Firmware Upgrade

SEONG JI INDUSTRIAL

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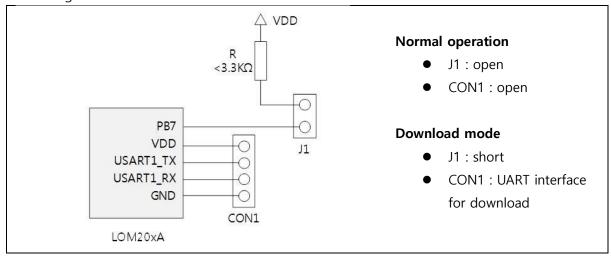
Hardware configuration

The LOM20xA module can download and upgrade firmware via UART communication on the USART1 port. To download the firmware, you need to set the pins as shown below.

Pin name	Pin number	Description
USART1_RX	7	Connect to PC with UART RX pin for firmware download
USART1_TX	6	Connect to PC with UART TX pin for firmware download
PB7	2	Pull-up to VDD level
		(After downloading the firmware, connect to GND or N.C)

[table. Download pin]

The circuit configuration for firmware downloading can be configured as shown in the following circuit diagram



Serial port setup

To download firmware through UART, connect UART interface of PC and module and set serial port as below.

Baud rate: 115200

Data: 8bitParity: noneStop: 1bit

• Flow control : none

Tera Term

To download the firmware, use a terminal program that supports serial communication and file transfer. This application note takes the example of a Tera Term supporting this function

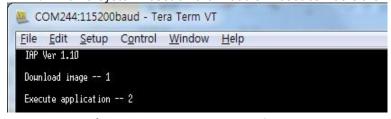
Tera Term can be downloaded from https://en.osdn.jp/projects/ttssh2/releases/ using open source software.



Firmware download

The procedure for downloading the firmware is as follows.

- 1. Set the PB7 pin to Logic High
- Connect the UART pin of the module to the download PC as in the example circuit above.
- 3. Execute Tera Term and execute serial port setting (115200/8/n/1) and connection.
- 4. Run a system reset on the module. Reset can be either Power-on reset or NRST reset.



[after reset, Tera Term screenshot]

5. After enter the number 1, press the Enter key

```
COM244:115200baud - Tera Term VT

File Edit Setup Control Window Help

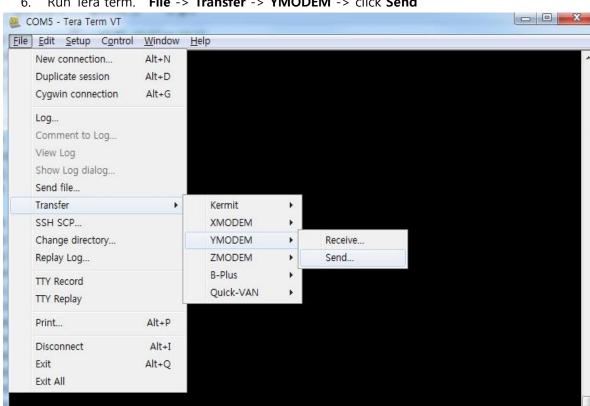
IRP Ver 1.10

Download inage -- 1

Execute application -- 2

Haiting (press 'a' to abort)
```

[after enter the number 1 and press the Enter key, Tera Term screenshot]

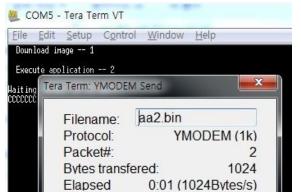


6. Run Tera term. File -> Transfer -> YMODEM -> click Send

[Tera Term : File→Transfer→YMODEM→Send]

Select the binary file you want to download (file extension : bin) X Tera Term: YMODEM Send ≪ Keil → Node → LoRaMac → classA → Objects 0 새 폴더 ₩ - □ 이름 수정한 날짜 유형 크기 ☆ 즐겨찾기 2016-08-02 오후... 🐌 다운로드 aa1.bin BIN 파일 54KB ■ 바탕 화면 aa2.bin 2016-08-03 오전... BIN 파일 51KB 💹 최근 위치 aa3.bin 2016-08-03 오전... BIN 파일 51KB 2016-08-03 오후... BIN 파일 aa0803_01.bin 51KB 🥽 라이브러리 2016-08-03 오후... BIN 파일 aa0803_01_org.bin 51KB 문서 2016-08-02 오후... BIN 파일 aaa.bin 51KB 비디오 2016-08-03 오전... HEX 파일 aaa.hex 122KB ■ 사진 2016-08-03 오후... CRF 파일 adc.crf 412KB 🜒 음악 2016-08-03 오후... D 파일 adc.d 5KB 2016-08-03 오후... 0 파일 adc.o 508KB ■ 컴퓨터 2016-08-03 오후... CRF 파일 adc-board.crf 414KB 基 로컬 디스크 (C:) 2016-08-03 오후... D 파일 adc-board.d 5KB 로컬 디스크 (D:) ▼ ◀ [파일 이름(N): aa2.bin All(*.*) 도움말(H) 열기(O) 취소

[Binary file selection screenshot]



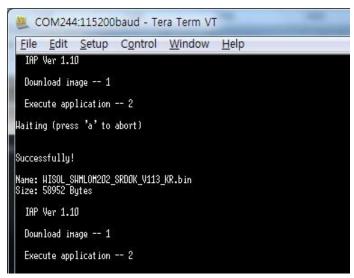
8. Select the binary file and click "Open" to execute the firmware download.

2.0%

[Firmware download progress screenshot]

Cancel

- 9. When the firmware download is complete, the message "Successfully!" Appears on the screen.
 - If the download progress is not 100%, or the message "Successfully!" is not displayed, start from step 1



[Firmware download complete screenshot]