



(Realtek RTL8822CE)

Combo NGFF Type2230 Module User's Manual

Preliminary Version

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Realtek Semiconductor Corp.

No. 2, Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan

Tel.: +886-3-578-0211. Fax: +886-3-577-6047

www.realtek.com

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ENVIRONMENTAL

Operating

Operating Temperature: 0°C to +70 °C

Relative Humidity: 5-90% (non-condensing)

Storage

Temperature: -40°C to +80°C (non-operating)

Relevant Humidity: 5-95% (non-condensing)

MTBF caculation

Over 150,000hours

Warning

Federal Communication Commission Interference Statement

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.

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.

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.

IMPORTANT NOTE:

FCC 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.

This device is intended only for OEM integrators under the following conditions:

- 1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
- 2) This device and its antenna(s) must not be co-located with any other transmitters except in accordance with FCC multi-transmitter product procedures. Referring to the multi-transmitter policy, multiple-transmitter(s) and module(s) can be operated simultaneously without C2P.
- 3) For all products market in US, OEM has to limit the operation channels in CH1 to CH13 for 2.4G band by supplied firmware programming tool. OEM shall not supply any tool or info to the end-user regarding to Regulatory Domain change.

USERS MANUAL OF THE END PRODUCT:

In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied. The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment. If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the users manual: This device complies with Part 15 of 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.

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains TX2-RTL8822CE ". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of 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.

Manual Information To the End User

This module is intended for OEM integrator. The OEM integrator is responsible for

the compliance to all the rules that apply to the product into which this certified RF module is integrated.

Additional testing and certification may be necessary when multiple modules are used.

Industry Canada Statement

This device complies with Industry Canada's licence-exempt RSSs.

Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This device and its antenna(s) must not be co-located with any other transmitters except in accordance with IC multi-transmitter product procedures.

Referring to the multi-transmitter policy, multiple-transmitter(s) and module(s) can be operated simultaneously without reassessment permissive change.

Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionner en association avec une autre antenne ou transmetteur.

This radio transmitter (RTL8822CE) has been approved by Industry Canada to operate with the antenna types listed below with the 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 (RTL8822CE) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de

l'émetteur.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
					2.4GHz	5GHz
1	PSA	RFDPA171320EMLB301	Dipole Antenna	I-PEX	3.14	5
2	LYNwave	ALA110-222050-300011	PIFA Antenna	I-PEX	3.5	5

Dynamic Frequency Selection (DFS) for devices operating in the bands 5250-5350 MHz, 5470-5600 MHz and 5650-5725 MHz.

Sélection dynamique de fréquences (DFS) pour les dispositifs fonctionnant dans les bandes 5250-5350 MHz, 5470-5600 MHz et 5650-5725 MHz.

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.

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.

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.

le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la limite de p.i.r.e.

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 specified for point-to-point and non-point-to-point operation as appropriate.

le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5725-5850 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.

For indoor use only.

Pour une utilisation en intérieur uniquement.

IMPORTANT NOTE:**IC Radiation Exposure Statement:**

This equipment complies with IC RSS-102 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.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

IMPORTANT NOTE:

This module is intended for OEM integrator. The OEM integrator is responsible for the compliance to all the rules that apply to the product into which this certified RF module is integrated.

Additional testing and certification may be necessary when multiple modules are used.

20cm minimum distance has to be able to be maintained between the antenna and the users for the host this module is integrated into. Under such configuration, the IC RSS-102 radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

USERS MANUAL OF THE END PRODUCT:

In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the IC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied.

The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment. 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.

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following "Contains IC: 6317A-RTL8822CE".

The Host Model Number (HMN) must be indicated at any location on the exterior of the end product or product packaging or product literature which shall be available with the end product or online.

NCC 警語

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

1. 本模組於取得認證後將依規定於模組本體標示審驗合格標籤。
2. 系統廠商應於平台上標示「本產品內含射頻模組：

XXXyyyLPDzzzz-x」字樣。

Installing the Wireless PCIe NGFF2230 module

Hardware

Installing PCIe NGFF2230 module to PCIe NGFF2230 connector and connect two external Wi-Fi antennas on I-PEX connectors.



Un-installing the Wireless PCIe NGFF2230 module

Hardware

Remove 2 external Wi-Fi Antennas from the Wireless PCIe NGFF1630 module

board and remove the Wireless PCIe NGFF2230 module board from PCIe

NGFF2230 connector port



Installing the Wireless PCIe NGFF2230 module

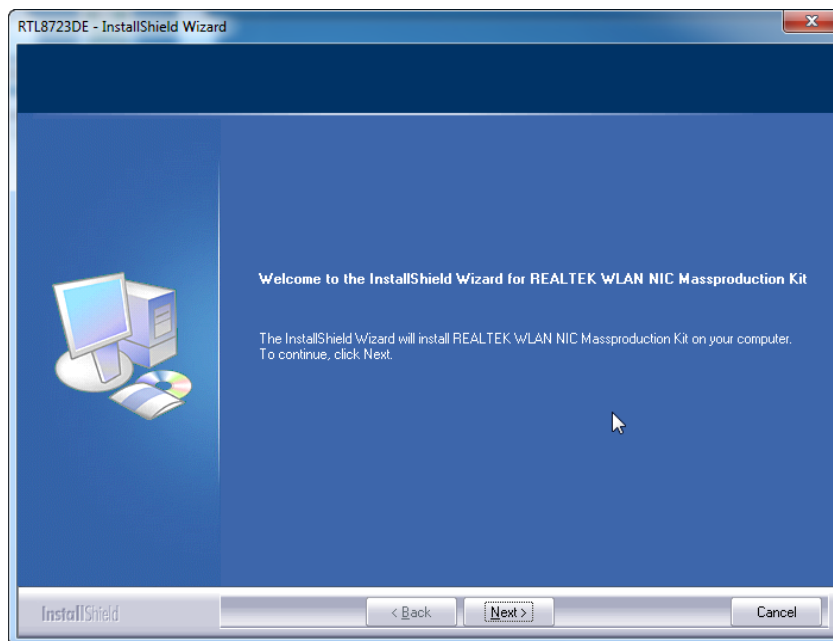
Software

Before you proceed with the installation, please notice following descriptions.

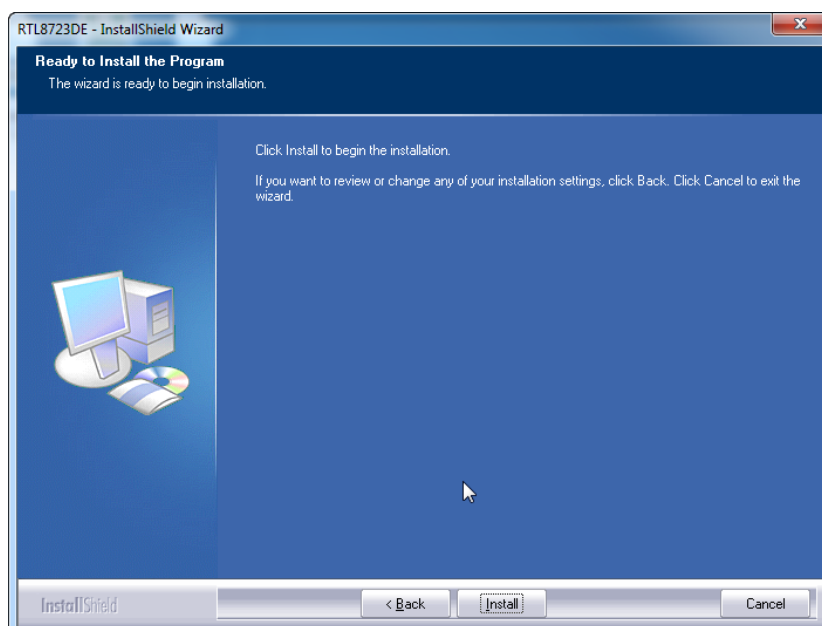
Note1: The following installation was operated under Windows 7.

Note2: If you have installed the WLAN driver & utility before, please uninstall the old version first.

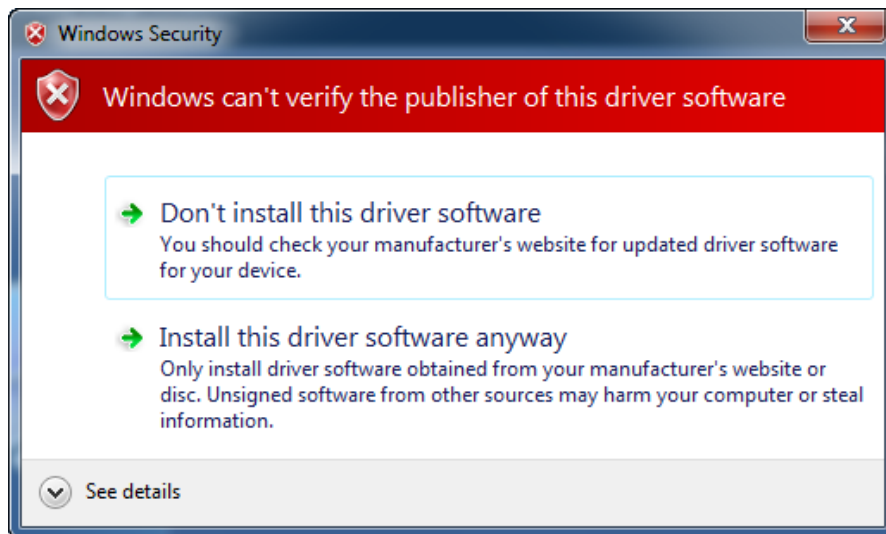
A. Execute the “setup.exe”, Click “Next” to process the installation



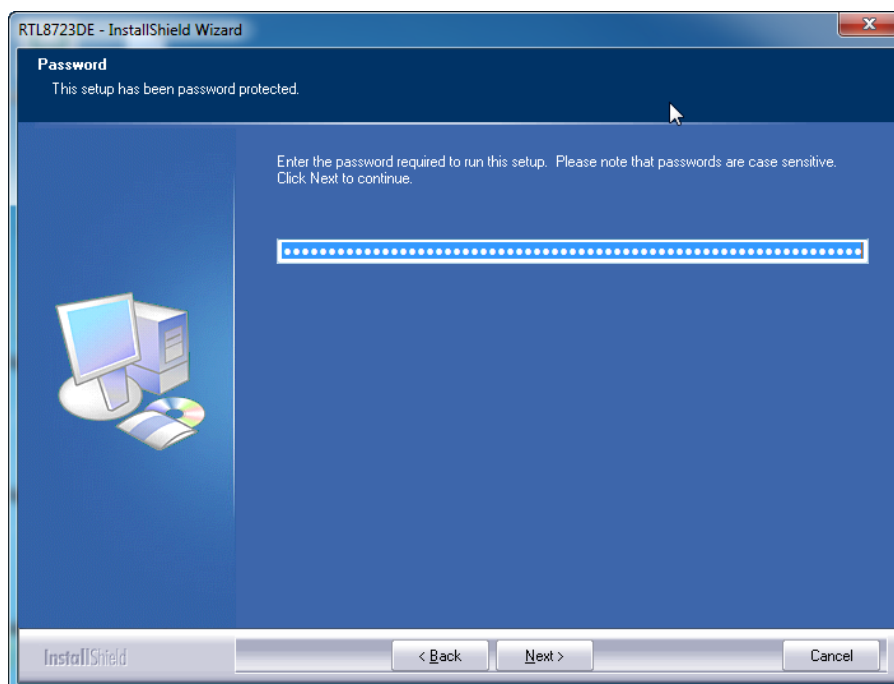
B. Click “Install” to process the installation



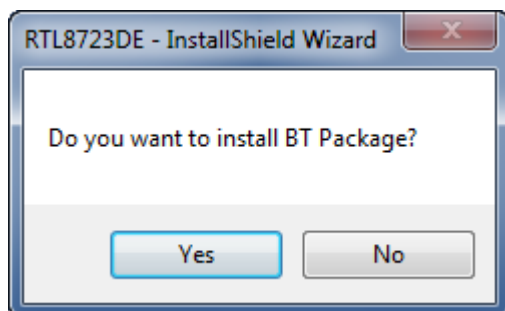
C. Click Install this driver software anyway



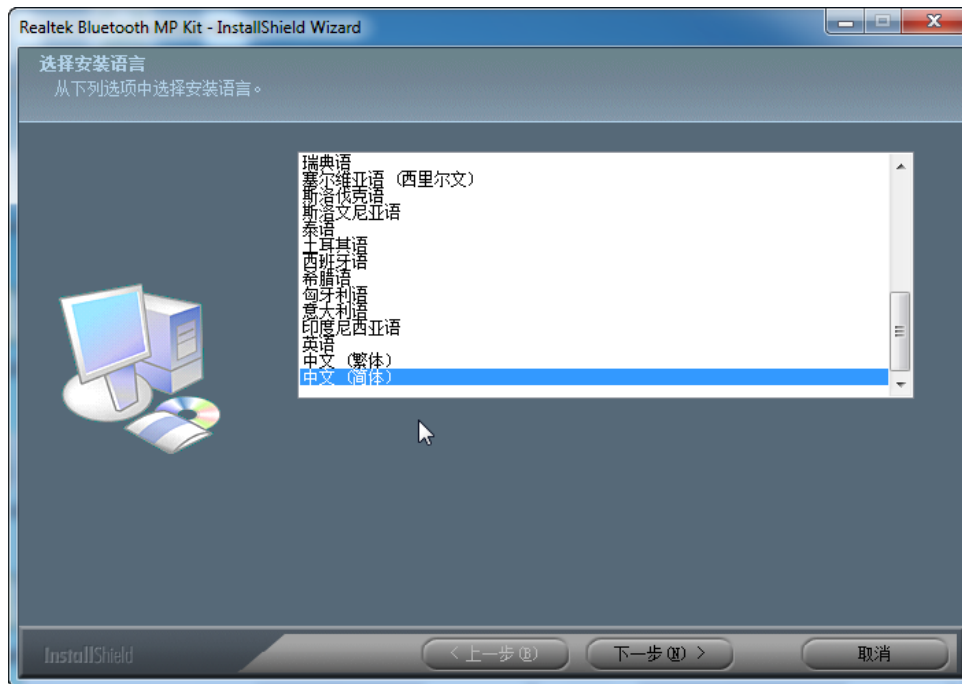
D. After step "C" please press Next button.



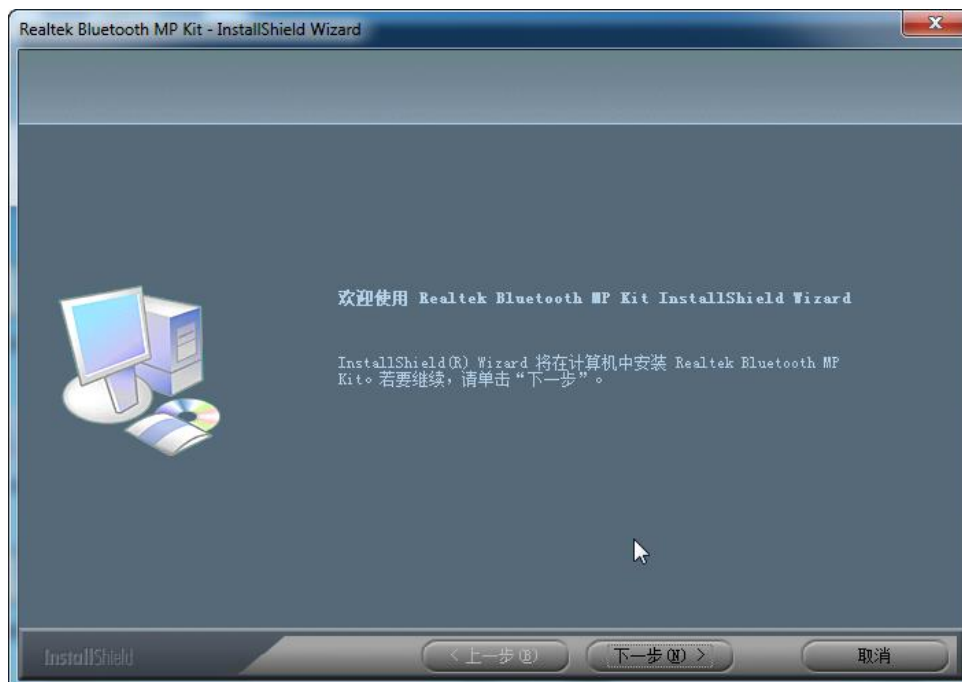
E. Please click "YES" to install BT package.



F. Please click “下一步”to continue.



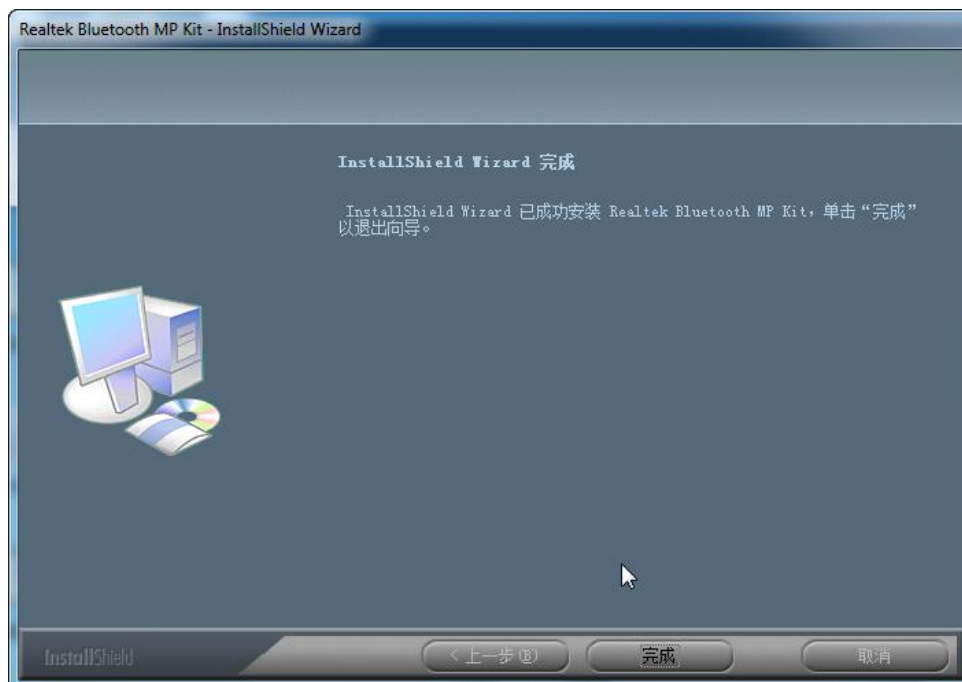
G. Please click “下一步”to continue.



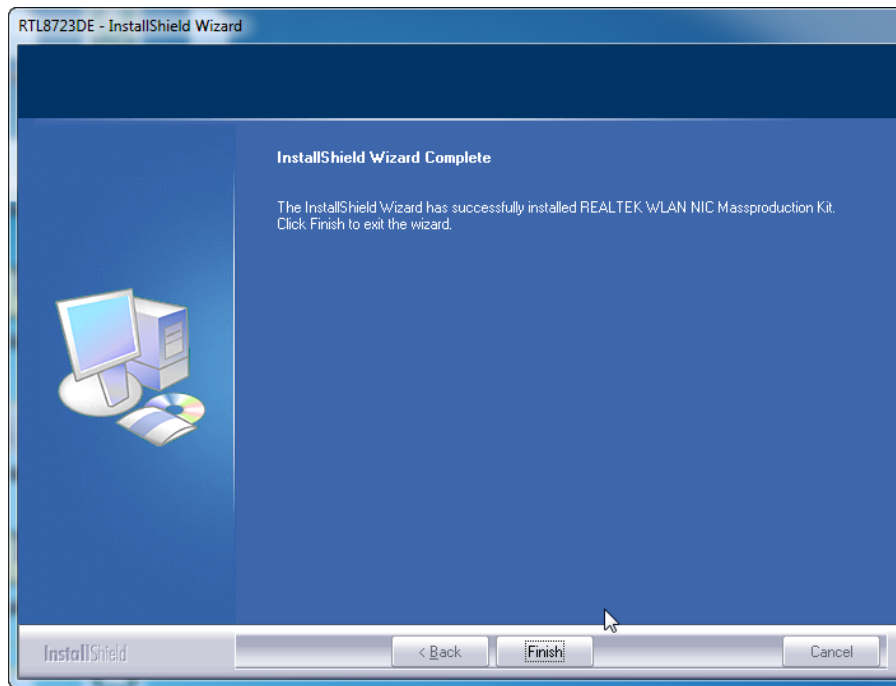
H. Please click “安装”to start installation.



I. Please click “完成”to finish the installation.



J. Press Finish button to complete the install process

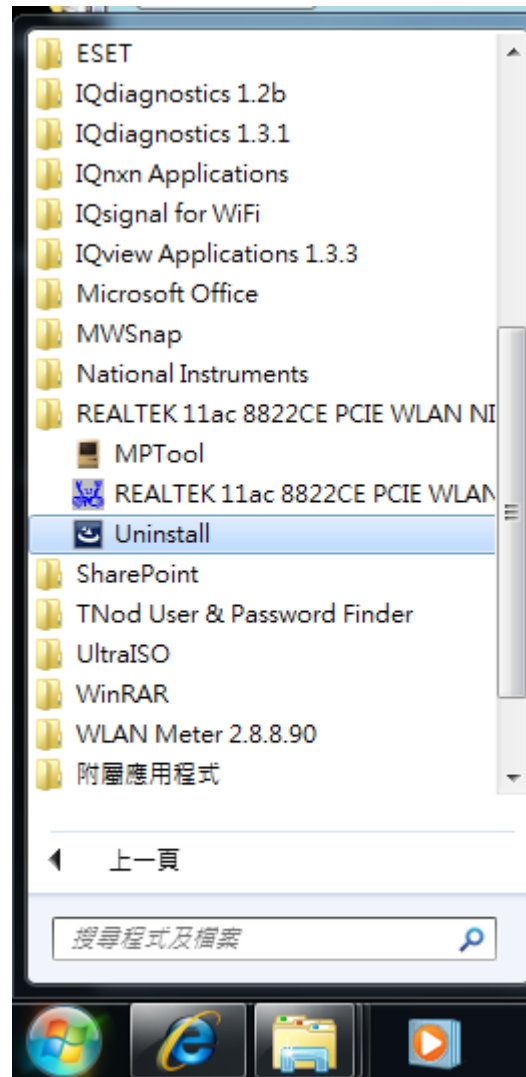


Un-installing the Wireless PCIe NGFF2230 module

Software

A. Uninstall the RTL8822CE WLAN Driver from “Start”→ “All Programs”→ “REALTEK 11ac 8822CE PCIE WLAN NIC Massproduction kit”

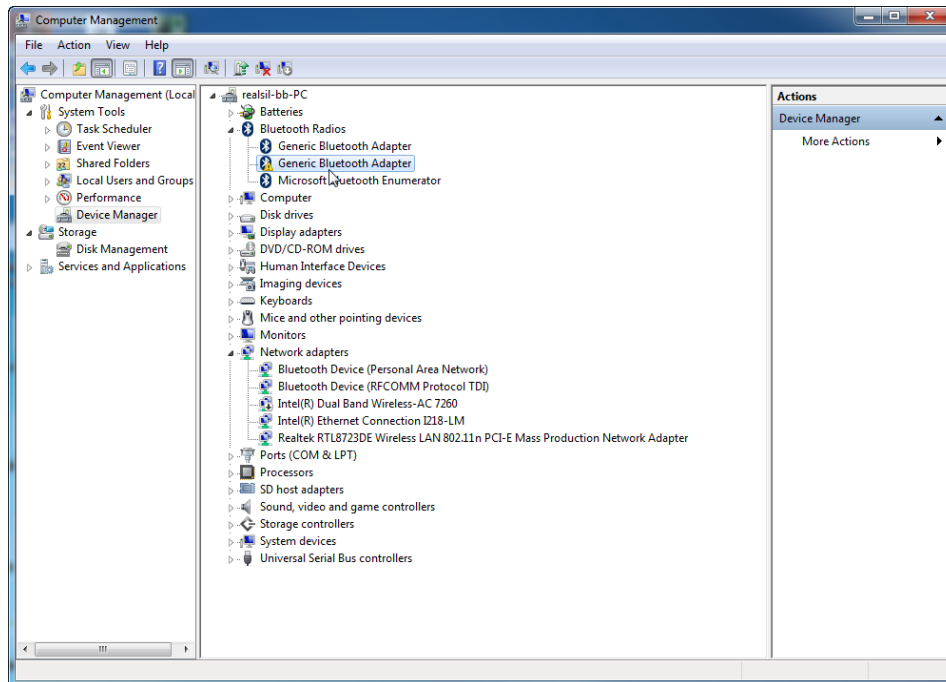
Please click “Uninstall” to remove RTL8822CE WLAN driver.



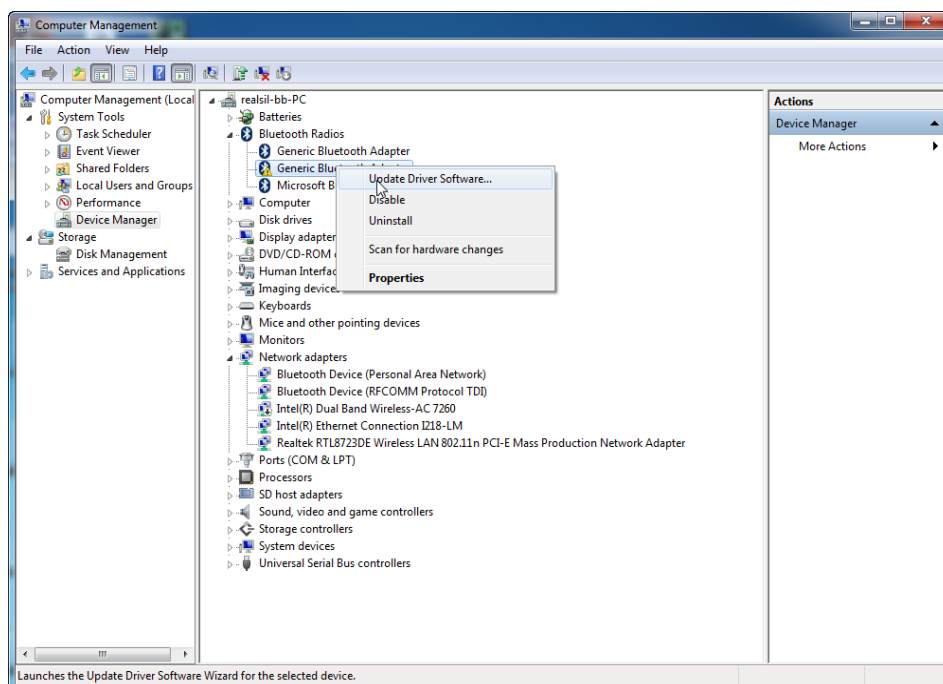
Installing the Bluetooth USB Module

Software

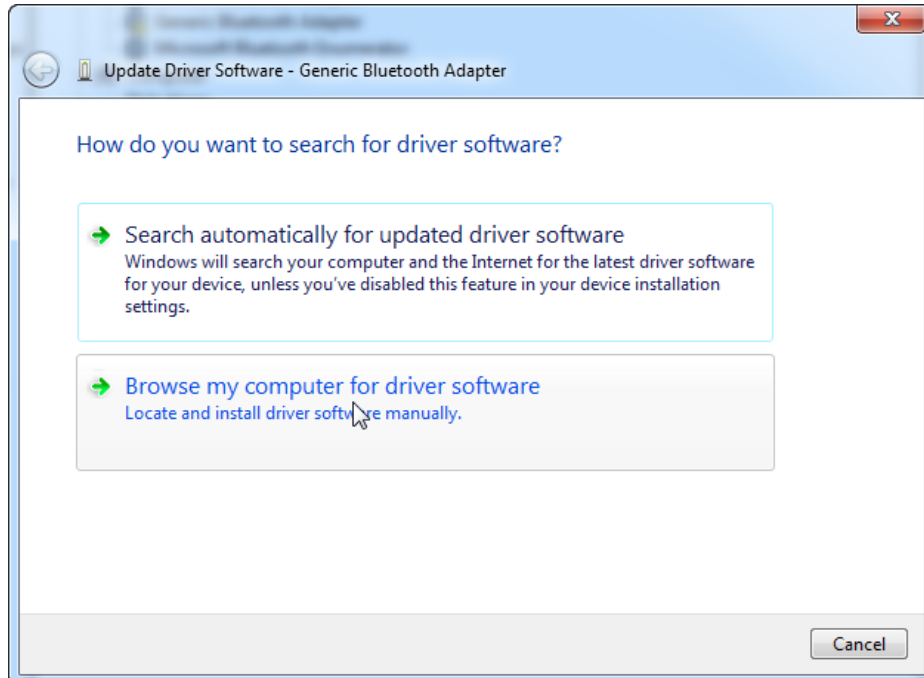
- A. Insert the NGFF2230 card into system connector.
- B. Boot on system then the “Generic Bluetooth Adapter” device will show up in device manager.



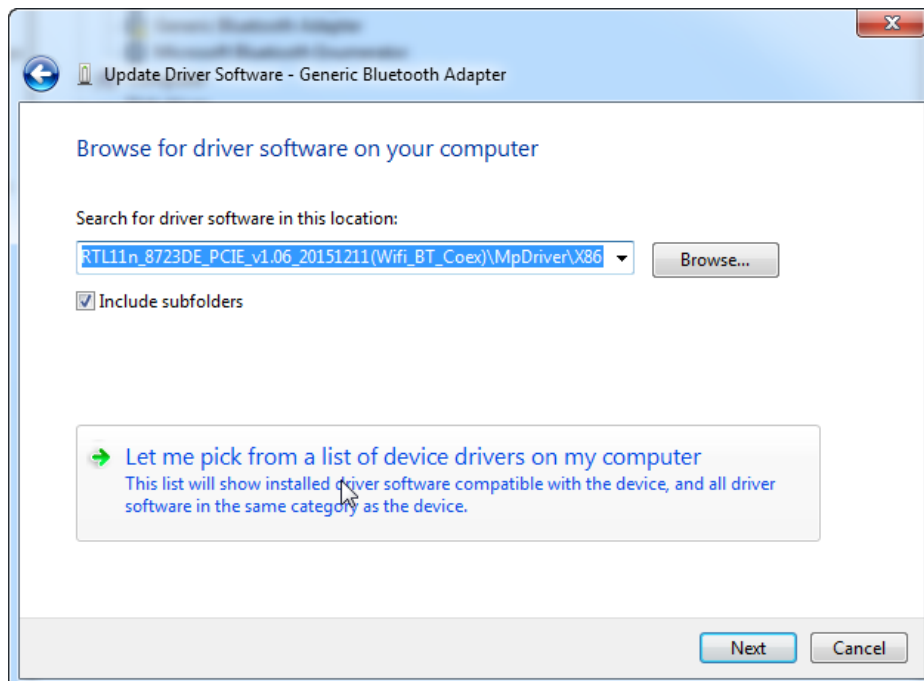
- C. Click right button on “RT Bluetooth Radio” and select “Update Driver”.



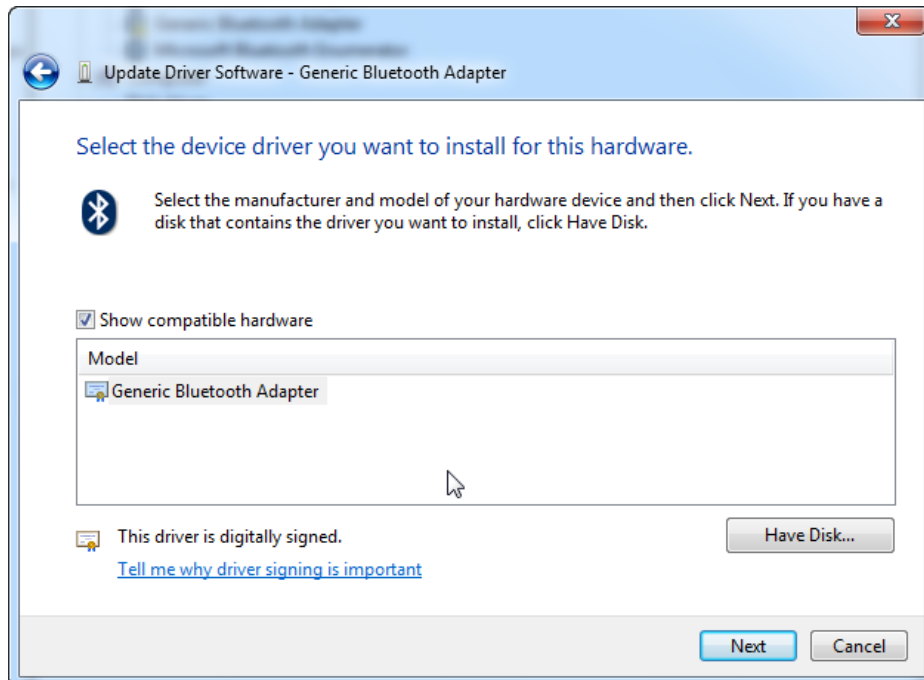
- D. After select “Update Driver Software ” then the Hardware Update Wizard will pop up, please select “Browse my computer for driver software” and press Next button.



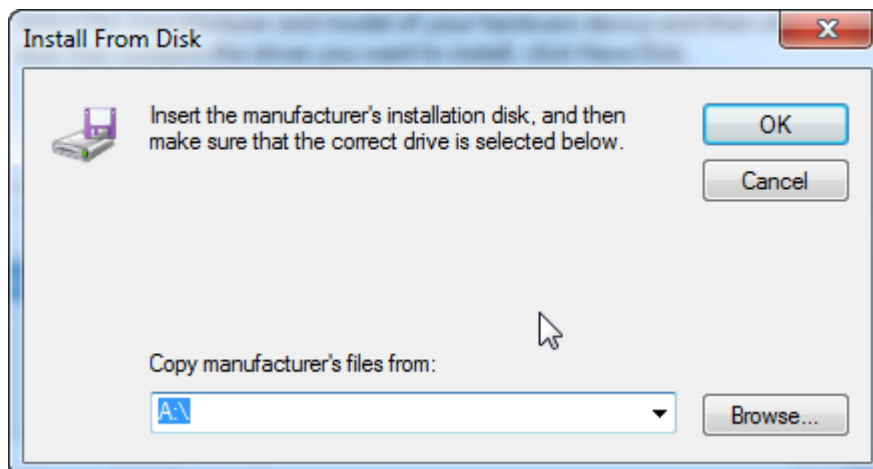
- E. After step “D” please Select “Let me pick from a list of device drivers on my computer ”.

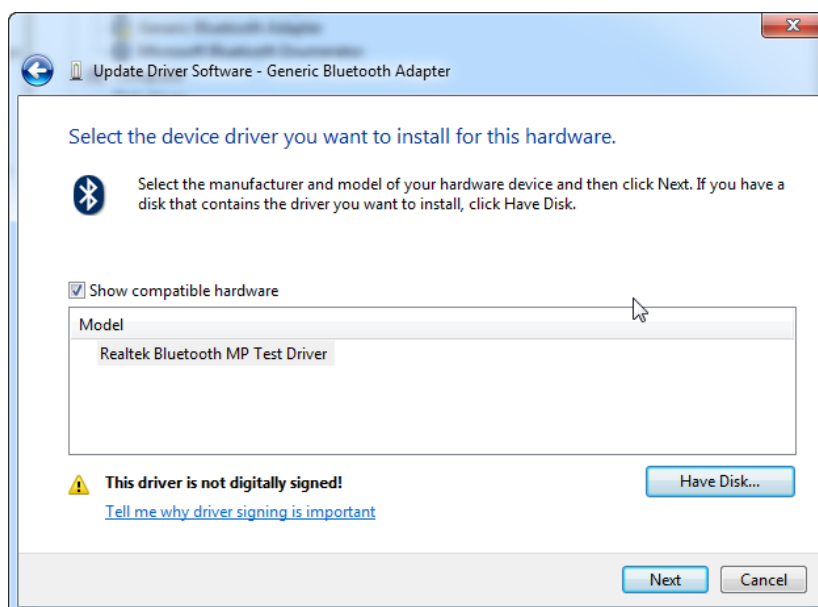
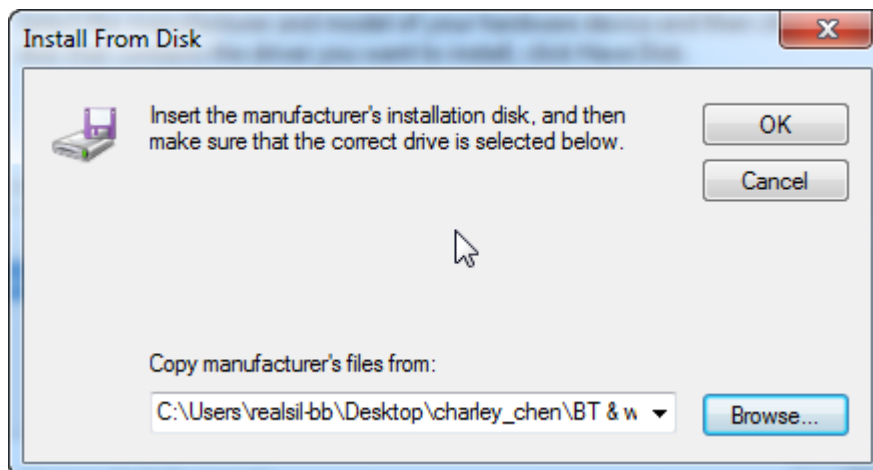
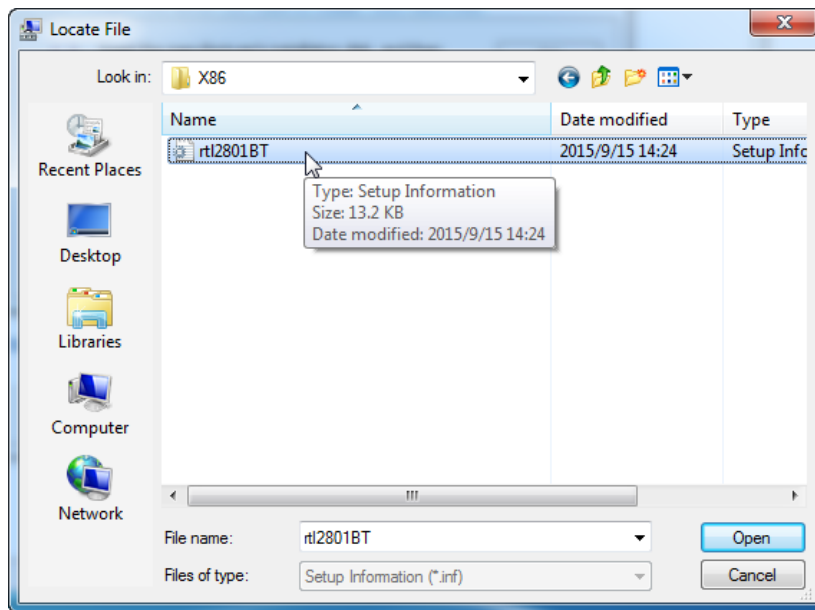


F. Finish step “E” then select “Have Disk..”

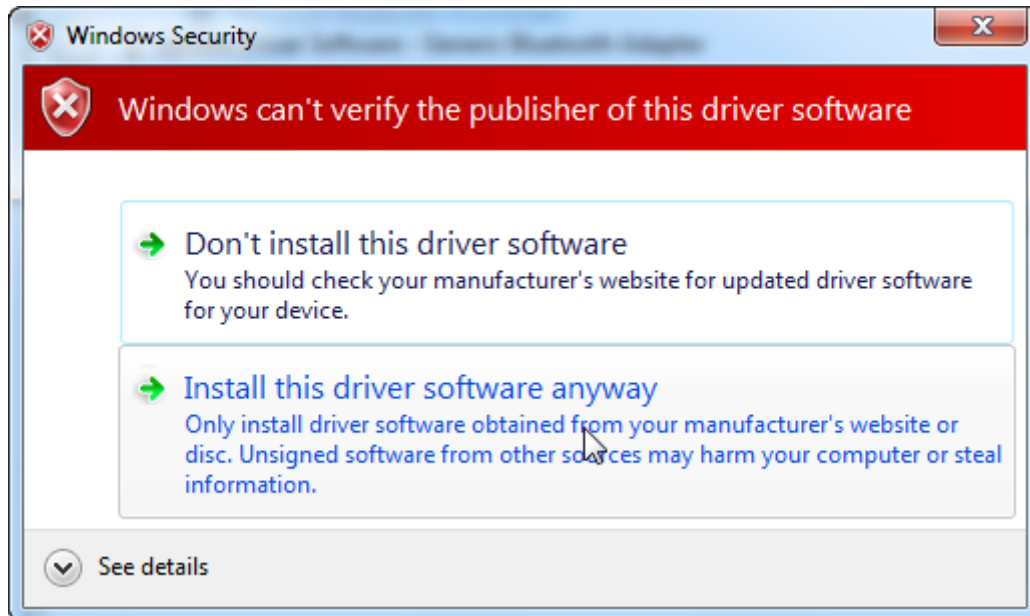


G. Now select browse to find the driver for device and press Next button.(The driver's locate is the same with WiFi driver)





H. Then click “Install this driver software anyway” to continue.



I. Press close button to complete the install process and you can see the Driver will be show up in Device Manager.

