

MERCUSYS[®]

User Guide

AC1200 Wi-Fi Bluetooth PCIe Adapter

MA30E

REV1.0.0
1910080123

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<https://www.mercusys.com>

CE Mark Warning



This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

OPERATING FREQUENCY (the maximum transmitted power)

2400MHz—2483.5MHz(20dBm)

5150MHz—5250MHz(23dBm)

5250MHz—5350MHz(23dBm)

5470MHz—5725MHz(23dBm)

RF Exposure Information

This device meets the EU requirements (2014/53/EU Article 3.1a) on the limitation of exposure of the general public to electromagnetic fields by way of health protection.

The device complies with RF specifications when the device used at 20 cm from your body.

Frequency band: 5150 - 5250 MHz:

Indoor use: Inside buildings only. Installations and use inside road vehicles and train carriages are not permitted. Limited outdoor use: If used outdoors, equipment shall not be attached to a fixed installation or to the external body of road vehicles, a fixed infrastructure or a fixed outdoor antenna. Use by unmanned aircraft systems (UAS) is limited to within the 5170 - 5250 MHz band.

Frequency band: 5250 - 5350 MHz:

Indoor use: Inside buildings only. Installations and use in road vehicles, trains and aircraft are not permitted. Outdoor use is not permitted.

Frequency band: 5470 - 5725 MHz:

Installations and use in road vehicles, trains and aircraft and use for unmanned aircraft systems (UAS) are not permitted.

	AT	BE	BG	CH	CY	CZ	DE	DK
	EE	EL	ES	FI	FR	HR	HU	IE
	IS	IT	LI	LT	LU	LV	MT	NL
	NO	PL	PT	RO	SE	SI	SK	UK(NI)

	UK
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Attention: This device may only be used indoors in Great Britain.

EU declaration of conformity

Mercusys hereby declares that the device is in compliance with the essential requirements and other relevant provisions of directives 2014/53/EU, 2011 /65/EU and (EU) 2015/863.

The original EU declaration of conformity may be found at <https://www.mercusys.com/en/ce/>

UK declaration of conformity



Mercusys hereby declares that the device is in compliance with the essential requirements and other relevant provisions of the Radio Equipment Regulations 2017.

The original UK declaration of conformity may be found at <https://www.mercusys.com/support/ukca/>

Korea Warning Statements

당해 무선설비는 운용중 전파혼신 가능성이 있음.

NCC Notice

注意!

取得審驗證明之低功率射頻器材，非經核准，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。

低功率射頻器材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。

前述合法通信，指依電信管理法規定作業之無線電通信。

低功率射頻器材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。

BSMI Notice

- 請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。
- 清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行清潔。
- 注意防潮，請勿將水或其他液體潑灑到本產品上。
- 插槽與開口供通風使用，以確保本產品的操作可靠並防止過熱，請勿堵塞或覆蓋開口。
- 請勿將本產品置放於靠近熱源的地方。除非有正常的通風，否則不可放在密閉位置中。
- 不要私自拆開機殼或自行維修，如產品有故障請與原廠或代理商聯繫。

限用物質含有情況標示聲明書

Equipment name 設備名稱：AC1200 Wi-Fi Bluetooth PCIe Adapter			Model 型號 (型式)：MA30E			
單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr ⁺⁶)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
PCB	○	○	○	○	○	○
外殼	○	○	○	○	○	○
天線	○	○	○	○	○	○
其他及其 配件	—	○	○	○	○	○
<p>備考 1. “超出 0.1 wt %” 及 “超出 0.01 wt %” 係指限用物質之百分比含量超出百分比含量基準值 Note 1: “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.</p> <p>備考 2. “○” 係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2: “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.</p> <p>備考 3. “—” 係指該項限用物質為排除項目。 Note 3: The “—” indicates that the restricted substance corresponds to the exemption.</p>						



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Safety Information

- Keep the device away from water, fire, humidity or hot environments.
- Do not attempt to disassemble, repair, or modify the device. If you need service, please contact us.
- Do not use the device where wireless devices are not allowed.
- This equipment can be powered only by equipments that comply with Power Source Class 2 (PS2) or Limited Power Source(LPS) defined in the standard of IEC 62368-1.

Please read and follow the above safety information when operating the device. We cannot guarantee that no accidents or damage will occur due to improper use of the device. Please use this product with care and operate at your own risk.











This product uses radios and other components that emit electromagnetic fields. Electromagnetic fields and magnets may interfere with pacemakers and other implanted medical devices. Always keep the product and its power adapter more than 15 cm (6 inches) away from any pacemakers or other implanted medical devices. If you suspect your product is interfering with your pacemaker or any other implanted medical device, turn off your product and consult your physician for information specific to your medical device.














Environment

Operating Temperature: 0°C ~40°C (32 °F ~104 °F)

Explanation of the symbols on the product label

Symbols may vary from products.

Symbol	Explanation
	Class II equipment
	Class II equipment with functional earthing
	Alternating current
	Direct current
	Polarity of d.c. power connector
	Indoor use only
	Dangerous voltage
	Caution, risk of electric shock
	Energy efficiency Marking
	Protective earth

	Earth
	Frame or chassis
	Functional earthing
	Caution, hot surface
	Caution
	Operator's manual
	Stand-by
	"ON"/"OFF" (push-push)
	Fuse
	Fuse is used in neutral N
	<p>RECYCLING</p> <p>This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment.</p> <p>User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.</p>
	Caution, avoid listening at high volume levels for long periods
	Disconnection, all power plugs
m	Switch of mini-gap construction

μ	Switch of micro-gap construction (for US version) Switch of micro-gap / micro-disconnection construction (for other versions except US)
ε	Switch without contact gap (Semiconductor switching device)

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Conventions

The Adapter or MA30E, or device mentioned in this User Guide stands for MA30E AC1200 Wi-Fi Bluetooth PCIe Adapter without any explanations.

Note: Features of the adapter may vary by model and driver version. All images, steps, and descriptions in this guide are only examples and may not reflect your actual adapter experience.

More Info

Specifications and the latest software can be found at the product page at the official website <https://www.mercusys.com>.

The Quick Installation Guide can be found where you find this guide or inside the package of the router.

Speed/Coverage Disclaimer

†Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput and wireless coverage, and number of connected devices are not guaranteed and will vary as a result of network conditions, AP limitations, and environmental factors, including building materials, obstacles, volume and density of traffic, and AP location.

‡Use of MU-MIMO requires APs to also support the corresponding feature.

§Use of WPA3 requires APs to also support the corresponding feature.

△Functionality of MA30E may be restricted on some computing systems and platforms. Please try to update the device's driver for feature compatibility.

*Several new features are introduced in the Bluetooth Core Specification 5.0 Release, including 2× faster speed and 4× broader coverage compared with Bluetooth 4.2.

Chapter 1 Introduction

1.1 Product Overview

The MA30E connects devices on both 2.4 GHz and 5 GHz bands simultaneously, offering a superior lag-free experience for work and play. Combining 300 Mbps 2.4 GHz (perfect for surfing and emailing) and 867 Mbps 5 GHz (ideal for HD streaming and gaming), you have the flexibility to allocate your devices to dedicated networks to do more at the same time.[†]



1.2 Features

- Strong Dual Band Wi-Fi Speed — Speeds up to 867 Mbps (5 GHz) + 300 Mbps (2.4 GHz)[†]
- Wider Signal Coverage — Two high-performance antennas
- Bluetooth 5.0 — The Bluetooth 5.0 technology achieves faster speeds and broader coverage*
- MU-MIMO — Simultaneously serve several devices with no more latency or bandwidth congestion[‡]
- Improved Security — The latest security enhancement, WPA3, provides enhanced protection in personal password safety[§]
- Backward Compatibility — Full support for 802.11ac/a/b/g/n standards
- Windows Compatible — Supported operating system: Windows 10, 11 (64 bit)

Chapter 2 Installation Guide

Before You Start

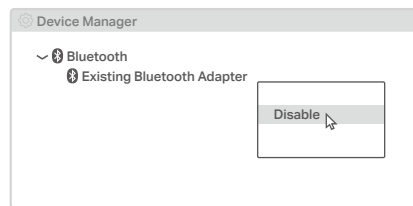
If you plan on using Bluetooth and already have connected Bluetooth devices, proceed with Step 1. Otherwise, **skip to Step 2**.

1. Disable your Bluetooth

- Right-click My Computer, select **Manage**, go to Device Manager.
- Expand the **Bluetooth** node to find your existing Bluetooth device.
- Right-click the existing Bluetooth device and select **Disable**.

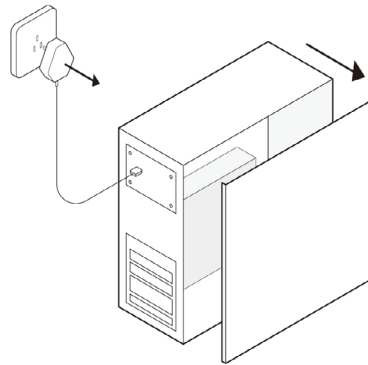
Note:

Make sure you have disabled all existing Bluetooth devices (both built-in and third party).

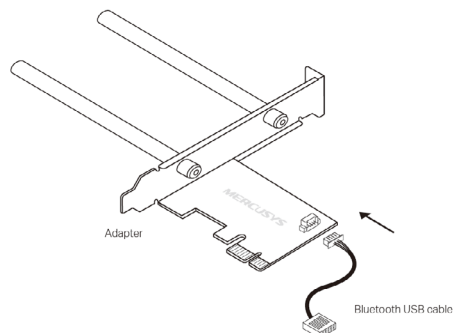


2. Hardware Connection

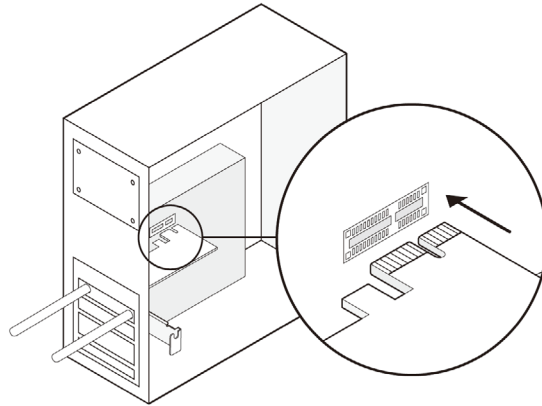
- Turn off your computer, unplug the power cable then remove the case panel.



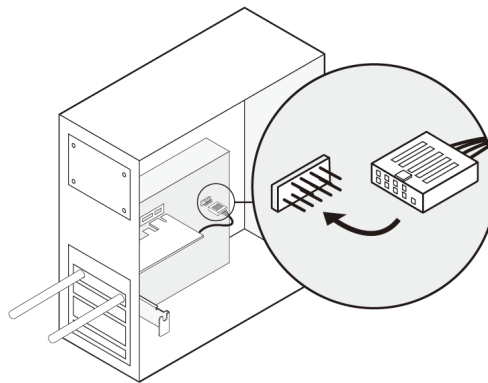
- Connect the provided Bluetooth USB cable to the adapter.



3. Locate an available **PCI-E** slot (X1, X4, X8, or X16) and remove the corresponding slot cover on the rear panel. Then insert the adapter carefully.



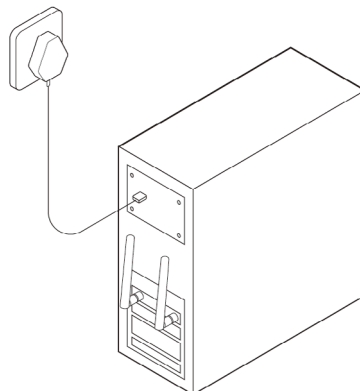
4. Locate an available **9-pin** connector and carefully plug the Bluetooth USB cable into it.



Note:

If the Bluetooth USB cable is not correctly connected to the motherboard, Bluetooth function won't work even after driver installation.

5. Replace the case panel, plug in the power cable and turn on your computer.



2.3 Driver Installation



The following instructions take Windows 10 as an example. The steps may vary slightly from other versions of Windows.

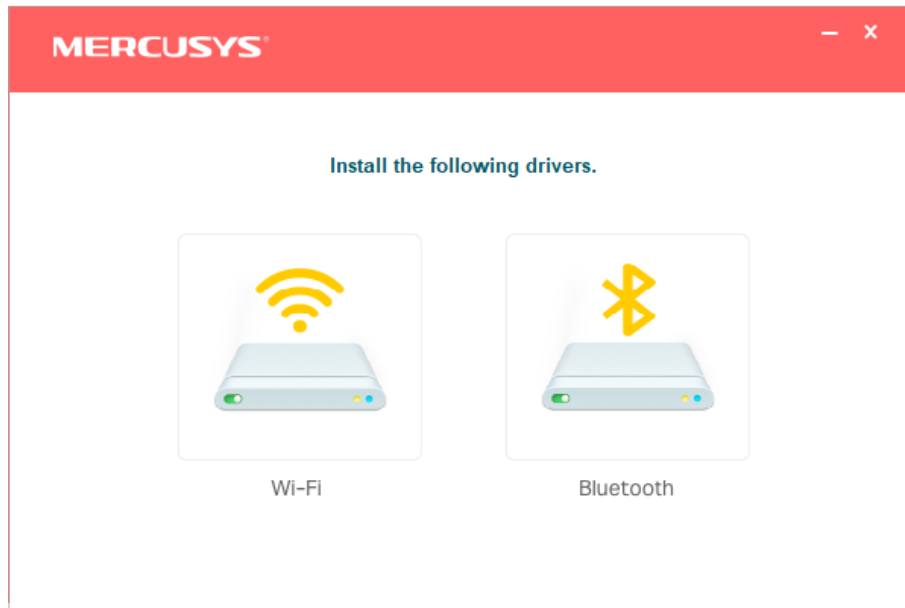
1. Insert the CD and run the **Autorun.exe**.

Tip:

You can also check the new release and download the driver at www.mercusys.com/support.

2. Install the Wi-Fi and Bluetooth drivers.

- a. **Wi-Fi:** Click  and follow the onscreen instructions to complete the Wi-Fi installation.
- b. **Bluetooth:** Click  and follow the onscreen instructions to complete the Bluetooth installation.



Note:


DO NOT run the driver installations at the same time. When one driver is being installed, please wait until the installation is complete and then try to install the other.

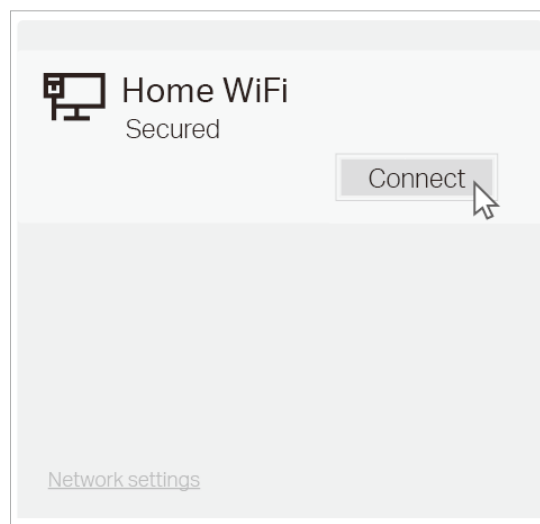
Chapter 3 Connect to a Wireless Network

With both the hardware and software successfully installed into your computer, you can quickly connect to a wireless network via Windows wireless utility.

The following instructions take Windows 10 as an example. The steps may vary slightly from other versions of Windows.

Connect to a Wireless Network


1. Click the network icon () on the taskbar. Select your Wi-Fi network, click **Connect**, and enter the password when prompted.
2. When **Connected** displays next to the network name (SSID) on the screen, it indicates a successful network connection.

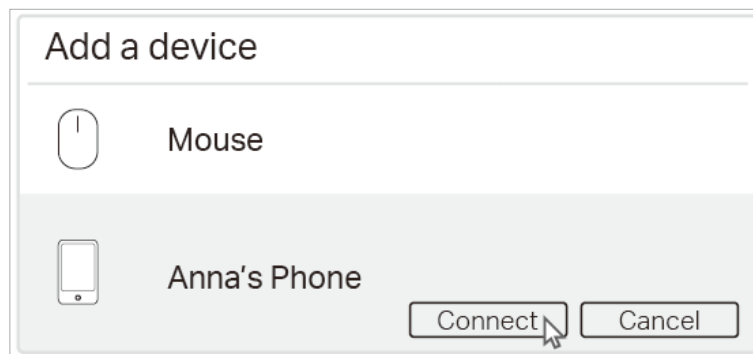


Chapter 4 Pair With Bluetooth Devices

MA30E makes your PC Bluetooth-capable with Bluetooth 5.0 which achieves more stable connection, farther range and faster transmission speeds than Bluetooth 4. Just connect your Bluetooth devices to your computer and enjoy with ease.

Pair With Bluetooth Devices

1. Right click the  (Bluetooth) icon on the taskbar. If it's not displayed, turn on Bluetooth in your PC settings first.
2. Select **Add a Bluetooth Device** or **Add a Device** to scan for available devices.
3. Select your Bluetooth device from the list and follow the onscreen instructions to complete pairing.



Note:

Make sure your device's Bluetooth is enabled and discoverable.

Chapter 5 Uninstall Driver

You can remove the driver from **Windows Control Panel**.

• Uninstall Wi-Fi driver

1. Start **Control Panel**, go to **Programs and Features**, click **Uninstall a program**.
2. Find and uninstall the Mercusys program **MERCUSYS MA30E Wi-Fi Driver**.
3. Follow the on-screen instructions to complete the uninstallation.
4. Restart your computer.

• Uninstall Bluetooth driver

1. Start **Control Panel**, go to **Programs and Features**, click **Uninstall a program**.
2. Find and uninstall the Mercusys program **MERCUSYS MA30E Bluetooth Adapter**.
3. Follow the on-screen instructions to complete the uninstallation.
4. Restart your computer.

Appendix: Specifications

Normal	
Wireless Standards	IEEE 802.11 a/n/ac 5 GHz IEEE 802.11 b/g/n 2.4 GHz
Wi-Fi Speeds	867 Mbps on 5 GHz 300 Mbps on 2.4 GHz
Reception Sensitivity	5 GHz: 11ac HT80: -59.0dBm 11n HT40: -68.5dBm 11a 54Mbps: -73.5dBm 11a 6Mbps: -91dBm 2.4 GHz: 11n HT40: -69.5dBm 11g 54Mbps: -74dBm 11b 11Mbps: -87dBm
Wireless Security	WPA-PSK/WPA2-PSK/ WPA3-SAE**
Dimensions	226.3 × 120.8 × 21.5 mm (8.9 × 4.8 × 0.85 in.)
Antenna Type	2×Fixed High-Performance Omni-Directional Antennas
System Requirements	Supported operating systems include Windows 10, 11(64-bit)

Environmental and Physical	
Operating Temperature	0°C~40°C (32°F~104°F)
Operating Humidity	10%~90% Non-Condensing
Storage Humidity	5%~90% Non-Condensing