MERCUSYS®

User Guide

AC650 Nano Wireless Dual Band USB Adapter

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1910080122

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http://www.mercusys.com

CE Mark Warning

CE

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

5250 MHz -5350 MHz: 23dBm

5470 MHz -5725 MHz: 23dBm

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/support/ce.

UK
CA

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/

National restrictions

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)

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

	UK

RF Exposure Information

This device has been tested and meets the ICNIRP exposure guidelines and the European Standard EN 62209-2. SAR is measured with this device at a separation of 0.5 cm to the body, while transmitting at the highest certified output power level in all frequency bands of this device. Carry this device at least 0.5 cm away from your body to ensure exposure levels remain at or below the as-tested levels.

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。

BSMI Notice

安全諮詢及注意事項

- 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

設備名稱：AC650 Nano Wireless Dual Band USB Adapter Equipment name				型號（型式）：MA20N Type designation (Type)		
產品元件名稱	限用物質及其化學符號					
	鉛 Pb	鎘 Cd	汞 Hg	六價鉻 CrVI	多溴聯苯 PBB	多溴二苯醚 PBDE
PCB	○	○	○	○	○	○
外殼	○	○	○	○	○	○
天線	○	○	○	○	○	○
其他及其配件	—	○	○	○	○	○
備考1.“超出0.1wt%”及“超出0.01wt%”系指限用物質之百分比含量超出百分比含量基準值。 備考2.“○”系指該項限用物質之百分比含量未超出百分比含量基準值。						



Продукт сертифіковано згідно с правилами системи УкрСЕПРО на відповідність вимогам нормативних документів та вимогам, що передбачені чинними законодавчими актами України.

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℃ ~40℃ (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
	RECYCLING 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. 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.
	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 MA20N, or device mentioned in this User Guide stands for AC650 Nano Wireless Dual Band USB 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 **http://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 quantity 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 WPA3 requires APs to also support the corresponding feature. To use WPA3, you may need to upgrade the drivers which can be downloaded on the official website of MERCUSYS.

§Functionality may be restricted on some operating systems and platforms. To ensure compatibility, you may need to update the adapter's drivers after an OS update. You can find our latest drivers in the download center at http://www.mercusys.com

Chapter 1 Introduction

1.1 Product Overview

MA20N receives Wi-Fi signals on two separate bands and has a speed up to 433Mbps (5 GHz)+ 200 Mbps (2.4 GHz).†

With the built-in inbox driver by Windows operation systems, you just need to plug MA20N into the computer and then enjoy the fast wireless network in seconds.



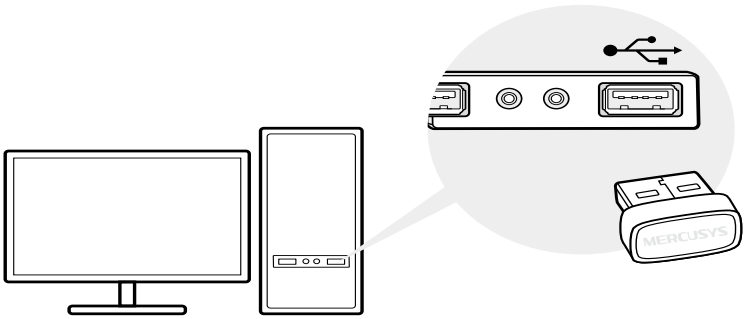
1.2 Features

- 433Mbps +200Mbps Dual Band Wi-Fi†
- Interoperate with other wireless (802.11ac/b/g/n, 802.11a/n/ac) products
- The latest security standard, WPA3, provides improved comprehensive Wi-Fi protection to defend your devices and private information against brute-force attacks.‡
- Provides USB 2.0 Interface
- Supports Infrastructure mode
- Easy Installation without CD
- Supports Windows 11/10 (32/64-bit)

Chapter 2 Installation Guide

2.1 Hardware Connection

Before you start using your adapter, insert the adapter into a USB port on your computer directly.



2.2 Driver Installation

This adapter supports Plug and Play feature. Plug the adapter in and then it is ready to use.

If your operating system does not support this feature, follow the steps below:

a. Download the driver or check the new release at **www.mercusys.com/support**.

b. Unzip the downloaded folder and run the Setup.exe.

c. Follow the instructions to complete the installation.

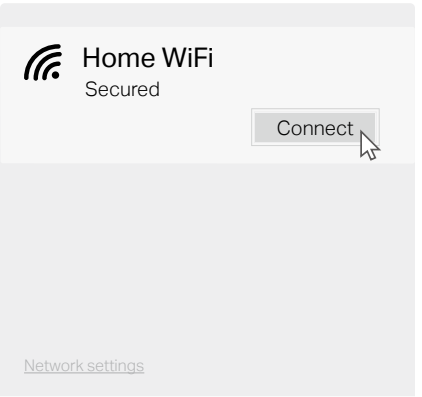
Tips

- If you can't install the driver successfully, disable the antivirus software and firewall, then try again.
- If an unknown publisher message pops up, select Yes to continue.
- If Windows User Account Control requires admin credentials, type user name and password of your Windows administrator account.
- For more support for driver installation, refer to https://www.mercusys.com/en/faq-817.

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.

1. Click the wireless icon on the taskbar. Select the wireless network you want to join and then click **Connect**. Enter your Wi-Fi password when prompted.
2. Select your Wi-Fi network, click Connect and enter the password when prompted.



Chapter 4 Uninstall Driver

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

1. Start **Control Panel**, go to **Programs and Features**, click **Uninstall a program**.
2. Find and uninstall the Mercusys program **MERCUSYS MA20N Driver.**
3. Follow the on-screen instructions to complete the uninstallation.
4. Restart your computer.

Appendix: Specifications

Normal	
Interface	USB 2.0
Standards	IEEE 802.11b/g/n 2.4 GHz, IEEE 802.11a/n/ac 5 GHz
Antenna	1 Internal Antenna
Security	WPA/PSK, WPA2-PSK/WPA3-SAE
Dimensions	19.15 × 14.94× 7.19 mm (0.75× 0.59 × 0.28 in.)
Operating System	Windows 10/11
Signal Rate	Up to 433 Mbps on 5 GHz Up to 200 Mbps on 2.4 GHz
Safety & Emissions	CE, ROHS

Environmental and Physical	
Operating Temperature	0°C~40°C (32°F~104°F)
Storage Temperature	-40°C~70°C (-40°F~158°F)
Working Humidity	10% - 90% RH, Non-condensing
Storage Humidity	5% - 90% RH, Non-condensing