

EVL20xA User Manual

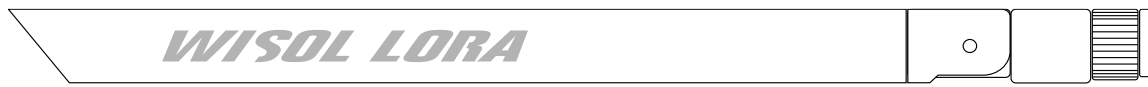
SEONGJI INDUSTRIAL

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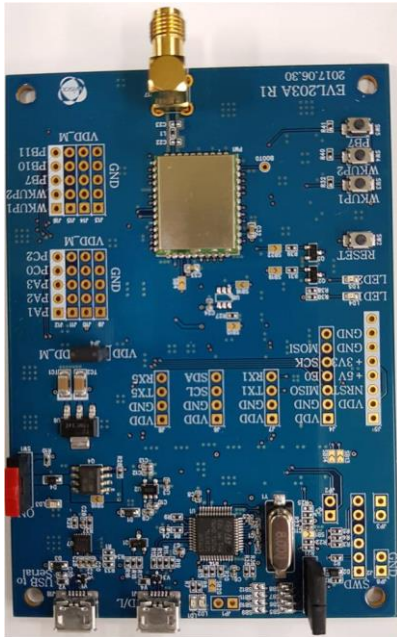
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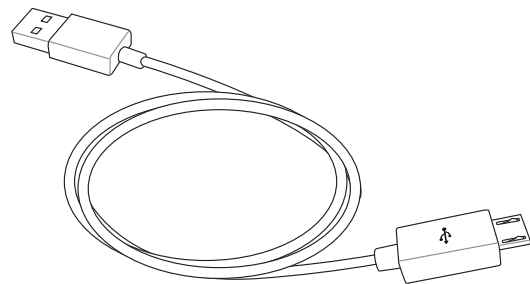
Eavluation kit Components



Antenna



EVL20xA



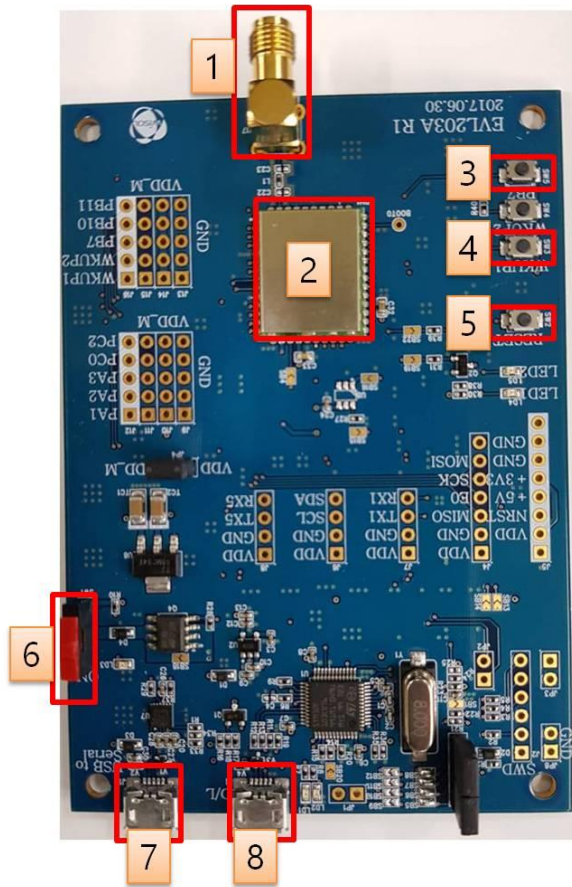
Micro USB cable

[Fig. Evaluation Kit components]

EVL20xA Evaluation Kit Set includes EVL20xA, Antenna, Micro USB cable and Jumper cable.

EVL20xA Hardware Configuration

EVL20xA Board



[Fig. EVL20xA]

1 : RF SMA Connector

2 : LOM20xA Module

3 : The push button used when updating the firmware with UART, enters the firmware update mode at boot time while pressing the button. (You do not need to press the button after entering the firmware update mode)

4 : This button is a push button that wakes up the sleep state and wakes-up when the button is pressed and released. In Class A, the module enters sleep mode automatically after completion of operation, so you have to press and release the button each time you send a command to the UART.

5 : Hardware Reset switch

6 : Power switch

7 : This USB port is a debug UART that allows input of CLI Command and debug message output. This supplies power..

8 : The EVB includes ST-Link. This port is the USB port of ST-Link. This ST-Link is connected to the SWD/SWCLK line of the MCU. Therefore, you can debug and download firmware through this port.

EVL20xA Connector Pin

Connector	Pin	Pin name	Mcu pin	Fucntion
J16	1	WKUP1	PA0	Wake Up: Rising Edge
	2	WKUP2	PC13	
	3	PB7	PB7	Boot Loader (High Active)
	4	PB10	PB10	
	5	PB11	PB11	
J12	1	PA1	PA1	
	2	PA2	PA2	
		PA3	PA3	
	3	PC0	PC0	
	4	PC2	PC2	Battery Level 12bit
J8	1	VDD		3.3V
	2	GND		Ground
	3	TX5	PB3	UART TX
	4	RX5	PB4	UART RX
J6	1	VDD		3.3V
	2	GND		Ground
	3	SCL	PB8	
	4	SDA	PB9	
J7	1	VDD		3.3V
	2	GND		Ground
	3	TX1	PA9	UART TX for Firmware download
	4	RX1	PA10	UART RX for Firmware download

Board configuration for firmware update

- 1) How to use ST-Link included in EVB.

STEP1

- Connect the micro USB cable to the J1 port on the PC.

STEP2

- Download the firmware hexa file using ST-Link Utility.
- Or Download from the IDE environment of IAR compiler.

- 2) How to update via UART1.

You can update through the UART1 or UART5

Default bootloader file is set to UART1.

If you want to use UART5. Download

Download "LOM20xA_IAP_V111_non_security_uart5.hex" file to the module

And then input "LRW 7B 30" command.

- Using the UART1

Connect TX1 and RX1 of EVB J7 to PC through Serial to USB module.

While holding down the SW5 button on the EVB, turn on the power.

See the "AppNote_LOM20xA_Firmware_Upgrade_[date]_en.pdf" file for instructions on how to download the firmware.

- Using the UART5

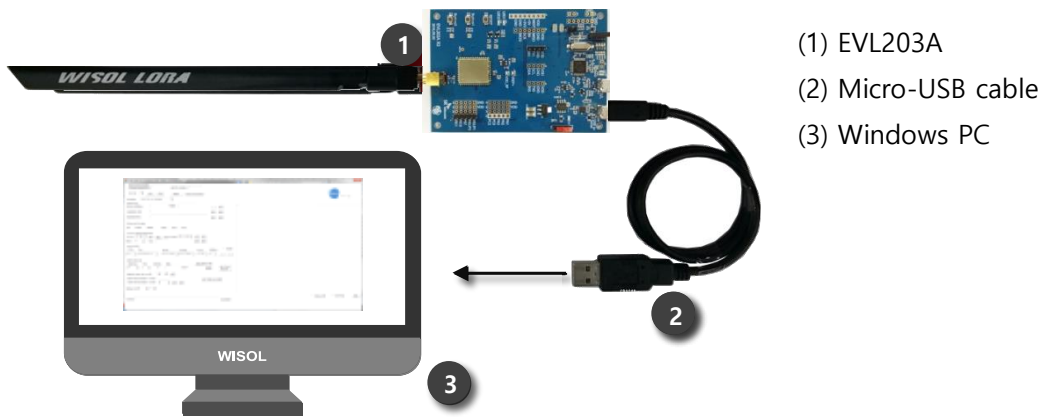
While holding down the SW5 button on the EVB, turn on the power.

See the "AppNote_LOM20xA_Firmware_Upgrade_[date]_en.pdf" file for instructions on how to download the firmware

Installing driver to use UART Terminal Program

Evaluation board Connection

Connect the EVL203A and Windows PC with a Micro-USB cable as shown below.



[Fig. EVL203A Connection]

Installing the FTDI driver

Step 1

Access the linked site below.

<http://www.ftdichip.com/Products/ICs/FT234XD.html>

Step 2

Click **VCP Drivers** on **Product information**..

▶ Product information

- [FT234XD Datasheet](#)
- [VCP Drivers](#)
- [D2XX Drivers](#)
- [AN_175_Battery Charging Over USB](#)

Step 3

Select the driver corresponding to the PC specification and download it.

Currently Supported VCP Drivers:

Operating System	Release Date	Processor Architecture						
		x86 (32-bit)	x64 (64-bit)	PPC	ARM	MIPSII	MIPSIV	SH4
Windows*	2017-03-10	2.12.26	2.12.26	-	-	-	-	-
Linux	2009-05-14	1.5.0	1.5.0	-	-	-	-	-
Mac OS X 10.3 to 10.8	2012-08-10	2.2.18	2.2.18	2.2.18	-	-	-	-
Mac OS X 10.9 and above	2017-05-12	-	2.4.2	-	-	-	-	-
Windows CE 4.2-5.2**	2012-01-06	1.1.0.20	-	-	1.1.0.20	1.1.0.10	1.1.0.10	1.1.0.10
Windows CE 6.0/7.0	2016-11-03	1.1.0.22 CE 6.0 CAT CE 7.0 CAT	-	-	1.1.0.22 CE 6.0 CAT CE 7.0 CAT	1.1.0.10	1.1.0.10	1.1.0.10
Windows CE 2013	2015-03-06	1.0.0			1.0.0			

Step 4

Install the driver from the linked site by referring to the guide document for the PC operating system.

<http://www.ftdichip.com/Support/Documents/InstallGuides.htm>

► Installation Guides

The table below lists the documents currently available to assist with the installation of FTDI device driver. To view an application note, click on the document title. To save a copy of an application note, right-click

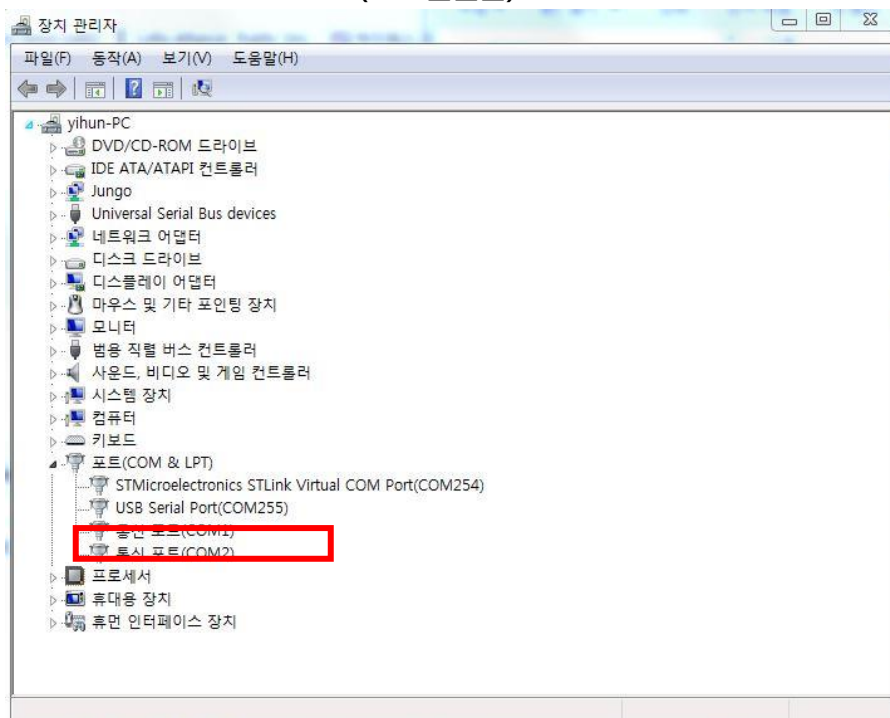
All of the application notes are in PDF format and require [Adobe Acrobat Reader](#) to be installed before

Document Title	Revision
FT51A Installation Guide	1.2
FT9xx Toolchain Installation Guide	1.05
D3XX Installation Guide	1.0
Windows 10 Installation Guide	1.0
Windows 8 Installation Guide	1.0
Windows 7 Installation Guide	1.1
Mac OS X Installation Guide	1.3

Step 5

After connecting the EVL202A to a Windows PC, check the serial port connection and port number in the Device Manager.

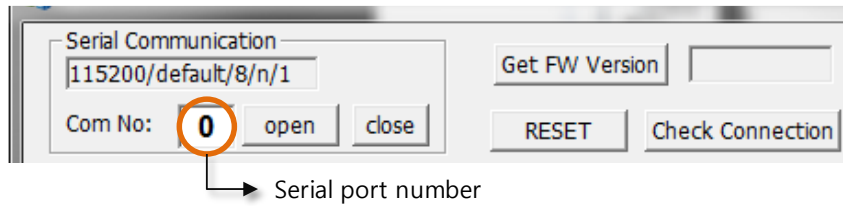
USB Serial Port(Com□□□)



[Fig. Device Manager for serial port connection confirmation]

Step 6

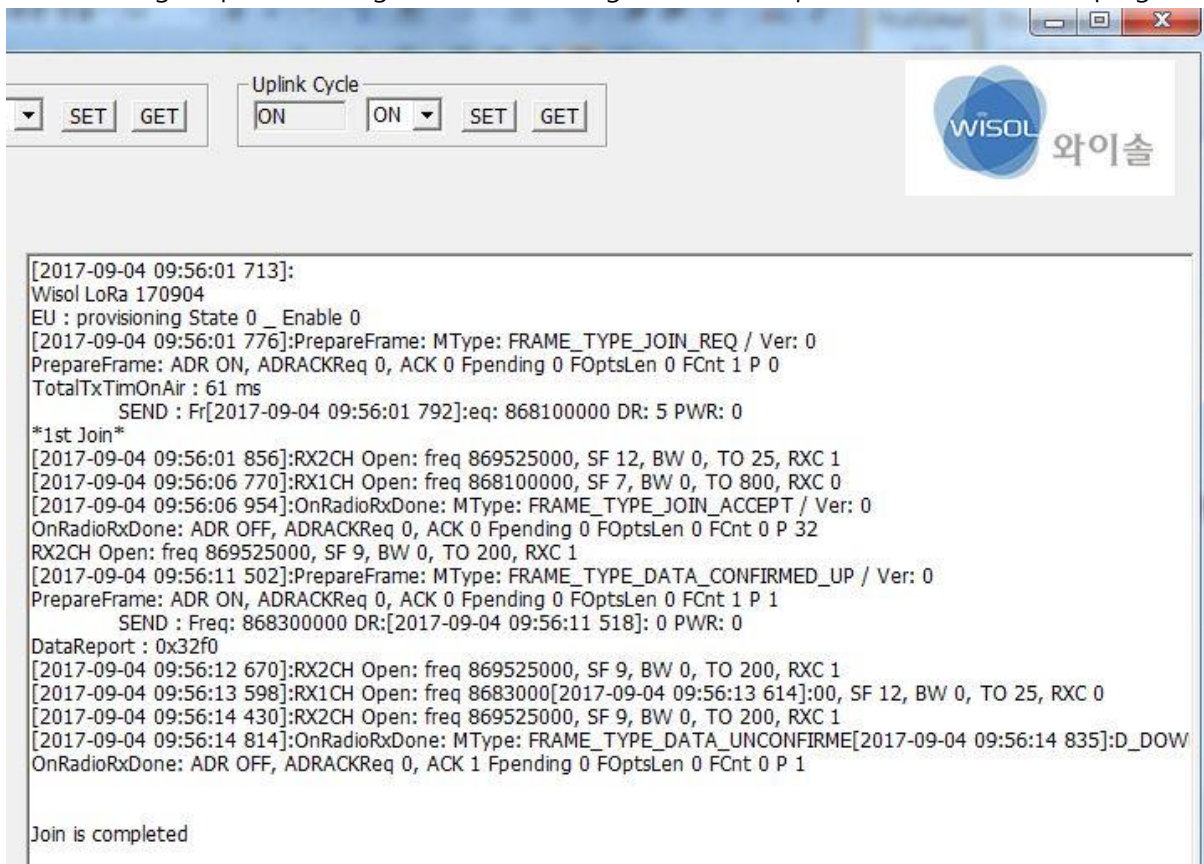
Run the provided UART terminal program LoRaWAN_GUI and click the **open** button after inputting the serial COM number confirmed by the device manager.



[Fig. Enter COM number]

Step 7

Check the log output in the log window on the right side of the provided UART terminal program.



[Fig. Log output screen of the provided UART terminal program]