

# Type1LD Application Note OTA

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Murata Manufacturing Co., Ltd.

## Revision History

Revision Number	Release Date	Comments
Revision 1.0	2018/4/16	Initial
Revision 1.1	2018/12/24	Add scope

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## 1. About this Document

### 1.1. Purpose and Scope

This document provides instructions on how to use the OTA application to provide “Over The Air” Update capability using Murata Type1LD EVB.

Note: OTA function is available with external Flash for WICED version 4.1 or higher.

### 1.2. References documentation

N1-4629\_Type1LD-Quick\_Start\_Guide.pdf

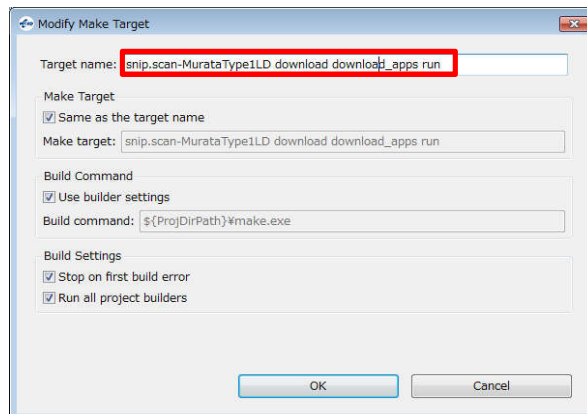
<WICED-Studio>¥43xxx\_Wi-Fi¥doc¥WICED-OTA.pdf

## 2. Build and Test the OTA Application

### 2.1. Build and Download the OTA Application

Build and download the OTA application with following “Target name”.

snip.ota\_fr-MurataType1LD download download\_apps run



### 2.2. Build the Application for upgrade Application

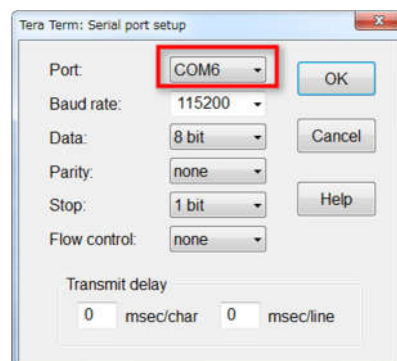
Build the scan application that will be upgraded from the snip.ota\_fr application. No “download download\_apps run” option in this Target name.

snip.scan-MurataType1LD

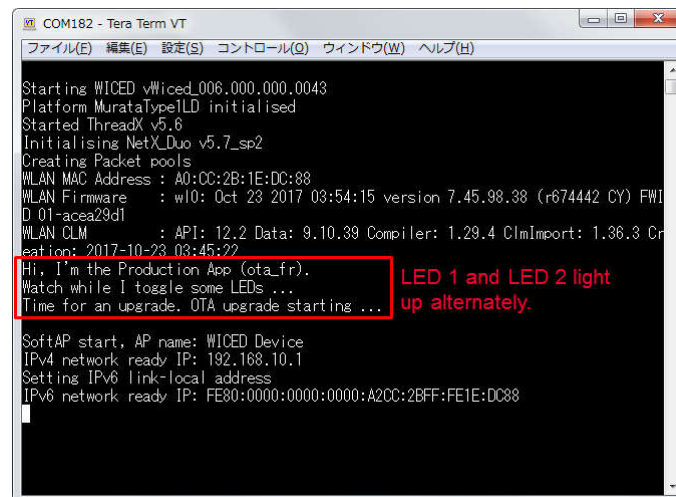
### 2.3. Test the OTA Application

#### A) Start terminal software

Please select [Setup] > [Serial Port...] in menu bar to setup serial port.



The following texts will appear on Tera Term



- B) Connect your PC to MurataType1LD board by Wi-Fi.

The SSID and Passphrase of MurataType1LD are set with the following files.

<WICED-SDK>/include/default\_wifi\_config.h

```
56 /**
57  * This is the soft AP available for normal operation (if used)
58  */
59 #define SOFT_AP_SSID      "WICED Device"
60 #define SOFT_AP_CHANNEL  1
61 #define SOFT_AP_SECURITY  WICED_SECURITY_WPA2_AES_PSK
62 #define SOFT_AP_PASSPHRASE "WICED_PASSPHRASE"
63
```

- C) Start Web browser and input 192.168.10.1 in URL bar.

Note: Chrome browser is recommended. Internet Explorer may not work properly.

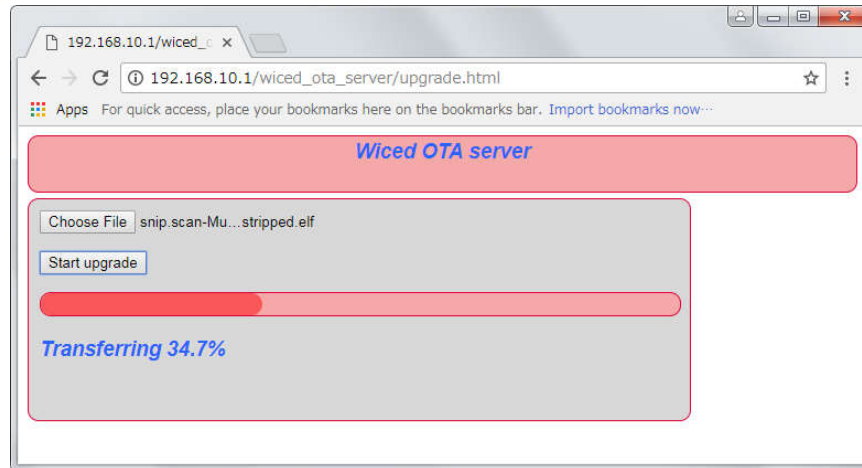


- D) Click “Choose File” button, and select the elf file of snip.scan.

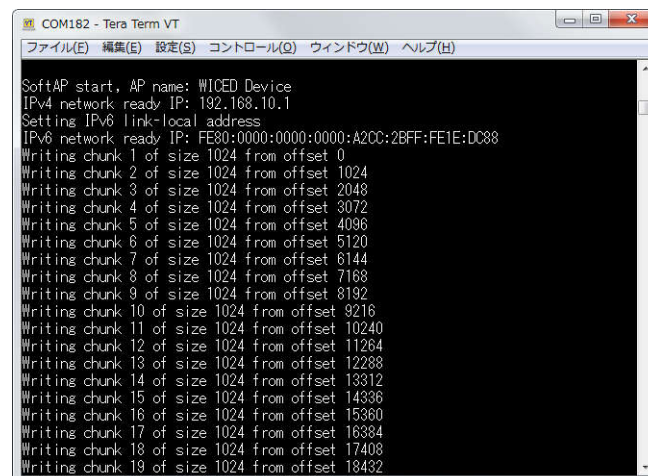
<WICED-SDK>/build/snip\_scan-MurataType1LD/Binary/snip.ota\_fr-MurataType1LD.stripped.elf



- E) Click “Start upgrade” button. Ensure that the progress bar is increased in web browser.



The following texts will appear on Tera Term.

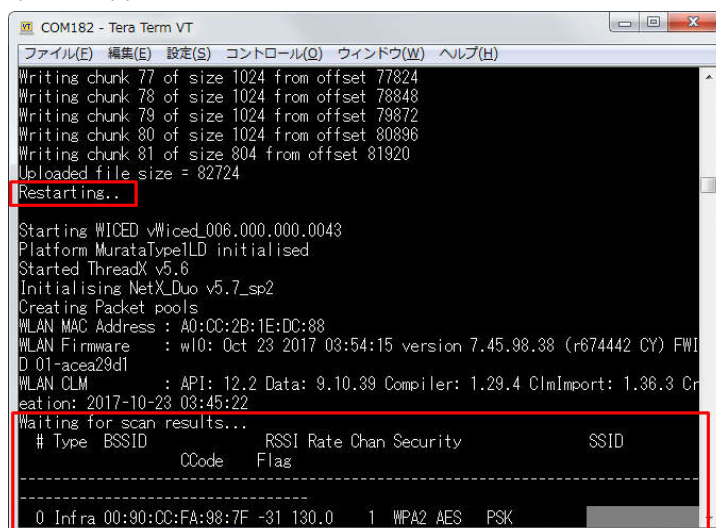


- F) Check that the upgrade is ended.

Check that the “Transfer completed” message is displayed in web browser.



Check that snip.scan application is restarted on Tera Term.



### 3. Memory usage

#### 3.1. Software requirements

Make Target: snip.ota\_fr-MurataType1LD download download\_apps run

#### 3.2. Memory Usage

Modules	Flash	RAM
App	395	0
crc	1060	0
DHCP_Server	1508	132
DNS	68	44
Host MCU-family library	17436	2692
Interrupt Vectors	388	0
libc	32320	3068
Networking	4957	13280
NetX-Duo - Interfaces & Stacks	0	16
OTA_Server	8259	696
Other	158884	609
Packet Buffers	0	23088
platform	1704	288
RAM Initialisation	2548	0
resources	44	0
Ring_Buffer	112	0
SPI_Flash_Library_MurataType1LD	836	72
Startup Stack & Link Script fill	134	7
Supplciant - BESL	3462	772
ThreadX	8590	396
WICED	4037	1036
Wiced_RO_FS	568	0
WWD	17966	3176
Total(Bytes)	262728	49372

For more detail memory map, please refer to

<WICED-Studio-xx>%43xxx\_Wi-Fi%build%snip.ota\_fr-MurataType1LD%binary%snip.ota\_fr-MurataType1LD\_map.csv



#### **4. Appendix**

##### **4.1. After the upgrade, return to the snip.ota\_fr application.**

- A) Hold down the SW1 button and press the reset button.
- B) Confirm that the LED1 blinks.
- C) When LED1 turn off, release the SW1 button.
- D) Confirm to be started the snip.ota\_fr application in Tera Term.

(END)