

**Type1GC Evaluation Board  
AT Command (USB)  
Quick Start Guide**

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## Revision History

Revision Number	Release Date	Comments
Revision A	2020/03/31	Initial
Revision B	2020/06/11	Change Chapter 4 image
Revision C	2020/06/30	Added description of UART usage 1.1 Purpose and Scope
Revision D	2020/07/28	Change to the USB procedure 1.1 Purpose and Scope 3 Prerequisites  In this guide, it is assumed that you have applied the patch file provided by Murata Manufacturing to the WICED SDK. If it has not been applied, check the Type1GC/1PS Evaluation Board Quick Start Guide and apply the patch file.  Building a Demo Application 5 Running AT command Application
Revision E	2021/03/25	Update for .patch platform file

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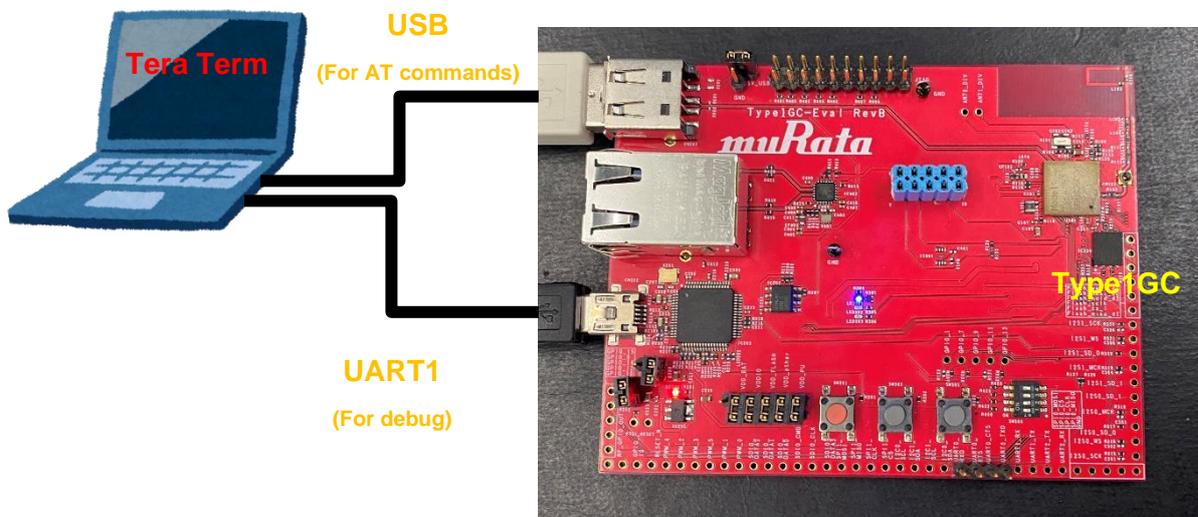
## 1. About this Document

### 1.1. Purpose and Scope

This document provides instructions to evaluate an AT command sample application on the Murata Type1GC EVB. Although Type1GC is supported by WICED-SDK, some modifications will be required when using our EVB. We provide the modification as a “platform file” and AT command sample application source code.

Note: Type1GC and 1PS is pin-to-pin compatible module.

For example, in the case of Type1PS, please use Type1PS platform files and module name 1PS instead of 1GC.



### 1.2. Document Conventions

Platform file – the source code to configure each platform.

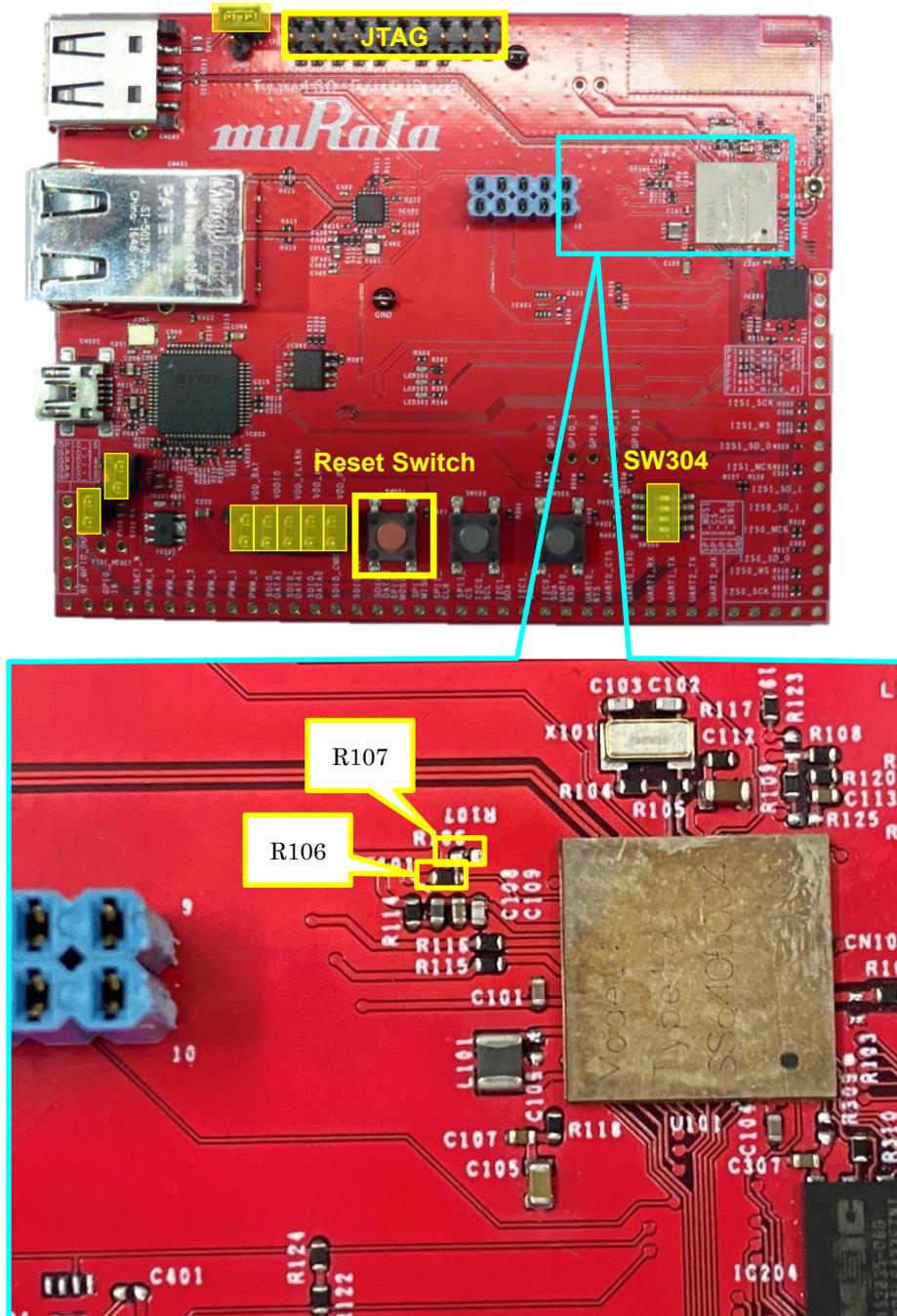
## 2. Evaluation Board

The Murata Type1GC Evaluation Board supports both Ethernet and USB interfaces. To allow proper operation with WICED Studio, please verify that the mini-switch SW304 is set with the correct pin settings.

To use USB with AT commands, the jumper must be properly configured and used as a "USB device".

- ✓ SW304: pin1 and 2 ON, pin3 and 4 OFF
- ✓ Jumper setting

	R106	R107
USB Host	Open	Short
USB device	Short	Open



### 3. Prerequisites

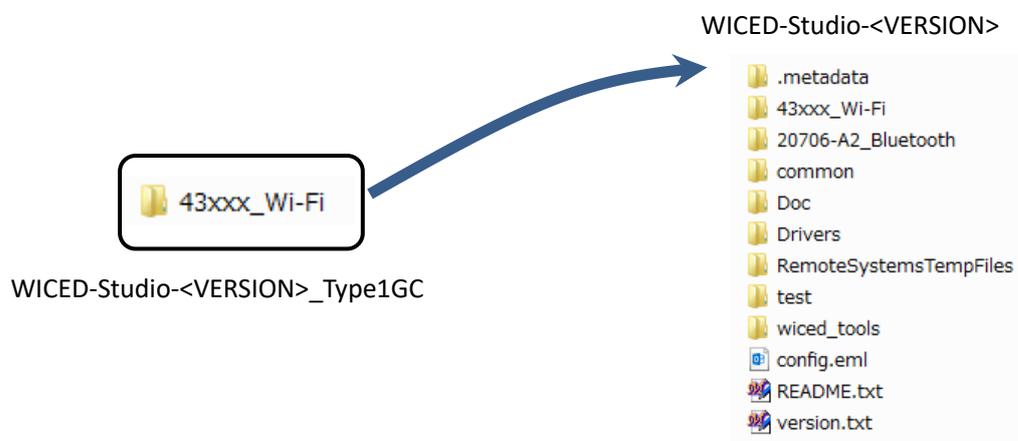
In this guide, it is assumed that you have applied the patch file provided by Murata Manufacturing to the WICED SDK. If it has not been applied, check the Type1GC/1PS Evaluation Board Quick Start Guide and apply the patch file.

### 4. Building a Demo Application

To Build a Demo Application, the following steps must be performed:

- A) Copy the AT command sample application files provided by Murata to your WICED directory.

Note: WICED directory is at "C:\Users\\Documents\WICED-Studio-<VERSION>" with default installation.



- B) Connect the Evaluation board to your PC via the mini USB cable.

Type1GC should be detected as "WICED USB Serial Port (COMXX)". ("XX" is the serial port number.) If Type1GC cannot be detected, you may manually install the driver from <WICED-Studio>\Drivers\Windows\

- C) Change the source code.

To run the sample application, edit "43xxx\_Wi-Fi\apps\test\at\_cmd\at\_cmd.mk".

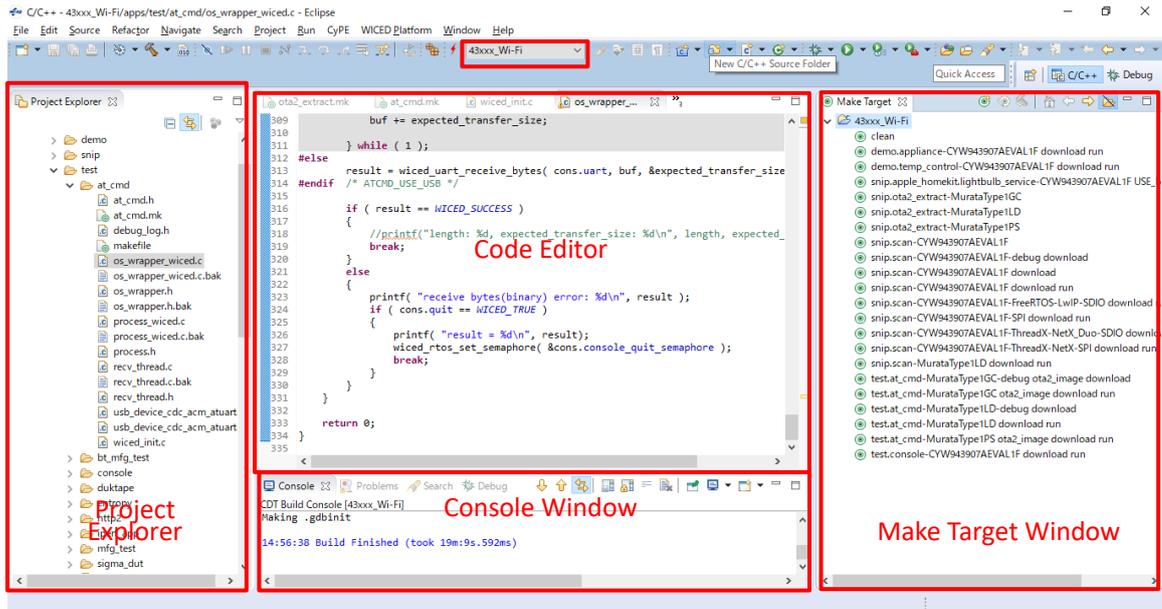
```
63 ATCMD_USE_USB := 0
64 ifeq ($(ATCMD_USE_USB),1)
65 GLOBAL_DEFINES += ATCMD_USE_USB
```

A blue callout box with the text "Change to '1'." points to the value '0' in line 63 of the code block.

- D) Start the WICED-SDK.

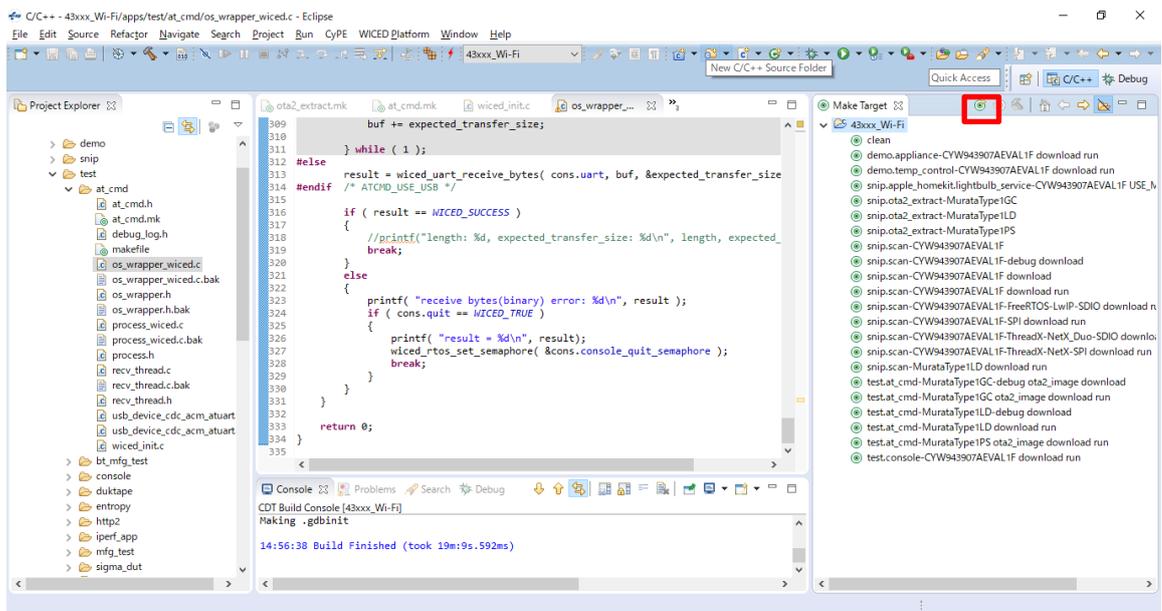
Start the WICED Studio by selecting *START > ALL Programs > Cypress > WICED-Studio*.

Select target "43xxx\_Wi-Fi" or "WICED Filters off".



E) Make new build targets.

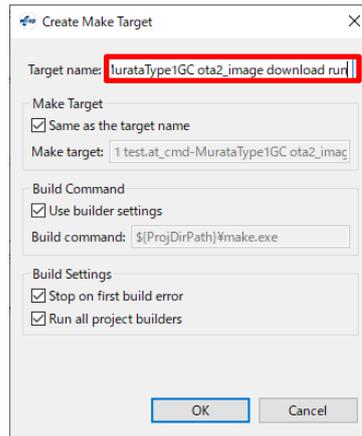
a) Click “New Make Target” button.



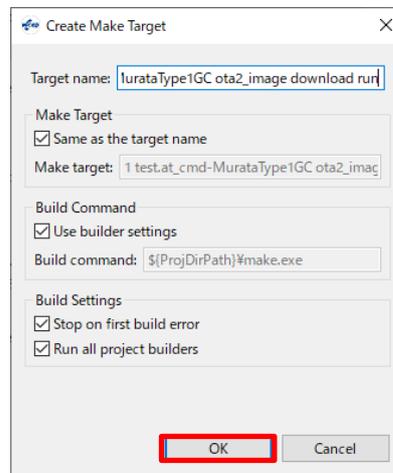
“Create Make Target” window will appear.

b) Input the following text to the “Target name” field.

test.at\_cmd-MurataType1GC ota2\_image download run

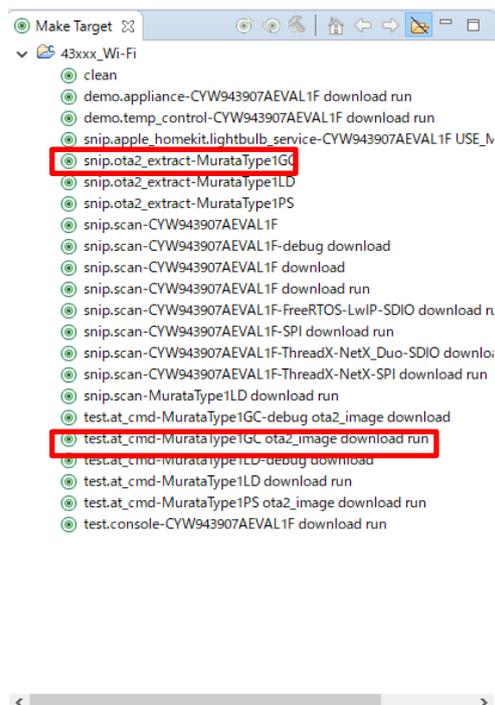


c) Select "OK".



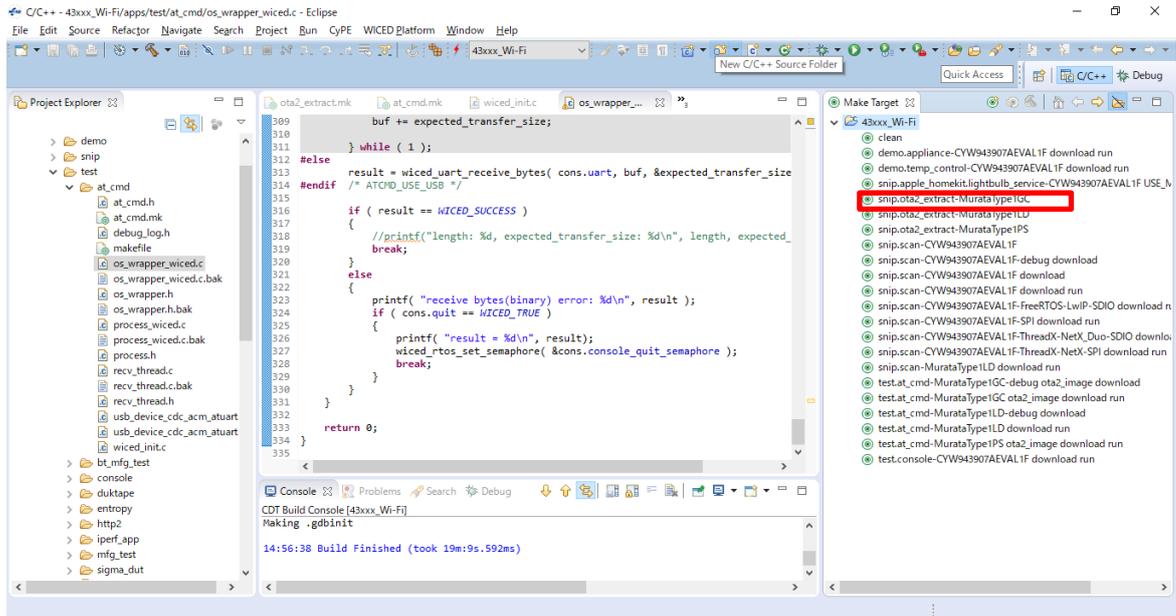
d) Repeat steps "a)" through "c)" to create make Target "snip.ota2\_extract-MurataType1GC".

e) Confirm that the new targets have been added in the "Make Target".



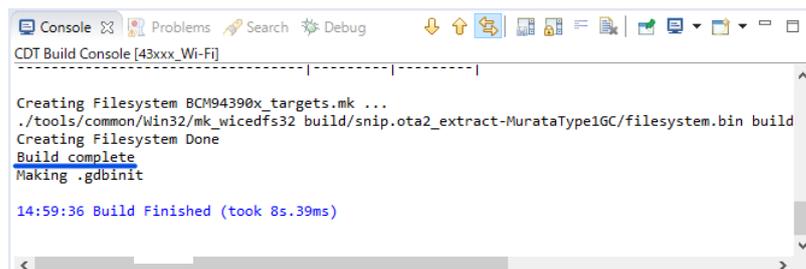
- F) Double-click on the Make Target “snip.ota2\_extract-MurataType1GC” to build the application.

Note: It will take some minutes for first building.



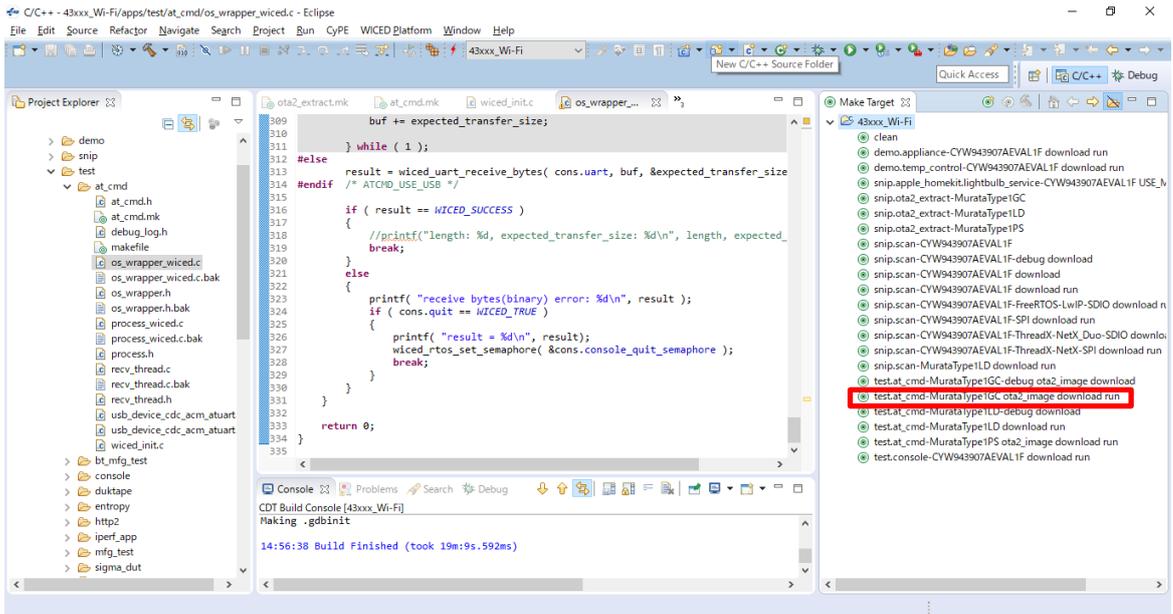
- G) Building progress will be displayed on the window of the “Studio Console”.

- H) “Build complete” indicates that the building has been successful.

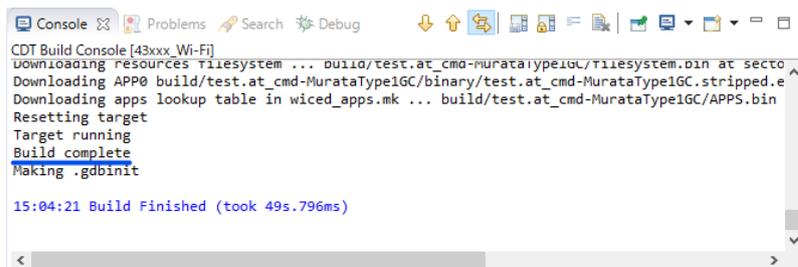


- I) Double-click on the Make Target “test.at\_cmd-MurataType1GC ota2\_image download run” to build the application.

Note: It will take some minutes for first building.

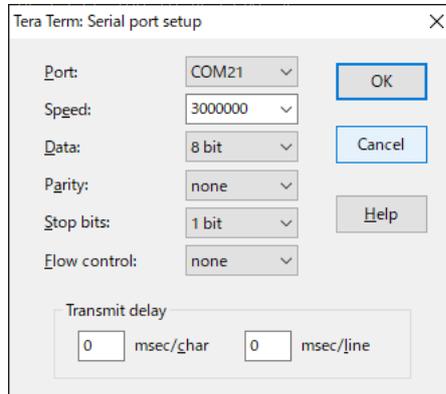


- J) Building progress will be displayed on the window of the “Studio Console”.
- K) “Build complete” indicates that the building and downloading of the application has been successful.

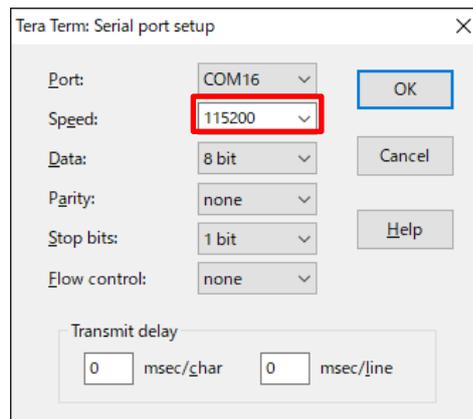


## 5. Running AT command Application

To verify the application which is downloaded in section 3, you need to launch a terminal software such as Tera Term. Please select [Setup] > [Serial Port...] in the menu bar to setup serial port. Please use the following settings for the COM port connection.



COM port settings for **USB**



COM port settings for **UART1**

The following texts will appear on Tera Term (**UART1**).

```

COM16 - Tera Term VT
File Edit Setup Control Window Help
Initialising NetX_Duo v5.10_sp3
Creating Packet pools
WLAN MAC Address : A4:08:EA:B9:5B:38

WLAN Firmware : wl0: May 2 2019 02:34:15 version 7.15.168.130 (r714231) FWID
01-7fc7cd46

WLAN CLM : API: 12.2 Data: 9.10.74 Compiler: 1.31.3 ClmImport: 1.36.3 Cr
eation: 2019-05-02 02:29:29

Console app
USB CDC-ACM Device init starting...
Detected board strapping is in USB-PHY mode!!
Detected board is in USB Device mode!!
@@@ch_attach: id=0x81a, rev=23
USB Device support 1 DCI resource
USB20 Device io=0x18007000, irq=3
@@@ch_reset: chipid=43909, chiprev=2
@@@ch_reset: init 40nm USBPHY
USB set DeviceReady
USB20 Device init completed!!!
Thread number not running: 0
Enter rcv_thread.
  
```

The following texts will appear on Tera Term (**USB**) when you type an AT command “**AT+WSCAN**” and line feed code (**CR+LF**) on the Tera Term window.

```

COM21 - Tera Term VT
File Edit Setup Control Window Help
+WSCAN: ,6,20,Open,
+WSCAN: ,6,20,WPA2_AES_TKIP_PSK,
+WSCAN: -73, ,7,20,WEP_PSK,JP
+WSCAN: ,11,20,AES_ENT,JP
+WSCAN: ,11,20,WPA2_AES_PSK,JP
+WSCAN: -64, ,11,20,AES_ENT,JP
+WSCAN: -76, ,52,20,AES_ENT,JP
+WSCAN: -77, ,52,20,Open,JP
+WSCAN: -77, ,52,20,AES_ENT,JP
+WSCAN: -76, ,52,20,WPA2_AES_PSK,JP
+WSCAN: -58, ,108,20,AES_ENT,JP
+WSCAN: -58, ,108,20,AES_ENT,JP
+WSCAN: -58, ,108,20,WPA2_AES_PSK,JP
+WSCAN: -57, ,124,20,WPA2_AES_PSK,JP
+WSCAN: -75, ,124,20,AES_ENT,JP
+WSCAN: -75, ,124,20,AES_ENT,JP
+WSCAN: -57, ,124,20,AES_ENT,JP
+WSCAN: -75, ,124,20,WPA2_AES_PSK,JP
+WSCAN: -72, ,132,20,AES_ENT,JP
+WSCAN: -72, ,132,20,AES_ENT,JP
+WSCAN: -72, ,132,20,WPA2_AES_PSK,JP
+WSCAN: ,144,20,Open,
+WSCAN_FINISH
  
```

(END)