REALTEK RTL8852BE 11ax Combo Module User Manual

RTL8852BE
User's Manual
(Realtek RTL8852BE) 11ax RTL8852BE Combo module
Preliminary Version 2021/05/13

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Contents

ENVIRONMENTAL

Operating
Operating Temperature: -20°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 calculation
Over 150,000hours

Warning

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.
Operations in the 5.15-5.25GHz band are restricted to indoor usage only.
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 a minimum distance 20cm between the radiator & your body.
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
2.3 Summarize the specific operational use conditions The module is tested for standalone mobile RF exposure use conditions. Any other usage conditions such as co-location with another transmitter (s) or being used in a portable condition will need a separate reassessment through a class II permissive change application or new certification.
2.4 Limited module procedures Not applicable.
2.5 Trace antenna designs Not applicable.
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. If the module is installed in a portable host, a separate SAR evaluation is required to confirm compliance with relevant FCC portable RF exposure rules.
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. The antenna must be installed such that 20 cm can be maintained between the antenna and users.
2.8 Label and compliance information
The final end product must be labeled in a visible area with the following: "Contains FCC ID: TX2-RTL8852BE". The grantee's FCC ID can be used only when all FCC compliance requirements are met.
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 another transmitter (s) or portable use will require a separate 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.

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.

IMPORTANT NOTE: In the event that these conditions can not 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 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 FCC authorization.

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 shown 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

Industry Canada statement:

This device complies with ISED's license-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.

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.

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.

IMPORTANT NOTE: 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.

End Product Labeling

This transmitter module is authorized only for use in devices 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: 6317A-RTL8852BE".

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 shown in this manual.

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.

This radio transmitter [IC: 6317A-RTL8852BE] has been approved by Innovation, Science, and Economic Development Canada 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.

tenna Spec (not for SAR) : *The following forms for modify *(Please note that Cable lose is included or not) -->						with cable	Including cable loss
Antenna Set	Model (NCC必填)	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connecter Type	*Cable Length	
1	RFA-27-JP326-MHF4300	3.5dBi	2.4~2.4835GHz	PIFA	i-pex(MHF)	300	
		5dBi	5.15~5.85GHz				
2	RFA-27-C3BH1-MHF4300	3dBi	2.4~2.4835GHz	Dipole	i-pex(MHF)	300	
		5dBi	5.15~5.85GHz				

NCC Statement
Japan Statement
Host system must be labeled with “Contains MIC ID:xxxxxx”, MIC ID displayed on label.

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 NGFF2230 module board and remove the Wireless PCIe NGFF2230 module board from the PCIe NGFF2230 connector port

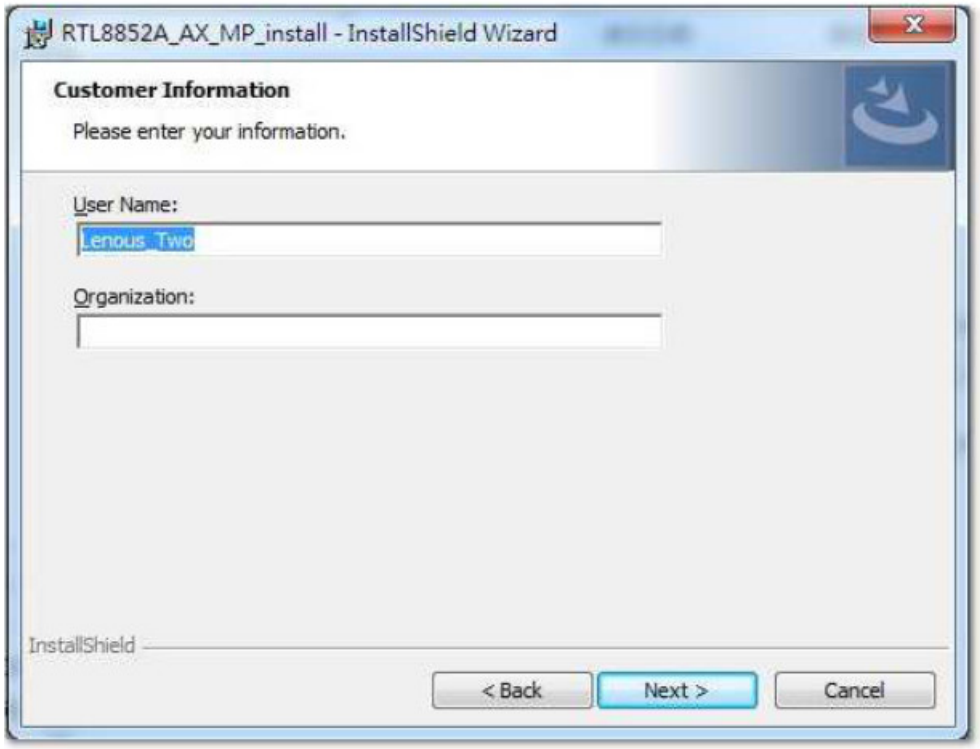
Installing the WLAN PCIe & Bluetooth USB NGFF2230 module Software

Before you proceed with the installation, please notice the 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.

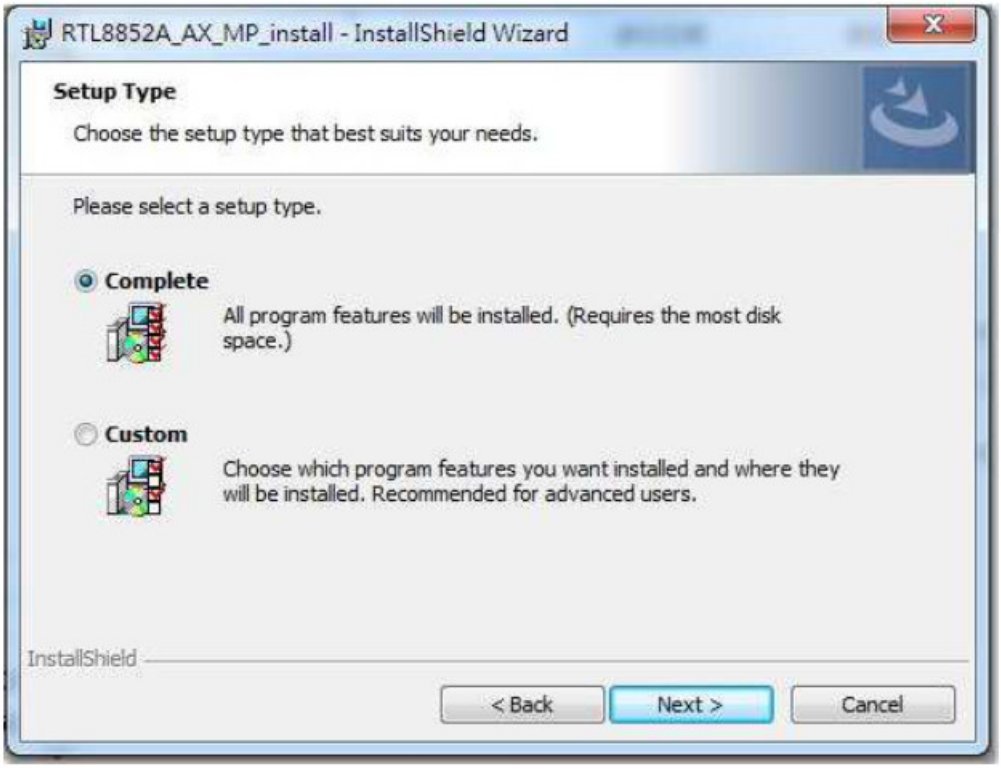
A. Execute the “setup.exe”, Click “Next” to process the installation

B. Select “I accept the terms in the license agreement” and click “Next” to process the installation

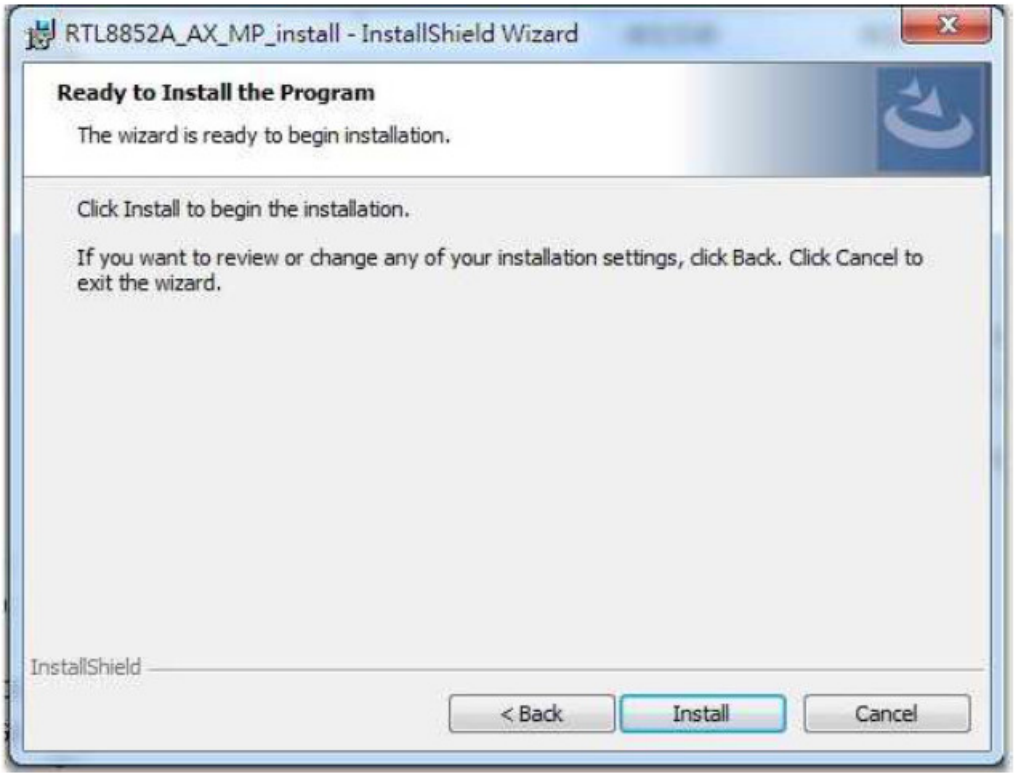
C. Click the “Next” button.



D. Select “Complete” and click the “Next” button.



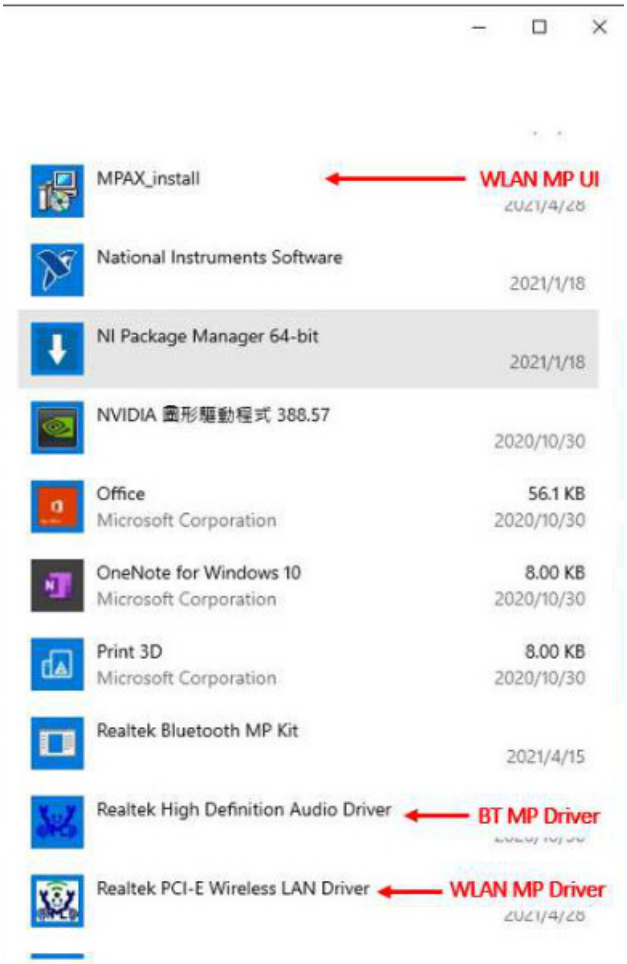
E. Click the “Install” button.



F. Click the “Finish” button.

Un-installing the Wireless PCIe NGFF2230 module Software

A. Uninstall the RTL8852BE WLAN Driver from “Start” “Control Panel” “Programs” Please select items as below and click “Uninstall” to remove RTL8852BE WLAN, BT driver, and MP UI.



Documents / Resources

	REALTEK RTL8852BE 11ax Combo Module [pdf] User Manual RTL8852BE, TX2-RTL8852BE, TX2RTL8852BE, RTL8852BE 11ax Combo Module, 11ax Combo Module, Combo Module, Module
	REALTEK RTL8852BE 11ax Combo Module [pdf] User Manual RTL8852BE, TX2-RTL8852BE, TX2RTL8852BE, 11ax Combo Module, RTL8852BE 11ax Combo Module

References

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