AW-CU480

Bluetooth Low Energy 5.0 wireless microcontroller Stamp LGA module

Environment Kit

Rev. A

(For Standard)

Revision History

Version	Revision Date	Description	Initials	Approved
A	2020/11/10	● Initial Version	Shihhua Huang	N.C. Chen

1. System Setup

(1) Hardware Requirements

- AW-CU480 TA Board + Carrier Board
- Host system need running the Windows10 x64 operating system
- IQxel-M8
- RF isolation chamber for receive measurements.
- RF attenuators
- RF cable
- NFC reader

(2) Software Requirements

● PL-2303GC Driver

名稱	修改日期	類型	大小
PL23XX-M_LogoDriver_Setup_v200_20190815.exe	2019/8/15 下午 0...	應用程式	9,974 KB
PL2303 Windows Driver Manual v1.23.0.pdf	2019/6/17 下午 0...	Adobe Acrobat D...	1,815 KB
PL2303_CheckChipVersion_v1006.exe	2013/1/15 下午 0...	應用程式	208 KB
PL2303_DriverInstallerv1.23.0_ReleaseNote.txt	2019/8/15 下午 0...	文字文件	15 KB
PL2303CheckChipVersion_ReadMe.txt	2015/6/17 下午 1...	文字文件	2 KB
PL2303G_DriverInstallerv1.4.0_ReleaseNote.txt	2019/7/16 下午 0...	文字文件	5 KB

PL23XX_Prolific_DriverInstaller_v200 > PL23XX_Prolific_DriverInstaller_v200

● Tera Term (tool)

Note: Tera Term is our suggestion. You can try any terminal tool.

名稱	修改日期	類型	大小
teraterm-4.63.exe	2009/9/8 下午 04...	應用程式	7,045 KB

● DK6Production flash programmer folder (please contact FAE)
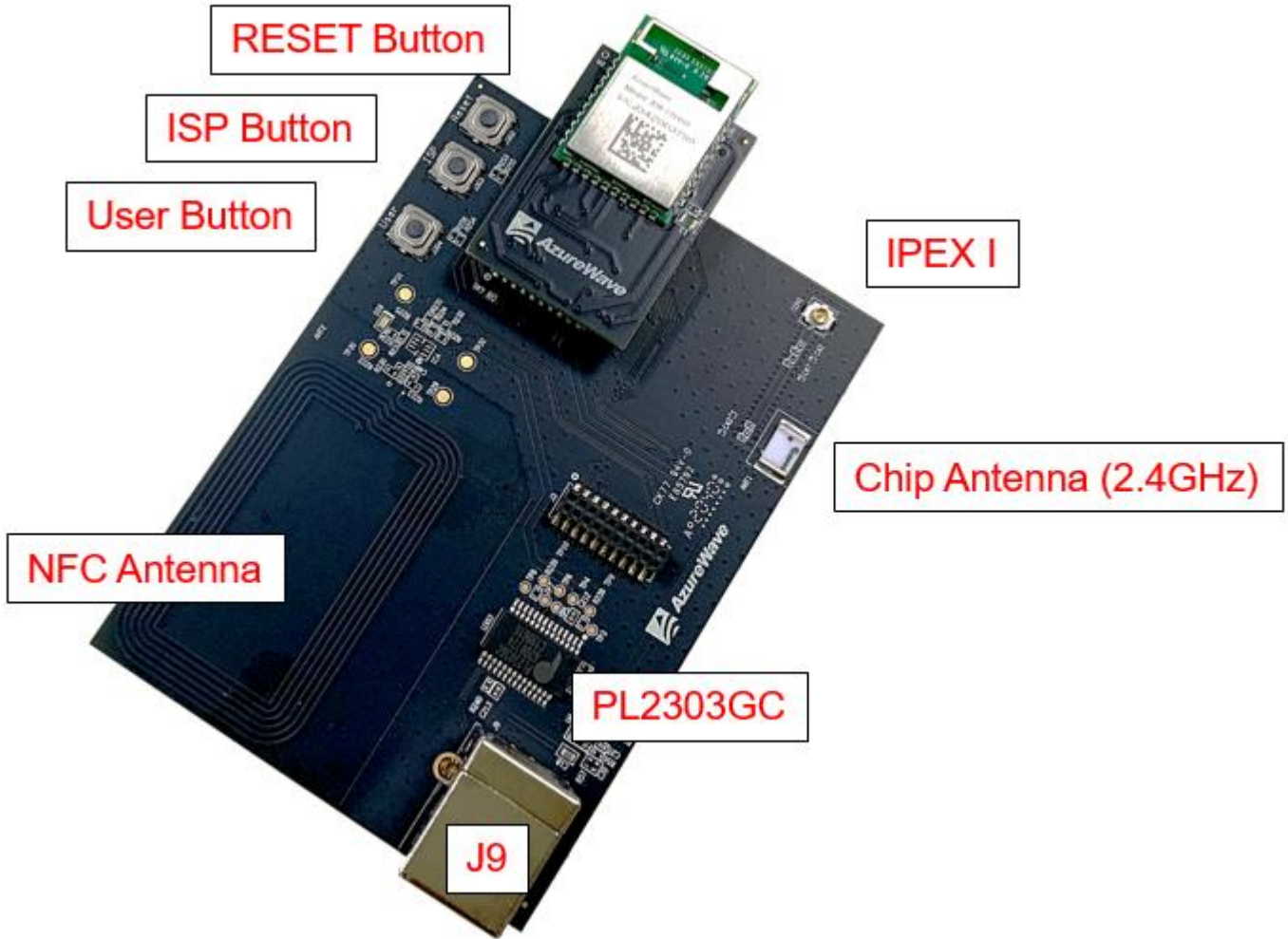
Note: You must have below files

機磁碟 (C:) > nxp > DK6ProductionFlashProgrammer

名稱	修改日期	類型	大小
DK6Programmer.exe	2019/11/16 上午 02:02	應用程式	588 KB
ftd2xx.dll	2019/5/28 下午 07:15	應用程式擴充	215 KB
jn5189dk6_hello_world.bin	2020/4/15 上午 10:11	BIN 檔案	17 KB
JN-AN-1242-JN518x-Customer-Module-Evaluation-Tool.bin	2020/2/28 下午 05:23	BIN 檔案	69 KB
JN-AN-1242-K32W061-Customer-Module-Evaluation-Tool.bin	2020/5/1 下午 09:52	BIN 檔案	56 KB
libgcc_s_dw2-1.dll	2019/5/28 下午 07:15	應用程式擴充	110 KB
pdcurses.dll	2019/5/28 下午 07:15	應用程式擴充	116 KB
programmer.dll	2019/11/16 上午 02:02	應用程式擴充	972 KB
qn9090dk6_hci_black_box_bm.bin	2020/3/3 下午 02:03	BIN 檔案	149 KB
qn9090dk6_hello_world.bin	2020/2/20 上午 10:53	BIN 檔案	21 KB
uninstall.exe	2020/2/13 下午 02:22	應用程式	323 KB

● Mbt.exe (please contact FAE)

Note: mbt is our suggestion, you can try any hci tool.

名稱	修改日期	類型	大小
mbt.exe	2020/7/21 上午 1...	應用程式	50 KB
mbt_setup.ini	2020/7/21 下午 0...	組態設定	1 KB

2. AW-CU480 EVK

RESET Button

ISP Button

User Button

IPEX I

Chip Antenna (2.4GHz)

NFC Antenna

PL2303GC
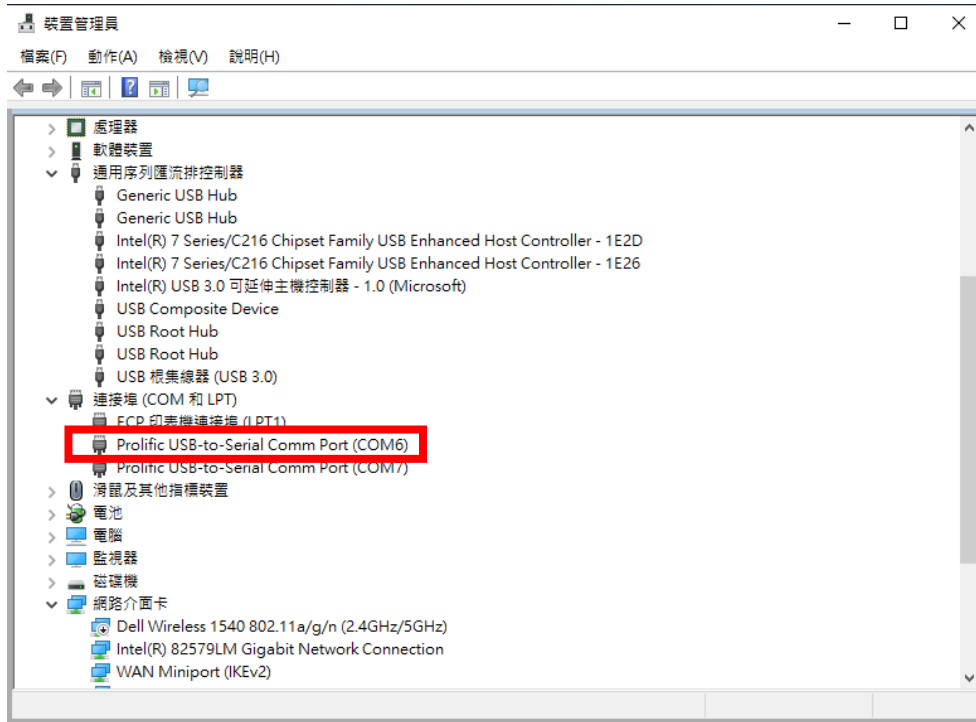
J9

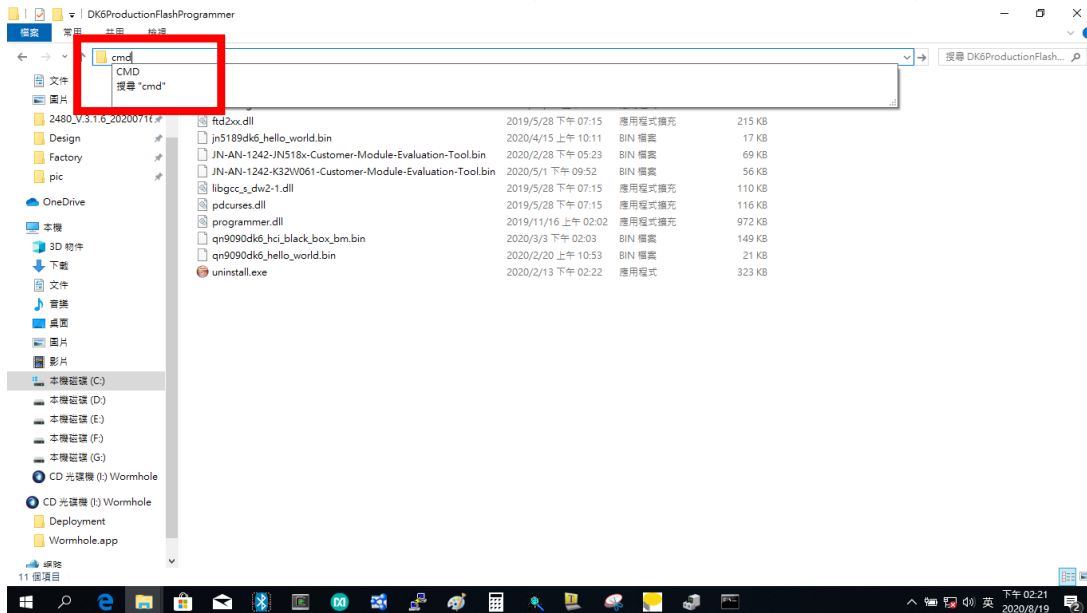AzureWave Technologies, Inc.

3. How to download the image

1. You must check the COM number (can check the value by the following picture)
   Note: J9 for DUT COM port

2. Find the folder of DK6ProductionFlashProgrammer, and type cmd to get into the Dos window.

3. Key in

➢ BLE IMAGE:

   DK6Programmer.exe -s com6 –p qn9090dk6_hci_black_box_bm.bin

*You must note the step. If you key in the format before getting into download mode (DK6Programmer.exe -s com6 –p qn9090dk6_hci_black_box_bm.bin), you need to keep holding the ISP button and Reset button, and then release the ISP button after releasing the reset button.
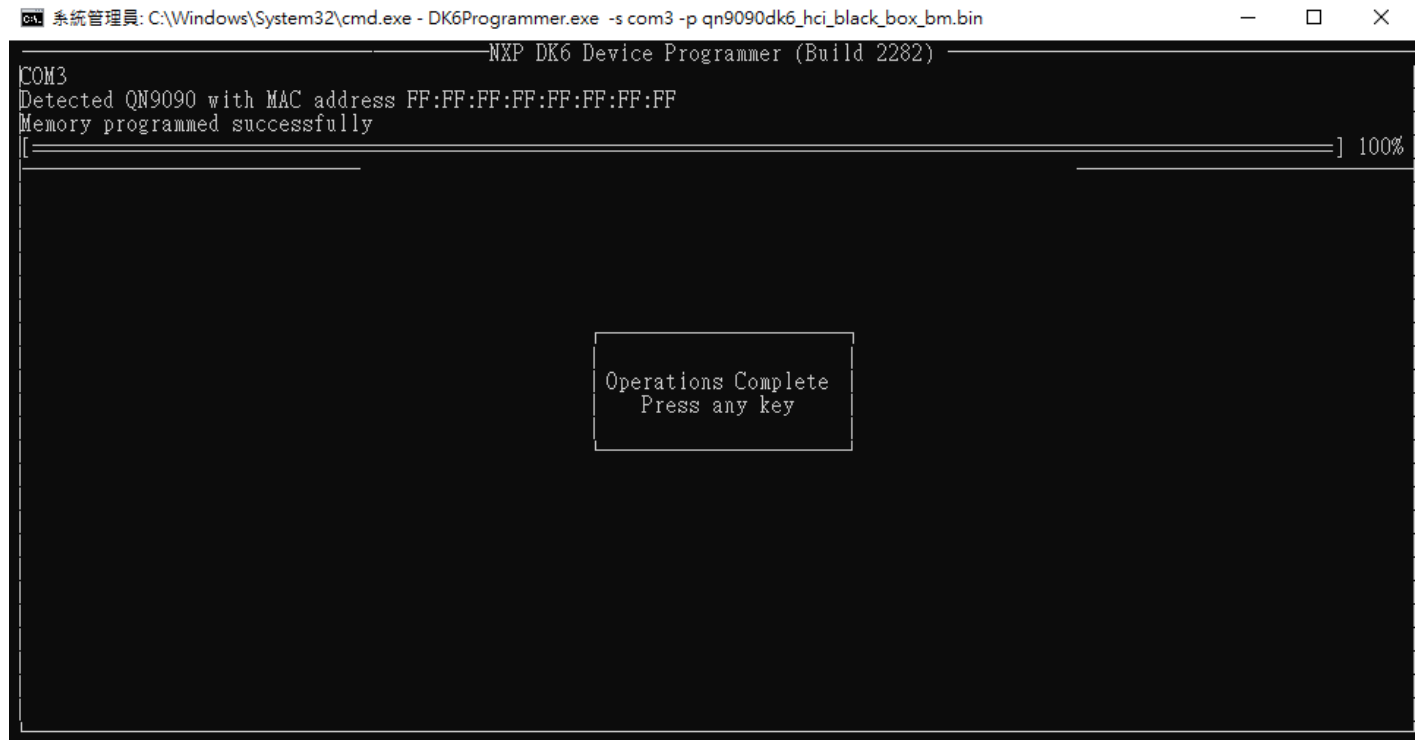
To open the tool and download the image file (com6 is your DUT J9 COM port)
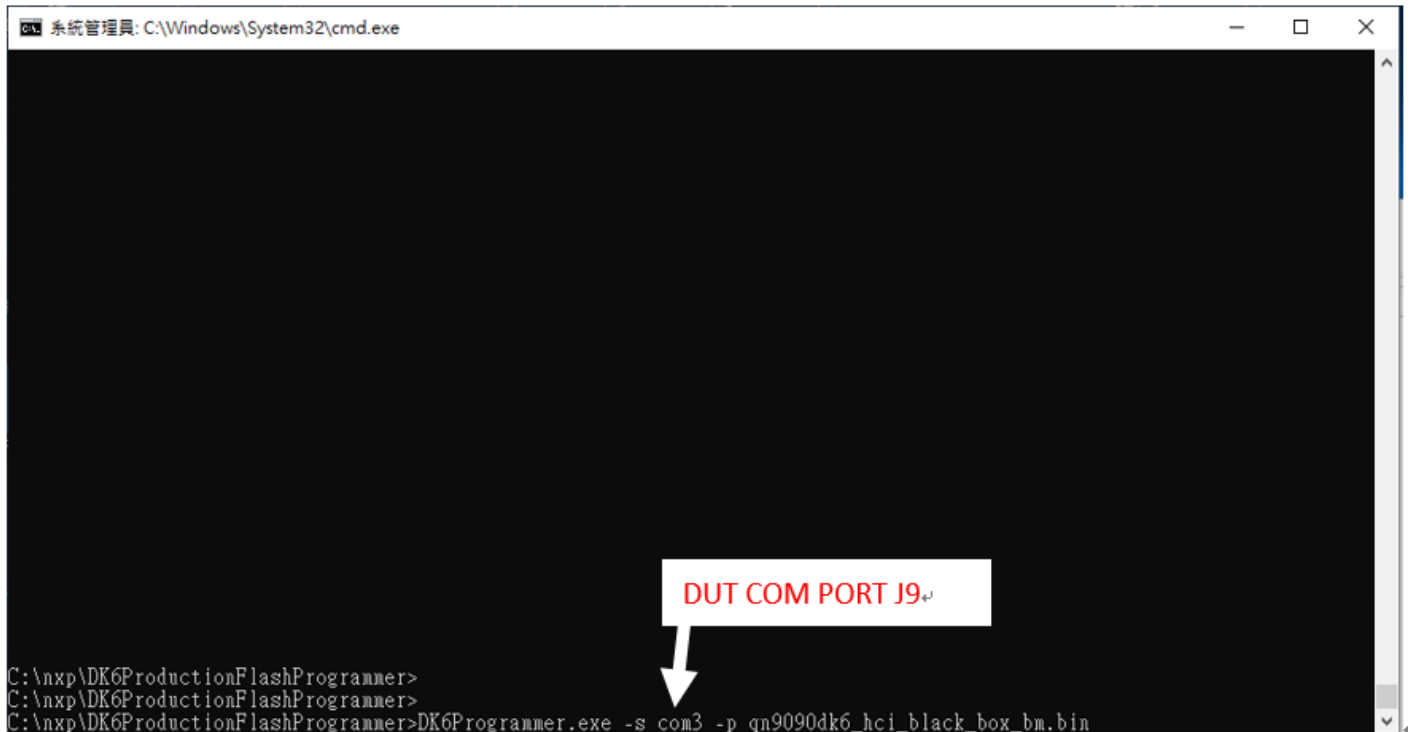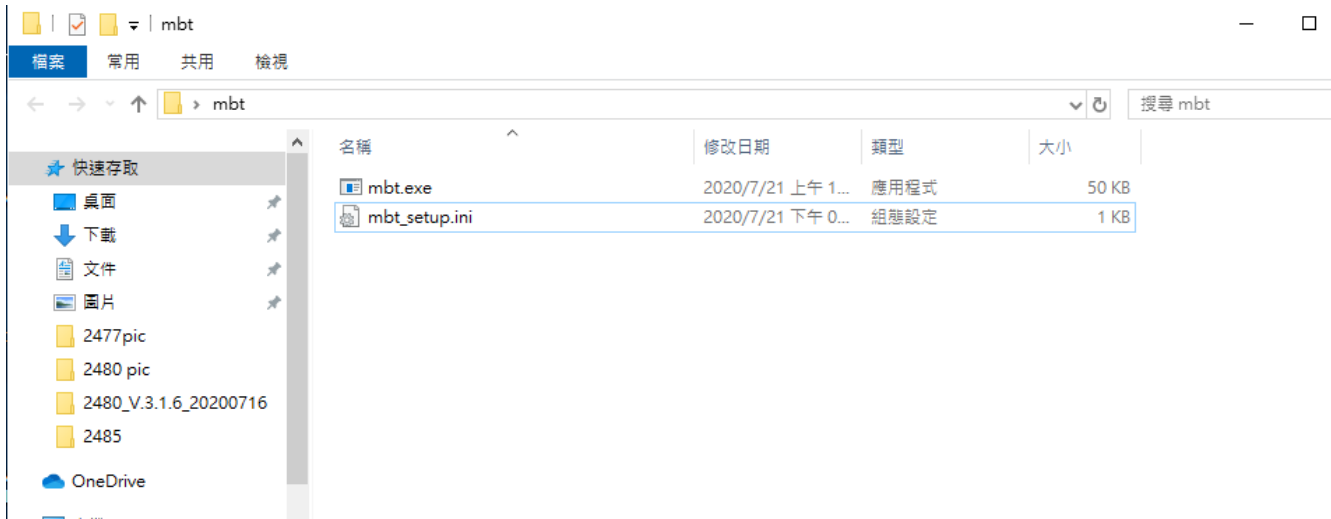

4. Select Y
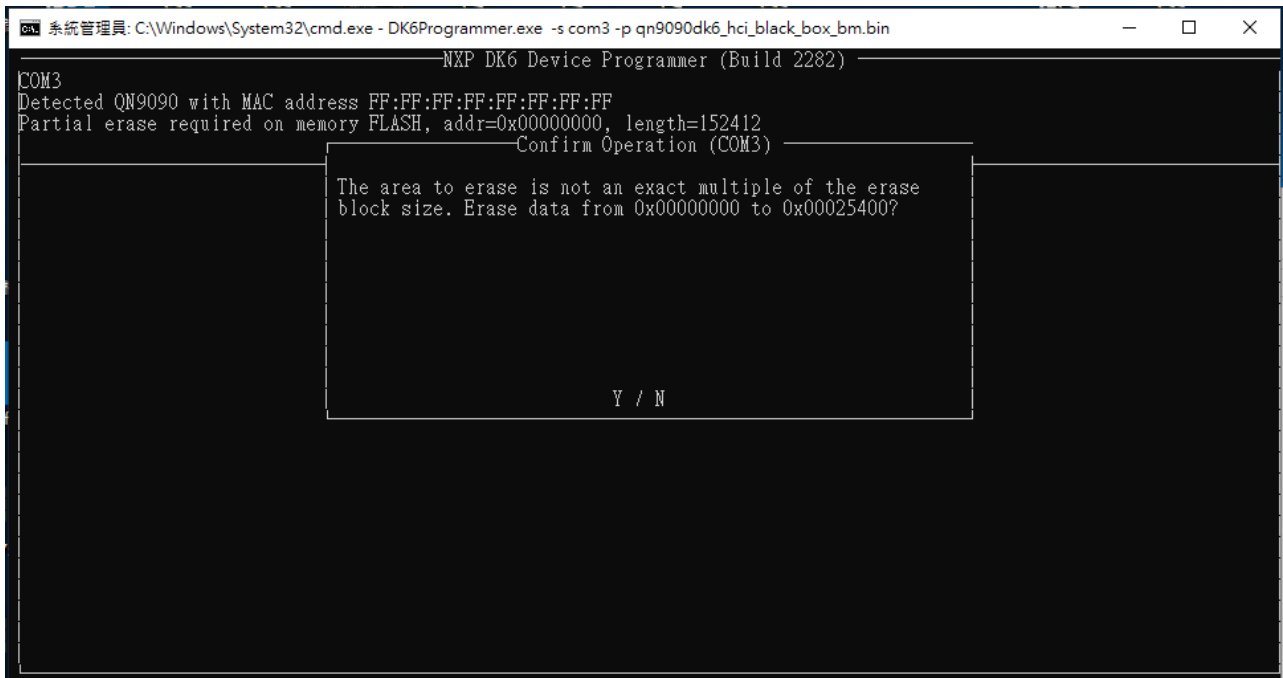
5. Finish

4. Test mode(In BLE)

1. Open the folder of mbt

2. Open the mbt_setup.ini

Setting MBT_TRANSPORT=COM3 (your DUT COM port J9)

      DOWNLOAD_BAUDRATE=115200

      APPLICATION_ BAUDRATE=115200

      Enable_Debug_Message=1

      DOWNLOAD_DELAY = 50

      [Solution]

      Type=2
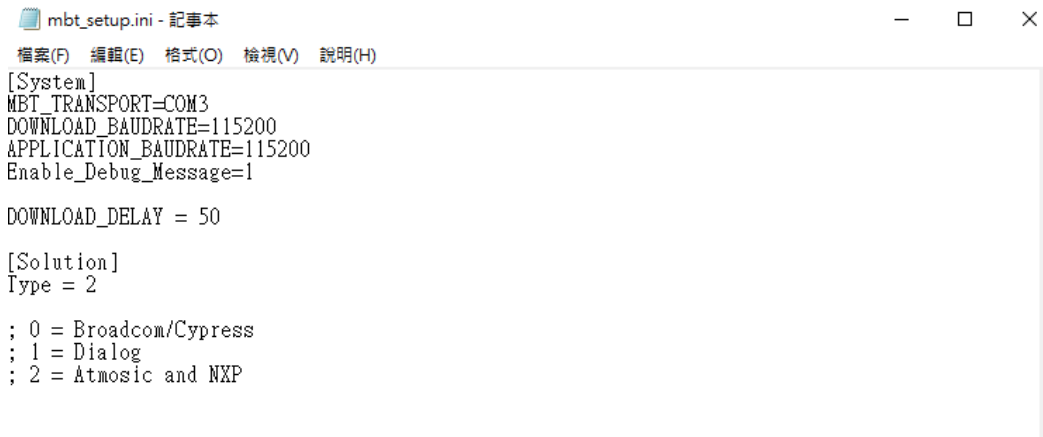
3. And type cmd to get into the Dos window.
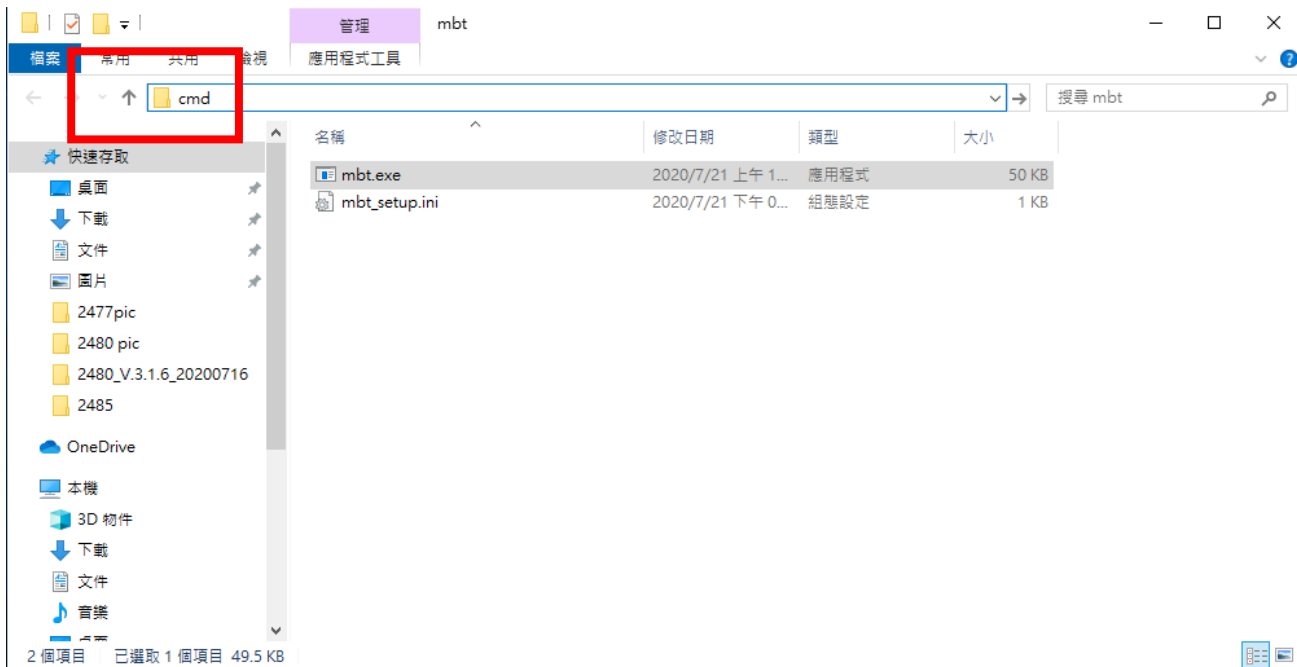
4. Key in mbt.exe

5. Main menu

If you need more information, please key in mbt help.

6. Key in mbt reset

Make sure the DUT have been reset.

7. Read the NFC tag

Open the NFC Taginfo on you smart phone, and scan the NFC

Then you will get the information from NFC
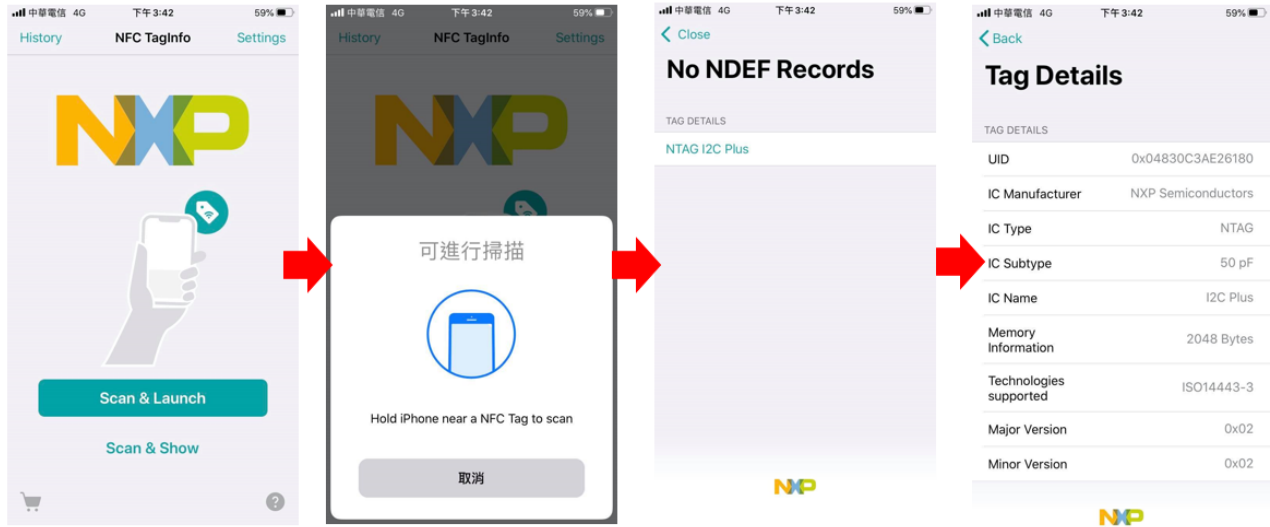
If you want to check UID in DUT, please download Zigbee image into your DUT.

5. Carrier Board Schematic

Connectors To TA Board

J1

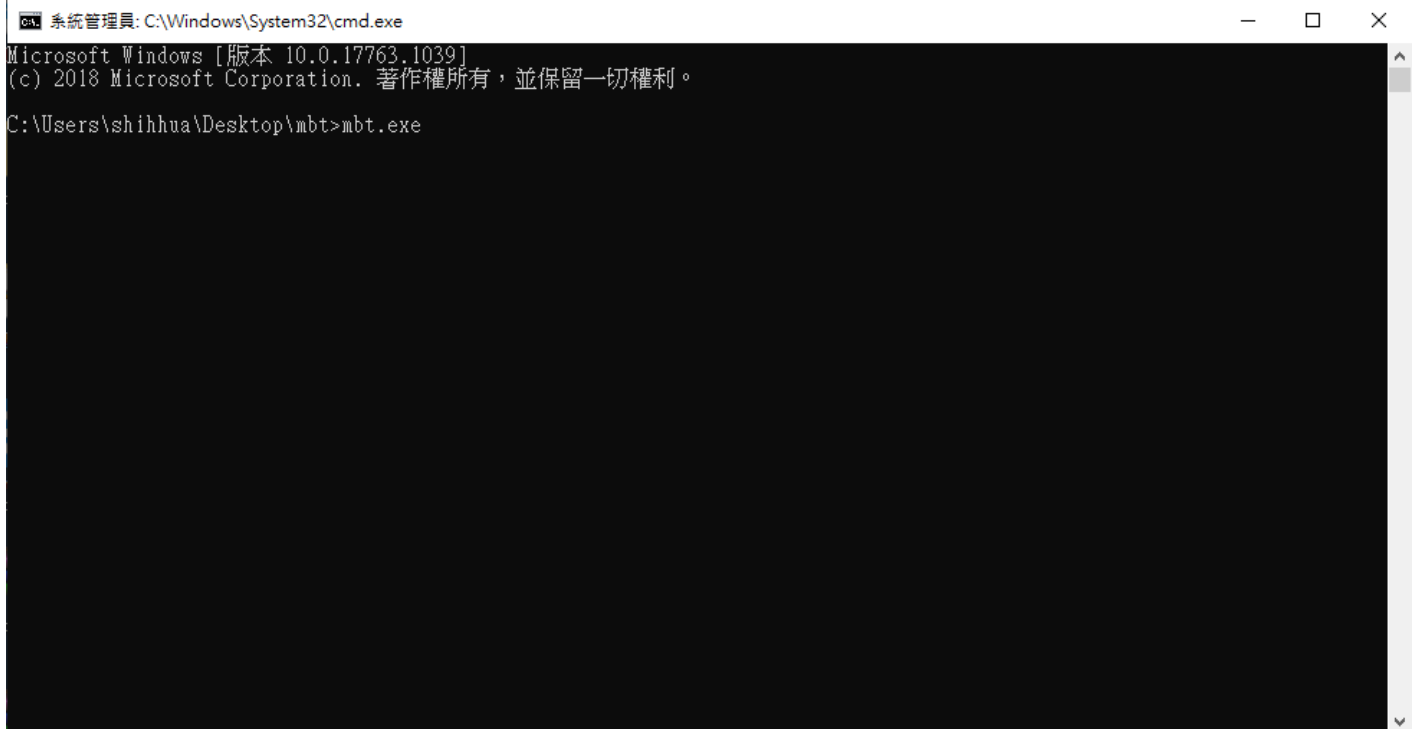|		
PIO_12/SWCLK	1	2	PIO_21_SPIFI_IO1
PIO_13/SWDIO	3	4	
PIO_8/USART0_TXD	5	6	PIO_20/SPIFI_IO2
PIO_9/USART0_RXD	7	8	PIO_19/SPIFI_IO0
PIO_4/PWM4-PU	9	10	PIO_18/SPIFI_CLK
	11	12	PIO_17/SPIFI_IO3
	13	14	PIO_10/I2C0_SCL
PIO_6/PWM6-PD	15	16	RSTN
VDD	17	18	PIO_1/SPI1_MISO
	19	20	PIO_7/PWM7-PD

PH127020F-03305
Male

J2

PIO_0/SPI1_SCK	1	2	LB
PIO_5/ISP_ENTRY	3	4	LA
PIO_2/SPI1_MOSI	5	6	
PIO_3/SPI1_SSELN0	7	8	
PIO_11/I2C0_SDA	9	10	
PIO_16/SPIFI_CSN	11	12	PIO_15/ADC1
PIO_15/ADC1	13	14	PIO_14/ADC0
	15	16	
	17	18	
	19	20	

PH127020F-03305
Male

J3

PIO_0/SPI1_SCK	1	2	PIO_12/SWCLK
PIO_1/SPI1_MISO	3	4	PIO_13/SWDIO
PIO_2/SPI1_MOSI	5	6	PIO_14/ADC0
PIO_3/SPI1_SSELN0	7	8	PIO_15/ADC1
PIO_4/PWM4-PU	9	10	PIO_16/SPIFI_CSN
PIO_5/ISP_ENTRY	11	12	PIO_17/SPIFI_IO3
PIO_6/PWM6-PD	13	14	PIO_18/SPIFI_CLK
PIO_7/PWM7-PD	15	16	PIO_19/SPIFI_IO0
PIO_10/I2C0_SCL	17	18	PIO_20/SPIFI_IO2
PIO_11/I2C0_SDA	19	20	PIO_21_SPIFI_IO1

FH127020F-03202
Female

uFL

CON1

C42 10pF

L9 5.6nH L0201-M

C47 0R

L8 DNI L0201-M

L2 DNI L0201-M

C43 1.1pF

L6 DNI L0201-M

ANT1 FEED
G1G2
ANT-IPEX-7_3X5_3

Title	AW-CU480		
Size Custom	Document Number <Doc>		Rev I6
Date:	Tuesday, November 10, 2020	Sheet 1	of 4

PL2303GC

U303

TXD
DTR_N
RTS_N
VDD_325
RXD
RI_N
NC_7
TXEN
DSR_N
DCD_N
CTS_N
SUSP_N
GPB3
GPB2

XO
XI
NC_26
GPB5
GPB4
GPB1
GPB0
NC_21
VIN
RESET_N
GND_18
VO_33
DM
DP

PL2303GC/SSOP28

3.3V_PL2303
TP3
PL_TXD
C212
0.1uF
TP4
PL_RXD
TP5
TP6
TP7
TP8
PL_RTS_N
PL_CTS_N

5V_USB

R240   0R
5VDD_PL
3.3V_PL2303
3.3V_PL2303
C213
0.1uF

DM
DP

R236   0R
PL_TXD   R237   0R   PIO_9/USART0_RXD
PL_RXD   R238   0R   PIO_8/USART0_TXD
PL_RTS_N R239   0R   TP9
PL_CTS_N   TP

J9
1 2
3 4
5 6
USB_B

5V_USB
DM
DP

DUT ISP Mode

J303
3   1
4   2
SWITCH_TACT

3.3V_USB
R255
15k
R253   0R
PIO_5/ISP_ENTRY

DUT Reset

J302
3   1
4   2
SWITCH_TACT

RSTN

DUT User Interface

J304
3   1
4   2
SWITCH_TACT

3.3V_USB
R254
15k
R256   0R
PIO_1/SPI1_MISO

DC/DC Convertor

+5V --> +3.3V

U4 — IT7811

- 5V_USB — Vin (4)
- SW (3) — L4 4.7uH 2016
- GND (2)
- FB (5)
- EN (1)

C18 — 10uF C0603-m

C38 — 10nF C0402-m

R257 — 0R

VDD

3.3V_USB

C17 — 10uF C0603-m

R56 — 68k

C37 — 22pF C0402-m

R57 — 15k

C39 — NC C0402-m

NFC
NTAG