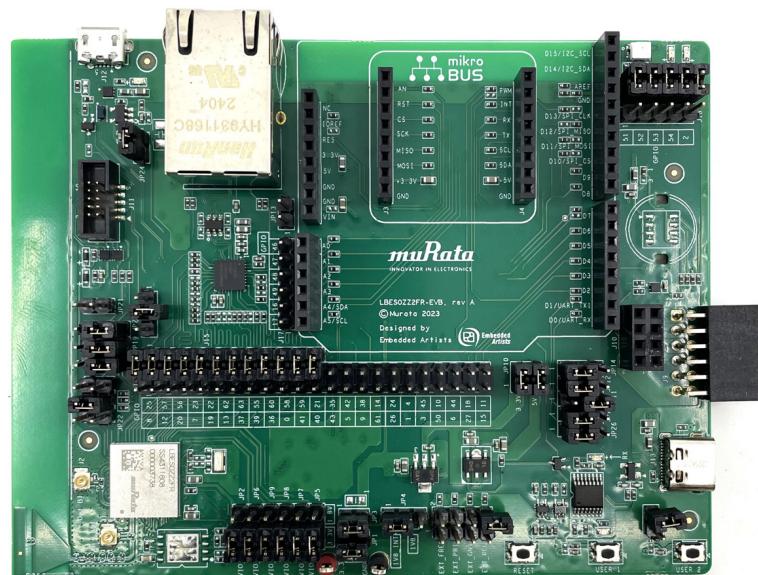


Type 2FR EVK

Quick Start Guide - Rev. 1.1



1 Introduction

Murata Type 2FR module (Murata part number LBES0ZZ2FR) includes 3 radios: Wi-Fi, BLE and 802.15.4. It is based on NXP's RW612 chip.

2 Murata Type 2FR EVK Contents

The Murata Type 2FR EVK contains the following items:

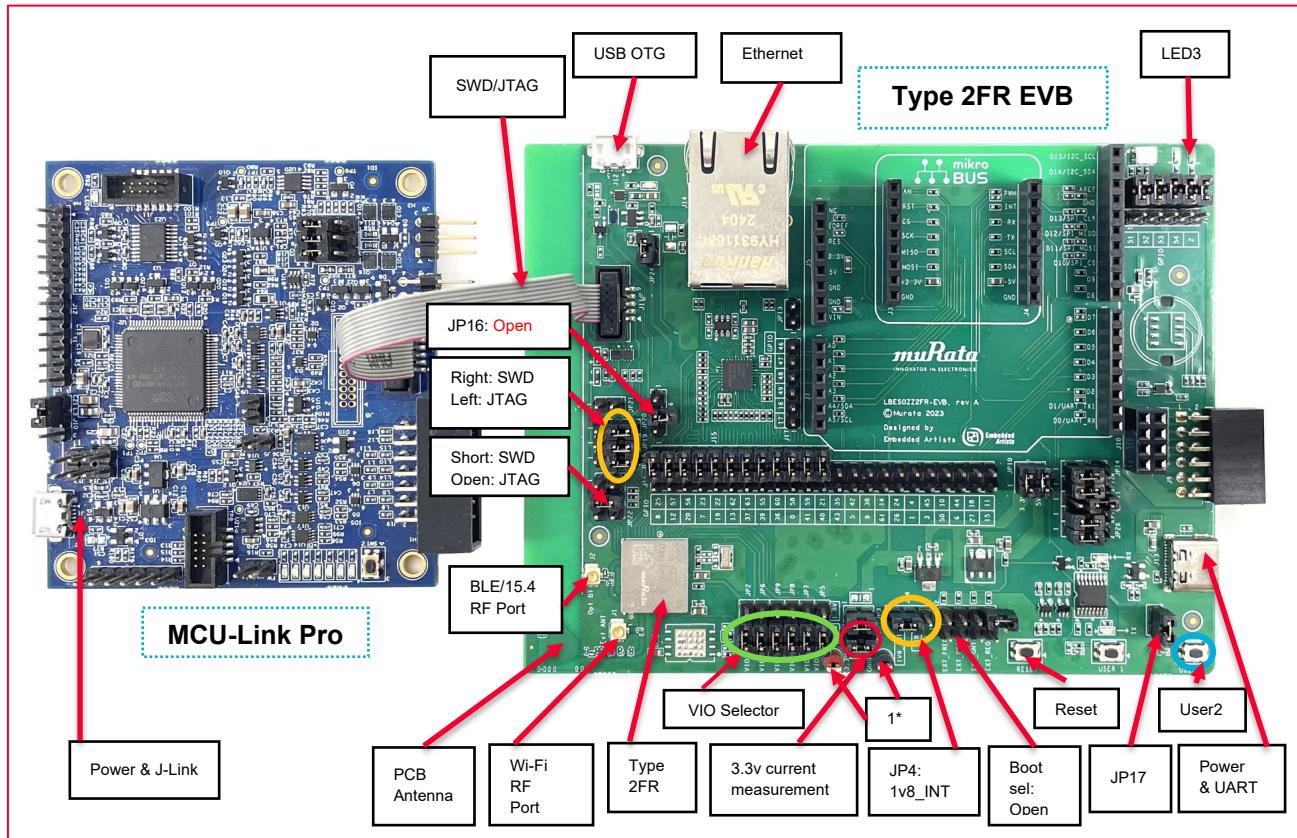
1. Type 2FR EVB
2. 1 USB-C cable

An NXP MCU-Link Pro board is needed for firmware flashing and debugging. **Figure 1** shows the connections between 2FR EVB and MCU-Link Pro board.



An MCU-Link Pro can be obtained from [here](#).

Figure 1: Murata Type 2FR EVB + NXP MCU-Link Pro



Note: 1* in the figure represent the optional external power supply.

3 Hardware Setup for Development

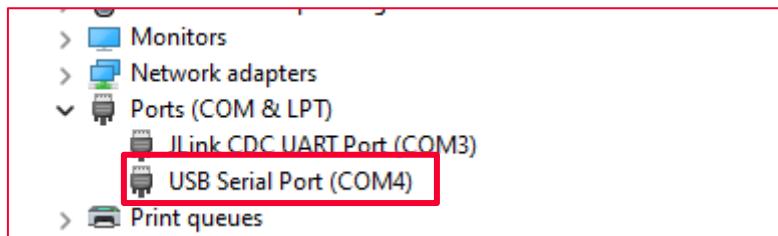
Ensure the following on the 2FR EVB before connecting it to the host PC.

1. Connect the SWD/JTAG cable between the Type 2FR EVB and the MCU-Link Pro debug board, as shown in **Figure 1**.
2. The JP16 jumper is OPEN.
3. JP18, 19, 20 jumpers are set up for SWD operation by closing the RIGHT pins.
4. JP22 jumper pins 3-4 are SHORT to set up for SWD operation.

Once configured, connect the MCU-Link Pro with an USB cable to the host PC, and the Type 2FR EVB to the host PC using an USB-C cable, as shown in **Figure 1**.

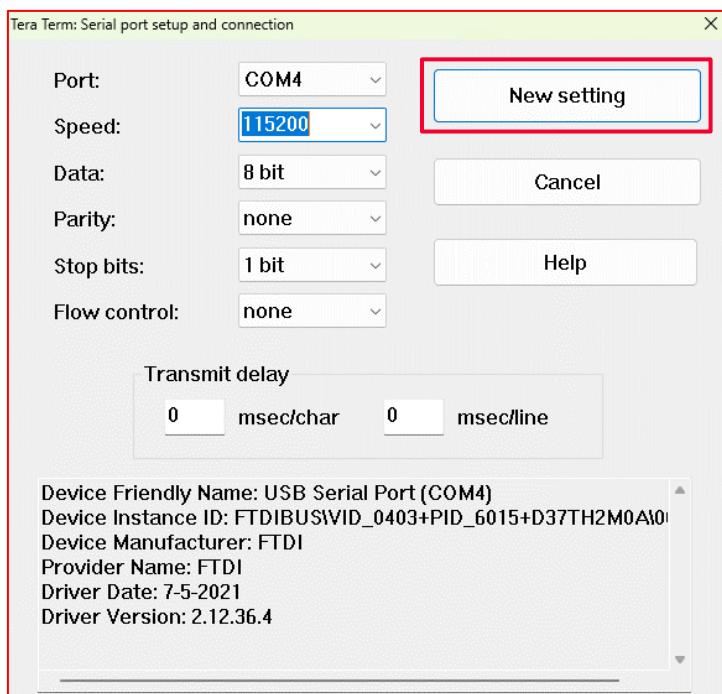
Open device manager on the host PC and check the detected COM port enumeration. There should be two new COM ports. Select the COM port which shows as 'USB Serial Port' (not the 'JLink CDC UART port') to interact with the application on Type 2FR.

Figure 2: Serial Port Detection



Open a terminal software ([PuTTY](#) , [Tera Term](#) ) and configure the COM port as 115200, 8N1, as shown in **Figure 3**.

Figure 3: Serial Port Setup

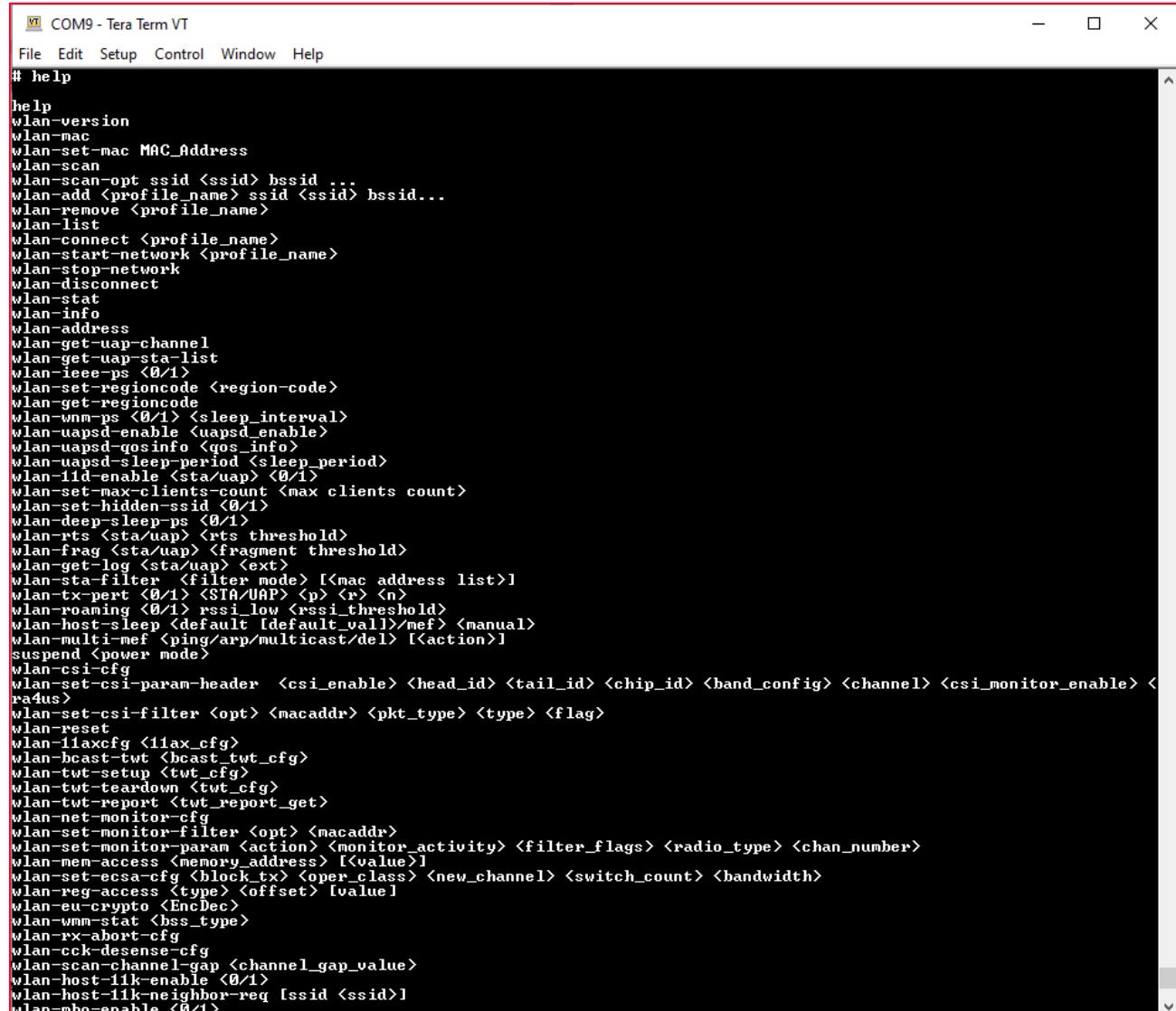


4 Default On-board Application

The 2FR EVB has already been flashed with a default application: wifi_cli, which provides a list of commands for users to control the Wi-Fi behavior.

1. Connect the 2FR EVB to the laptop using the USB-C cable.
2. You should see the following output in the Tera Term. You can run the various Wi-Fi commands now.

Figure 4: Wi-Fi CLI Example Output Logs



COM9 - Tera Term VT

File Edit Setup Control Window Help

```
# help

help
wlan-version
wlan-mac
wlan-set-mac MAC_Address
wlan-scan
wlan-scan-opt ssid <ssid> bssid ...
wlan-add <profile_name> ssid <ssid> bssid...
wlan-remove <profile_name>
wlan-list
wlan-connect <profile_name>
wlan-start-network <profile_name>
wlan-stop-network
wlan-disconnect
wlan-stat
wlan-info
wlan-address
wlan-get-uap-channel
wlan-get-uap-sta-list
wlan-ieee-ps <0/1>
wlan-set-regioncode <region-code>
wlan-get-regioncode
wlan-wmm-ps <0/1> <sleep_interval>
wlan-uapsd-enable <uapsd_enable>
wlan-uapsd-qosinfo <qos_info>
wlan-uapsd-sleep-period <sleep_period>
wlan-ssid-enable <sta/uap> <0/1>
wlan-set-max-clients-count <max clients count>
wlan-set-hidden-ssid <0/1>
wlan-deep-sleep-ps <0/1>
wlan-rts <sta/uap> <rts threshold>
wlan-frag <sta/uap> <fragment threshold>
wlan-get-log <sta/uap> <ext>
wlan-sta-filter <filter mode> [<mac address list>]
wlan-tx-pert <0/1> <STA/UAP> <p> <r> <n>
wlan-roaming <0/1> rssi_low <rssi_threshold>
wlan-host-sleep <default [default_val]><mef> <manual>
wlan-multi-mef <ping/arp/multicast/de1> [<action>]
suspend <power mode>
wlan-csi-cfg
wlan-set-csi-param-header <csi_enable> <head_id> <tail_id> <chip_id> <band_config> <channel> <csi_monitor_enable> <ra4us>
wlan-set-csi-filter <opt> <macaddr> <pkt_type> <type> <flag>
wlan-reset
wlan-l1axcfg <l1ax_cfg>
wlan-bcast-twt <bcast_twt_cfg>
wlan-twt-setup <twt_cfg>
wlan-twt-teardown <twt_cfg>
wlan-twt-report <twt_report_get>
wlan-net-monitor-cfg
wlan-set-monitor-filter <opt> <macaddr>
wlan-set-monitor-param <action> <monitor_activity> <filter_flags> <radio_type> <chan_number>
wlan-mem-access <memory_address> [<value>]
wlan-set-ecsa-cfg <block_tx> <oper_class> <new_channel> <switch_count> <bandwidth>
wlan-reg-access <type> <offset> [<value>]
wlan-eu-crypto <EncDec>
wlan-wmm-stat <bss_type>
wlan-rx-abort-cfg
wlan-ckk-desense-cfg
wlan-scan-channel-gap <channel_gap_value>
wlan-host-11k-enable <0/1>
wlan-host-11k-neighbor-req [ssid <ssid>]
wlan-mbo-enable <0/1>
```

For details of the default application, firmware flashing procedure, software/hardware development, please refer to the [Type 2FR User Guide](#) and the [product page](#).

Revision History

Revision	Date	Author	Change Description
1.0	Aug 03, 2023	TF	Initial Release
1.1	June 27, 2024	TF	Changed image on Title page and in Figure 1.



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