(SparkLAN WNFT-237ACN(BT))

M.2 Module User's Manual

Preliminary Version

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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

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 or more 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.

Any changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

RF exposure statements
This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body or nearby persons.

CFR 47 FCC PART 15 SUBPART C (15.247) and SUBPART E (15.407) has been investigated. It is applicable to the modular transmitter.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

This radio transmitter RYK-WNFT237ACNBT has been approved by Federal Communications Commission to operate with the antenna types listed below, with the maximum

permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Unique antenna connector (IPEX) must be used on the Part 15 authorized transmitters used in the host product.

Antenna Type	Antenna Model	Maximum Gain (dBi)		Remark
		2.4 GHz	5GHz	
PCB	FML2.4W45A-160-MHF4L	3.13 dBi	4.94 dBi	

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: “Contains Transmitter Module FCC ID: RYK-WNFT237ACNBT” Or “Contains FCC ID: RYK-WNFT237ACNBT”

The modular transmitter is only FCC authorized for the specific rule parts (i.e., FCC transmitter rules) listed on the grant, and the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. The final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.

The final host manual shall include the following regulatory statement: FCC part 15.19 and 15.105.

Industry Canada statement:
This device complies with Industry Canada license-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;
2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

Caution:
1) 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;

2) 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;

3) 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 specified for point-to-point and non-point-to-point operation as appropriate; and

Avertissement:
1) Le dispositif fonctionnant dans la bande 5150-5250 MHz est réservé uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

2) Le gain maximal d'antenne permis pour les dispositifs avec antenne(s) amovible(s) utilisant les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la imitation P.I.R.E.;

3) Le gain maximal d'antenne permis pour les dispositifs avec antenne(s) amovible(s) utilisant la bande 5725-5850 MHz doit se conformer à la limitation P.I.R.E spécifiée

pour l’exploitation point à point et non point à point, selon le cas.

Radiation Exposure Statement:
This equipment complies with IC 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.

Déclaration d’exposition aux radiations:
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.

This radio transmitter (IC: 6158A-237ACNBT 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 (IC: 6158A-237ACNBT a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés cidessous 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.

Antenna Type	Antenna Model	Maximum Gain (dBi)		Remark
		2.4 GHz	5GHz	
PCB	FML2.4W45A-160-MHF4L	3.13 dBi	4.94 dBi	

If the ISED certification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: “Contains IC: 6158A-237ACNBT”.

Si le numéro de certification ISDE n'est pas visible lorsque le module est installé à l'intérieur d'un autre appareil, alors l'extérieur de l'appareil dans lequel le module est installé doit également afficher une étiquette faisant référence au module inclus. Cette étiquette extérieure peut utiliser un libellé comme celui-ci: “ Contient IC: 6158A-237ACNBT“.

Plaque signalétique du produit final:
Le produit final doit être étiqueté dans un endroit visible avec l'inscription suivante: "Contient des IC: 6158A-237ACNBT ".

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 manue

Must use the device only in host devices that meet the FCC/ISED RF exposure category of mobile, which means the device is installed and used at distances of at least 20cm from persons.
The end user manual shall include FCC Part 15 /ISED RSS GEN compliance statements related to the transmitter as show in this manual.
Host manufacturer is responsible for compliance of the host system with module installed with all other applicable requirements for the system such as Part 15 B, ICES 003.
Host manufacturer is strongly recommended to confirm compliance with FCC/ISED requirements for the transmitter when the module is installed in the host.
Must have on the host device a label showing Contains FCC ID: RYK-WNFT237ACNBT, Contains IC: 6158A-237ACNBT
The use condition limitations extend to professional users, then instructions must state that this information also extends to the host manufacturer's instruction manual.

If the end product will involve the Multiple simultaneously transmitting condition or different operational conditions for a stand-alone modular transmitter in a host, host manufacturer have to consult with module manufacturer for the installation method

in end system.

l'hôte doit utiliser l'instrument uniquement dans des dispositifs qui répondent à la fcc / (catégorie d'exposition rf mobile, ce qui signifie le dispositif est installé et utilisé à une distance d'au moins 20 cm de personnes.
le manuel de l'utilisateur final doit inclure la partie 15 / (fac rss gen déclarations de conformité relatives à l'émetteur que de montrer dans ce manuel.
le fabricant est responsable de la conformité de l'hôte, le système d'accueil avec le module installé avec toutes les autres exigences applicables du système comme la partie 15 b, ices - 003. accueillir le fabricant est fortement recommandé de confirmer la conformité avec les exigences de la fcc / (émetteur lorsque le module est installé dans l'hôte.
le dispositif d'accueil doivent avoir une étiquette indiquant contient FCC ID: RYK-WNFT237ACNBT contient IC : 6158A-237ACNBT

NCC 警語 :

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

應避免影響附近雷達系統之操作。
高增益指向性天線只得應用於固定式點對點系統。

系統廠商應於平台上標示『本產品內含射頻模組: CCXXxxYYyyyZzW 』

Installing the Wireless PCIe M.2 module

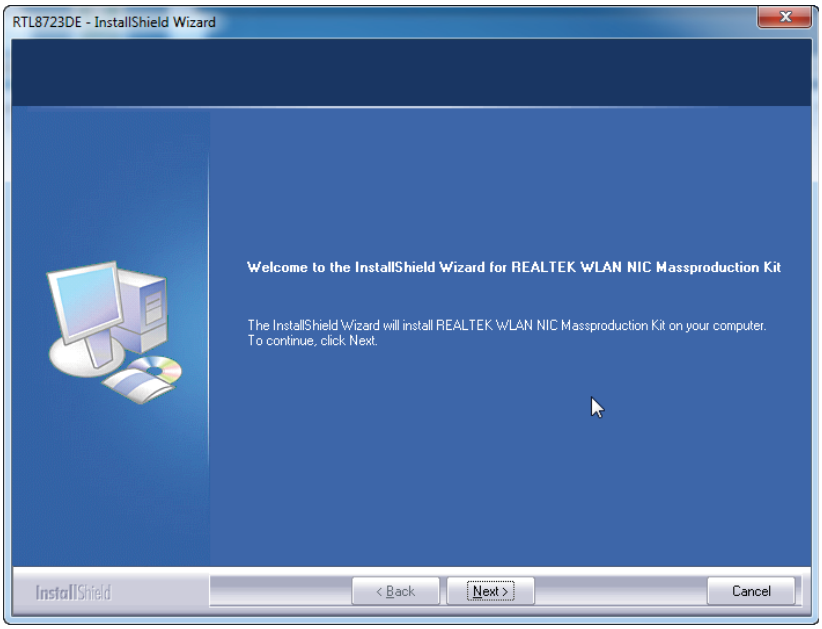
Software

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

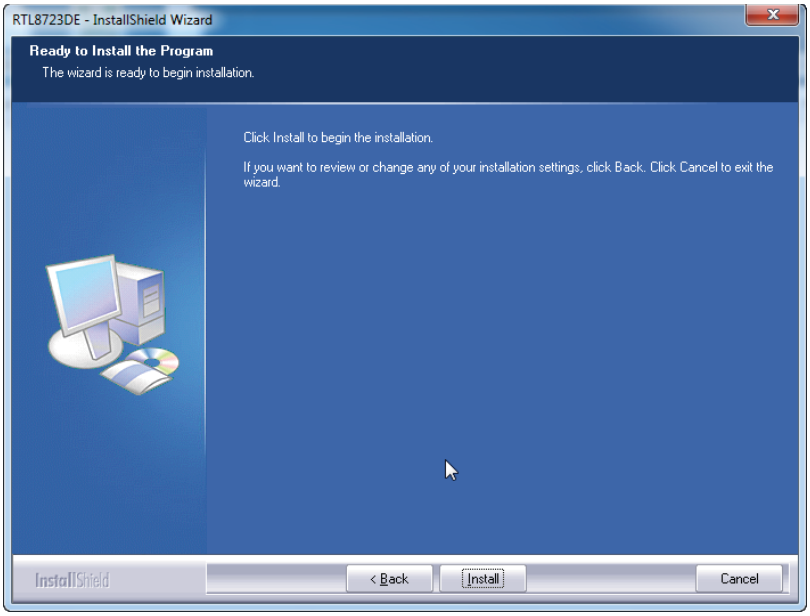
Note1: The following installation was operated under Windows 7.

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

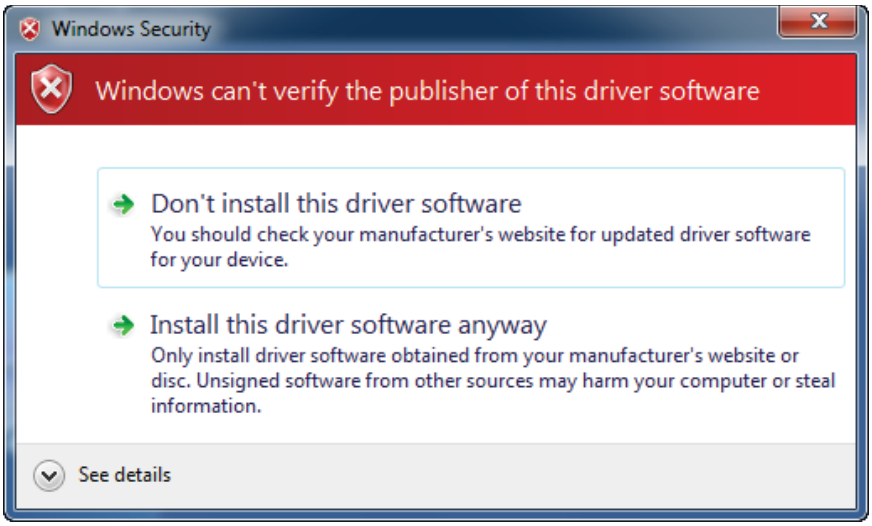
A. Execute the "setup.exe", Click "Next" to process the installation



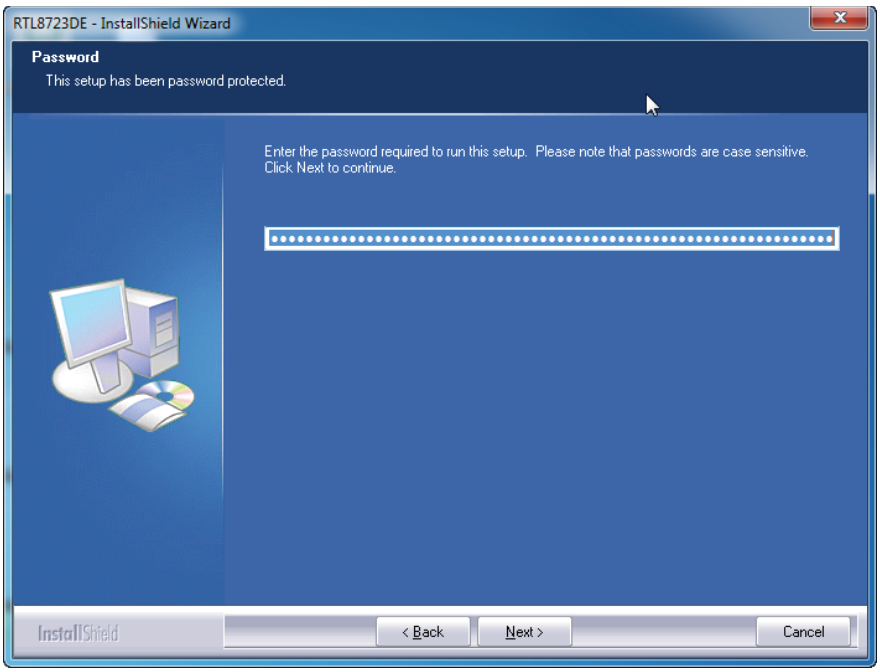
B. Click "Install" to process the installation



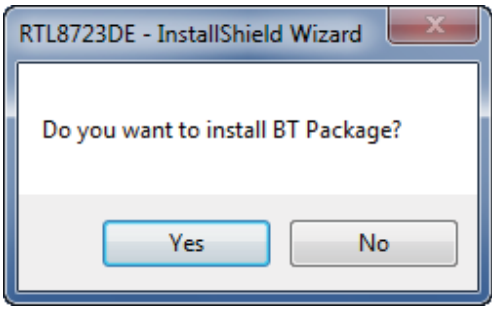
C. Click Install this driver software anyway



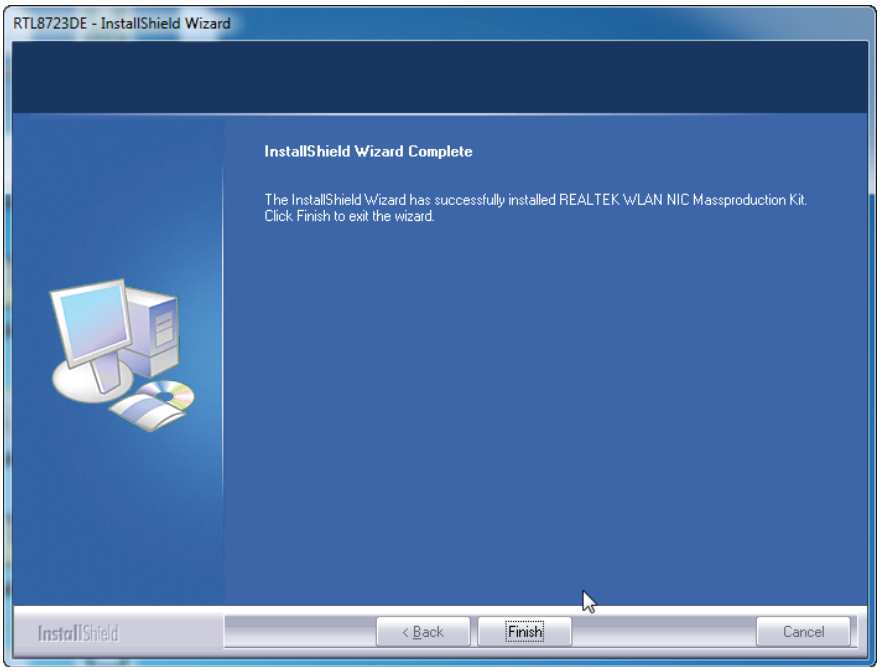
D. After step "C" please press Next button.



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



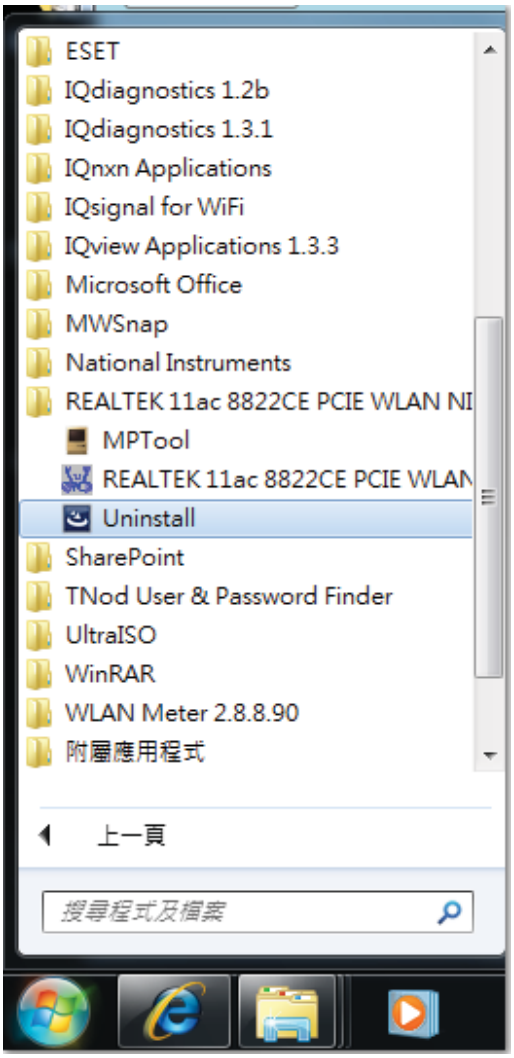
J. Press Finish button to complete the install process



Un-installing the Wireless PCIe M.2 module

Software

A. Uninstall the WNFT-237ACN(BT) WLAN Driver from “Start”→ “All Programs”→ “REALTEK 11ac 8822CE PCIE WLAN NIC Massproduction kit”
Please click “Uninstall” to remove WNFT-237ACN(BT) WLAN driver.

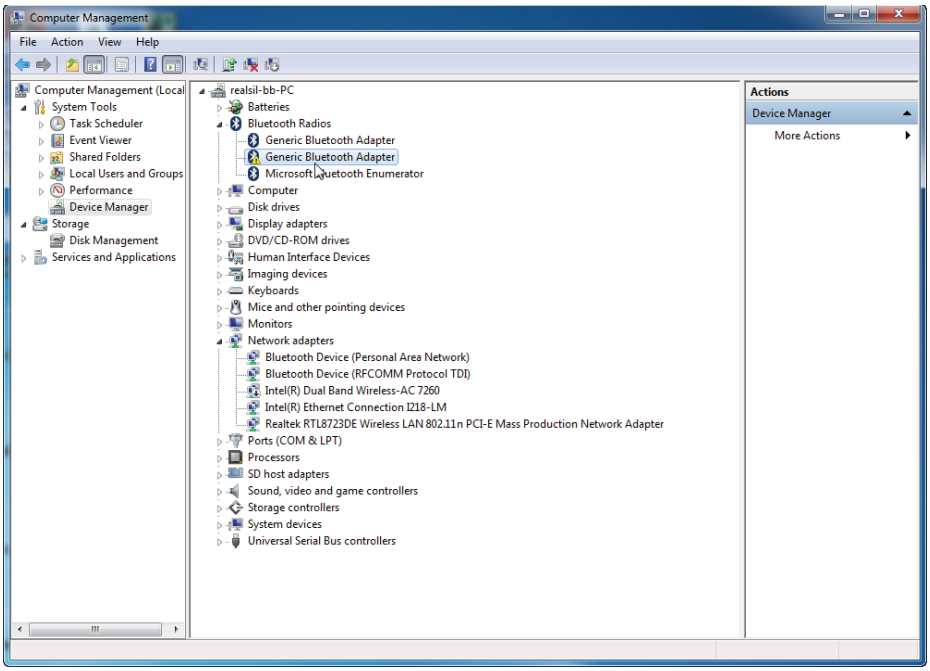


Installing the Bluetooth USB Module

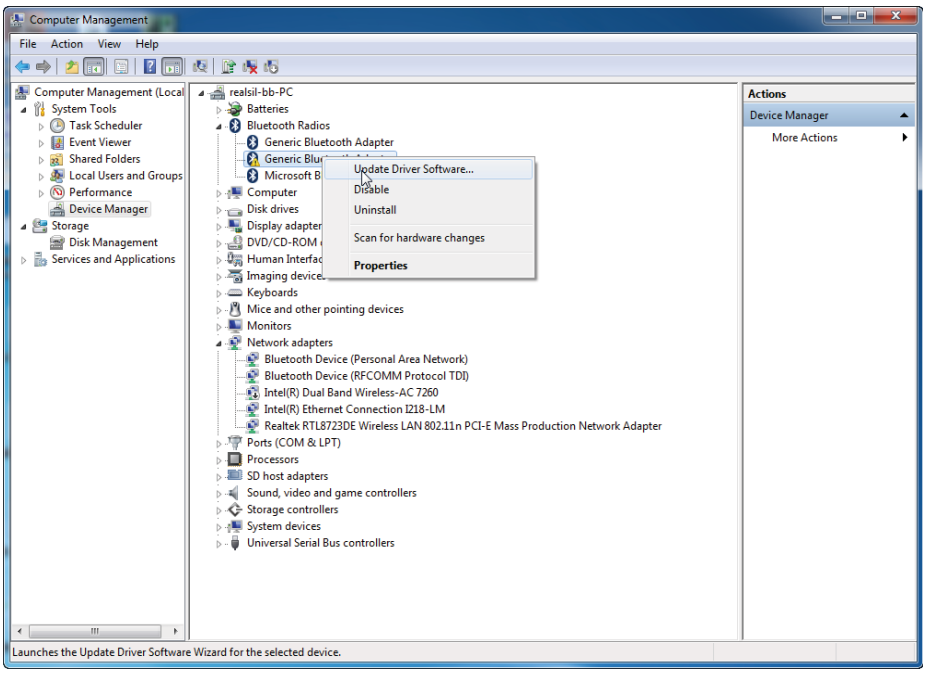
Software

A. Insert the M.2 card into system connector.

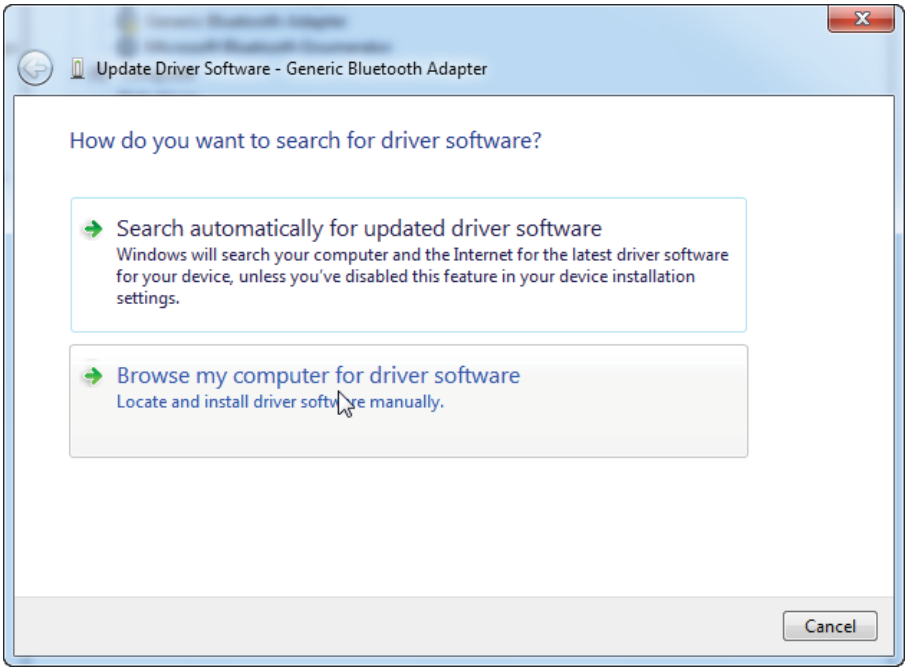
B. Boot on system then the "Geniric Bluttooth Adapter" device will show up in device manager.



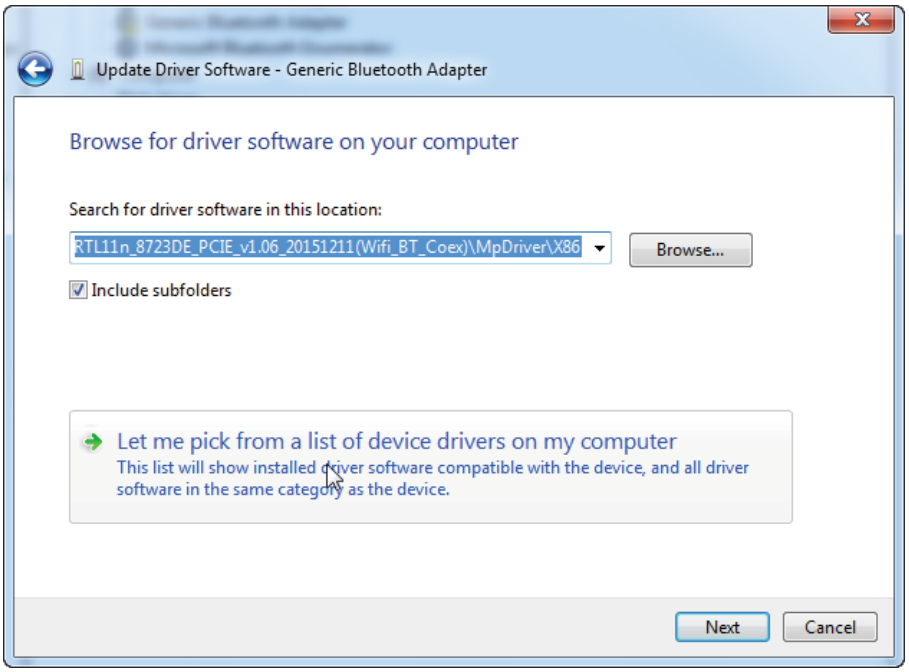
C. Click right button on "RT Bluetooth Radio" and select "Update Driver".



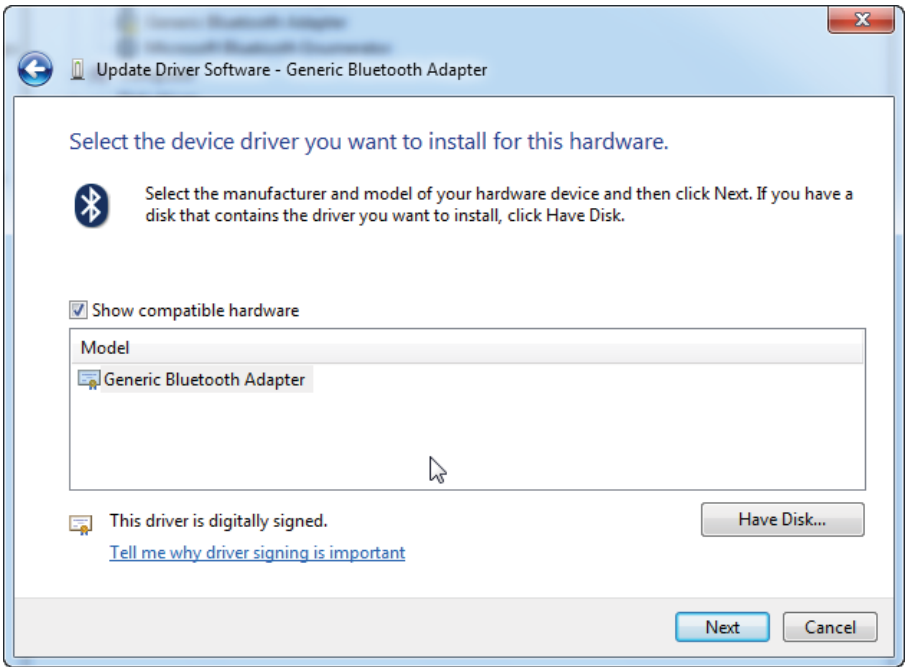
D. After select "Update Driver Software " then the Hardware Update Wizard will pop up, please select "Browse my computer for driver software" and press Next button.



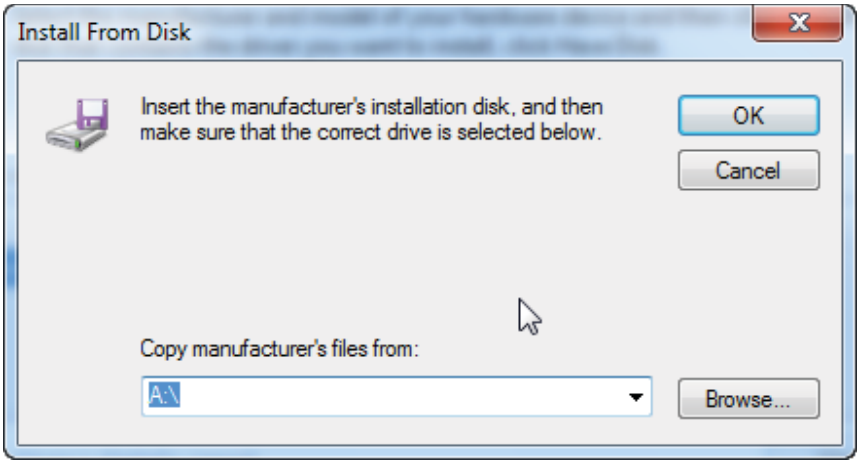
E. After step "D" please Select "Let me pick from a list of device drivers on my computer ".

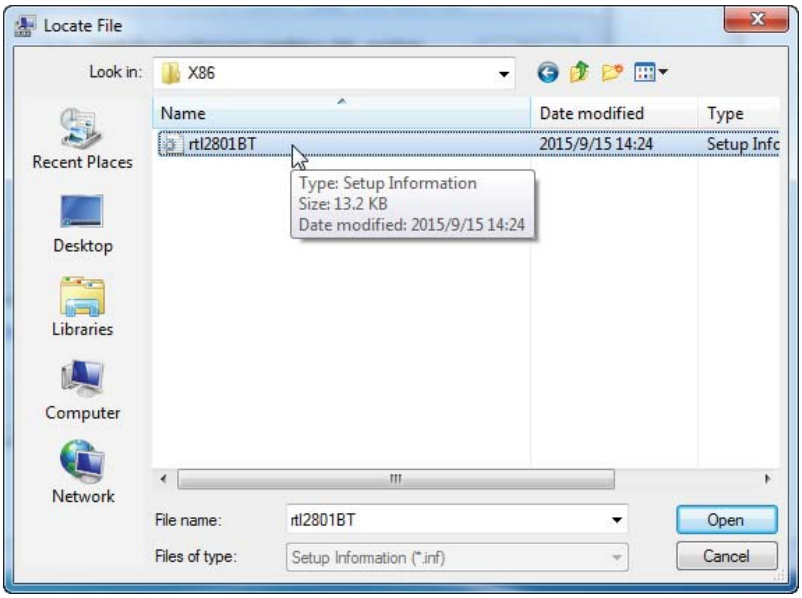


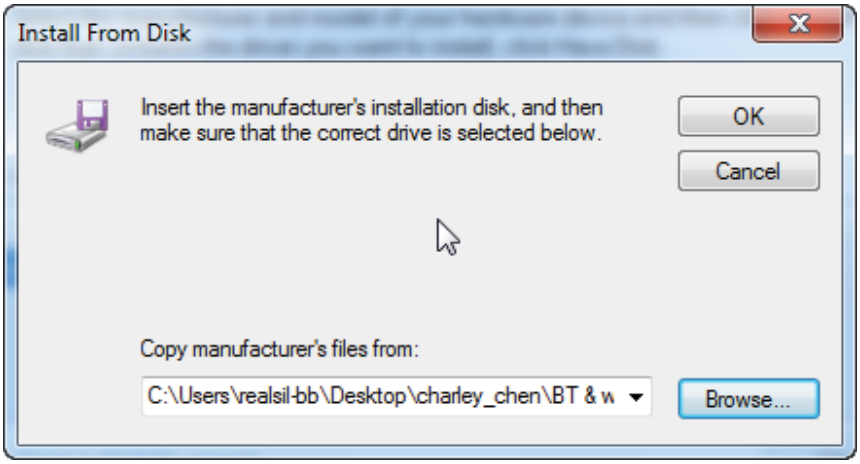
F. Finish step "E" then select "Have Disk.."

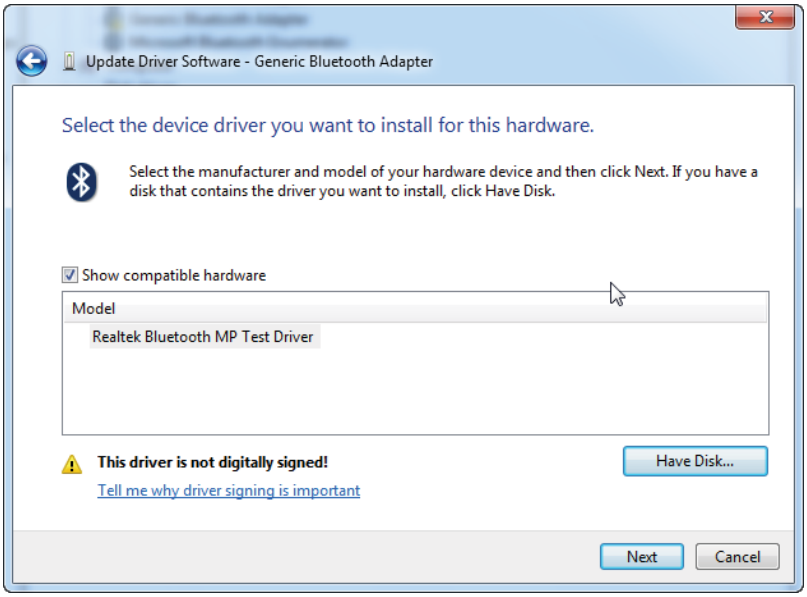


G. Now select browse to find the driver for device and press Next button.(The driver's locate is the same with WiFi driver)

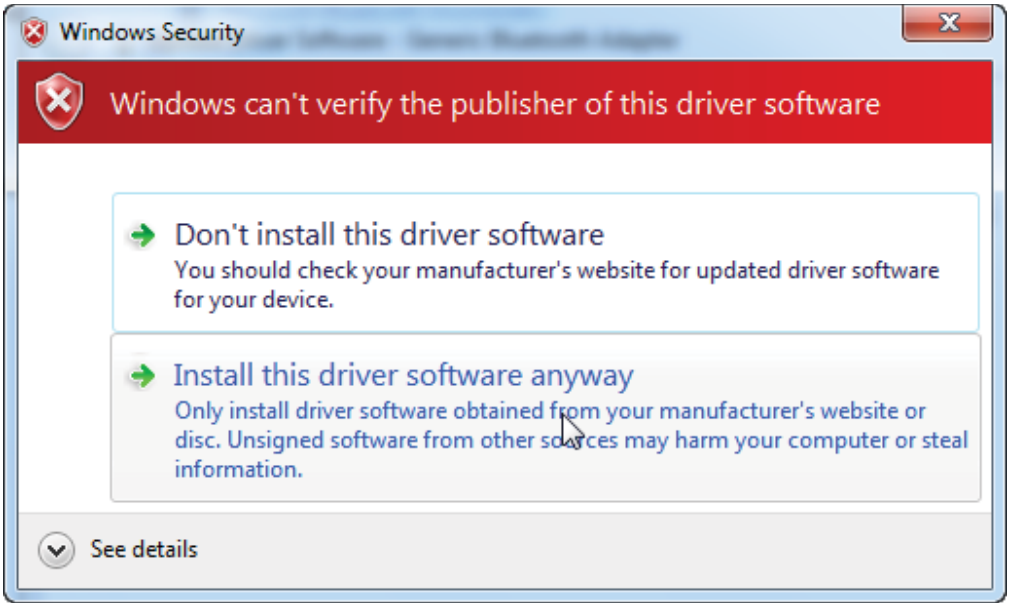
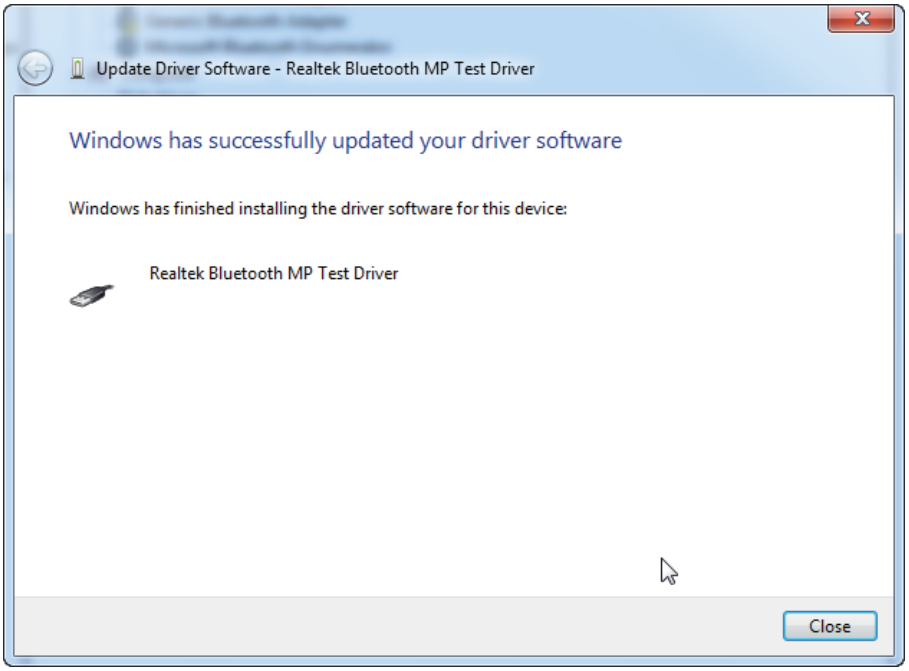



Locate File
Look in:
X86
Name
Date modified
Type
rtl2801BT
2015/9/15 14:24
Setup Info
Type: Setup Information
Size: 13.2 KB
Date modified: 2015/9/15 14:24
Recent Places
Desktop
Libraries
Computer
Network
File name:
rtl2801BT
Files of type:
Setup Information (*.inf)
Open
Cancel


Install From Disk
Insert the manufacturer's installation disk, and then make sure that the correct drive is selected below.
OK
Cancel
Copy manufacturer's files from:
C:\Users\realsil-bb\Desktop\charley_chen\BT & w
Browse...


Update Driver Software - Generic Bluetooth Adapter
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Show compatible hardware
Model
Realtek Bluetooth MP Test Driver
This driver is not digitally signed!
Tell me why driver signing is important
Have Disk...
Next
Cancel

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.