

Type2AB Firmware Upgrade Guide

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Revision History

Revision	Date	Description
V0.1.0	2021-03-02	<ul style="list-style-type: none">• Initial version.• Support Type2AB EVB
V0.2.0	2022-03-04	<ul style="list-style-type: none">• Update the EVB Junper setting.
V0.2.1	2023-03-07	<ul style="list-style-type: none">• Update the description and pictures.

INTRODUCTION

1.1 Scope

This document provides instructions how to download firmware to Type2AB EVB and also applicable to other Type2AB-based boards.

1.2 Audience

This document is intended for software/firmware engineers to evaluate and develop applications with Murata's Type2AB module.

1.3 Contact Information and Support

For general contact, technical support services, technical questions and report documentation errors contact Murata Technical Support window. Please keep us informed of your comments and suggestions for improvements. Murata will take into consideration any feedback from the users of this information.

1.4 Text Conventions

Danger: This information MUST be followed or catastrophic equipment failure or bodily injury may occur.
--

Caution: Alerts the user to important points about using the product; if these points are not followed, the product and end user equipment may fail or malfunction.
--

Tip: Provides advice and suggestions that may be useful when using the product.

Note: Provides note admonitions that should be took into considerations when using the product.

1.5 Acronyms

Abbr.	Description
EVB	Evaluation Board
FW	Firmware

1.6 Related Documents

- [DS] Type2AB_Module_Datasheet.pdf, Murata
- [UM] muRata UWB Module(2AB) EVB User manual v5.1_20240305.pdf, Murata
- [nRF Command Line Tools Guide](#), Nordic

REQUIREMENTS

2.1 EVB Hardware Requirements

Table 2.1: EVB Hardware Requirements

Name	Quantity	Comment
Type2AB EVB	1	Type2AB EVB
J-Link	1	J-Link Debug Probes provided by SEGGER
MicroUSB Cable	1	Power Supply

2.2 Software Requirements

Table 2.2: Software Requirements

Name	Quantity	Comment
nRF Command Line Tools	1	The nRF Command Line Tools is used for development, programming and debugging of Nordic Semiconductor.
Type2AB FW Binary File	1	
SEGGER J-link Software	1	SEGGER J-Link programmers and debuggers

OPERATION STEPS

3.1 Power the EVB

Type2AB EVB supports multiple power supply options. Currently, power supply option 3 is used. So make sure the EVB jumper setting is same as the below the Fig. 3.1 *EVB Jumper Setting(UART interface)*.

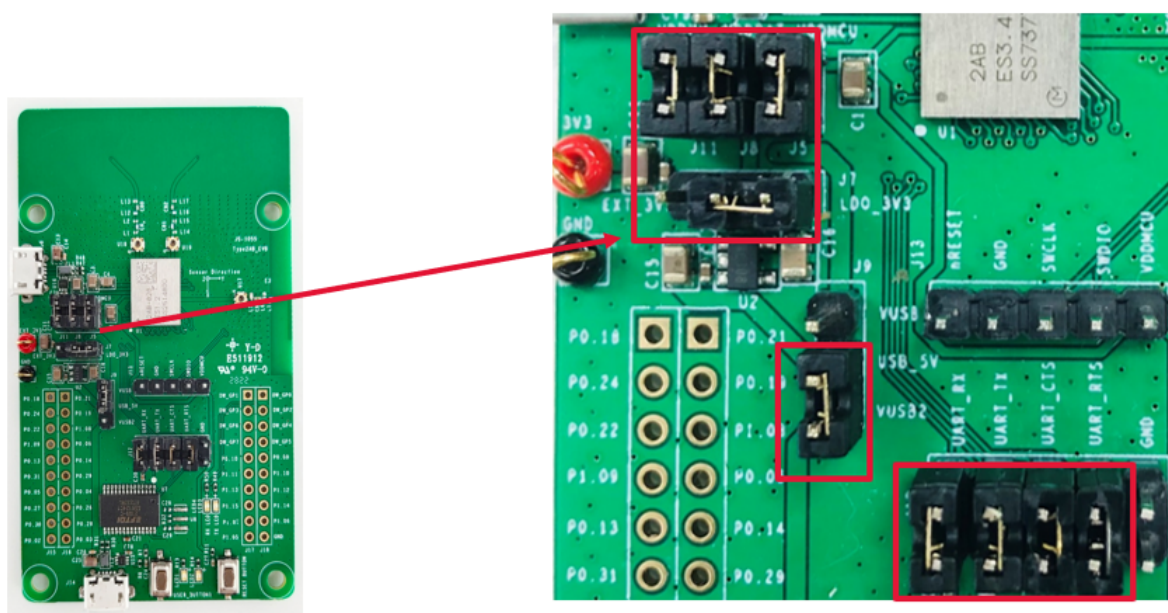


Fig. 3.1: EVB Jumper Setting(UART interface)

Now, you select the Micro USB connector(*J14*) as power supply.

Note: If you want to use other power supply options, please refer to “muRata UWB Module(2AB) EVB User manual v5.1_20240305.pdf”.

3.2 Connect the Board

See Fig. 3.2 *SWD Interface* and follow the instructions below to complete the connections.

1. Connect the EVB with the J-Link.

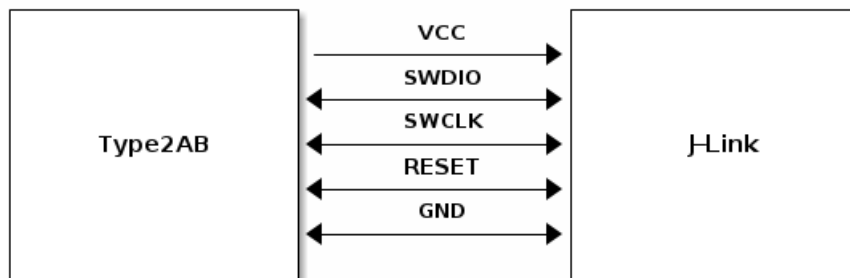


Fig. 3.2: SWD Interface

2. Plug the J-Link into the PC with a USB Cable.

If the board is Type2AB EVB, please refer to the following connection.

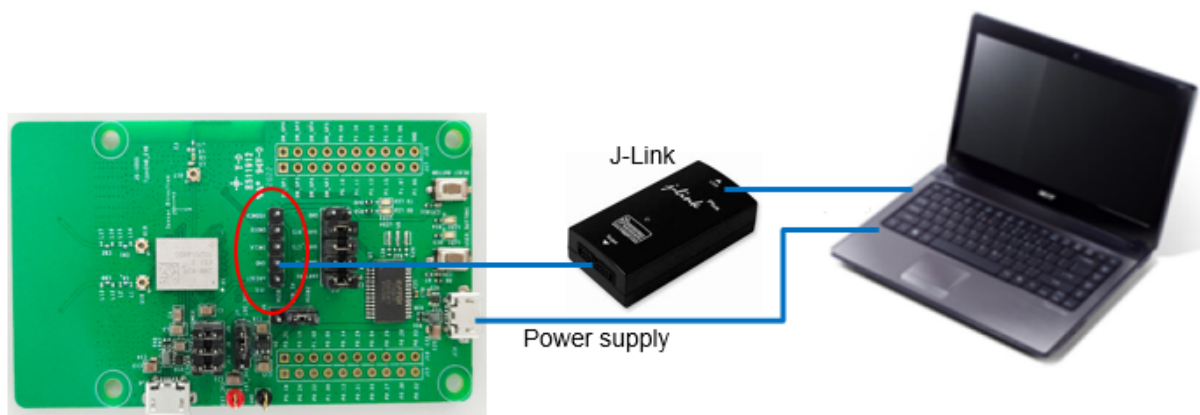


Fig. 3.3: Type2AB EVB Hardware Connection

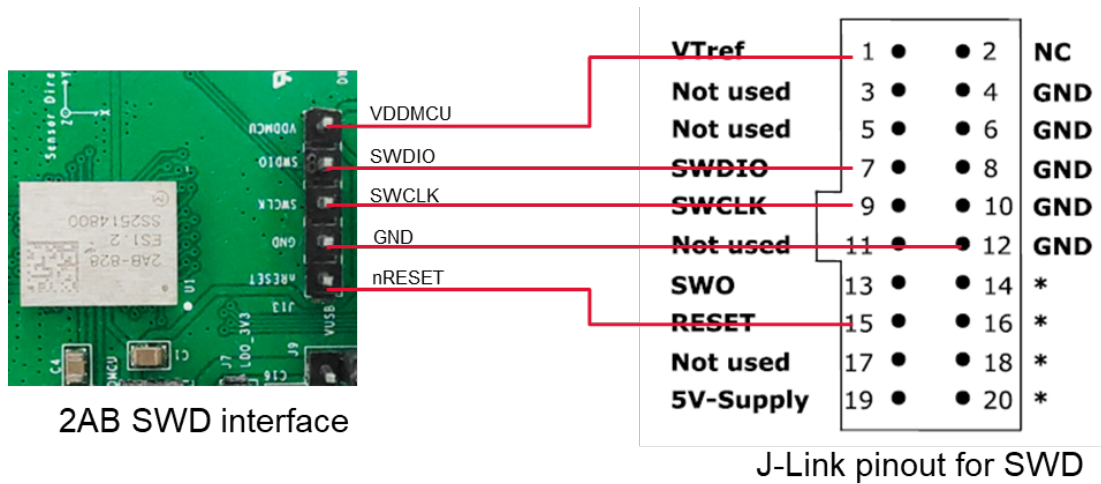


Fig. 3.4: EVB/J-Link Connection

3.3 Install nRF Command Line Tools

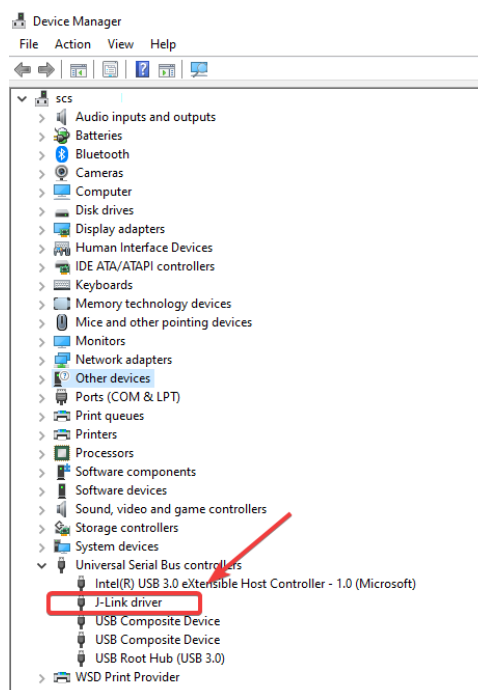
Complete the following steps to install the nRF Command Line Tools:

1. Download the [nRF Command Line Tools](#).
2. Run the installer for your operating system.

After running the installer, the nRF Command Line Tools are ready for use.

The [SEGGER J-link Software](#) can be installed by downloading and running the installer from SEGGER Software.

When installing the nRF Command Line Tools on PC, [SEGGER J-link Software](#) is automatically installed in addition to the tools.



3.4 Download firmware

1. Open the terminal in the current directory of FW(such as: *Type2AB-TestFW-V0.7.0-ALL-20220926.hex* or later).
2. Select the download according to whether you need to erase all.

If *--chiperase* is given, all the available user non-volatile memory, including UICR, will be erased before programming.

```
nrfjprog -f nrf52 --program <hex_file> --chiperase --verify
```

Note: If there are multiple J-Link connected to PC, you need to add the *--snr <Segger-chip-Serial-Number>* parameter.

Download Murata's officially released firmware and executr the log reference as follows:

```
C:\Users\sychip>: nrfjprog -f nrf52 --program Type2AB-TestFW-V0.7.0-ALL-20220926.
↪hex --chiperase --verify
Parsing hex file.
Erasing user available code and UICR flash areas.
Applying system reset.
Checking that the area to write is not protected.
Programming device.
Verifying programming.
Verified OK.
C:\Users\sychip>:
```

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- Undersea equipment.
- Power plant control equipment
- Medical equipment.
- Transportation equipment (vehicles, trains, ships, elevator, etc.).
- Traffic signal equipment.
- Disaster prevention / crime prevention equipment.
- Burning / explosion control equipment
- Application of similar complexity and/ or reliability requirements to the applications listed in the above.

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