Interface
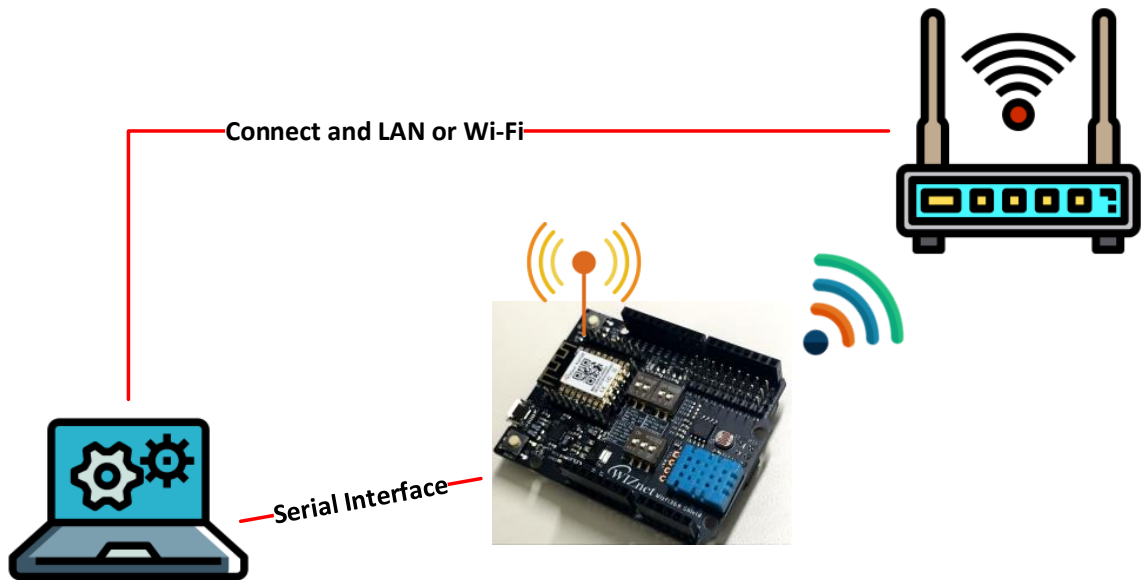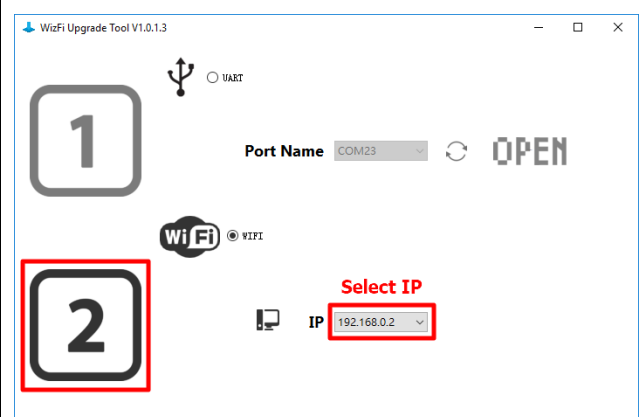
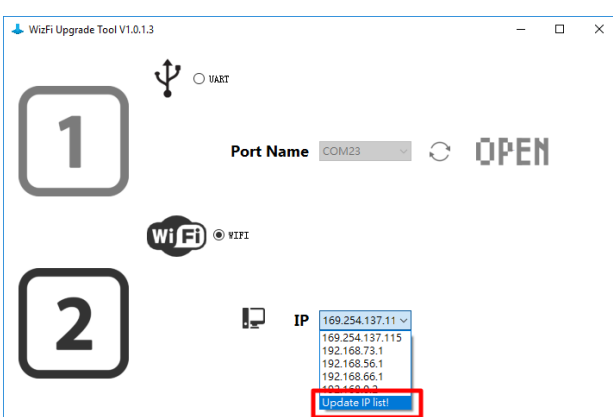Automatically assigns temporary IP address to PC by DHCP server.
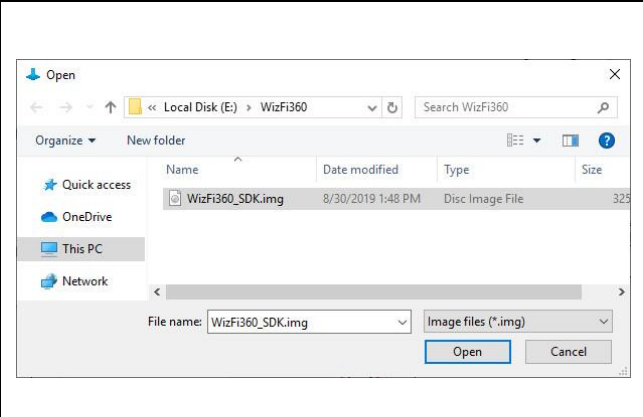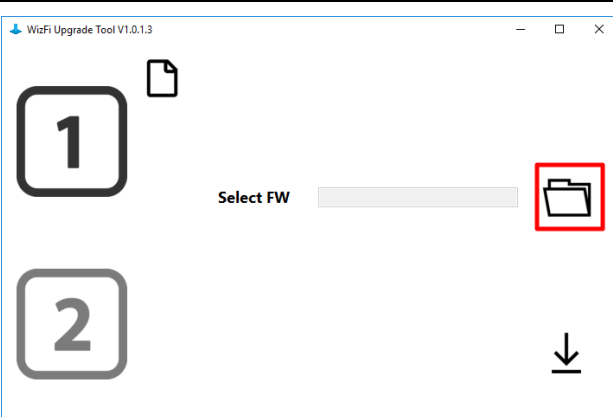
UART1	UART0

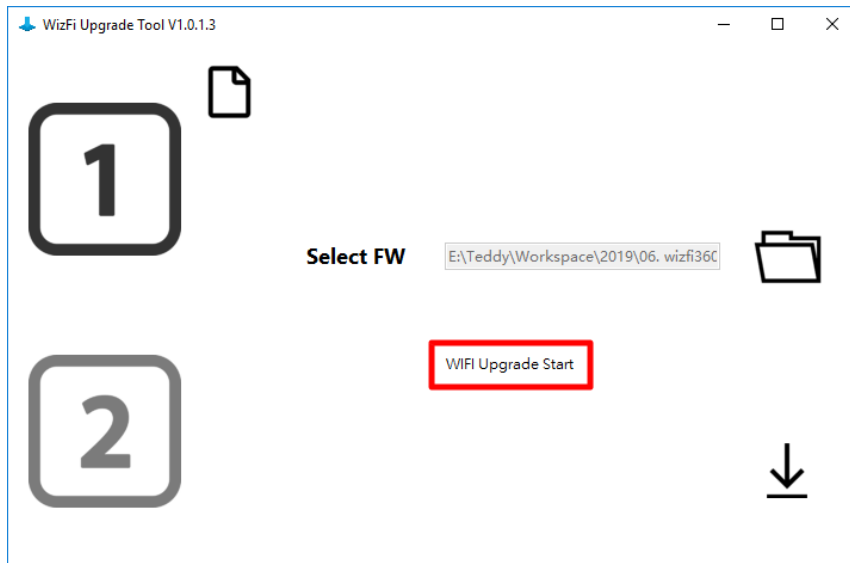2. Upgrade Tool의 WiFi 옵션을 클릭한다.
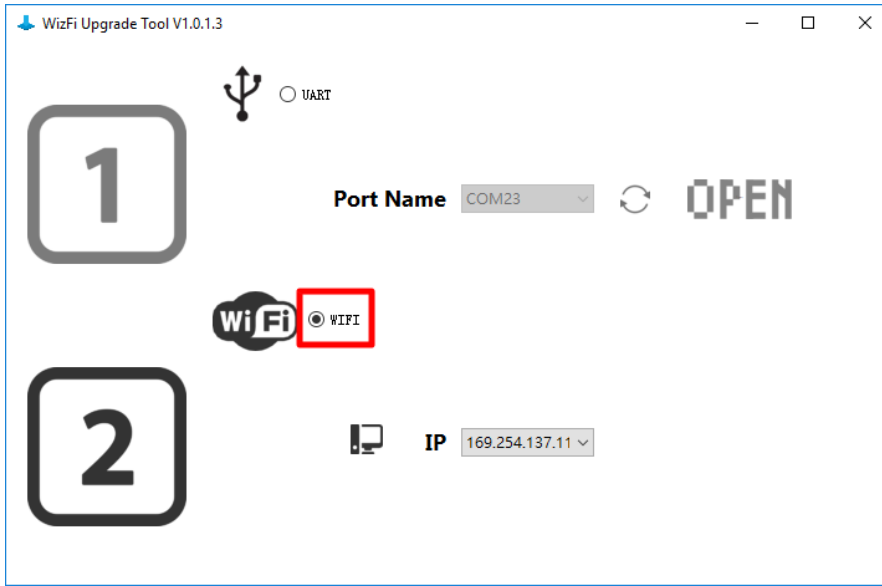
3. Update IP list를 Click해서 PC의 IP를 선택한다.

4. Select FW에서 폴더 모양의 아이콘을 클릭해 WizFi360 Firmware binary 파일을 선택한다.
   (WizFi360_SDK.img)

5. WizFi360의 Firmware Upgrade 준비 완료되면 아래와 같이 메시지가 출력된다.

6. AT command를 이용하여 firmware upgrade를 진행한다.


```
AT+CIUPDATE="http://192.168.0.2:8080/WizFi360_SDK.img"
AT+CIUPDATE="http://192.168.0.2:8080/WizFi360_SDK.img"
+CIPUPDATE:1
+CIPUPDATE:2
+CIPUPDATE:3
+CIPUPDATE:4

OK

ready
```