MT7925B14L

Test-Mode Software Application Note

Part-1: QA-Tool User Guideline

Version: V1.5

Release Date: 2025-07-03

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1 System overview

1.1 General Description

MT7925B14L chip is highly integrated single chip which have built in 2x2 dual-band wireless LAN and Bluetooth combo radio. It can be configured in test-mode for performance validation, production testing and regulatory certification. There are two software tools, QA-Tool and Combo-Tool responsible for evaluating WIFI and Bluetooth signal and performance testing. This document is introducing how to install and use QA-Tool.

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2 QA-Tool

Users have to install 3 major software before using QA-Tool.

- WinPcap
- Windows7 X64 security package
- QA-Tool Windows driver

MTK strongly recommends install QA-Tool on Windows 7-64bit operating system.

2.1 How to install QA-tool

Please follow the procedure listed in below to install QA-Tool

- 1st : Install WinPcap
- 2nd : Update Windows7 security package to register x64 signature mechanism
- 3rd : Instal QA-Tool Windows driver.

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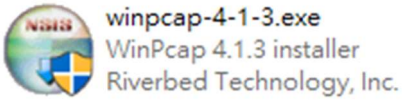
2.1.1 Install WinPcap

If users are the 1st time operating this tool, users should install WinpCap at first. Please follow below link and steps to install this software.

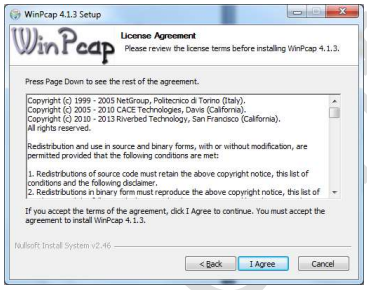
https://www.winpcap.org/install/

WinPcap version: 4.1.3 or later.



1

2



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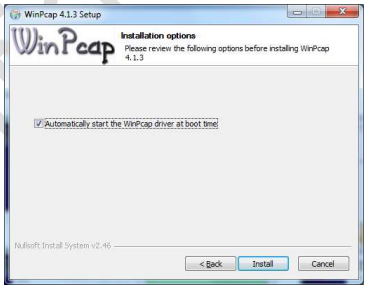

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2.1.2 Windows 10 install note

If users can't install the driver in Windows 10 due to driver integrity check. Try to disable the integrity check to allow installation.

- **Disable Driver Integrity Check**

1. Open cmd as Administrator.
2. Execute 'bcdedit /set nointegritychecks on'
3. Reboot
4. Then install again. If still fail, try do 'Disable Secure Boot' below.

NOTE: Re-enable the driver integrity check by executing 'bcdedit /set nointegritychecks off' and then rebooting.

- **Disable Secure Boot**

Please refer to:
https://docs.microsoft.com/en-us/windows-hardware/manufacture/desktop/disabling-secure-boot

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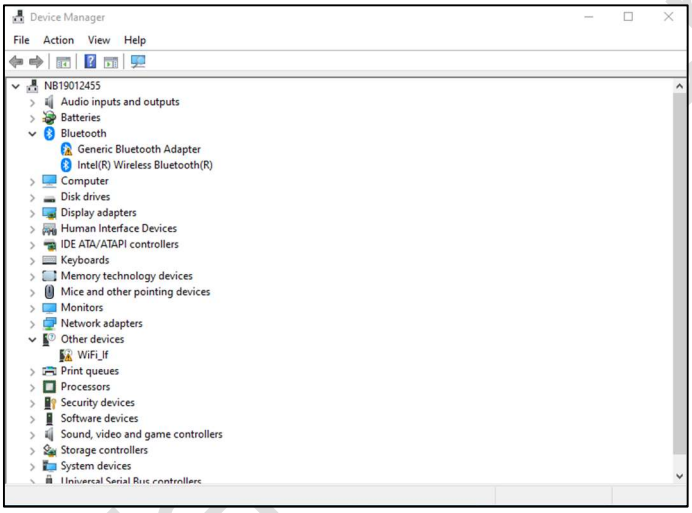
2.1.3 QA-Tool Windows driver

MT7925B14L supports USB, and PCIE interface. According to interface type of MT7925B14L on users' hand, please refer to steps shown below to install QA-Tool Windows driver:

USB interface:

1. Connect DUT to PC/NB and check Windows Device Manager.

2. Window Device Manager would discover DUT shows "**Generic Bluetooth Adapter**"(BT device) and "**WiFi_If**"(WiFi device).



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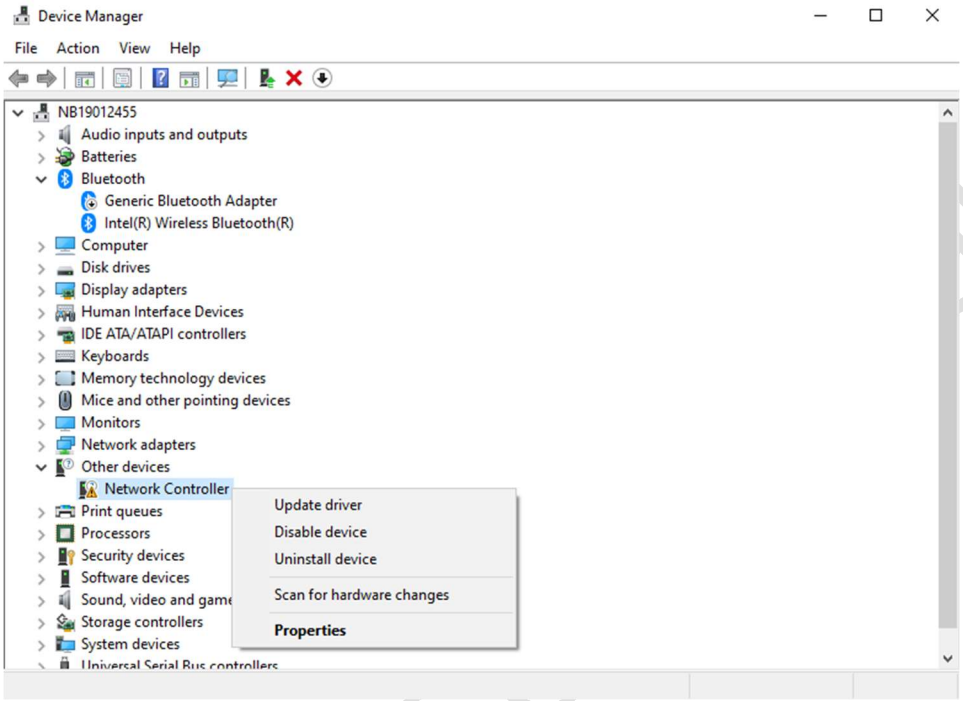
3. Right-click on "**WiFi_If**" Wifi device and Update Driver Software.



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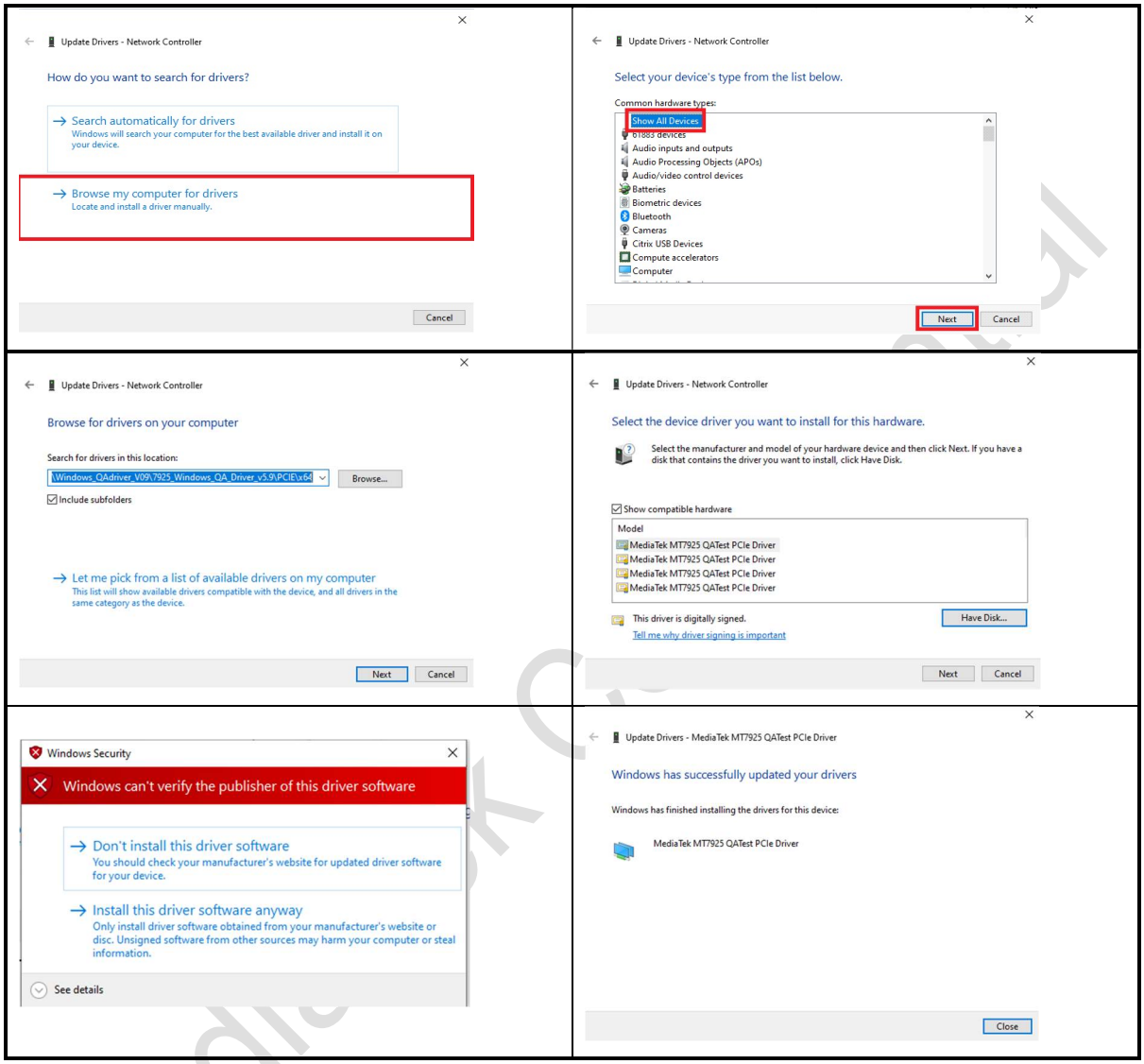
4. According user's Windows' OS to select and install test tool driver.



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2.1.4 [Troubleshoot] Driver install fail (Part 1)

If users can't install the driver in Win 10 / Win 11 due to driver integrity check, there is some different kind of signature mechanism applied on driver package.
This is rare but to resolve this issue try to disable the integrity check to allow installation.

Disable Driver Integrity Check

1. Open cmd as Administrator.
2. Execute 'bcdedit /set nointegritychecks on'
3. Reboot
4. Then install again. If still fail, try do 'Disable Secure Boot' below.

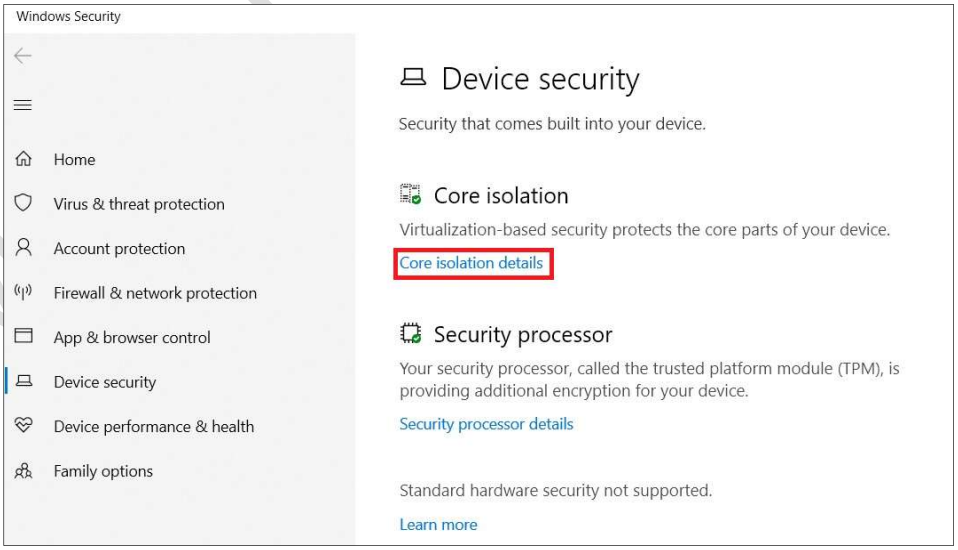
NOTE: Re-enable the driver integrity check by executing 'bcdedit /set nointegritychecks off' and then rebooting.

Disable Secure Boot

Please refer to:
https://docs.microsoft.com/en-us/windows-hardware/manufacture/desktop/disabling-secure-boot

2.1.5 [Troubleshoot] Driver install fail (Part 2)

If above steps did not work, then, by default, the "Core Isolation Memory Integrity" might be turned ON in Win 10 / Win 11. This can block driver installation. To turn this feature off, search for "Device Security" from Start menu and then go to "Core isolation details".



Turn off Memory Integrity.

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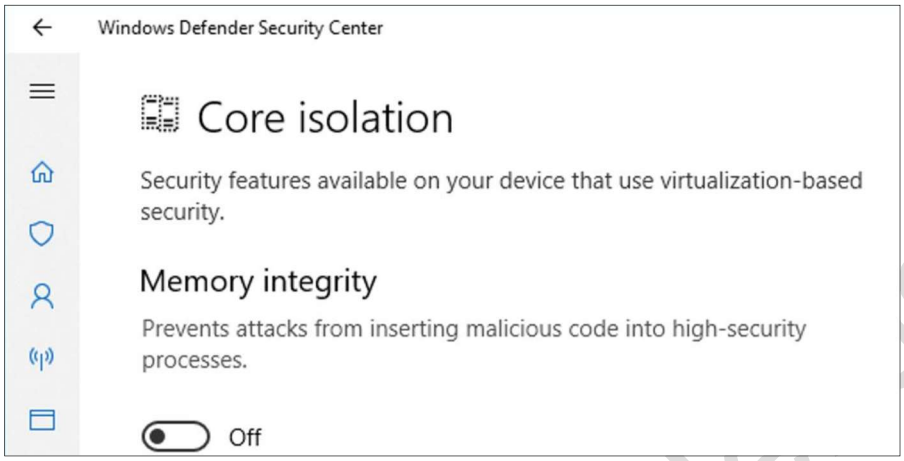
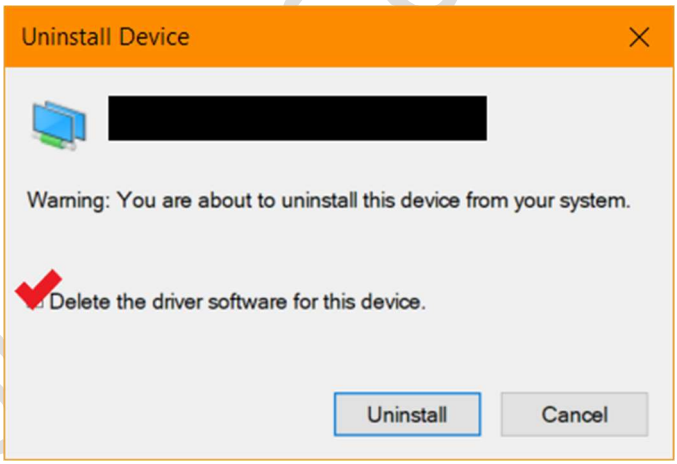


2.1.6 Completely Removing Older Drivers in Windows

It is strongly recommended to do clean driver installation, which means to **delete older drivers at uninstallation time** before installing the newer ones, as shown.



[Optional] If user wants to instead do clean removal manually, follow below steps:

- Open command prompt in administrator mode.

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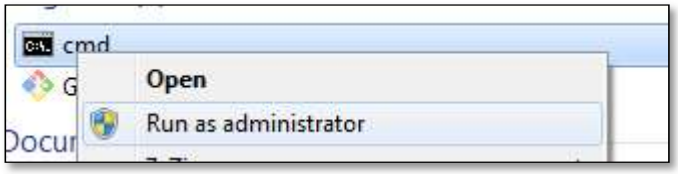
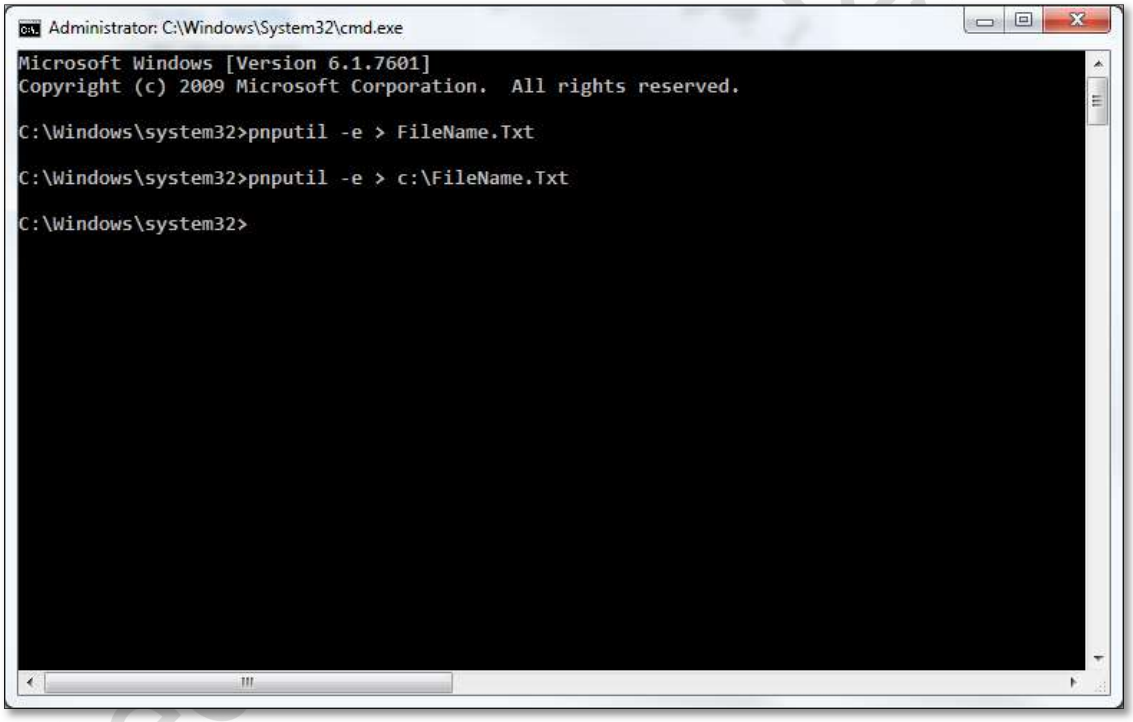


- Use a PNP utility that is already provided in Windows OS, to enumerate all the device drivers installed in the PC.

Give the command 'pnputil –e' followed by '>' and then the path of the text file where it should save the results. Can provide only filename or the filename with full path, as shown below.



- Now open the text file saved at that location and search for 'MediaTek'. Just note the OEM number in the details.

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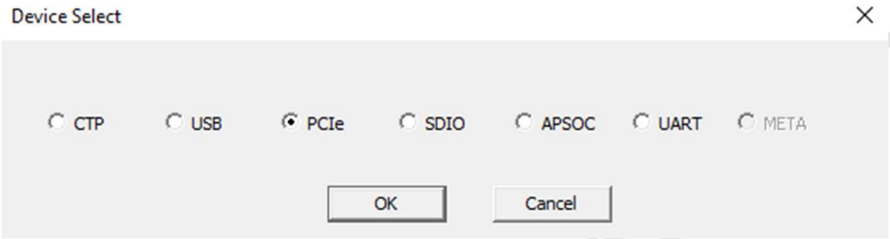
2.2 How to use QA-tool

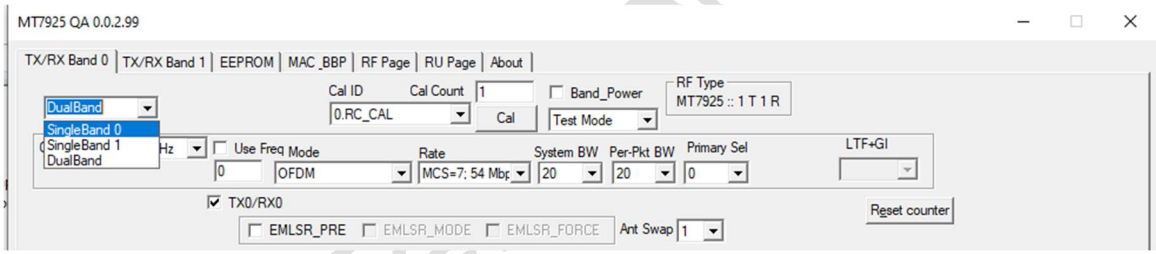
2.2.1 Launch QA-Tool

Double-click on QA-Tool icon "**QATool_Dbg.exe**" and Device Select window will pop up.

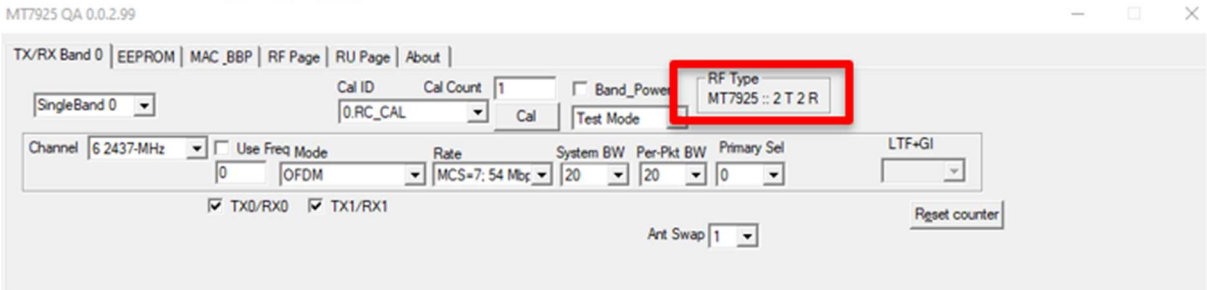
Select interface type and click "OK" button to lunch QA-Tool.



After QA-Tool UI pops out, select **"SingleBand 0".**



Users can check RF Type which should be shown **MT7925 : 2 T 2 R** to make sure the QA-Tool is working normally. There are two modes, BIN-file mode and E-fuse mode, supported by QA-tool. Section 2.2.2 & 2.2.3 provide details about respective mode.



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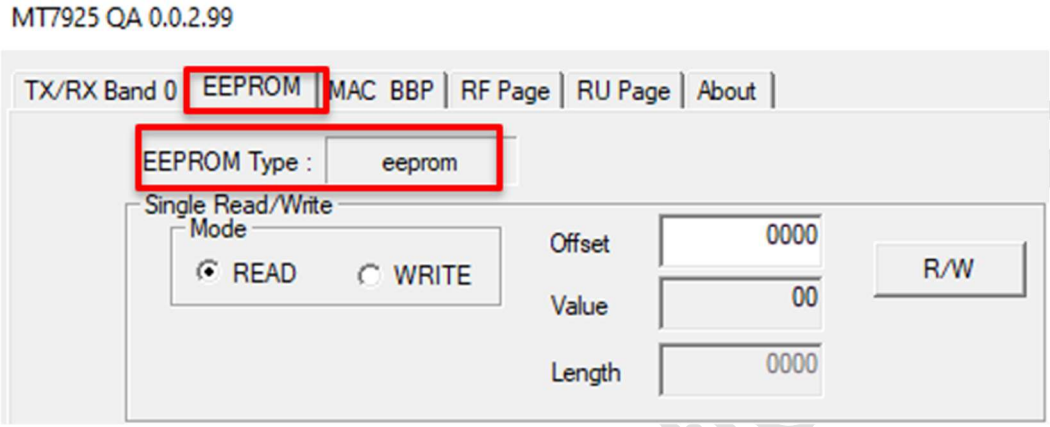
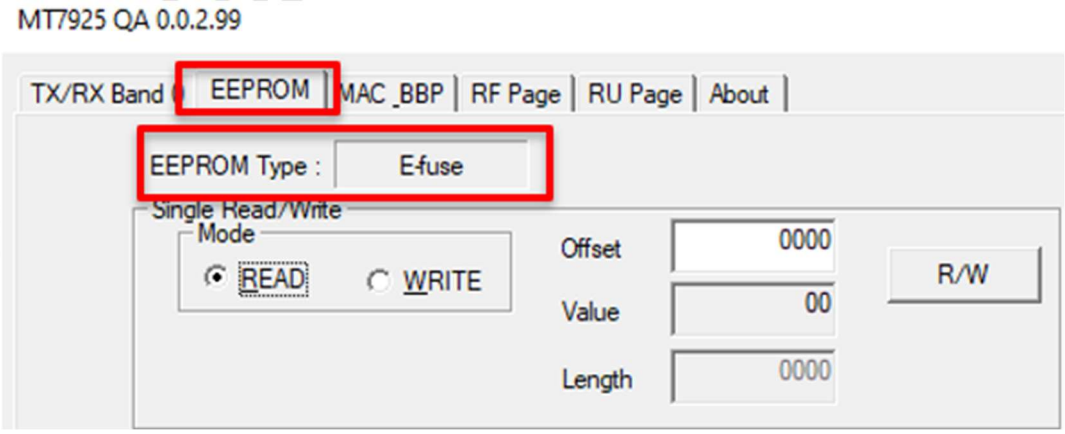
2.2.2 Start QA-Tool in BIN-file Mode

To start in BIN-file mode user can use "**eeprom.bin**" while launching QA tool. If "**QATool_Dbg.exe**" accompanies "**eeprom.bin**" file in the same folder, QA-tool will start in BIN-file mode. After QA-tool is launched, users can check "EEPROM" sheet to have **EEPROM Type : eeprom** to know the mode of QA-Tool in operating.



2.2.3 Start QA-Tool in E-fuse Mode

If "**eeprom.bin**" file leaves the folder of "**QATool_Dbg.exe**", QA-tool will starts in E-fuse mode. User also check **EEPROM Type : E-fuse** in "EEPROM" sheet.



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2.3 How to Use the QA-Tool

2.3.1 WIFI Packets Transmitting –1 stream

On TX/RX page:

a. Select TX sub-page and "**Test Mode**" as following figure.

b. Select **"TX/RX Band0".**

c. Set Channel/Mode/Rate.

   i. 802.11b CCK, 802.11g OFDM, 802.11n HT Mix Mode, 802.11ac VHT,

   ii. 802.11ax HESU, 802.11ax RU HETB (need to set step g and RU Need to set in RU Page)

   iii. 802.11be EHTSU, 802.11be RU EHTTB (need to set step g and RU Need to set in RU Page)

d. Set BW. (Generally, System BW = Pre-Packet BW).

e. Select TX0 or TX1 only

f. Select **"Nss=1"** and choose "TX/RX0" to do transmitting.

g. Set LFT+GI index. (Generally, setting index3) (this step for HESU, HETB(RU), EHTSU, EHTTB(RU))

h. Set packet number. (0 means infinite packets)

i. Click "**Start TX**" button to start packet transmitting and click "**Stop TX**" button to stop.

j. The transmitted packets number is shown at "**Transmitted:**" area.

k. Users can click "**Reset counter**" button to reset "**Transmitted:**" area.

l. Users can click " " button to modify power level of transmitting signal.

m. Users can click " " button to modify frequency offset of transmitting signal.

If users want to adjust packets duty cycle

n. adjust packets lengths(L) to modify packets duty cycle (example 512)

   (Make sure "**Transmitted:**" area have counter when start TX. If not, reduce the packet lengths)

Note: Please *re-trigger "HWTX" if users change Channel/Mode/Rate/BW.

*Re-trigger "HWTX": click "**Stop TX**" button and un-click "HWTX", and then click "HWTX" and click "**Start TX**" bottom again.

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2.3.2 WIFI Packets Transmitting –2 stream

On TX/RX page:

a. Select TX sub-page and "**Test Mode**" as following figure.

b. Select **"TX/RX Band0".**

c. Set Channel/Mode/Rate.

   i. 802.11b CCK, 802.11g OFDM, 802.11n HT Mix Mode, 802.11ac VHT,

   ii. 802.11ax HESU, 802.11ax RU HETB (need to set step g and RU Need to set in RU Page)

   iii. 802.11be EHTSU, 802.11be RU EHTTB (need to set step g and RU Need to set in RU Page)

d. Set BW. (Generally, System BW = Pre-Packet BW).

e. Both TX0 and TX1

f. Select **"Nss=2"** and choose both TX0 and TX1 to do transmitting.

g. Set LFT+GI index. (Generally, setting index3) (this step for HESU, HETB(RU), EHTSU, EHTTB(RU))

h. Set packet number. (0 means infinite packets)

i. Click "**Start TX**" button to start packet transmitting and click "**Stop TX**" button to stop.

j. The transmitted packets number is shown at "**Transmitted:**" area.

k. Users can click "**Reset counter**" button to reset "**Transmitted:**" area.

l. Users can click " " button to modify power level of transmitting signal.

m. Users can click " " button to modify frequency offset of transmitting signal.

If users want to adjust packets duty cycle

n. adjust packets lengths(L) to modify packets duty cycle (example 512)

   (Make sure "**Transmitted:**" area have counter when start TX. If not, reduce the packet lengths)

Note: Please *re-trigger "HWTX" if users change Channel/Mode/Rate/BW.

*Re-trigger "HWTX": click "**Stop TX**" button and un-click "HWTX", and then click "HWTX" and click "**Start TX**" bottom again.

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2.3.3 WIFI Packets 11ax RU TX (HE TB (trigger based)) Transmitting setting

On RU page:

a. Select RU sub-page

b. Select band

c. Set Category

RU size	Category
RU26	26*9
RU52	52*4
RU106	106+106
RU242	242*1
RU484	484*1
RU996	996*1
RU996*2	996*2

d. Set RU index (wanted TB RU location).

Refer to the RU Index from below

e. Set data rate

f. Set MU NSS/LDPC/stream index/length

"MU Nss=1" for Antenna number.

Set LDPC or non-LDPC to do transmitting.

Set **"Nss=1"** to do transmitting.

Set **"stream index=1"**

Refer to the **"Length"** from below table. (**For example, set to 128 at RU26/MCS0……**)

g. Click "**ADD**" button to added test case.

h. Click "**SET**" button to set test case.

i. If user wanted to test another case can select origin test case and click "**Remove**" button to remove old case and resetting another case again.

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2.3.4 WIFI Packets 11be RU&MRU TX (EHT TB (trigger based)) Transmitting setting

RU

On RU page:

a. Select RU sub-page

b. Select band

c. Set Category

RU size	Category
RU26	26*9
RU52	52*4
RU106	106+106
RU242	242*1
RU484	484*1
RU996	996*1
RU996*2	996*2
RU996*4	996*4

d. Set data rate

e. Set MU NSS/LDPC/stream index/length

"MU Nss=1" for Antenna number.

Set LDPC or non-LDPC to do transmitting.

Set **"Nss=1"** to do transmitting.

Set **"stream index=1"**

Refer to the **"Length"** from below table. (**For example, set to 128 at RU26/MCS0……**)

f. Click "**ADD**" button to added test case.

g. Click "**SET**" button to set test case.

h. If user wanted to test another case can select origin test case and click "**Remove**" button to remove old case and resetting another case again.

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MRU

On RU page:

a. Select RU sub-page

b. Select band

c. Set Category

d. Set RU index (wanted TB RU location).

e. Set data rate

f. Set MU NSS/LDPC/stream index/length

   "MU Nss=1" for Antenna number.

   Set LDPC or non-LDPC to do transmitting.

   Set **"Nss=1"** to do transmitting.

   Set **"stream index=1"**

   Refer to the **"Length"** from below table. (**For example, set to 128 at RU26/MCS0……**)

g. Click "**ADD**" button to added test case.

h. Click "**SET**" button to set test case.

i. If user wanted to test another case can select origin test case and click "**Remove**" button to remove old case and resetting another case again.

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2.3.5 VSA Setting

Open Litepoint MW Web page select VSA

Setting RU info.

1. litepoint GI LTF Type align to QAtool LTF+GI
2. litepoint LDPC sym.(1=Orange light; 0=Gray light) align to QAtool LDPC Extra Sym
3. litepoint PE Disamb.(1=Orange light; 0=Gray light) align to QAtool Tx PE
4. A Factor:
    1. If QAtool A Factor set =0, set litepont A Factor =4
    2. If QAtool A Factor set =1, set litepont A Factor =1
    3. If QAtool A Factor set =2, set litepont A Factor =2
    4. If QAtool A Factor set =3, set litepont A Factor =3
5. Litepoint Stream setting (1 or 2) align to QAtool RU-page stream setting.
6. Litepoint MCS rate setting align to QAtool RU-page MCS setting.
7. Litepoint RU idx setting align to QAtool RU-page RU index setting.
8. If QAtool RU-page LDPC checked, set litepoint Coding : LDPC; Otherwise, set litepoint Coding : BCC.

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2.3.6 WIFI Packets Receiving –1 stream

On TX/RX page

a. Select **"TX/RX Band0"**.

b. Select RX sub-page and "**Test Mode**" as following figure.

c. Set Channel frequency.

d. Set BW. (Generally, System BW = Pre-Packet BW).

e. Choose "TX0/RX0" or TX1/RX1 to do receiving.

f. Select HE_MU mode and Set RU Station ID (wanted RU location station ID) (this step for HE_MU/ EHT_MU_SU and the default sta ID is "888" or you can refer below step to check the correct sta ID)

   Check Station ID of wanted RU (MRU follow RU):

   - Setting RU info
     1. Choose TxQuality Info OFDM
     2. Load test waveform
     3. Choose wanted RU user
     4. RU check Station ID

g. Click "**Start RX**" button to receive WIFI packets.

   Enable WIFI signal generator to transmit packets. Click "**Stop RX**" button to stop receiving.

h. Successful received packets number would be shown at "**RX OK**" area and RSSI shown at "**inst RSSI IB 0**" area.

i. Users can click "**Reset counter**" button to reset counter value.

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2.3.7 WIFI Packets Receiving –2 stream

On TX/RX page

a. Select **"TX/RX Band0"**.

b. Select RX sub-page and "**Test Mode**" as following figure.

c. Set Channel frequency.

d. Set BW. (Generally, System BW = Pre-Packet BW).

e. Choose "TX0/RX0" and TX1/RX1 to do receiving.

f. Select HE_MU mode and Set RU Station ID (wanted RU location station ID) (this step for HE_MU/ EHT_MU_SU and the default sta ID is "888" or you can refer below step to check the correct sta ID)

   Check Station ID of wanted RU:

   - Setting RU info
     5. Choose TxQuality Info OFDM
     6. Load test waveform
     7. Choose wanted RU user
     8. RU check Station ID

g. Click "**Start RX**" button to receive WIFI packets.

   Enable WIFI signal generator to transmit packets. Click "**Stop RX**" button to stop receiving.

h. Successful received packets number would be shown at "**RX OK**" area and RSSI shown at "**inst RSSI IB 0**" area.

i. Users can click "**Reset counter**" button to reset counter value.

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2.4 Read, Write E-fuse Table

2.4.1 Read a Value from E-fuse

Users can use QA-Tool to read a value from an address offset of E-fuse.

On EEPROM page:

a. In E-fuse Mode, EEPROM Type is “E-fuse”.

b. Select Single Read/Write is “**READ**”.

c. Set address offset in “**Offset**” text box then click on ”**R/W**“button. The value of assigned address offset would be shown in the “**Value**” text box.

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2.4.2 Write a Value to E-fuse

Users can use QA-Tool to write a value to an address offset of E-fuse.

On EEPROM page:

a. In E-fuse Mode, EEPROM Type is “E-fuse”.

b. Select Single Read/Write mode is “**WRITE**”

c. Set address offset and new value in “**Offset**” and “**Value**” text boxes then click on ” **R/W** “ button.

d. Click “ **Read ALL** ” button to update e-fuse value in e-fuse table and check it.

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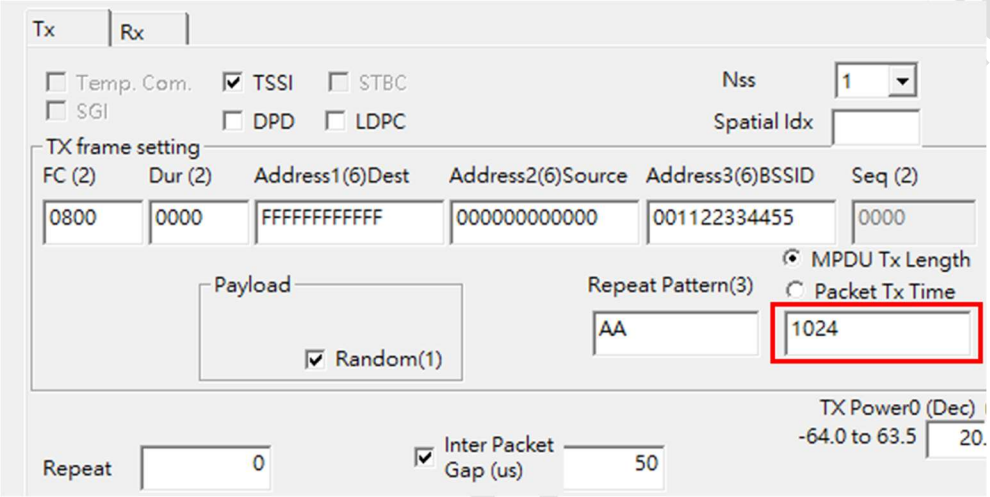
2.5 Homologation test setting

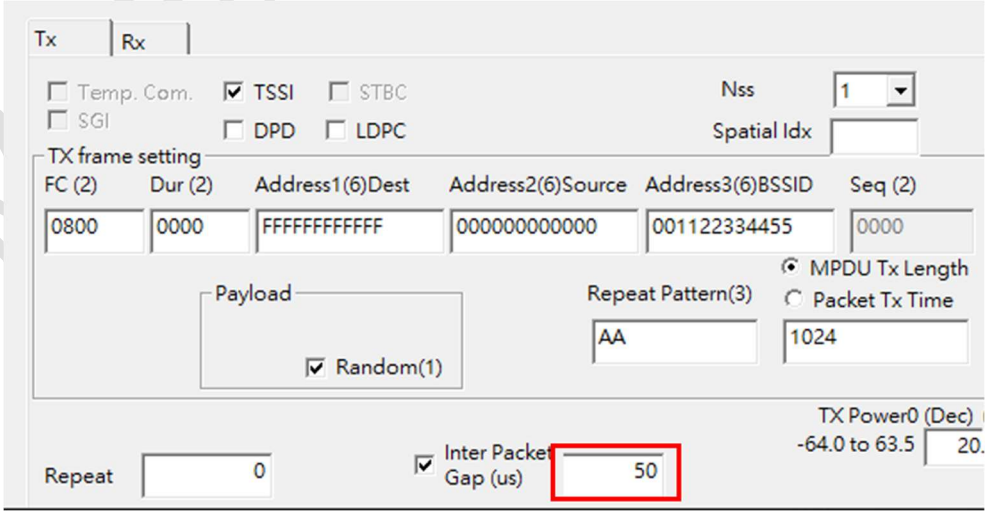
1. Normal Test item, we suggest Packet lengths (2/5/6G):
   a. CCK packet length 1500.
   b. BW20 packet length 4095 (except CCK).
   c. BW40 /BW80 packet length 8192.
   d. BW160 packet length 15000.

   Note: follow section 3



2. For 5G test items, you should modify the packet length as above and IPG as below item.
   a. BW20 / BW40 IPG 1200.
   b. BW80 IPG 600.
   c. BW160 IPG 500.

   Note: follow section 3



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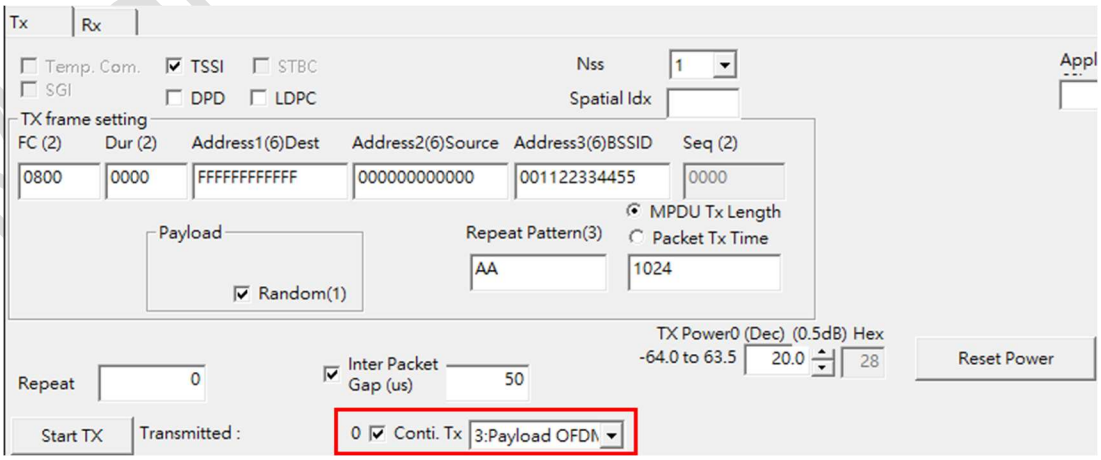
3. QAtool setting

Note: Low rate as worse case

band	mode	rate	BW	packet length	IPG
2G	CCK	1M	20M	1500	50
	OFDM	6M	20M	4095	50
			40M	8192	50
	HT MIX	6.5M	20M	4095	50
			40M	8192	50
	VHT HE EHT	MCS0	20M	4095	50
			40M	8192	50
5G	OFDM	6M	20M	4095	1200
	HT MIX	6.5M	20M	4095	1200
			40M	8192	1200
	VHT HE EHT	MCS0	20M	4095	1200
			40M	8192	1200
			80M	8192	600
			160M	15000	500
6G	OFDM	6M	20M	4095	50
	HE EHT	MCS0	20M	4095	50
			40M	8192	50
			80M	8192	50
			160M	15000	50

4. SAR test item, we suggest use continue TX, and adjust packet lengths that duty meet test conditions (duty > 85%)



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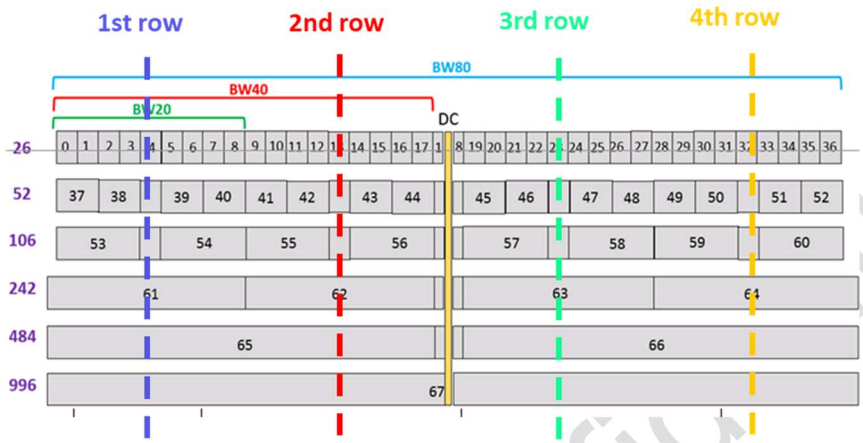
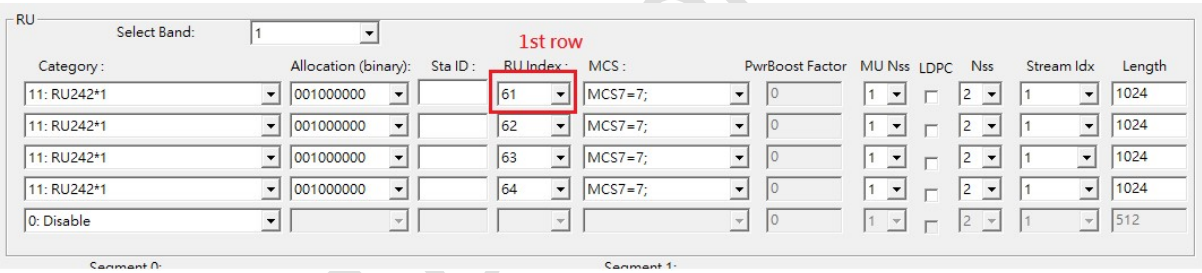
2.6 RU Setting example

RU index setting under QA Tool



Ex: RU Index 61 Can find it at RU242 1st ROW



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MT7925B14L

Test-Mode Software Application Note

Part-2: Combo-Tool

Version: V0.5
Release Date: 2023-08-14

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3 System overview

3.1 General Description

MT7925B14L chip is highly integrated single chip which have built in 2x2 dual-band wireless LAN and Bluetooth combo radio. It can be configured in test-mode for performance validation, production testing and regulatory certification. There are two software tools, QA-Tool and Combo-Tool responsible for evaluating WIFI and Bluetooth signal and performance testing. This document is introducing how to install and use Combo-Tool.

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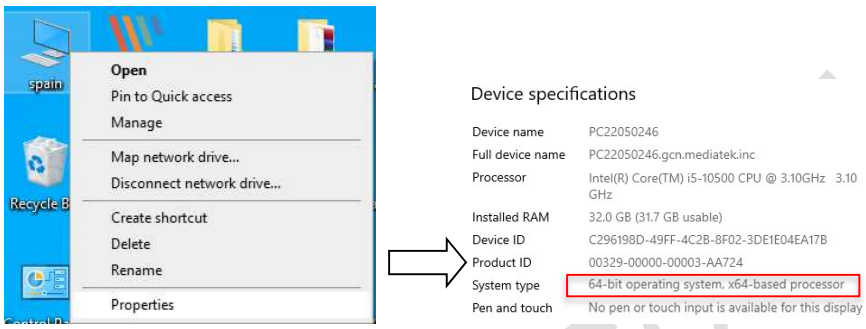
4 Combo-Tool

Combo-Tool installation package include 2 major software:

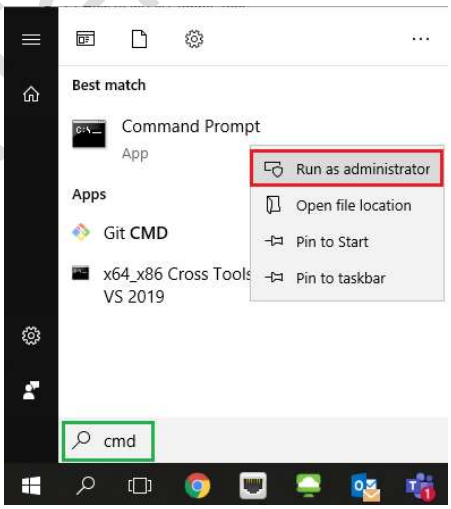
- BT driver
- Combo-Tool Windows installation package

Before doing installation, users should check computer system type by right-clicking Computer icon and selecting Properties to know OS type as following figures.



The OS type MTK strongly recommends use Windows10 64-bit operating system. Users should set Windows10 64-bit OS under test mode according to following steps:

1. Right-click "**Command Prompt**" in Accessories and select "**Run as administrator**."



2. After command window pops out, entering command "**bcdedit /set testsigning on**" to enable test mode as following figure.

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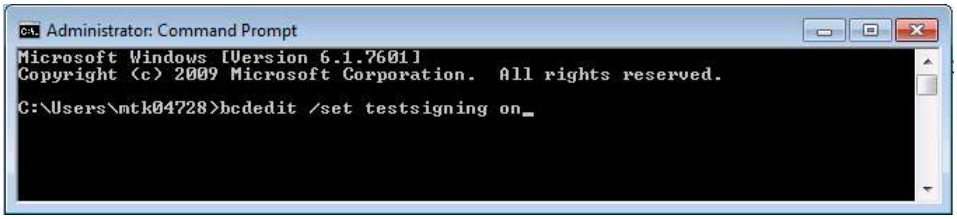


4.1 How to install Combo-Tool

Users should follow the procedure listed in below to install Combo-Tool

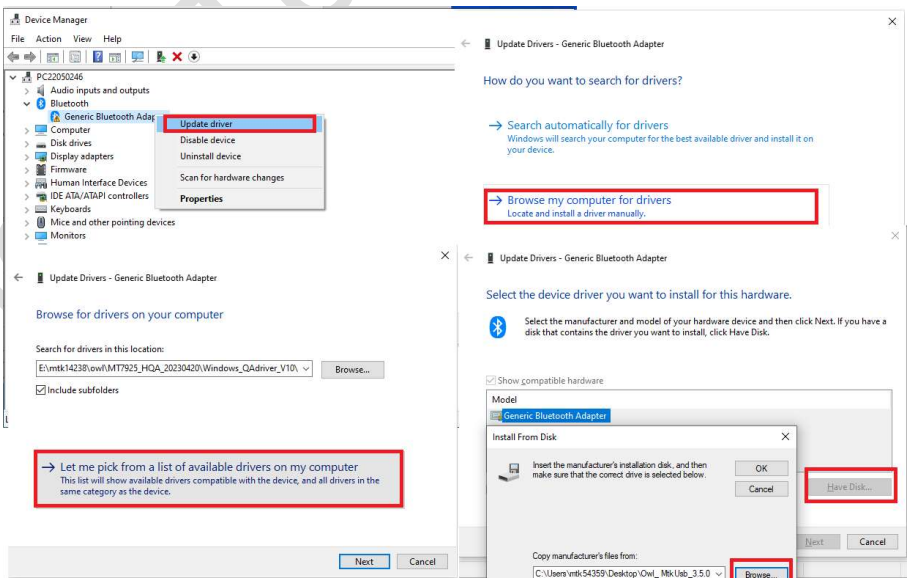
- 1st step: Install BT driver
- 2nd step: Install WinPcap version 4.1.3
- 3rd step: Install Combo-Tool

4.1.1 Install BT driver

BT driver is necessary for Combo-Tool. This driver should be well installed to make Bluetooth device and Combo-Tool working smoothly. Users can refer to following steps to install this driver.

USB Interface:

1. In Window Device Manager, users can update driver software and select BT driver in the folder *…\MtkUsb_3.5.0.51\x64\objfre_win7_x64\mtkbtusb.inf*



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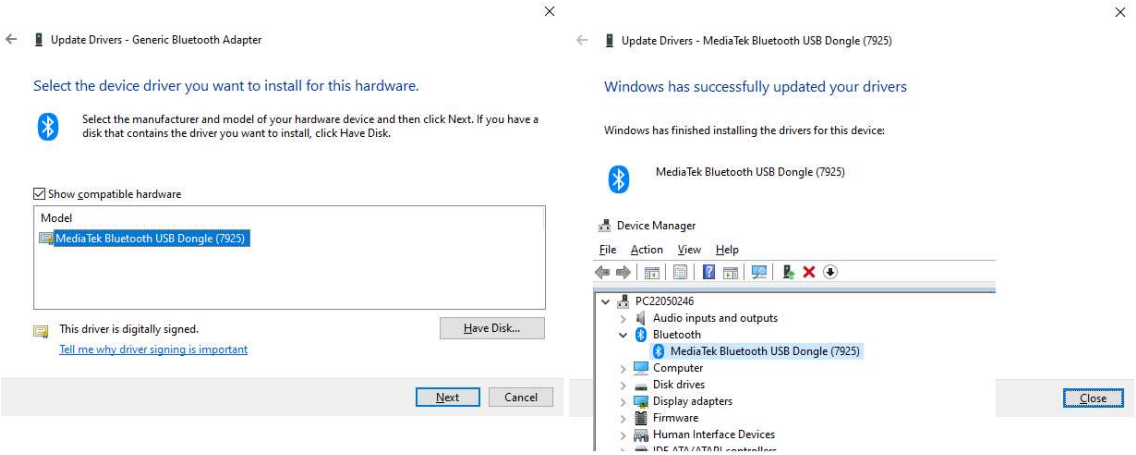
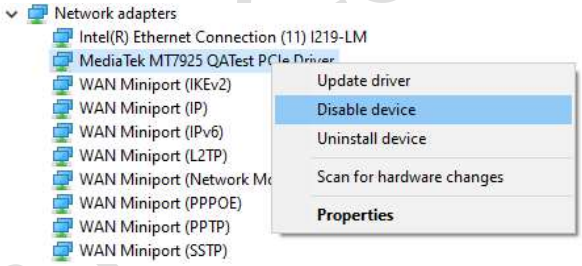
2. Select model "*Mediatek Bluetooth USB Dongle (7925)*" and click Install. Device Manager will also show a device "*Mediatek Bluetooth USB Dongle (7925)*" in Bluetooth Radios if installation is completed.



3. Right-click "MediaTek MT7925 QATest PCIe Driver" (WiFi device if you installed MT7925 WiFi driver) and select disable. User should plug-out and plug-in DUT again after this step.



4.1.2 Install WinPcap version 4.1.3

Double-click WinPcap_4_1_3.exe in "..\WinPcap installer_must\" and follow below steps to install WinPcap.

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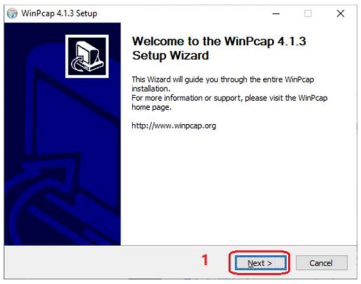
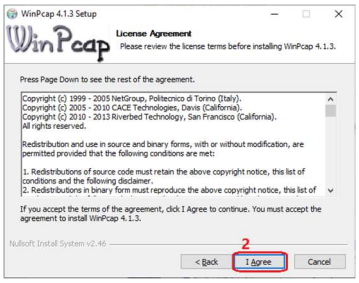
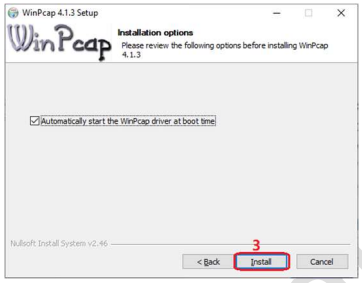
1



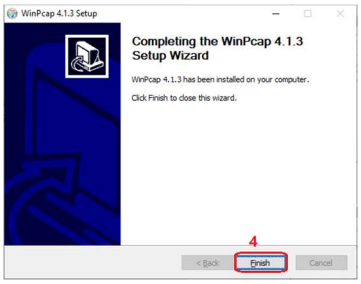
2



3

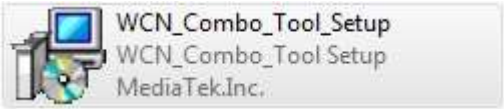


4

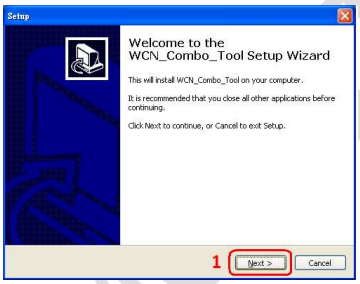


4.1.3 Install Combo-Tool

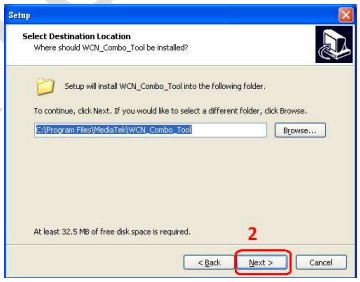
Double-click **WCN_Combo_Tool_Setup** icon in "..\[2.2331]WCN Combo Tool for customer\" and follow below steps to install Combo-Tool.



1

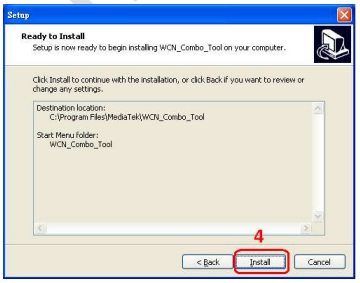


2

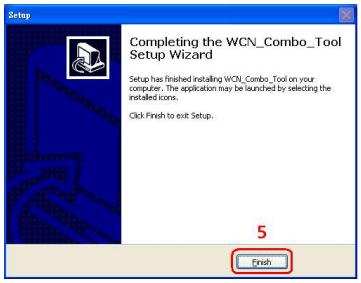


3

4



5



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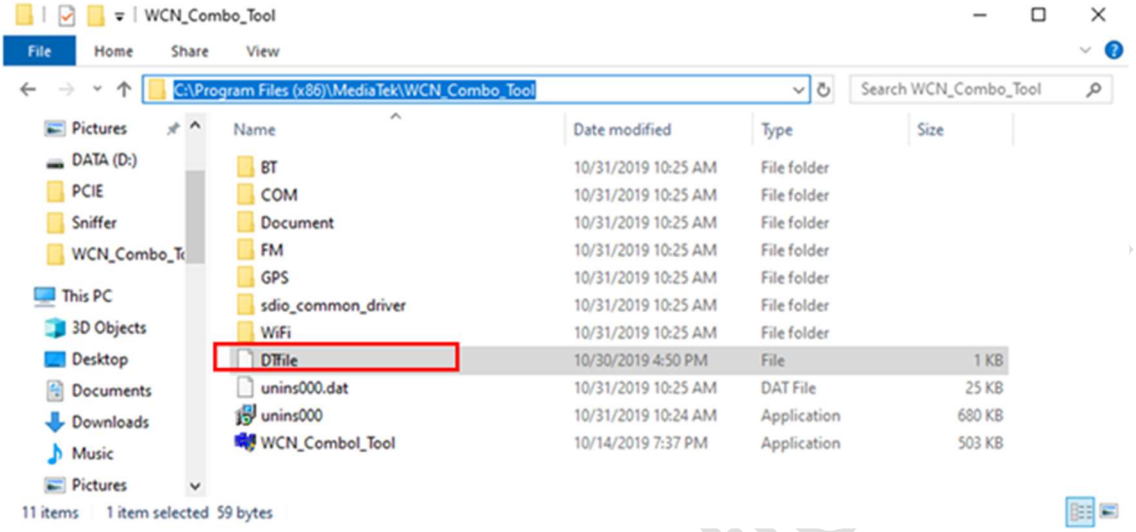
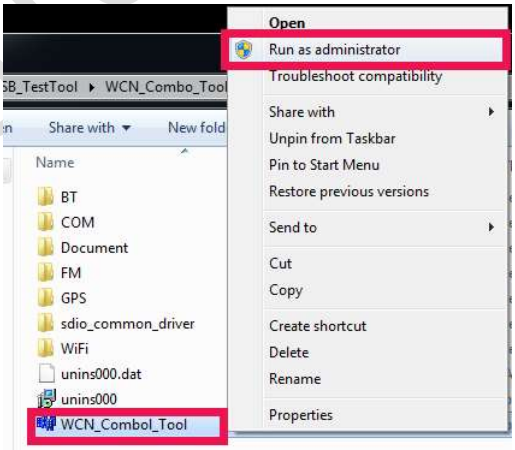
After installation finished, copy “DTFile” to “C:\Program Files (x86)\MediaTek\WCN_Combo_Tool” (as below screenshot).



4.2 How to use Combo-Tool

Users should follow the procedure listed in below to initiate DUT by Combo-Tool

1. Running WCN_Combo_Tool as administrator and the UI will pop out.



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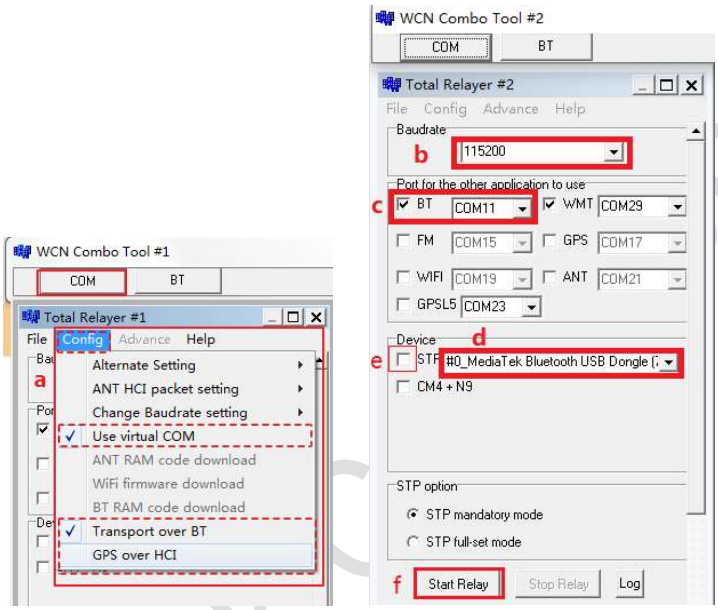
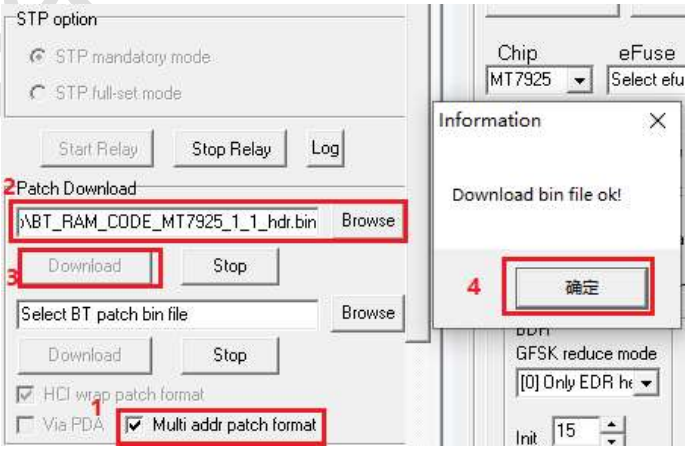
2. a. Select COM ➔ Config ➔ Enable “Transport over BT”, Disable “GPS over HCI”.
   b. Set Baudrate = 115200.
   c. Select BT port number.
   d. Select Device Interface (#0_Mediatek Bluetooth USB Dongle).
   e. Uncheck “STP”.
   f. Click “ Start Relay ”.



3. Click “**Browse**” and “**Download**” buttons to load BT patch in this step. Prompt box will pop up when download is completed. ,please follow the steps : 1->2->3->4



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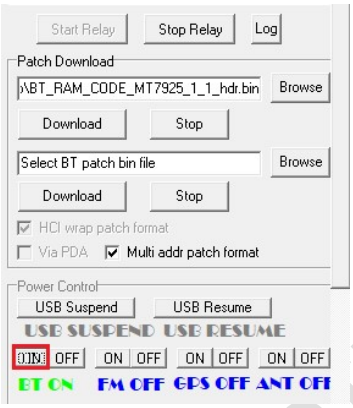
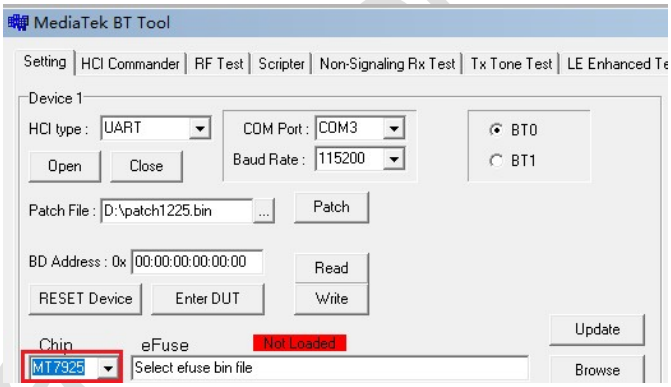
4. After patch download pops out “Download bin file ok!”, click “ ON ” button to set BT ON as following figure.



5. Select Chip ID.



6. On **Setting** page:
   a. Select HCI type : UART
   b. Select COM Port and Baud Rate identical to step-2
   c. Click “ Open ” button to open BT COM port; (“ Close ” button can also close BT COM port.)
   d. Select BT0 or BT1
   e. Click “ Read ” button. If users can get BD address, your DUT initiation is successful.
   f. Click “ RESET Device ” after Open is clicked.
   g. Click “ Enter DUT “ button, the device is entering Bluetooth test mode (signaling mode).

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4.2.1 BDR/EDR Signaling Test Mode

If uses can read BD Address successful on **Setting** page, the DUT is entering Bluetooth signaling test mode automatically. Users can use R&S® CBT Bluetooth Tester to create connection with DUT directly and perform testing. Users could have detailed information of this Bluetooth tester from this URL: https://www.rohde-schwarz.com/en/product/cbt_cbt32-productstartpage_63493-7927.html

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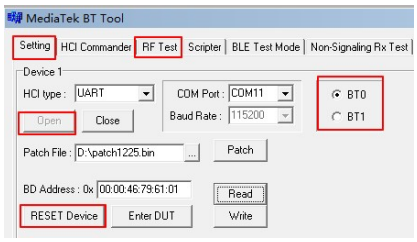
4.2.2 BDR/EDR Non-signaling TX Setting

Ensuring Device is opened and "RESET Device" button is clicked on "**Setting**" page. After that, change the page to "**RF Test**"



TX Setting

a. Click "RESET Device" button to reset DUT again. HCI event would respond RX: E, 4, 1, 3, C, 0.

b. Select Pattern type.

c. Select Packet type.

d. Set channel number (0~78) or frequency hopping.

e. Click " Start " button to start transmitting.

f. Click " Stop " button to stop transmitting.

Note: If BT tester is CBT, user should configure BD address = 000000A5F0C3 on it.

Repeat a~f if Tx pattern, packet type, channel or power are changed.

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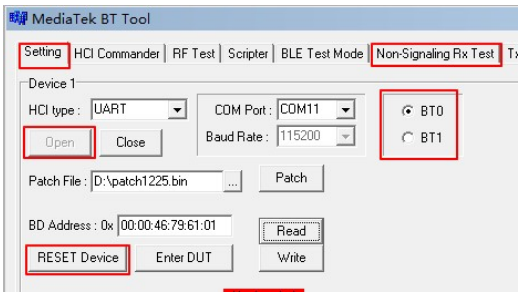
4.2.3 BDR/EDR Non-signaling RX Setting

Ensuring Device is opened and "RESET Device" button is clicked on "**Setting**" page. After that, change the page to "**Non-Signaling Rx Test**"



RX Setting

a. Click " HCI Reset " button at first.

b. Select Rx Pattern type.

c. Set Rx channel number (0~78).

d. Select Rx Packet type.

e. Set BD address identical to CBT tester.

Setup TX parameters on CBT test and turn on transmitting.

f. Click " Enter Test " button to start receiving.

g. Click " Exit Test " button to stop receiving. RX test results are shown on right-side.

Repeat a~g if Rx pattern, packet type or channel are changed.

4.2.4 BLE Direct Test Mode

The picture below shows the setup for BLE direct test mode. The PC serves as a relay station. Then, the DUT and the CBT can transmit commands with each other.
Accessories:

- 1 USB cable
- 1 USB-to-RS232 cable (Option if PC has no RS232 COM-port)
- 1 RS232 TX/RX cross-over cable.

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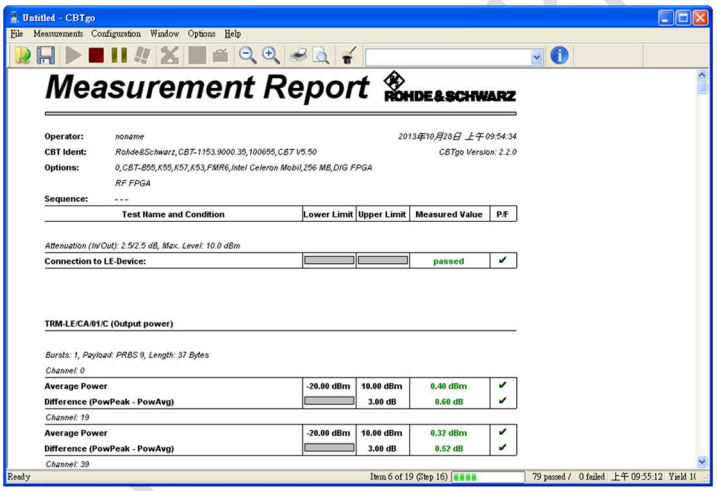
Combo-Tool Setting for BLE Direct Test Mode (Real COM Relay)

After inserting the DUT through the USB cable, please follow the steps to set the real COM relay correctly.

a. Follow the step 1~4 in the beginning of Section 2.2 to download patch and BT on.
b. Click "Stop Relay" to close BT COM port.
c. Click "Config", then unselect "Use virtual COM".
d. Select COM port of "USB to UART cable". For example: COM153 for "USB to UART cable", please choose "COM153".
e. Press "Start Relay" for Real COM Relay.
f. Click "Run" Button to run "BT LE test script" by CBTgo.



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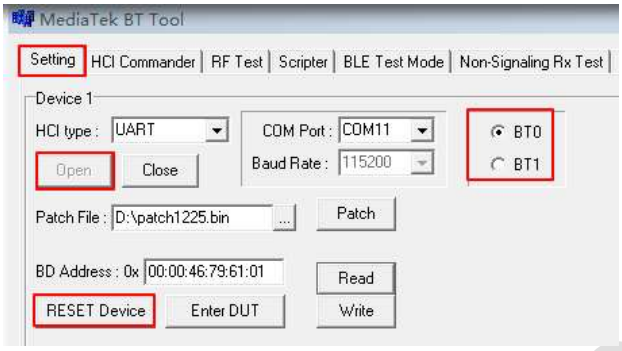
4.2.5 CW-tone TX Setting

Ensuring Device is opened and "RESET Device" button is clicked on "**Setting**" page. After that, change page to "**Tx Tone Test**"



Non-modulated signal

a. Select Tone Type: Single_Tone_DC
b. Select Tx Frequency (channel) number: 0 ~ 78
c. Click " Enter Test " button to start signal transmitting.
d. Click " Exit Test " button to stop signal transmitting

Repeat a ~ d if Tx channel is changed.

Modulated signal

a. Select Tone Type: Modulation_Tone.
b. Select Tx Frequency (channel) number: 0 ~ 78.
c. Select Modulation Type.
d. Select Pattern Type (default PRBS9).
e. Click " Enter Test " button to start signal transmitting.
f. Click " Exit Test " button to stop signal transmitting

Repeat a ~ f if Tx channel is changed.

4.2.6 BLE Enhanced TX Test Mode

"LE Enhanced Test Mode" support part of BT5 LE feature test.
This BT5.0 testing can be executed with equipment likes R&S® CMW270/500 which support BT5.0 feature.
As CMW270/500, users could have detailed information of this Bluetooth tester from this URL: https://www.rohde-schwarz.com/product/cmw270-productstartpage_63493-9552.htm

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Ensuring Device is opened and "RESET Device" button is clicked on "**Setting**" page. After that, change the page to "**LE Enhanced Test Mode**"

BLE Test Mode – TX

a. Select TX Test.
b. Set TX Channel number(0~39).
c. Select Phy.
d. Select Payload length (37 – 255Bytes).
e. Select Pattern type.
f Click Start button and TX signal is present on CBT accordingly.
g. Click Stop to stop transmitting.

Users can repeat a ~ g to change channel number and pattern type.

4.2.7 BLE Enhanced RX Test Mode

Ensuring Device is opened and "RESET Device" button is clicked on "**Setting**" page. After that, change the page to "**LE Enhanced Test Mode**"

BLE Test Mode – RX

a. Select RX Test.
b. Set RX Channel number(0~39).
c. Select Phy.

Turn on CMW270/500 packet generator.

d. Click " Start " button.
e. Click Stop button again. RX results are shown in Packet Count.

Users can repeat a ~ e to change channel number and pattern type.

4.2.8 BT Run Script

1. On Script Page, Select Script file, and modify BT COM.

2. Run script.

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4.2.9 BT RF Parameter Setting

4.2.9.1 Set BT Radio Setting

1. EDR power range should be equal to BDR's (range = max - min)
2. Max power, init power and min power should be kept 5dB multiples apart

	NB Tx Power		TV Tx Power	
	BDR	EDR	BDR	EDR
Lv8 ~ Lv8-4	11 ~ 7	8 ~ 4	15 ~ 11	12 ~ 8
Lv7 ~ Lv7-4	6 ~ 2	3 ~ -1	10 ~ 6	7 ~ 3
Lv6 ~ Lv6-4	1 ~ -3	-2 ~ -6	5 ~ 1	2 ~ -2
Lv5 ~ Lv5-4	-4 ~ -8	-7 ~ -11	0 ~ -4	-3 ~ -7
Lv4 ~ Lv4-4	-9 ~ -13	-12~ -16	-5 ~ -9	- 8~ -12
Lv3 ~ Lv3-4	-14 ~ -18	-17 ~ -21	-10 ~ -14	-13 ~ -17
Lv2 ~ Lv2-4	-19 ~ -23	-22 ~ -26	-15 ~ -19	-18 ~ -22
Lv1 ~ Lv1-4	-24 ~ -28	-27 ~ -31	-20 ~ -24	-23 ~ -27
Lv0 ~ Lv0-4	-29 ~ -33	-32 ~ -36	-25 ~ -29	-28 ~ -32

4.2.9.2 Set BT Loss

BT0 – ANT0 loss, BT1—ANT0 loss can be defined by customer, then setting the BT radio power will refer to the ANT port , BT software will then set the BT chip out power = ANT port + (BT –ANT0 loss), please notice BDR chip out max power is limited to 15dBm, EDR chip out max power is limited to 12dBm

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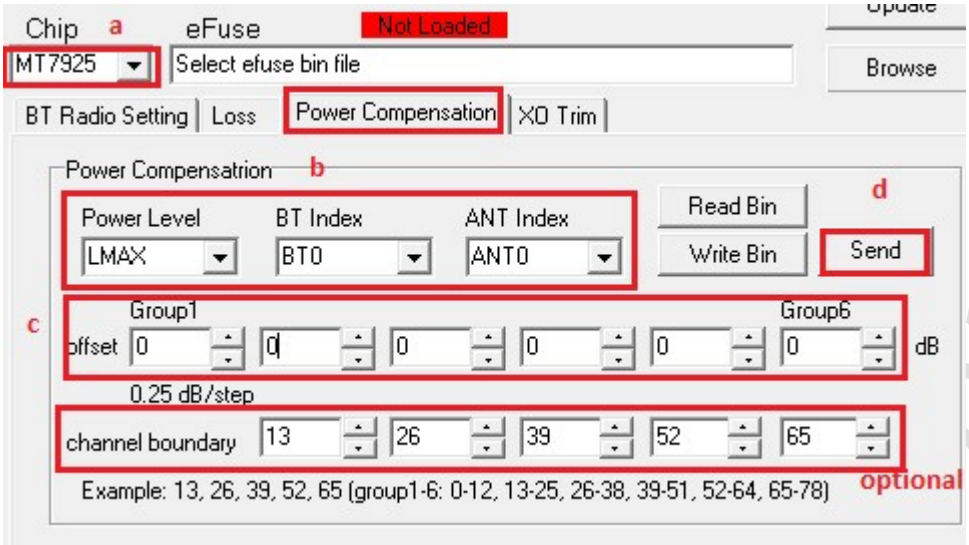
4.2.9.3 Set BT Power compensation



4.2.9.4 Set BT Mode XO Trim

C1 Frequency offset (XO_C1_SEL_BTM)

BIT[7] : C1 BTM value valid bit

BIT[6:0] : C1 BTM value

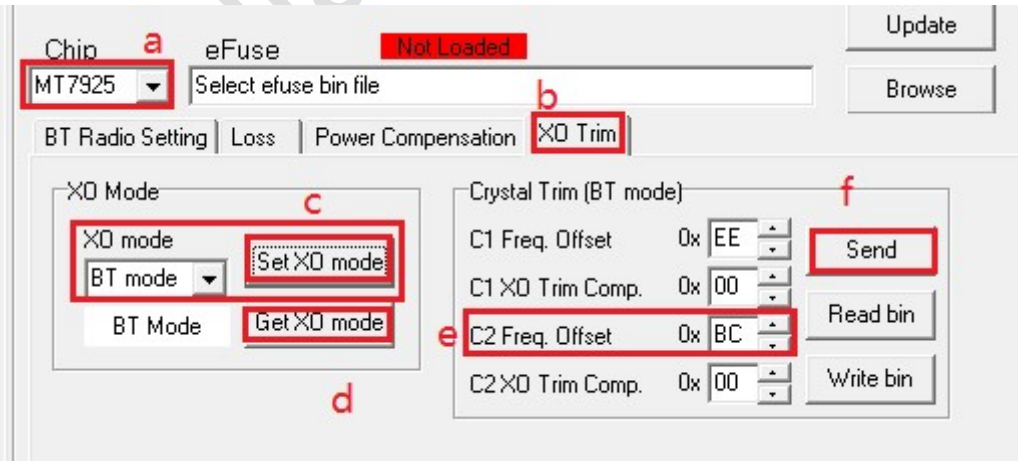
Fix C1 Frequency offset to 0xEE.

C2 Frequency offset(XO_C2_SEL_BTM)

BIT[7] : C2 BTM value valid bit

BIT[6:0] : C2 BTM value

Tune C2 value to trim XO frequency offset.



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5 General Information & Integration Instructions

5.1 General Description of MT7925B14L

Product	2TX 11be (WiFi7) BW160 + BT/BLE Combo Card
Brand	MediaTek
Model	MT7925B14L
Power Supply Rating	3.3Vdc from host equipment
Modulation Type	GFSK, π/4-DQPSK, 8DPSK CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in VHT mode 1024QAM for OFDMA in 11ax mode 4096QAM for OFDMA in 11be mode
Modulation Technology	**BT EDR:** FHSS **BT LE:** DTS **WLAN:** DSSS, OFDM, OFDMA
Transfer Rate	**BT EDR:** up to 3 Mbps **BT LE:** 125kbps / 500kbps / 1Mbps / 2 Mbps **2.4GHz:** 802.11b: up to 11 Mbps 802.11g: up to 54 Mbps 802.11n: up to 300 Mbps VHT: up to 400 Mbps 802.11ax: up to 573.5 Mbps 802.11be: up to 688.2 Mbps **5GHz:** 802.11a: up to 54 Mbps 802.11n: up to 300 Mbps 802.11ac: up to 1733.3 Mbps 802.11ax: up to 2401.9Mbps 802.11be: up to 1441.2 Mbps **5.9GHz:** 802.11a: up to 54 Mbps 802.11n: up to 300 Mbps 802.11ac: up to 1733.3 Mbps 802.11ax: up to 2401.9 Mbps 802.11be: up to 2882.4 Mbps **6GHz** 802.11a: up to 54 Mbps 802.11ax: up to 2401.9 Mbps 802.11be: up to 2882.4 Mbps
Operating Frequency	**BT EDR:** 2402MHz ~ 2480MHz **BT LE:** 2402MHz ~ 2480MHz **2.4GHz:** 2.412 ~ 2.472GHz **5GHz:** 5.18~5.25GHz, 5.25~5.32GHz, 5.5 GHz ~5.72 GHz, 5.745 ~ 5.825GHz, 5.815GHz ~5.885GHz **6GHz:** 5.955~6.415GHz, 6.435~6.525GHz, 6.535~6.865GHz, 6.875~7.115GHz
Number of Channel	**BT EDR:** 79 **BT LE:** 40 **2.4GHz:** 802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20), 802.11be (EHT20): 13 802.11n (HT40), VHT40, 802.11ax (HE40), 802.11be (EHT40): 9 5 **GHz:**

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	U-NII-1 802.11a, 802.11n(HT20), 802.11ac(VHT20), 802.11ax(HE20), 802.11be(EHT20):4 802.11n(HT40), 802.11ac(VHT40), 802.11ax(HE40), 802.11be(EHT40):2 802.11ac(VHT80), 802.11ax(HE80), 802.11be(EHT80):1 U-NII-2A + U-NII-2C 802.11a, 802.11n(HT20), 802.11ac(VHT20), 802.11ax(HE20), 802.11be(EHT20):16 802.11n(HT40), 802.11ac(VHT40), 802.11ax(HE40), 802.11be(EHT40):8 802.11ac(VHT80), 802.11ax(HE80), 802.11be(EHT80):4 802.11ac(VHT160), 802.11ax(HE160), 802.11be(EHT160):2 U-NII-3 802.11a, 802.11n(HT20), 802.11ac(VHT20), 802.11ax(HE20), 802.11be(EHT20):5 802.11n(HT40), 802.11ac(VHT40), 802.11ax(HE40), 802.11be(EHT40):2 802.11ac(VHT80), 802.11ax(HE80), 802.11be(EHT80):15.9GHz: 802.11a, 802.11n(HT20), 802.11ac(VHT20), 802.11ax(he20), 801.11be(EHT20):3 802.11n(HT40), 802.11ac(VHT40), 802.11ax(HE40), 802.11be(EHT40):2 802.11ac(VHT80), 802.11ax(HE80), 802.11be(EHT80):1 802.11ac(VHT160), 802.11ax(HE160), 802.11be(EHT160):1 **6GHz:** 802.11a/ax(HE20), 802.11be(EHT20): 59 80211ax(HE40), 802.11be(EHT40): 29 80211ax(HE80), 802.11be(EHT80): 14 80211ax(HE160), 802.11be(EHT160): 7
Output power	**BT EDR:** 12.71 dBm **BT LE:** 12.79 dBm **2.4GHz:** 1TX: 24.14 dBm 2TX: 24.82 dBm **5GHz:** **1TX:** 5.18~5.24GHz: 21.75 dBm 5.26~5.32GHz: 21.96 dBm 5.5 GHz ~5.72 GHz: 22.67 dBm 5.745 ~ 5.825GHz: 24.43 dBm **2TX:** 5.18~5.24GHz: 23.89 dBm 5.26~5.32GHz: 23.96 dBm 5.5 GHz ~5.72 GHz: 23.87 dBm 5.745 ~ 5.825GHz: 27.44 dBm **5.9GHz:** 1TX: 28.17 dBm 2TX: 29.74 dBm **6GHz:** **1TX:** (under control of a low-power indoor AP) 5.955~6.415GHz: 19.99 dBm 6.435~6.525GHz: 19.91 dBm 6.535~6.865GHz: 20.01 dBm 6.875~7.115GHz: 20.25 dBm **2TX:** 5.955~6.415GHz: 20.34 dBm 6.435~6.525GHz: 20.33 dBm 6.535~6.865GHz: 20.22 dBm 6.875~7.115GHz: 20.36 dBm (under control of a standard power AP) **1TX:** 5.955~6.415GHz: 29.84 dBm 6.535~6.855GHz: 29.88 dBm **2TX:** 5.955~6.415GHz: 29.84 dBm 6.535~6.855GHz: 29.95 dBm

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5.2 Antenna information

The antennas mentioned below are covered in the certification scope and the HOST can only be used with the following antennas:

Ant. Set	RF Chain No.	Brand	Model	Ant. Net Gain (dBi)	Freq. Range (GHz)	Ant. Type	Connector Type
1	Chain0	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.85	PIFA	i-pex(MHF)
	Chain1	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.85	PIFA	i-pex(MHF)
2	Chain0	PSA	RFMTA311020EMMB301	1.71 4.82 4.76 4.29 4.61 4.09	2.4~2.4835 5.15~5.85 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
	Chain1	PSA	RFMTA311020EMMB301	1.71 4.82 4.76 4.29 4.61 4.09	2.4~2.4835 5.15~5.85 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
3	Chain0	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex
	Chain1	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex
4	Chain0	HongBo	260-25096	3.11 4.88 4.91 4.9 4.9 4.87 4.73 4.29 4.58 4.09	2.4~2.4835 5.15~5.895 5.25~5.35 5.47~5.725 5.725~5.85 5.85~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Monopole	i-pex (MHF)
	Chain1	HongBo	260-25096	3.11 4.88 4.91 4.9 4.9 4.87 4.73 4.29 4.58 4.09	2.4~2.4835 5.15~5.895 5.25~5.35 5.47~5.725 5.725~5.85 5.85~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Monopole	i-pex (MHF)

Only the above antennas are tested for compliance with the FCC rules, and all other antennas (even same type with lower gain) will require a re-assessment to be used with this module.

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5.3 Host Integration instructions

The product is designed to be used with the "NGFF (Next Generation Form Factor) M.2" PCIe bus and LGA. Please install the module into an M.2 PCIe slot for the M.2 SKU and use the soldering method for the LGA interface.

5.4 Host product testing guidance

HOST must follow the specific restrictions listed in "3.5 Regulatory notes" section below and section 3 of KDB996369 D04 V02 Module Integration Guide v01, to verify that the host product meets all the applicable rules.

FCC regulation requirements / installation restrictions

Dual Client 6CD

a. This device not 6PP category and the maximum power does not exceed authorized values.
b. This device will only associate and connect with a low-power indoor Access Point, subordinate device, or standard access point and never directly link to any other client devices.
c. This device will always initiate transmission under the control of a low-power indoor AP or subordinate or standard client except access point for brief communications before joining a network. These quick messages will only occur if the client has detected an indoor AP, subordinate, or standard access point operating on a channel. These brief messages will have a time-out mechanism such that if it does not receive a response from an AP it will not continually repeat the request.
d. This device, when associated and connected with a low-power indoor access point, subordinate or standard access point device, will operate at a power lower as advertised by the indoor access point, subordinate, or standard access point:
   i. lower than or equal to the power advertised by the low-power indoor access point or subordinate and never above the maximum output power allowed by the FCC grant for clients associated with indoor clients or subordinates.
   ii. lower than or 6 dB below the power advertised by the standard access point.

1. Contention-based protocol as demonstrated in the test report is permanently embedded in the module and is not host-dependent based protocol demonstrated in the test report.

Installation restrictions

1. Prohibited for control of or communications with unmanned aircraft systems, including drones.

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Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Radiation Exposure Statement:

The product comply with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual.
The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

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This module is intended for OEM integrators only. Per FCC KDB 996369 D03 OEM Manual v01 guidance, the following conditions must be strictly followed when using this certified module:

KDB 996369 D03 OEM Manual v01 rule sections:

2.2 List of applicable FCC rules

This module has been tested for compliance to FCC Part 15 Subpart C (15.247) and Subpart E (15.407).

2.3 Summarize the specific operational use conditions

The module is tested for standalone mobile RF exposure use condition. Any other usage conditions such as co-location with other transmitter(s) or being used in a portable condition will need a separate reassessment through a class II permissive change application or new certification.

NII-4 Client

This module is authorized for **client** device applications under the control of an indoor access point or subordinate.

The final host product must comply with the following operational restrictions:

a) Cannot have a direct connection to the internet to source the internet to other clients, access points, subordinates or clients from a wired or direct connection.

For 6CD

This module is authorized for **Dual Client (6CD)** device applications.

The final host product must comply with the following operational restrictions:

a) Cannot connect directly to any other client device;
b) Cannot source internet/network (obtained via wired connection or other means such as cellular) to other clients, access points and subordinate devices or provide any direct peer to peer connections to other clients or subordinates;
c) Is prohibited for control of or communications with unmanned aircraft systems

6VL

This module is authorized for use in a **Very Low Power Device (6VL)** device.

The final host product must comply with the following operational restrictions:

a) The operation of this device is prohibited on oil platforms and aircraft, except that operation of this device in 5.925-6.425 GHz is permitted in large aircraft while flying above 10,000 feet.
b) Installation on outdoor fixed infrastructure is prohibited.
c) Controlling or communications with unmanned aircraft systems, including drones, is

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prohibited.

2.4 Limited module procedures

Not applicable.

2.5 Trace antenna designs

Any deviation(s) from the defined parameters of the antenna trace, as described by the instructions, require that the host product manufacturer must notify the module grantee that they wish to change the antenna trace design. In this case, a Class II permissive change application is required to be filed by the grantee, or the host manufacturer can take responsibility through the change in FCC ID (new application) procedure followed by a Class II permissive change application

2.6 RF exposure considerations

This equipment complies with FCC mobile radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. A separate SAR/Power Density evaluation is required to confirm compliance with relevant FCC portable RF exposure rules.

This device was tested for typical body operations. To comply with RF exposure requirements, a minimum separation distance of 5 mm must be maintained between the user's body a including the antenna.
accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided.

2.7 Antennas

The following antennas have been certified for use with this module; antennas of the same type with equal or lower gain may also be used with this module, except as described below. The antenna must be installed such that 20 cm can be maintained between the antenna and users.

Demonstration of compliance to Contention-Based Protocol requirements across U-NII-5/6/7/8 bands has been determined using a lowest antenna gain. The use of antennas with gain lower than this will require a separate Class II permissive change re-evaluation or new certification.

The following antennas have been certified with this module.

Ant. Set	RF Chain No.	Brand	Model	Ant. Net Gain (dBi)	Freq. Range (GHz)	Ant. Type	Connector Type
1	Chain0	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.85	PIFA	i-pex(MHF)
	Chain1	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.85	PIFA	i-pex(MHF)
2	Chain0	PSA	RFMTA311020EMMB301	1.71 4.82 4.76	2.4~2.4835 5.15~5.85 5.925~6.425	PIFA	i-pex(MHF)

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				4.29 4.61 4.09	6.425~6.525 6.525~6.875 6.875~7.125		
	Chain1	PSA	RFMTA311020EMMB301	1.71 4.82 4.76 4.29 4.61 4.09	2.4~2.4835 5.15~5.85 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
3	Chain0	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex
	Chain1	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex
4	Chain0	HongBo	260-25096	3.11 4.88 4.91 4.9 4.9 4.87 4.73 4.29 4.58 4.09	2.4~2.4835 5.15~5.895 5.25~5.35 5.47~5.725 5.725~5.85 5.85~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Monopole	i-pex (MHF)
	Chain1	HongBo	260-25096	3.11 4.88 4.91 4.9 4.9 4.87 4.73 4.29 4.58 4.09	2.4~2.4835 5.15~5.895 5.25~5.35 5.47~5.725 5.725~5.85 5.85~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Monopole	i-pex (MHF)

Note1: Use of other antenna types or the same type of antenna with higher gain than listed above must performed additional testing and appropriate permissive change approval.
Note2: In the 5.925-7.125GHz band, use of other similar type antennas and the antenna gain not higher/lower than listed above may only require a C1PC without any additional testing/submission.
Note3: Contact MTK for additional guidance, if choose to use different antenna types or higher/lower gain antennas in the end system.
IMPORTANT: The final host product must have an integral antenna which is not removable by the end-user.

2.8 Label and compliance information

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The final end product must be labeled in a visible area with the following: “Contains FCC ID: RAS-MT7925B14L”. The grantee's FCC ID can be used only when all FCC compliance requirements are met.

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user’s manual of the end product which integrates this module.

The end product user manual shall include all required regulatory information/warning as shown in this manual.

2.9 Information on test modes and additional testing requirements

This transmitter is tested in a standalone mobile RF exposure condition and any co-located or simultaneous transmission with other transmitter(s) class II permissive change re-evaluation or new certification.

2.10 Additional testing, Part 15 Subpart B disclaimer

This transmitter module is tested as a subsystem and its certification does not cover the FCC Part 15 Subpart B (unintentional radiator) rule requirement applicable to the final host. The final host will still need to be reassessed for compliance to this portion of rule requirements if applicable.

OEM/Host manufacturers are ultimately responsible for the compliance of the Host and Module. The final product must be reassessed against all the essential requirements of the FCC rule such as FCC Part 15 Subpart B before it can be placed on the US market. This includes reassessing the transmitter module for compliance with the Radio and EMF essential requirements of the FCC rules. This module must not be incorporated into any other device or system without retesting for compliance as multi-radio and combined equipment.

As long as all conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

2.11 Note EMI Considerations

The host manufacturer shall utilize KDB 996369 D04 Module Integration Guide for testing and evaluation in the event that non-linear interactions result in additional non-compliant limits due to module placement relative to host components or properties. For standalone mode, please refer to the guidance provided in KDB 996369 D04 Module Integration Guide. For simultaneous mode7, refer to D02 Module Q&A Question 12, which allows the host manufacturer to confirm compliance.

2.12 How to make changes

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Since only Grantees are permitted to make permissive changes, any modification to this modular device should be communicated to MTK staff using the information provided below.

Siegfried Chang /Manager
Tel.: + 886-3-5600868
Fax: + 886-3-6662673
E-mail: Siegfried.Chang@mediatek.com

IMPORTANT NOTE: In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

For UNII-4

Indoor AP
Statement in manual
FCC regulations restrict the operation of this device to indoor use only.

Statement on Label
FCC regulations restrict the operation of this device to indoor use only.
Or
Indoor use only

Subordinate
Statement in manual
FCC regulations restrict the operation of this device to indoor use only.
This device cannot operate as a subordinate between separate buildings or structures.

Statement on Label
FCC regulations restrict the operation of this device to indoor use only.
Or
Indoor use only.

6e indoor device (6ID, 6XD, 6CD, 6VL)

For 6CD (Dual Client)
Statement in manual
Transmitters in the 5.925-7.125 GHz band are prohibited from operating to control or communicate with unmanned aircraft systems.

For 6VL (Very Low Power)

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Statement in manual

a. The operation of this device is prohibited on oil platforms and aircraft, except that operation of this device in 5.925-6.425 GHz is permitted in large aircraft while flying above 10,000 feet.
b. Installation on outdoor fixed infrastructure is prohibited.
c. Controlling or communications with unmanned aircraft systems, including drones, is prohibited.

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

OEM/Host manufacturer responsibilities

OEM/Host manufacturers are ultimately responsible for the compliance of the Host and Module. The final product must be reassessed against all the essential requirements of the FCC rule such as FCC Part 15 Subpart B before it can be placed on the US market. This includes reassessing the transmitter module for compliance with the Radio and EMF essential requirements of the FCC rules. This module must not be incorporated into any other device or system without retesting for compliance as multi-radio and combined equipment.

Modules: extended to host manufacturers by integration instructions.

Industry Canada statement:

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This device complies with ISED's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d' ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Radiation Exposure Statement:
This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:
Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20 cm entre le radiateur et votre corps.

This device is intended only for OEM integrators under the following conditions: (For module device use)

1) The antenna must be installed and operated with greater than 20cm between the antenna and users, and
2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as **2** conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Cet appareil est conçu uniquement pour les intégrateurs OEM dans les conditions suivantes: (Pour utilisation de dispositif module)

1) L'antenne doit être installé et exploité avec plus de 20 cm entre l'antenne et les utilisateurs, et

2) Le module émetteur peut ne pas être coïmplanté avec un autre émetteur ou antenne.

Tant que les **2** conditions ci-dessus sont remplies, des essais supplémentaires sur l'émetteur ne seront pas nécessaires. Toutefois, l'intégrateur OEM est toujours responsable des essais sur son produit final pour toutes exigences de conformité supplémentaires requis pour ce module installé.

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In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the Canada authorization is no longer considered valid and the IC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate Canada authorization.

IMPORTANTENOTE

Dans le cas où ces conditions ne peuvent être satisfaites (par exemple pour certaines configurations d'ordinateur portable ou de certaines co-localisation avec un autre émetteur), l'autorisation du Canada n'est plus considéré comme valide et l'ID IC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera chargé de réévaluer le produit final (y compris l'émetteur) et l'obtention d'une autorisation distincte au Canada.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed and operated with greater than 20cm between the antenna and users. The final end product must be labeled in a visible area with the following: “Contains IC:7542A-MT792514L”.

Plaque signalétique du produit final

Ce module émetteur est autorisé uniquement pour une utilisation dans un appareil où l’antenne peut être installée et utilisée à plus de 20 cm entre l’antenne et les utilisateurs. Le produit final doit être étiqueté dans un endroit visible avec l'inscription suivante: "Contient des IC: 7542A-MT7925B14L

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user’s manual of the end product which integrates this module.
The end user manual shall include all required regulatory information/warning as show in this manual.

Manuel d'information à l'utilisateur final

L'intégrateur OEM doit être conscient de ne pas fournir des informations à l'utilisateur final quant à la façon d'installer ou de supprimer ce module RF dans le manuel de l'utilisateur du produit final qui intègre ce module.
Le manuel de l'utilisateur final doit inclure toutes les informations réglementaires requises et avertissements comme indiqué dans ce manuel.

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Caution :

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;

(iii) for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate;

(iv) where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

Avertissement:

Le guide d'utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment :

(i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

(ii) pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5 250 à 5 350 MHz et de 5 470 à 5 725 MHz doit être conforme à la limite de la p.i.r.e;

(iii) pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5 725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée, selon le cas;

(iv) lorsqu'il y a lieu, les types d'antennes (s'il y en a plusieurs), les numéros de modèle de l'antenne et les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, énoncée à la section 6.2.2.3, doivent être clairement indiqués

RSS-248 Issue 3 General statement

- Devices shall not be used for control of or communications with unmanned aircraft systems.
- Devices shall not be used on oil platforms.
- Devices shall not be used on aircraft, except for the low-power indoor access points, indoor subordinate devices, low-power client devices, and very low-power devices operating in the

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5925-6425 MHz band, that may be used on large aircraft as defined in the Canadian Aviation Regulations, while flying above 3,048 metres (10,000 feet).

- Les dispositifs ne doivent pas être utilisés pour commander des systèmes d'aéronef sans pilote ni pour communiquer avec de tels systèmes;
- Les dispositifs ne doivent pas être utilisés sur les plateformes de forage pétrolier;
- Les dispositifs ne doivent pas être utilisés dans les aéronefs, à l'exception des points d'accès intérieurs de faible puissance, des dispositifs subordonnés intérieurs, des dispositifs clients de faible puissance et des dispositifs de très faible puissance fonctionnant dans la bande de 5 925 à 6 425 MHz, qui peuvent être utilisés dans les gros aéronefs tel qu'il est défini dans le Règlement de l'aviation canadien, et ce, lorsqu'ils volent à une altitude supérieure à 3 048 mètres (10 000 pieds).

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DETACHABLE ANTENNA USAGE

This radio transmitter (IC: 7542A- MT7925B14L / Model: MT7925B14L) has been approved by ISED to operate with the antenna type listed below with maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (IC: 7542A-MT7925B14L / Model: MT7925B14L) a été approuvé par ISED pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Approved antenna(s) list

Ant. Set	RF Chain No.	Brand	Model	Ant. Net Gain (dBi)	Freq. Range (GHz)	Ant. Type	Connector Type
1	Chain0	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.85	PIFA	i-pex(MHF)
	Chain1	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.85	PIFA	i-pex(MHF)
2	Chain0	PSA	RFMTA311020EMMB301	1.71 4.82 4.76 4.29 4.61 4.09	2.4~2.4835 5.15~5.85 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
	Chain1	PSA	RFMTA311020EMMB301	1.71 4.82 4.76 4.29 4.61 4.09	2.4~2.4835 5.15~5.85 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
3	Chain0	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex
	Chain1	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex
4	Chain0	HongBo	260-25096	3.11 4.88 4.91 4.9 4.9 4.87 4.73 4.29 4.58 4.09	2.4~2.4835 5.15~5.895 5.25~5.35 5.47~5.725 5.725~5.85 5.85~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Monopole	i-pex (MHF)
	Chain1	HongBo	260-25096	3.11 4.88 4.91	2.4~2.4835 5.15~5.895 5.25~5.35	Monopole	i-pex (MHF)

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				4.9 4.9 4.87 4.73 4.29 4.58 4.09	5.47~5.725 5.725~5.85 5.85~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125		

IMPORTANT: The final host product must have an integral antenna which is not removable by the end-user.

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