

# LSM1x0A

## F/W Download Guide

Rev 1.5

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SJIT

Nov. 17, 2023

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## 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	

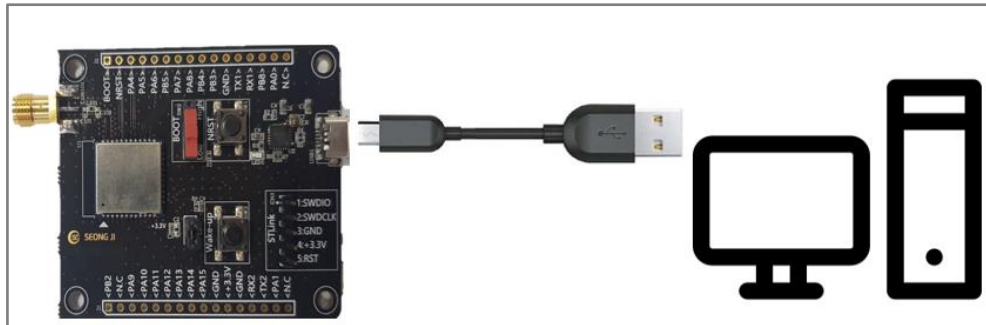
## 1. F/W Download - IAP

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

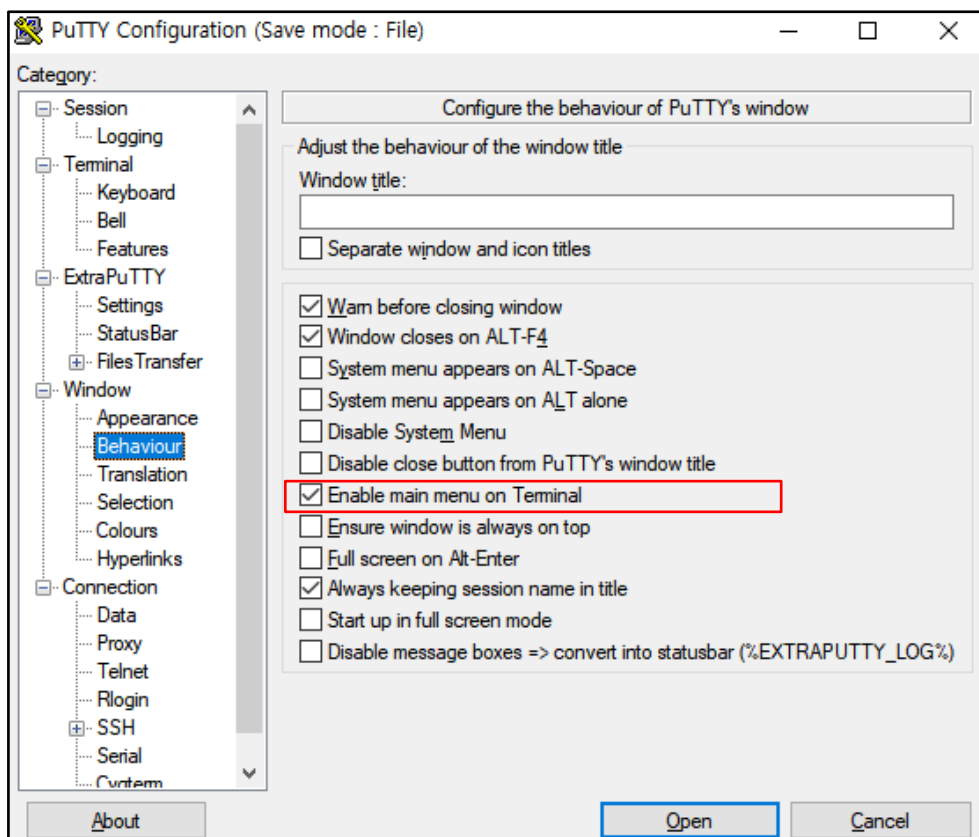


### 1.1 F/W download using Extra putty

Putty version: [Extra putty 0.30](#)

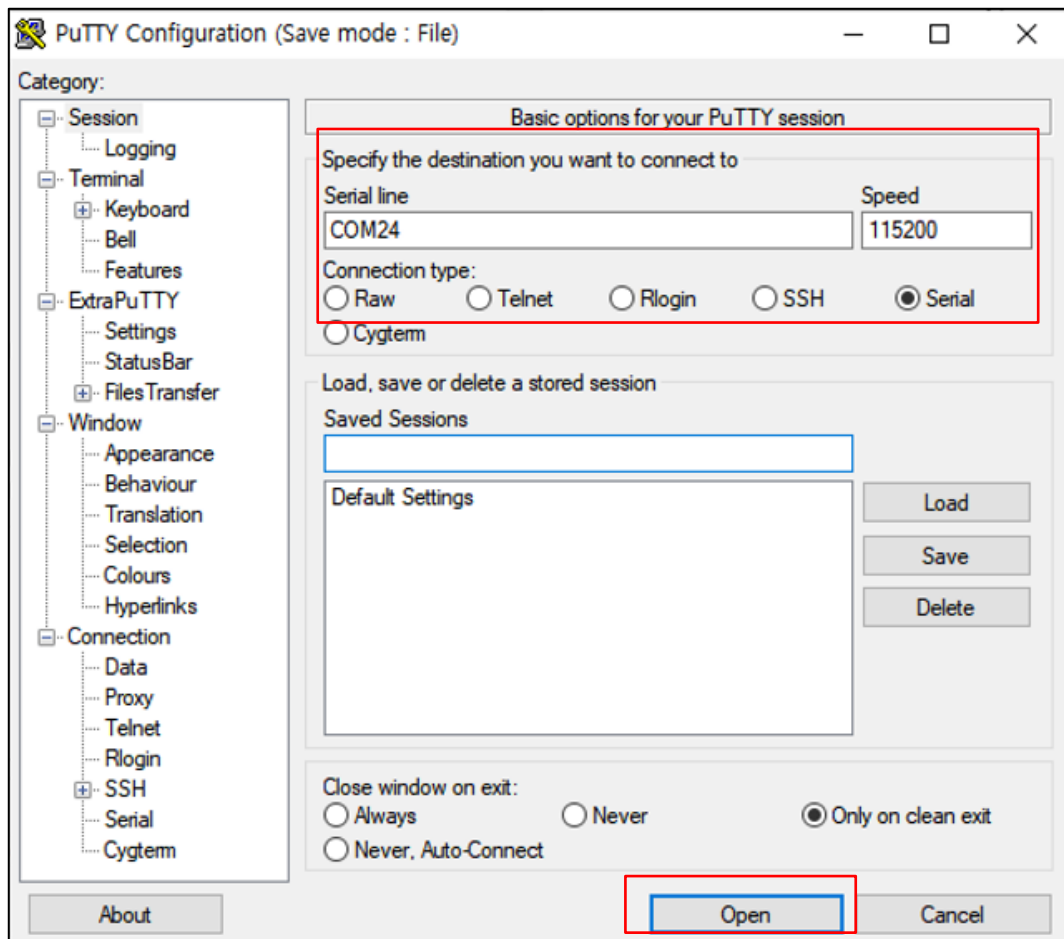
1)Putty standard setting

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



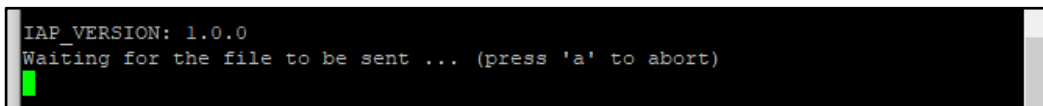
## 2) Serial connection

- Connection type: Serial
- Serial line: module port number Ex) COM24
- Speed(baud rate): 115200
- After setting as above, "Open" button click



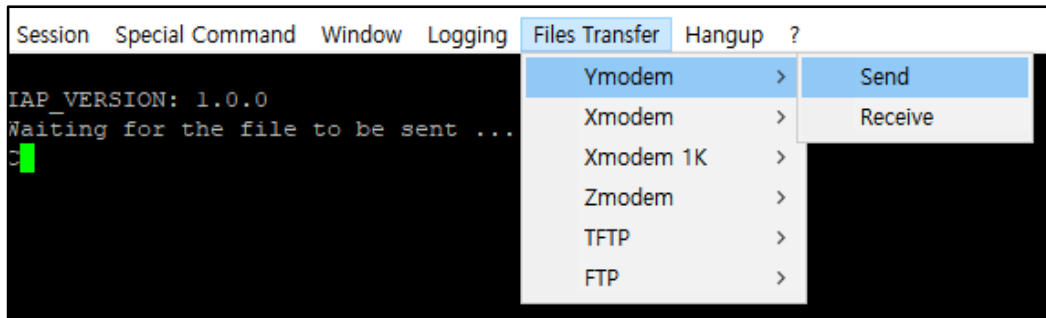
## 3) Start download mode

- Press reset and enter '1' within 0.5 seconds

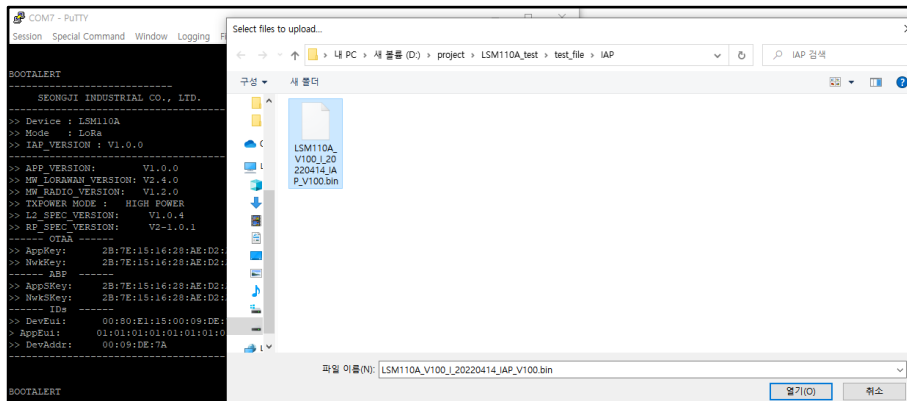


## 4) In download mode

- Files Transfer -> Ymodem -> Send click

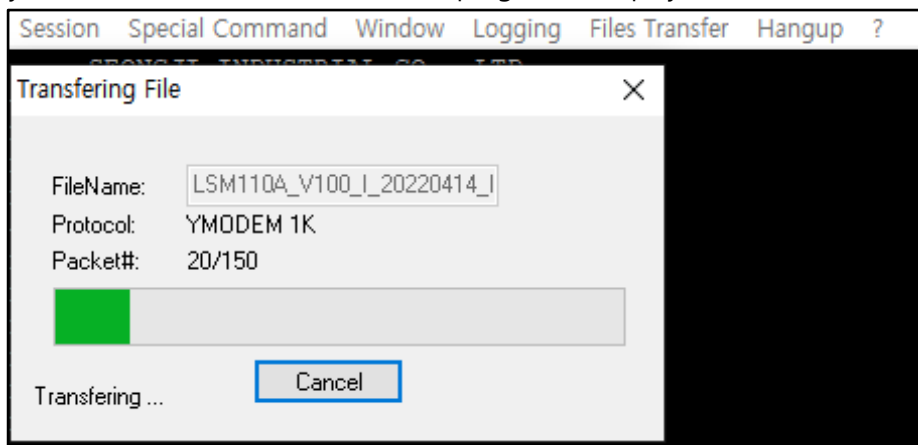


5) Find and select the .bin file you want to install



※ 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  
>> MH\_LORAWAN\_VERSION: V2.4.0  
>> MH\_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 -----

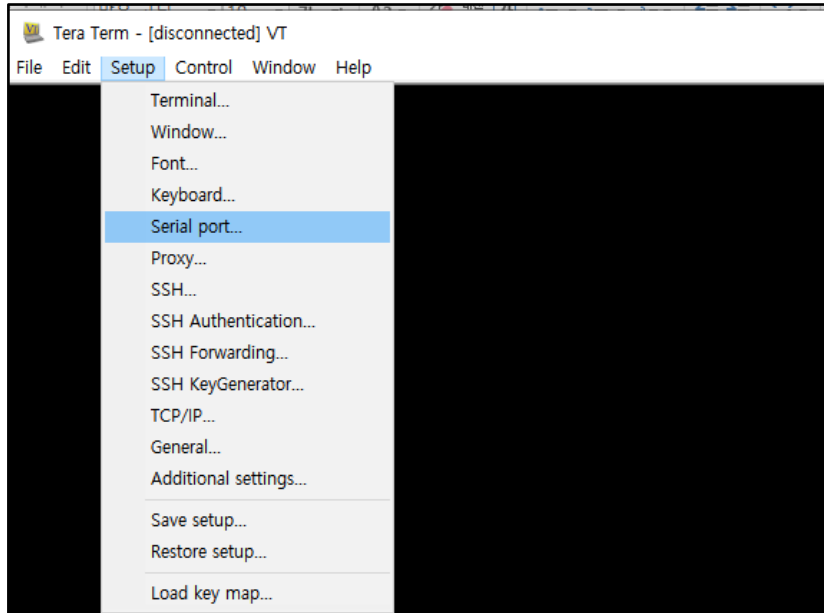
>> DevEui: 00:80:E1:15:00:09:0E:7A  
> AppEui: 01:01:01:01:01:01:01:01  
>> DevAddr: 00:09:0E:7A  
-----

## 1.2 F/W download using Tera term

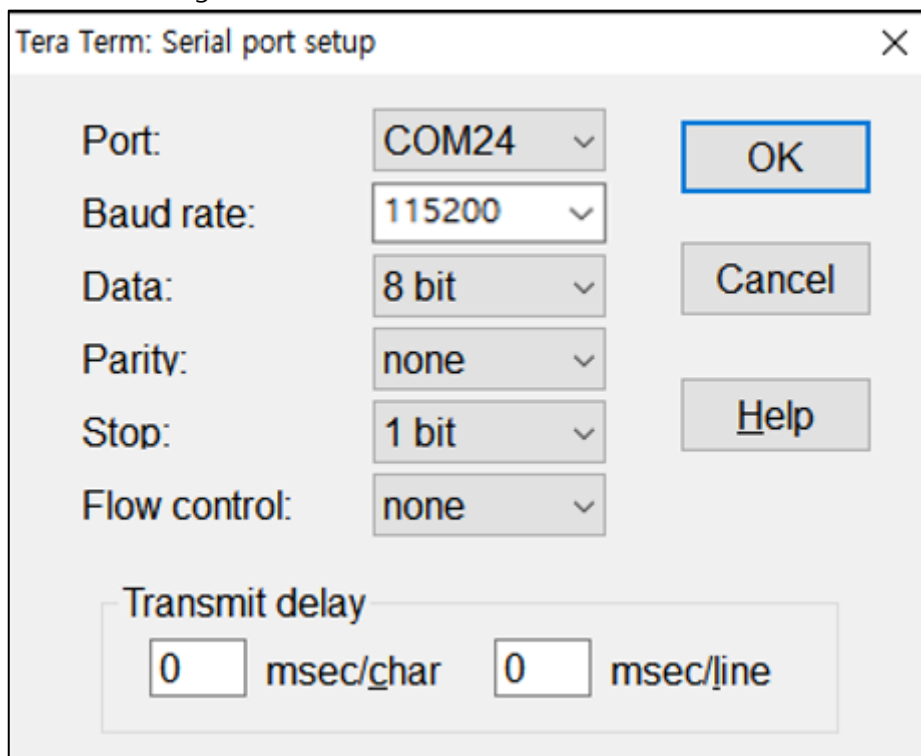
Note: tera term does not work in the latest version(4.106), use version 4.72

### 1) Serial connection

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



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

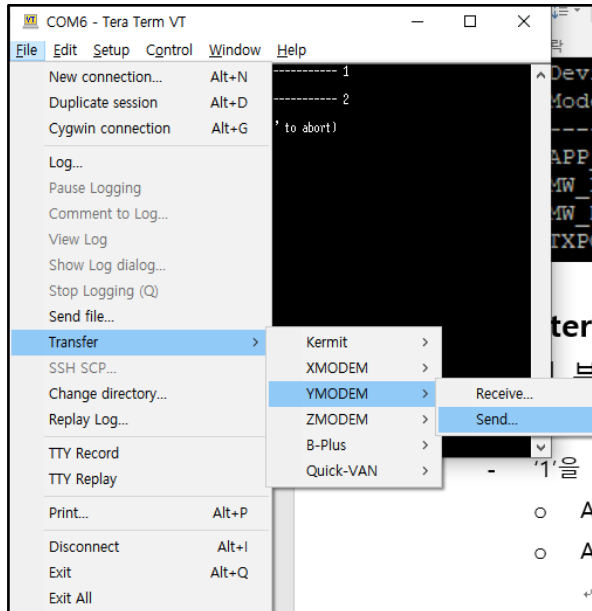


## 2) Start download mode

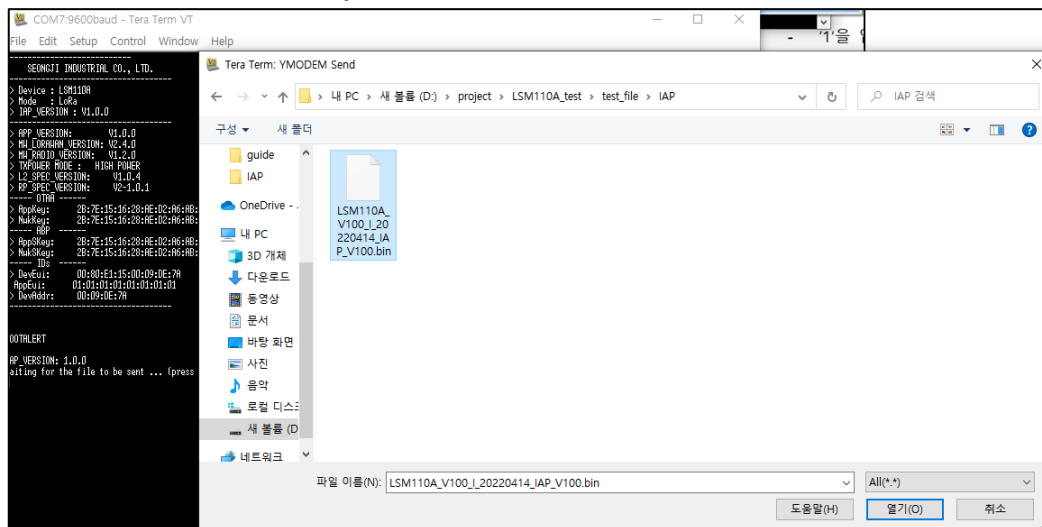
- Press reset and enter '1' within 0.5 seconds

```
IAP VERSION: 1.0.0
Waiting for the file to be sent ... (press 'a' to abort)
```

## 3) In download mode



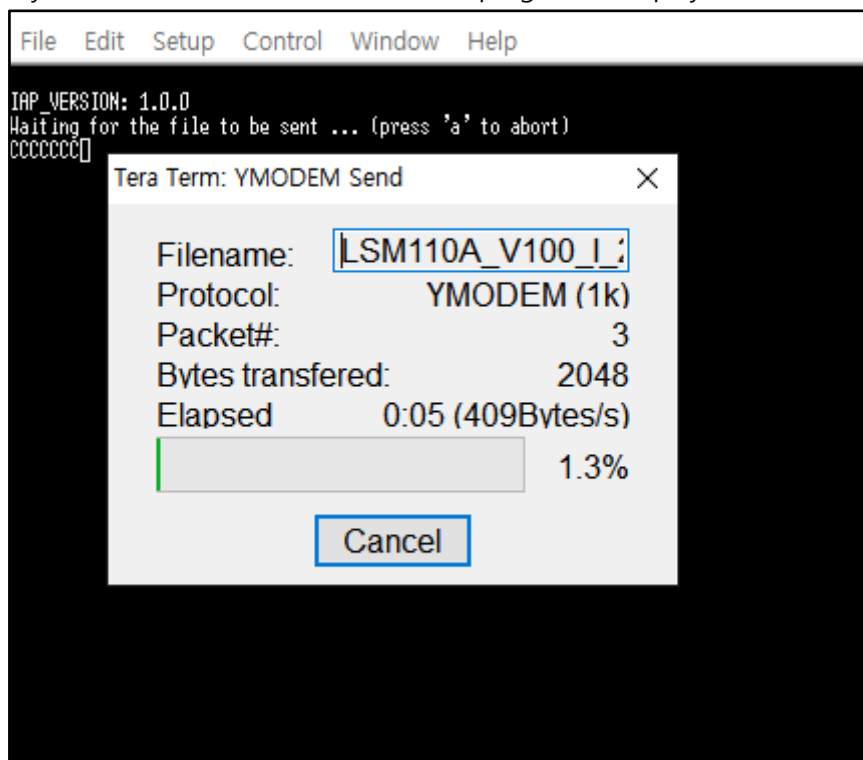
## 4) Find and select the .bin file you want to install



※ 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

```
Size: 152384 Bytes
-----
SEONGJI INDUSTRIAL CO., LTD.
-----
>> Device : LSM110A
>> Mode   : LoRa
>> IAP_VERSION : V1.0.0
-----
>> APP_VERSION:      V1.0.0
>> MH_CORAMAN_VERSION: V2.4.0
>> MH_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
-----
```

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

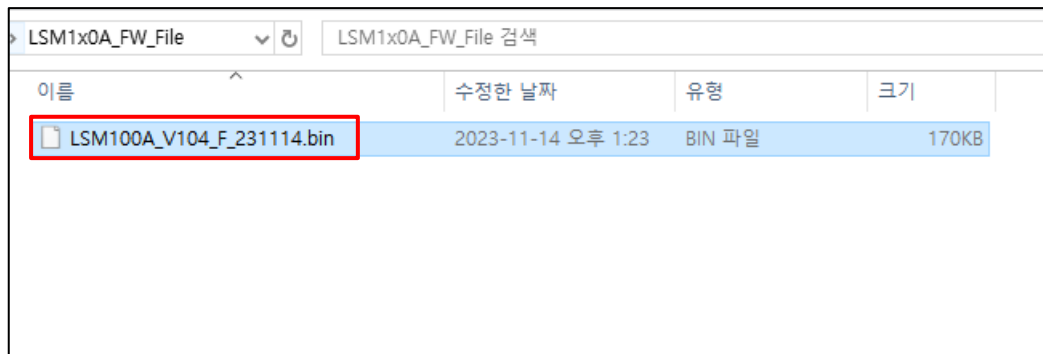


The screenshot shows a software interface for sending AT commands. At the top, there is a label "AT Command" above a text input field containing "AT\$RFS". To the right of the input field is a button labeled "AT SEND". Below the input field, the command "AT\$RFS" is displayed in blue. The response is shown in orange text, consisting of a blank line, the manufacturer "SEONGJI INDUSTRIAL CO., LTD.", another blank line, and two lines of status information: ">> Device : LSM100A" and ">> Mode : Sigfox".

( 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 : LSM100AWUtilities\WPC program)
- 2) Add the bin file to download in folder 'LSM1x0A\_FW\_File'



- 3) Set up the 'LSM1x0A\_FW\_Download.ttl' file
  - Enter the **F/W file name** to download in 'Download\_File\_Name.'

```
LSM1x0A_FW_Download.ttl - Windows 메모장
파일(F) 편집(E) 서식(O) 보기(V) 도움말(H)
; ----- Init Settings -----
getdir macro_path

Download_File_Path=macro_path
Download_File_Name='LSM100A_V104_F_231114.bin'

strconcat Download_File_Path 'WLSM1x0A_FW_FileW'
strconcat Download_File_Path Download_File_Name

Download_Baudrate=115200

Download_Mode_Command='1'
Download_Mode_String='Waiting for the file to be sent'

Download_Success_String='Size:'

count=0
```

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

```
LSM1x0A_FW_Download.ttl - Windows 메모장
파일(F) 편집(E) 서식(O) 보기(V) 도움말(H)
; ----- UART Connect -----
:UART_Connect
CONNECT '/C=21

setbaud Download_Baudrate
```

4) Execute 'LSM1x0A\_FW\_Dwload\_Ymodem.bat'

- If you press the module reset button within 5 seconds, the download will begin.

