

54M/150M/300M/433Mbps GWF-5B06 Wireless Wi-Fi Adapter

User Manual

Version: V1.0

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CONTENTS

1. Product Information	3
1.1 Product Introduction	<u>3</u>
1.2 Product View and Dimension	<u>3</u>
1.3 Main Parts Introduction	4
1.4 Main Features	<u>5</u>
2. Installation Steps	<u>6</u>
3. System Connection	9
3.1 Check Device Condition	<u>9</u>
3.2 Device Connection	10
4. Home Page Introduction	<u>13</u>
5. Device Mode Switch	18
5.1 Client+AP Mode	18
5.2 AP Mode	<u>19</u>
6. Agency and Approval	<u> </u>
7. Environment Requirements	<u> </u>
7.1 Temperature Range	20
7.2 Humidity Range	20
8. Disclaimer	20



1. Product Information

1.1 Product Introduction

Generally speaking, most digital devices in your home are working under 2.4GHz frequency band. Too many devices working in the same frequency band may cause severe interference to make the speed on network become slow, to let you feel bad. **GWF-5B06 Wireless Dual Band USB Wi-Fi adapter** can make the choice between 2.4GHz band and 5GHz band become available, can do its auto-negotiation via 802.11 a/b/g/n/ac standard, to let users have the chance to avoid the traffic jam in 2.4GHz band, and use fast 5GHz band to achieve the replacement. This adapter can link to wireless router permitted by 802.11 a/b/g/n/ac specification, for bringing the enhanced network experience, for having faster network speed to users.

GWF-5B06 Wireless Dual Band USB Wi-Fi adapter selects the latest 802.11ac technology. It can reach the wireless transmission speed of 433Mbps at most under 5GHz band, 150Mbps at most under 2.4GHz band and 802.11n pattern. Its auto-negotiation function can adjust work mode and transmission speed automatically when wireless signal interference are detected nearby.

This adapter can use several Wi-Fi encryption pattern, such as WPA, WPA2. This can provide a strong security assurance for users.

It has several work patterns, such as STA pattern and AP pattern. In STA pattern, users can access in wireless router, and in AP pattern, users can share the hotspot and built a network environment to offer a high speed Wi-Fi signal to other devices, just like your PC, laptop, and cell phone.

The dimension of this adapter is mini size, but the contour of it is cool and beautiful. It has a smooth shape and black color but mirror like front look. Our adapters can put the fun in functional and a cool addition to wireless innovation. Just install it, connect it and enjoy it.

1.2 Product View and Dimension

The appearance of this adapter can be displayed in several angles below:





The dimension of this adapter can be referred below (unit: mm):



1.3 Main Parts Introduction

The following picture is for the main parts' names and part locations.



- 4*2 heat radiation holes: These 8 holes are located on the 2 sides of this device, 4 holes on each side. When the adapter is in working condition, these holes can radiate extra heat to protect the device from overheat and keep its excellent performance.
- WPS button: WPS button is on the left side of our adapter. This button is for the encryption and connection between adapter and other wireless devices.
- Protection cap: This cap is for protecting USB2.0 interface from some damages caused by unexpected factors.



- USB2.0 interface: This is the interface of this adapter. Energy saving and low power consumption. It is the connection between our adapter and target devices. Just plug and play.
- LED indicator: It is on the bottom of product front side for indicating product working state. Under connection situation, the indicator is ON, under working condition, it is blinking, under disconnection state, it is OFF.
- 3*2 heat radiation holes: These 6 holes are located at the bottom of this device. When the adapter is in working condition, these holes can radiate extra heat to protect the device from overheat and keep its excellent performance.

1.4 Main Features

- Dual band wireless connection(2.4GHz and 5GHz) is available
- Built-in antenna
- With IEEE 802.11a/b/g/n/ac regulations

802.11a: 6, 9, 12, 184, 36, 48, 54Mbps

802.11b: 1, 2, 5.5, 11Mbps

802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps

802.11n: (20MHz) MCS0-7, up to 72Mbps at most

(40MHz) MCS0-7, up to 150Mbps at most

802.11ac: Max 433Mbps (80MHz)

- Support WPS function and wireless direct connection
- It can reach the wireless transmission speed of 433Mbps at most under 5GHz band, 150Mbps at most under 2.4GHz band
- Wireless transmission speed is auto-negotiation according by network condition
- Super USB 2.0 interface
- Support power consumption management function
- LED indicator can indicate product working state
- Great anti-interference function
- Compatible with many kinds of operation system



2. Installation Steps

Installation steps of adapter driver program is same when it is installed in different operation system. Here takes the steps under Windows 7 for example to explain the installation process.

1. Double click the icon of installation package to start the installation.



2. Choose "I accept the terms of the license agreement" and click "Next".



3. Users can choose the installation type for the actual needs. "Install driver and Mediatek WLAN Utility" is our recommended choice.





4. An UI will pop up to prompt that the system is ready for the installation, then click "Install".

Mediatek Wireless LAN - InstallS	hield Wizard
Ready to Install the Program	n
The wizard is ready to begin ins	tallation.
меділтек	Click Install to begin the installation. If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard. Note: Some virus scanner program will block the install package. If the install package does not work properly, please try to close the virus scanner before you run the install package
InstallShield	< Back Install Cancel

5. The system will show the installation processing bar. After the installation, another interface will show up.



6. When installation process is done, system will remind this information. Click "Finish" will accomplish the installation and log out from installation wizard automatically.

Mediatek Wireless LAN - InstallSh	ield Wizard
	InstallShield Wizard Complete
	The InstallShield Wizard has successfully installed Mediatek Wireless LAN. Click Finish to exit the wizard.
мерілтек	
InstallShield	< Back Finish Cancel

Notice: If you want to change the installation setup, please click "Back" to return to previous page to set it up again. If you want to quit the installation, please click "Cancel".



3. System Connection

3.1 Check Device Condition

After finishing the installation, users can find an icon is on the task bar, this icon has the information that our product is not existed. Therefore, users need to plug our adapter into the target USB2.0 port.

After plugging in, blue LED indicator on adapter will turn on. At the same time, icon $\underline{}$ will turn to $\underline{}$ to inform users that device is available but waiting for connecting.

Users can check its condition in Device Manager.



Double click device name "802.11ac Wireless LAN Card" can check its condition, and the condition will be shown like the below:

SHENZHEN OGEMRAY TECHNOLOGY CO., LTD PRODUCT USER MANUAL
802 11ac Wireless I AN Card Properties

	Advanced Drive	er Details Power Management	
<u>.</u>	802.11ac Wireles	ss LAN Card	
	Device type:	Network adapters	
	Manufacturer:	MediaTek, Inc.	
	Location:	Port_#0001.Hub_#0002	
This	device is working p	property.	*
			Ŧ
			Ŧ

Click "OK" can finish this step.

3.2 Device Connection

1. When device is working properly, please double click \mathbf{I} , or right click it and choose "Lauch Config Utility", users will find an UI like the following picture shows:



2. Click O, users can check all available wireless networks:

меділтек	(i)	× 🔁 🗉	Available Networks		×
SSID Rate Channel	▶ IP Address > Mask	Carcool Car Club cfq ChinaNet-27Hq ESP_996E59 jadky jadkyw lzw NETGEAR75-5G office ogemray-ZT QA 5 QA 9 QA2 szogemray2 Tenda_5_43156C AP Information	 炒 1 り ジ 	1 1 37% 1 68% 55% 1 41 55% 1 41 70% 1 41 44% 1 47 70% 1 41 55% 1 41 50% 1 41 50% 1 41 50% 1 41 50% 1 41 50% 1 41 50% 1 42% 63% 1 41 26% 1 41 26% 1 41 26% 1 41 26% 1 41 20%	

3. Choose the desired wireless netowrk name, the AP information of that network will be shown at the bottom for

reference. Click 🖤 will start the connection.

If the encryption pattern is NONE, system will start auto-connection, and the basic information of that a) network will be seen on home page.

MED	ОІЛТЕК) () ? ×
՝՝՝՝՝ Շ	 SSID Rate Channel 	QA 5 150.0 Mbps 4 (2427 MHz)	> IP Address > Mask	169.254.135.48 255.255.0.0

If the encryption pattern is not NONE, users will enter "Profile Settings" page when click 🆤 to connect b) this wireless network. Authentication pattern and encryption pattern can be revealed in this page.

Profile Settings	×
Authentication WPA2-PSK	

c) Click 🗪 to go to next step to input WPA preshared key.



WPA Preshared Key	******

d) Click 💌 to go to next step. If users input the correct key number, the connection will be done successfully.

	Available Networks	×
 SSID jacky Rate 72.2 Mbps IP Address 192.168.5. Channel 6 (2437 MHz) Mask 255.255.25 	wenjian 8 9 1 81% QA 9 7 9 1 470% vv 6 9 1 470% vv 6 9 1 470% QA 5 6 9 1 470% QA 5 6 9 1 475% Izw 3 9 1 475% Jacky 6 9 1 475% Jacky 6 9 1 44% ogemray-ZT 6 9 1 42% ChinaNet-27Hq 2 9 1 42% ChinaNet-27Hq 2 9 1 43% NETGEAR/55-56 149 1 39% 34% NETGEAR/55-56 149 1 29% 29% AP Information SSID jacky Authentication WPA2-PSK MAC Address D8-24+BD-78-D8+84 Encryption AES V	

Left part is the basic informaton of the connected network. On the right part, \checkmark is used to remark the connected one.

4. When the connection is established, LED indicator on device will keep blinking, and users can enjoy the connected network environment.
on task bar is for knowing the connection situation.

Notice:

1. Among the available network selections, 1-14 means the network of 2.4G band, 36-165 means the network of 5G band. If the network is marked as ^a, then it is a 5G network for easy recognization.

2. Click on home page, or right click the related icon on task bar to choose"Exit", network conncetion will be disconnected.



4. Home Page Introduction

Home page will display some basic information of the connected network, such as SSID, IP address, communication rate, channel, and subnet mask.

MED	DIATEK)i	? X
"]"	> SSID	jacky			
	👂 Rate	72.2 Mbps	IP Address	192, 168,	.5.105
all	Channel	6 (2437 MHz)	Mask	255.255	.255.0

We will explain the usage of those functional buttons in the red square frol left to right.

1. Detuction: This button is for searching all usable wireless networks. By clicking it, a page will show all networks that users can use for check.



Click 🔁 can refresh the list information, click 🔲 will guide users to "Profile Settings" page for the connection setup of desired network.



= + +	Profile Settings	×
Profile Name	PROF1	
SSID	iacky 🗸	
Network Type	 Infrastructure - Connect to AP Ad Hoc - Connect to other computers 	

Follow and guide and click \blacktriangleright to finish the connection setup.

Right click the selected network, users can get the 3 ways of network sequencing. Users can choose the preferred one to sequece the list for convenient check.

a =	Availa	ble Netwo	orks			×
		_	_			_
🔗 jacky		_		9	91%	*
wenjia So	orted by SSIL)		2	81%	
QA 9 So	orted by Cha	nnel		b	70%	
vv 🗸 se	orted by Siar	nal Stren	ath	b	68%	
szogeninuyz	~			ΨL	63%	=
vv111	Ŷ	9	69	🛈 💔	52%	-
ogemray-ZT	Ŷ	6	69	0	50%	
Izw	Ŷ	3	69	🛈 💔 –	50%	
szogemray1	Ŷ	9	69	🛈 💔 –	44%	
QA 5	Ŷ	6	69	🛈 💔 –	42%	
office	Ŷ	11	69	0	39%	
ChinaNet-27Hq	Ŷ	2	69	🛈 🗘 –	39%	
jackyw	Ŷ	3	69	0	34%	
NETGEAR 75-5G	r 🖒	149 <mark>a</mark>		🛈 💔 -	31%	
cfq	Ŕ	11	59	0	29%	Ŧ
AP Information						
SSID jack	у	Authe	ntication	WPA2-PS	SK 🔇))
MAC Address D8-2	24-BD-78-D8-(84 Encry	ption	AES		

Click The can connect to network and enter the page of "Profile Settings" directly.



2. Dutton: Click this button can gain network link information.

	a atll 🕜	Link Information X
	Status	jacky <> D8-24-BD-78-D8-84
	Extra Info	Link is Up [Tx Power: 100%]
	Authentication	WPA2-PSK
I	Encryption	AES
	Network Type	Infrastructure
	Central Channel	6

- button: Showing the link information just like the page above s hows.
- button: giving some link data information, such like link quality, signal strength, transmit rate and receive rate.

© اللم ه	Link Info	ormation		×
Link Quality Signal Strength 1			98 % -56 dBm	
Transmit Link Speed Throughput	72.2 Mbps 0.064 Kbps	Receive Link Speed Throughput	2.0 Mbps 67.064 Kbps	

button: Providing some data information about some statistic information about transmitting and receiving.



لink Information ه الاالل			×
Transmit O Receive		5	
Transmitted Successfully	=		2454
Retransmitted Successfully	=		2427
Fail To Receive ACK After All Retries	=		180

3. Discussion of the second se

+ × 📝 😭 🔮	Profile List	×
Profile Information	A	
SSID	Encryption	3

• Click button, can add a network connection into system, users can refer to chapter 3.2 for detailed

information.

- Click 🎽 button, can delete the chosen network connection.
- Click button can do edit operation.
- Click I button, can import some files into system.
- Click from system.
- Click D button can add a WPS profile. When finish the related setup, please click to follow the adding guide and finish it.



= + +	Profile Settings		×
WPS Method	Push-Button		
	C PIN	WPS Version	
		2.0	
WPS AP List	jacky		

4. i button: This button is for advanced setup.

		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	:
Install Certif	icate		
Us	er certificate		
Issu	Ier certificate		
			面
, Certificate D	etails	1	
Issuer		Version	
Subject		Туре	
Valid From		Valid To	



button: This button is for checking product version, MAC address information.

	About	:
Version		
Utility	5.0.9.19	Date 2015-05-06
Driver	5.1.21.0	Date 2015-02-16
SDK	1.1.18.19	Date 2015-03-14
MAC Address	7C-D	D-90-92-50-4C
MEDIATEK	MEDIATEK (c) Copyright 2014, Mediatek Inc. All rights reserved.	

5. Device Mode Switch

5

Here are 2 extra work modes for users to choose according to their actual needs and real situation: Client+AP mode and AP mode.

Client+AP mode can make device connect WLAN and use itself as a Wi-Fi hotspot simultaneously; AP mode is for access point mode.

5.1 Client+AP Mode

Right click the device icon on task bar, users can see a pop-up list:

Click "Switch to Client+AP Mode", users can see the following page:

I RaUI Message		X
Please enter SSID and F	Pre-Shared key.	
SSID	SoftAP-4D	
WPA2 Pre-Shared Key		
	OK	

Input SSID and pre-shared key and click "OK", then follow the guide to switch the work mode successfully.



5.2 AP Mode

Right click the device icon on task bar, users can see a pop-up list:

Launch Config Utility
Switch to Client + AP Mode
Switch to AP Mode
Exit

Click "Switch to AP Mode", the cofiguration utility will be activitated and the home operation page will pop up.

The device icon will turn to $\overset{\checkmark}{\overset{\checkmark}}$, and the operation method is described in chapter 4.

Notice: If users want to turn back to client mode, just right click device icon and choose "Switch to Client Mode".

6. Agency and Approval

This device is certificated by various of international approvals, users can purchase and use it without any worried behind. More information can be seen in the table below:

Certificate	Description
FCC	Undergoing
CE	Undergoing
RoHS	Undergoing

FCC Cautions:

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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.



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.

7. Environment Requirements

7.1 Temperature Range

Suitable working temperature range: $-10^{\circ}C \sim +50^{\circ}C$ Suitable storage temperature range: $-20^{\circ}C \sim +85^{\circ}C$

7.2 Humidity Range

Suitable working humidity range: 20%~85%

Suitable storage humidity range: $20\% \sim 90\%$

Notice: To keep the normal service life and ensure the excellent working performance of our device, please use it and store it abide by environment requirements strictly.

8. Disclaimer

This **DATA SHEET** document is the guidance of the installation and tentative usage of our products. Before operating the product, please read this data sheet carefully.

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We do not provide any guarantee about this data sheet, software or other relevant information. We solemnly state that there is no implied business warranty or commercial contract assurance in the sheet, software or other related information. The data sheet is only for operation guidance and reference; it cannot be used as basis or supplement of any other contract or duty.

Specific Absorption Rate (SAR) information:

This Wireless USB Adapter meets the government's requirements for exposure to radio waves. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons regardless of age or health. FCC RF Exposure Information and Statement The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. Device types: Tablet POS (FCC ID: YWTWF7610U5B) has also been tested against this SAR limit. The highest SAR value reported under this standard during product certification for use when properly worn on the **body is 0.416W/kg**. This device was tested for typical body-worn operations with the back of the handset kept 00cm from the body. To maintain compliance with FCC RF exposure requirements, use accessories that maintain a **00cm** separation distance between the user's body and the back of the handset. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.