LSM1x0A

F/W Download Guide

Rev 1.5

SJIT

Nov. 17, 2023

Contents

History

| Date	Contents	Version	
2022-04-18	Create	V1.0	
2022-06-03	Add F/W merge (IAP + F/W)	V1.1	
2023-02-01	Delete unnecessary content	V1.2	
2023-02-02	Changed IAP speed(baud rate)	V1.3	
2023-07-03	Add factory reset process after firmware download	V1.4	
2023-11-17	Add F/W download using Tera term macro(Ymodem ttl)	V1.5	

1. F/W Download - IAP

note: F/W downloader using IAP

Run as a Ymodem-enabled program (Extra putty, tera term, etc.)

Connect PC and module
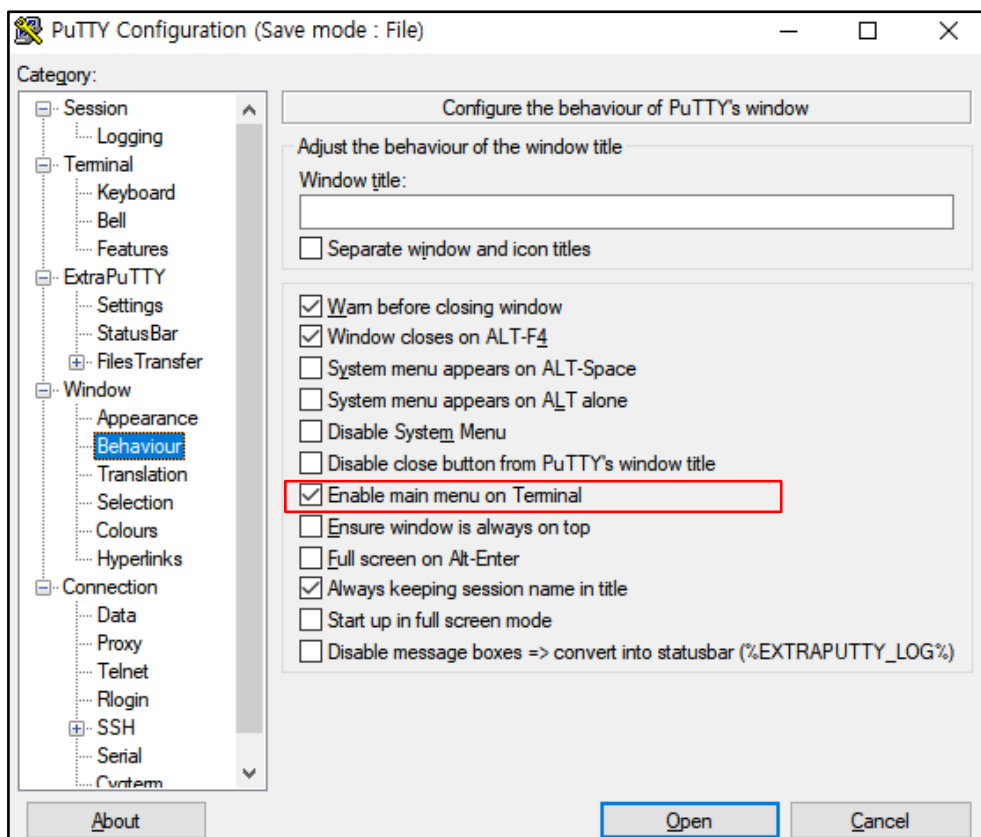
- PC and module connection using micro 5pin cable
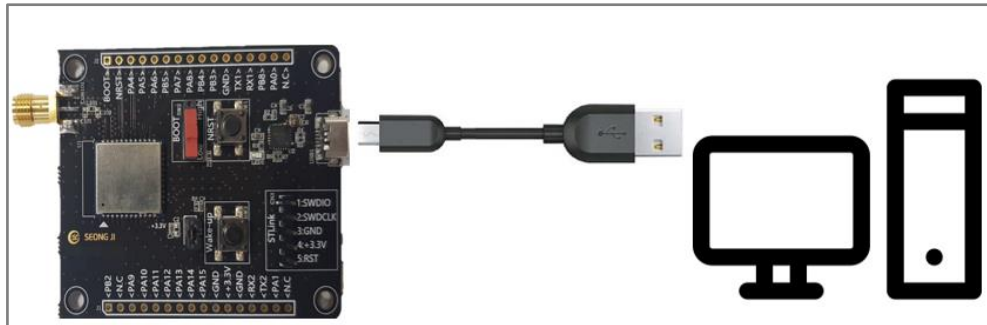
1.1 F/W download using Extra putty
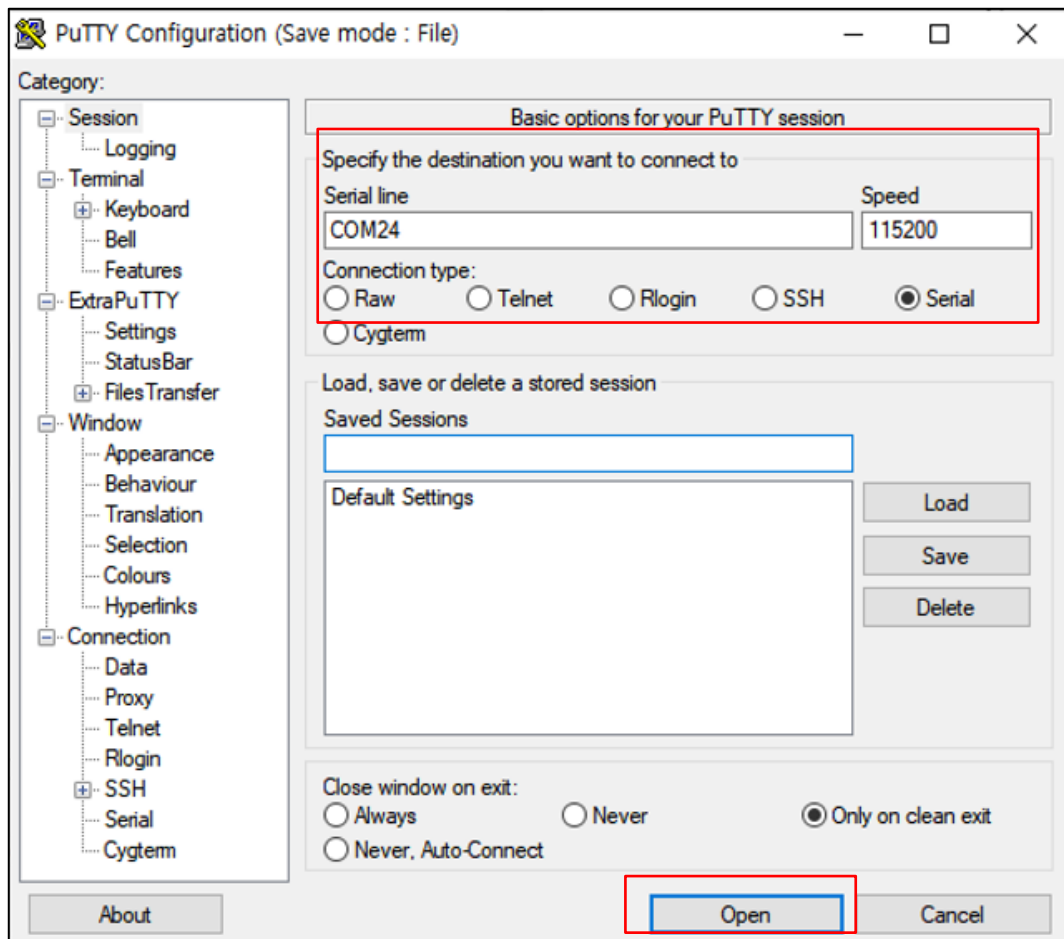
Putty version: Extra putty 0.30

1)Putty standard setting

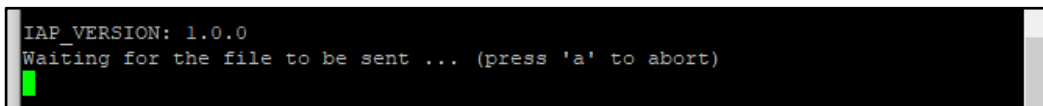- Window -> Behaviour -> "Enable menu on Terminal" check

2) Serial connection

    - Connection type: Serial

    - Serial line: module port number Ex) COM24

    - Speed(baud rate): 115200

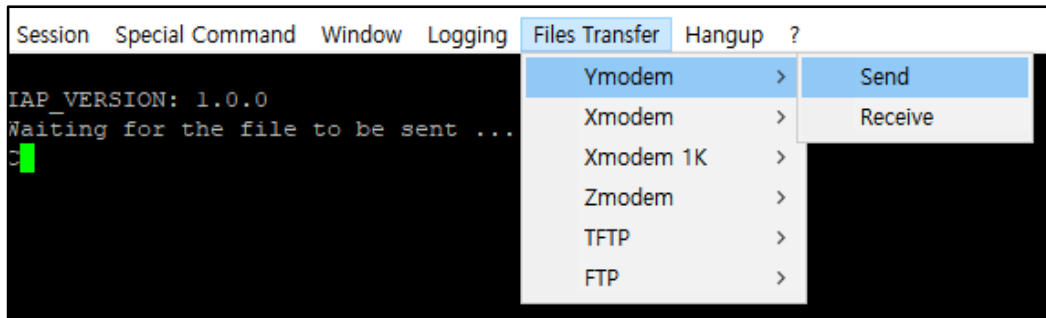   - After setting as above, "Open" button click

3) Start download mode

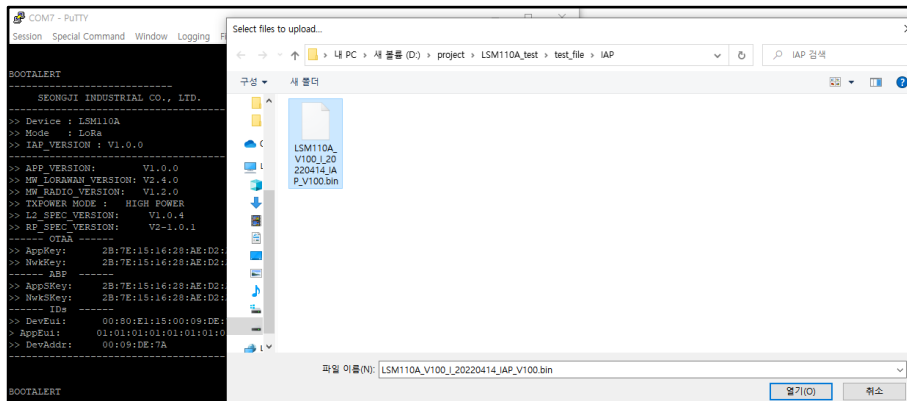   - Press reset and enter '1' within 0.5 seconds

4) In download mode

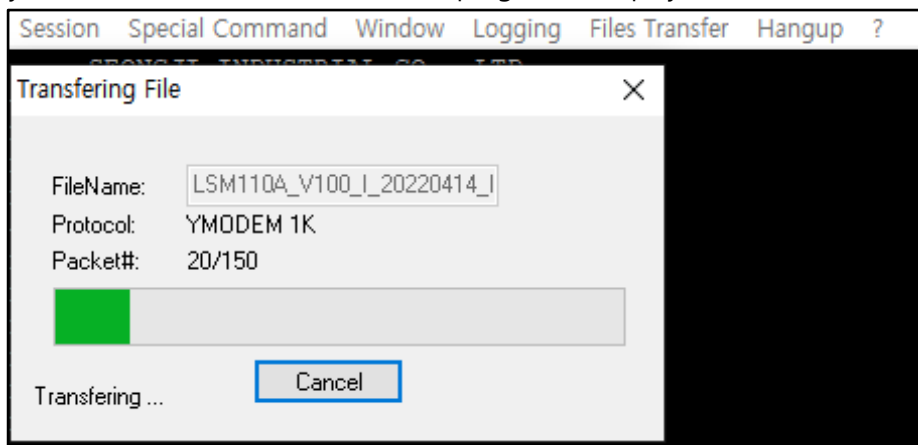   - Files Transfer -> Ymodem -> Send click

5) Find and select the .bin file you want to install

※ Warning: In addition to binary (.bin) files created by building SDKs, you are responsible for any problems that occur when using other binary (.bin) files.

6) If you select a bin file and send it, the progress is displayed as shown in the figure below

7) After the download is complete, the size of the binary is printed and F/W is booted
   - User FW Speed(baud rate): 9600

```
Size: 152384 Bytes
-----------------------------------
    SEONGJI INDUSTRIAL CO., LTD.
-----------------------------------
>> Device : LSM110A
>> Mode    : LoRa
>> IAP_VERSION : V1.0.0
-----------------------------------
>> APP_VERSION:        V1.0.0
>> MW_LORAWAN_VERSION: V2.4.0
>> MW_RADIO_VERSION:   V1.2.0
>> TXPOWER MODE :   HIGH POWER
>> L2_SPEC_VERSION:     V1.0.4
>> RP_SPEC_VERSION:     V2-1.0.1
------ OTAA ------
>> AppKey:    2B:7E:15:16:28:AE:D2:A6:AB:F7:15:88:09:CF:4F:3C
>> NwkKey:    2B:7E:15:16:28:AE:D2:A6:AB:F7:15:88:09:CF:4F:3C
------ ABP  ------
>> AppSKey:   2B:7E:15:16:28:AE:D2:A6:AB:F7:15:88:09:CF:4F:3C
>> NwkSKey:   2B:7E:15:16:28:AE:D2:A6:AB:F7:15:88:09:CF:4F:3C
------ IDs  ------
>> DevEui:    00:80:E1:15:00:09:DE:7A
>  AppEui:    01:01:01:01:01:01:01:01
>> DevAddr:   00:09:DE:7A
-----------------------------------
```

8) After setting Sigfox Mode, please set Initializing of restore flash factory settings by using ATCommand "AT$RFS"

```
┌─ AT Command ──────────────────────────────┐
│ ┌────────────────────────────────┐  ┌──────────┐ │
│ │ AT$RFS                         │  │ AT SEND  │ │
│ └────────────────────────────────┘  └──────────┘ │
└───────────────────────────────────────────┘
```

```
AT$RFS
-----------------------
    SEONGJI INDUSTRIAL CO., LTD.
-----------------------
>> Device : LSM100A
>> Mode   : Sigfox
```
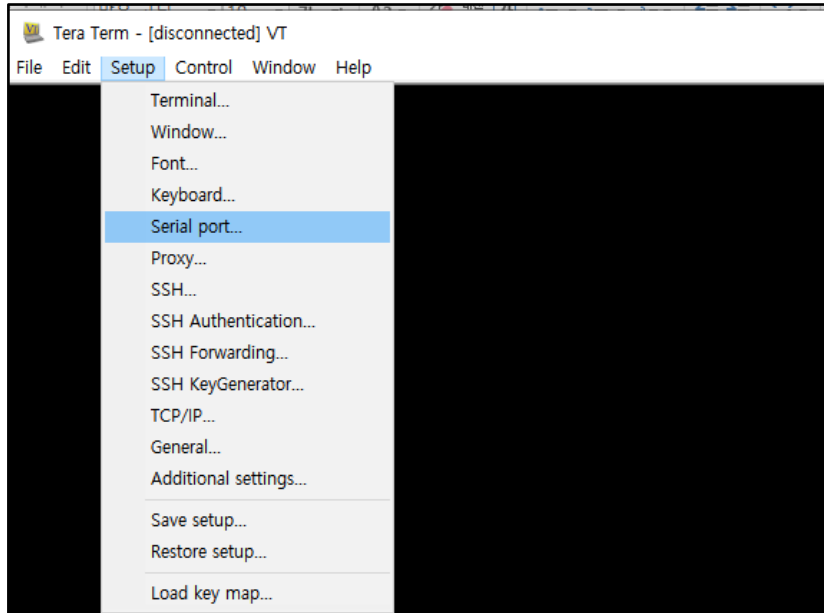
(If you don't setting 'Initializing of restore flash factory settings', using updated RC lastly is not available)

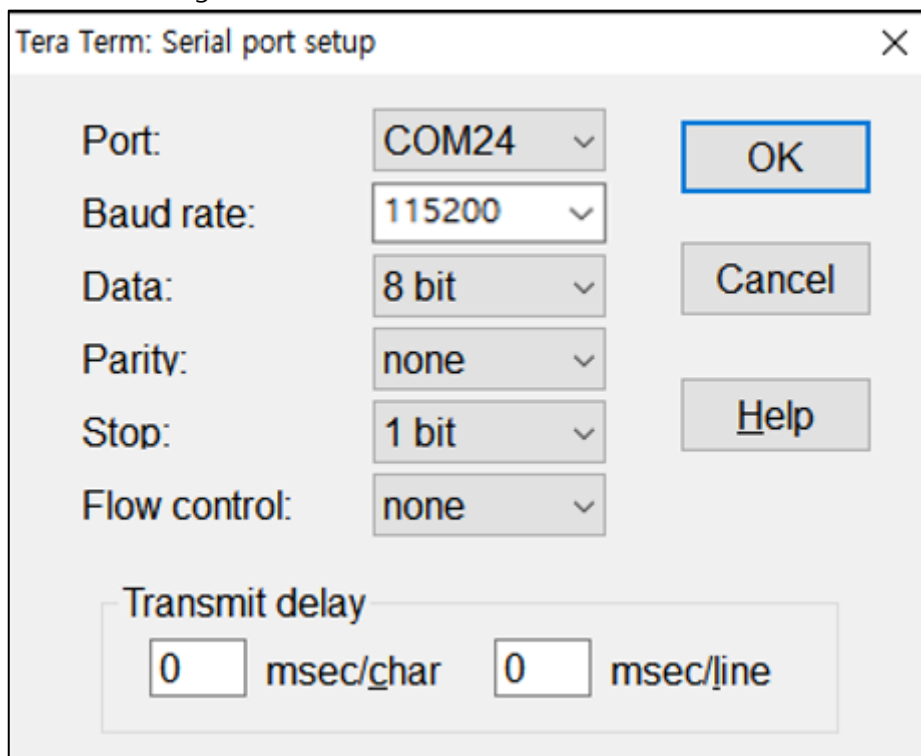## 1.2 F/W download using Tera term

Note: tera term does not work in the latest version(4.106), use version 4.72

1) Serial connection

- Setup -> "Serial port..." click

- Port: module port number Ex) COM24
- Baud rate: 115200
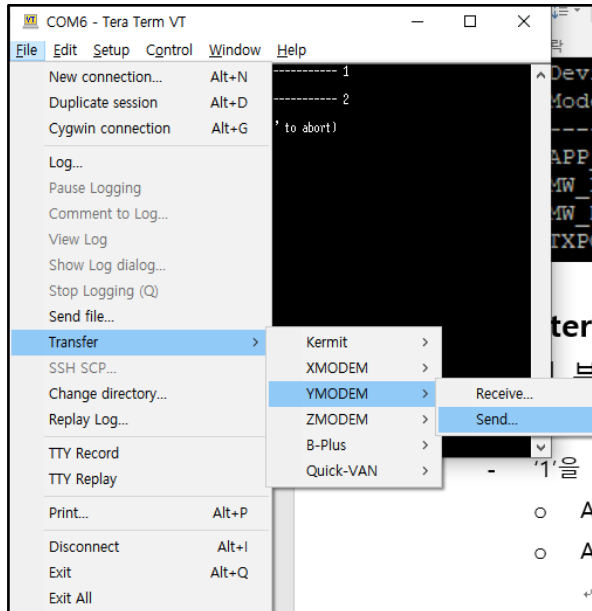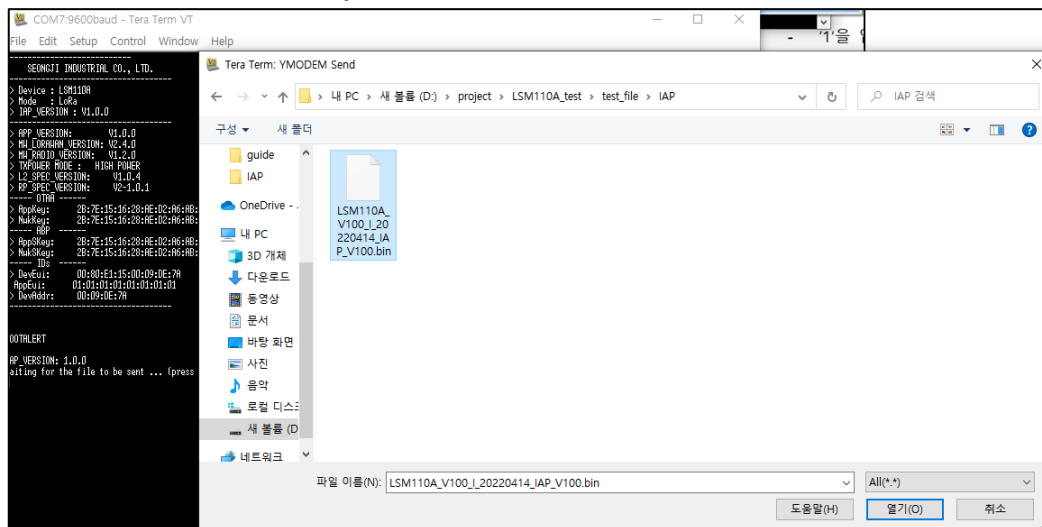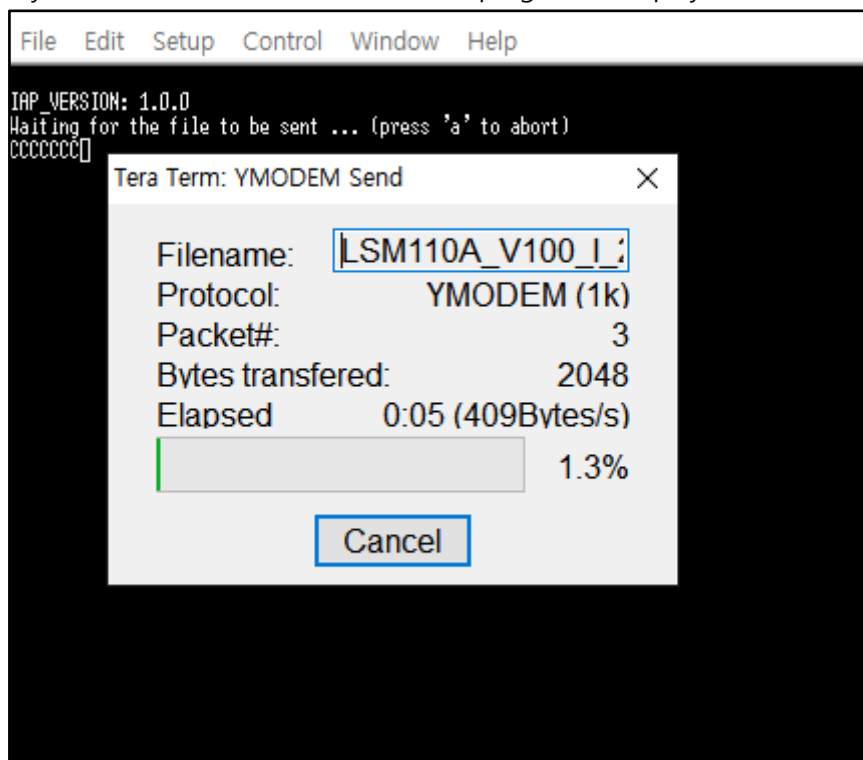- After setting as above, "OK" button click

2) Start download mode

    - Press reset and enter '1' within 0.5 seconds

3) In download mode

4) Find and select the .bin file you want to install

※ Warning: In addition to binary (.bin) files created by building SDKs, you are
              responsible for any problems that occur when using other binary (.bin)
              files.

5) If you select a bin file and send it, the progress is displayed as shown in the figure below

6) After the download is complete, the size of the binary is printed and F/W is booted
   - User FW Speed(baud rate): 9600

7) After setting Sigfox Mode, please set Initializing of restore flash factory settings by using ATCommand "AT$RFS"

(If you don't setting 'Initializing of restore flash factory settings', using updated RC lastly is not available)

1.3 F/W download using Tera term macro

1) Open folder 'LSM1x0A_FW_Download_Ymodem(ttl)'
   (File path : LSM100A₩Utilities₩PC program)

2) Make a folder named 'LSM1x0A_FW_File' in 'LSM1x0A_FW_Download_Ymodem(ttl)'.
   And add a bin file you want to download
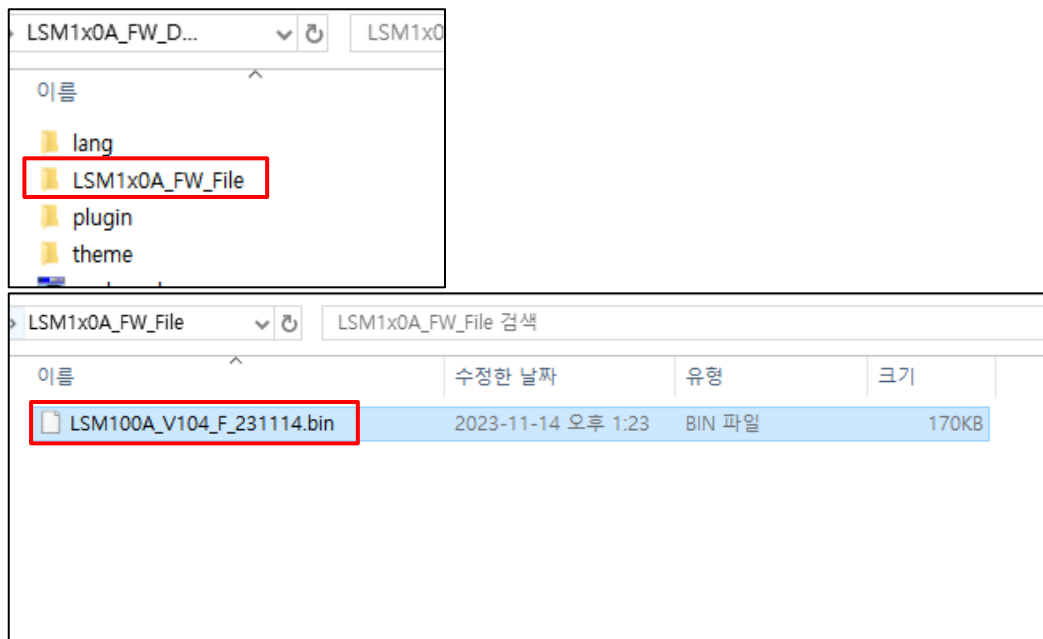
3) Set up the 'LSM1x0A_FW_Download.ttl' file
   - Enter the F/W file name to download in 'Download_File_Name.'

- Enter the module port number in 'CONNECT '/C'.

4) Excute 'LSM1x0A_FW_Dwonload_Ymodem.bat'
   - If you press the module reset button within 5 seconds, the download will begin.

5) After setting Sigfox Mode, please set Initializing of restore flash factory settings by using ATCommand "AT$RFS"

(If you don't setting 'Initializing of restore flash factory settings', using updated RC lastly is not available)