



# MG360 Driver Installation & User Manual

Supervised by MILLITRONIC Co., LTD

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Version:6

# Introduction

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**Thank you** for purchasing this MILLITRONIC product.

You can visit our website: <http://millitronic.com.tw>

**MG360** is the first portable of WiGig USB3.0 network adapter in the world, which is compatible with IEEE 802.11ad spec.

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# Overview

## *Product Description*

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**MG360** receives high-speed, 60 GHz WiGig 802.11ad wireless connectivity for the router devices with up to 2.0 Gbps connection to the router.

Complemented by a Wi-Fi router supports 802.11ad, it enables wire-equivalent user experience for wireless usage. This adapter supports the fastest Wi-Fi technology for networking accessibility.

## *Product Features*

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- Accessibility for 60GHz networking
- 360-degree wireless coverage
- 10x faster than Wi-Fi
- Easy to plug and Play
- Compatible with
  - a. TP-Link Talon AD7200
  - b. Netgear Nighthawk X10 R9000
  - c. Netgear Nighthawk Pro Gaming XR700

# Adapter Specification

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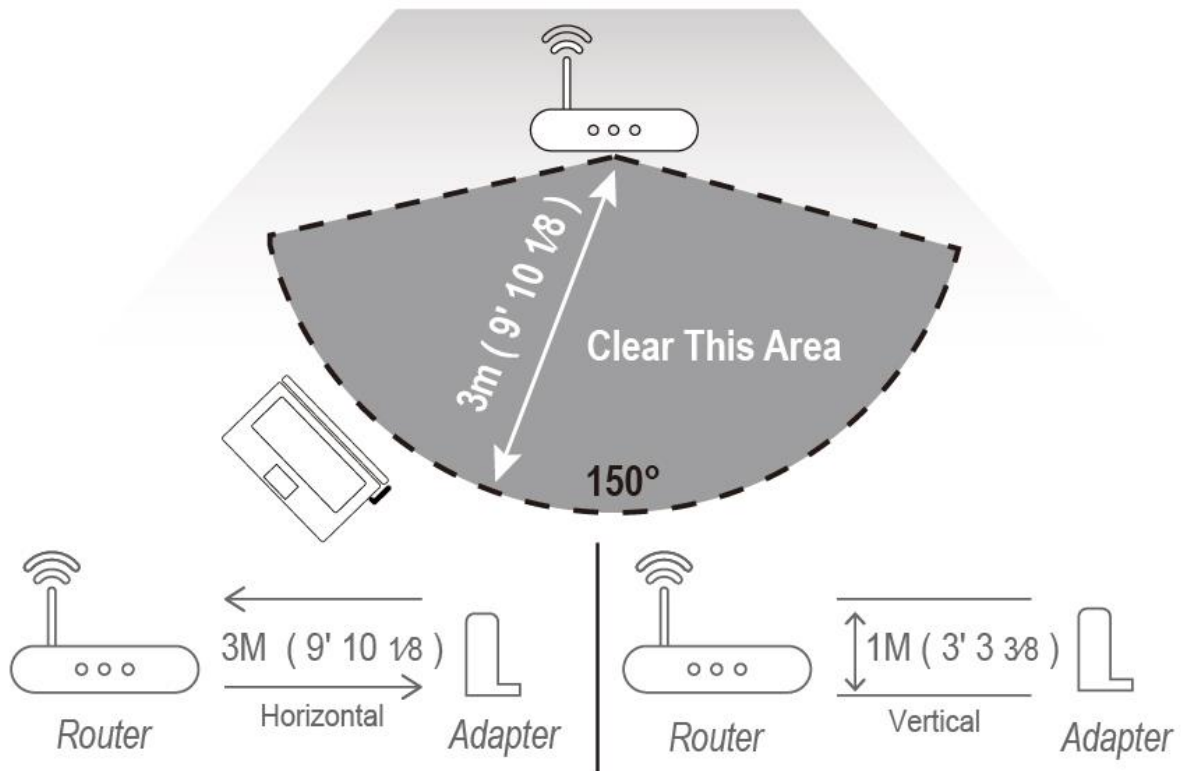


<b>Wireless</b>	
IEEE 802.11ad compliance	
Adaptive 360 Degree Beamforming	
60GHz Radio, 2.0 Gbps*	
Working range 10 feet (3 meter)	
<b>Dimension</b>	
Size: 110.3 x59.3 x17.3 mm	
Weight: 65 g	
<b>DRIVER SUPPORT</b>	
Windows 10, 64-bit RS3 v1709 above only	
<b>CONNECTION INTERFACE</b>	
USB 3.0 Type A	

\*Maximum wireless signal rate derived from IEEE 802.11ad specifications. Actual data throughput and wireless coverage will vary and may be lowered by network and environmental conditions, including network traffic volume and building construction.

## Effective Area

The effective range between MG360 USB adapter and WiGig router is shown in the following figure. Please keep MG360 in the fan area, which has a radius is 3 meters and field of view 150-degree from the center of router on the horizontal plane and under 1-meter difference on the vertical plane.



**Warning:** Please keep the space between MG360 and router clear, especially, avoid placing any metal objects to block wireless channel. **Make sure the laptop display does not block the router.**

No matter MG360 is plugged into the left side or right side of the notebook computer, it can connect to the router in the range of the radius. The adapter will stay connected in the effective area of the router, but the network connect session would drop until it disconnects over the time from the router setting.

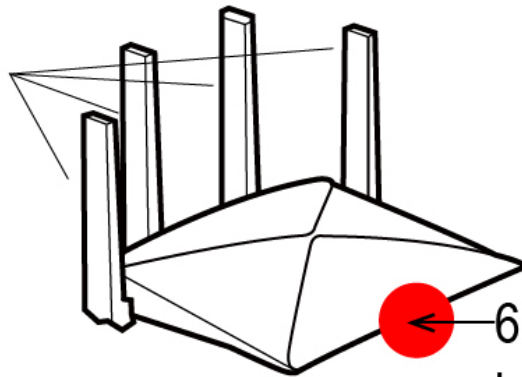


## Special notification for Netgear x10 R9000

Since the 802.11ad module of Nighthawk x10 R9000 is placed in the button of the front side, the 60GHz signal radiation will reflect by table or ground. In order to have better 802.11ad ultra speed experience, please try to place R9000 higher at the edge of the table and facing to an open space. The dongle must be within a 150-degree sector region relative to the front side of R9000. Make sure there is no object placed between MG360 and R9000.

Suggest Nighthawk x10 R9000 firmware version v1.0.4.12

4 giant antennas  
2.4GHz/5GHz antennas



60GHz antenna  
is located here

### **Warning :**

Netgear R9000 60GHz signal only covers 150 degrees in the front

At the edge of the table and facing to an open space



# Chapter 1 - Driver Installation

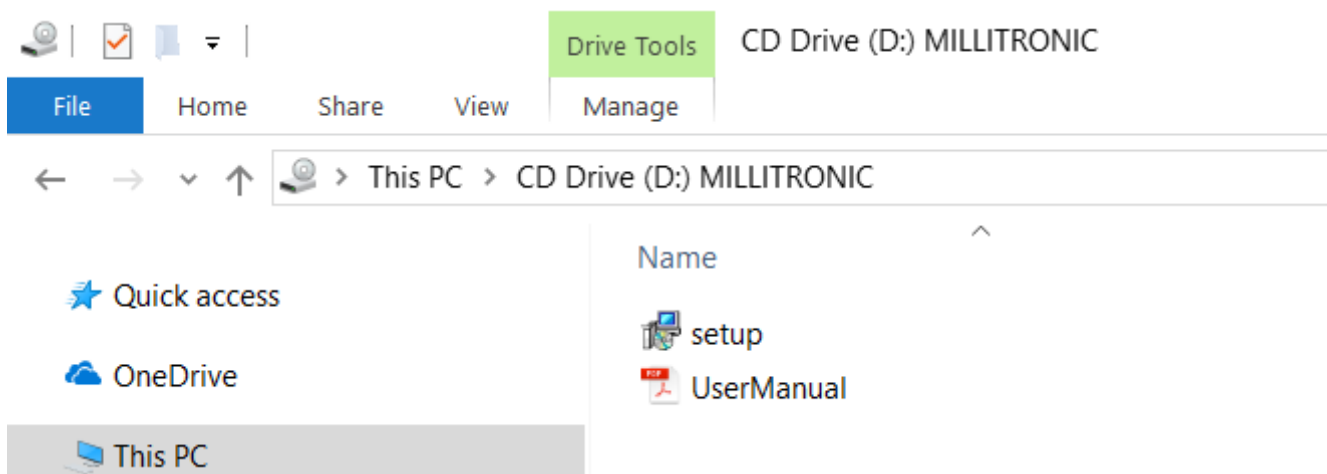
## Step 1 – Plug MG360 into Your Laptop



### The MG360 driver had pre-load to internal storage

When MG360 has been inserted to the laptop, the USB driver should enable and display the storage automatically, then you can follow the steps mentioned below. If not, please check the “**CD Drive**” in “**This PC**”.

When your laptop displays the storage and displays it as below, please double clicks “**setup**” for the next step.

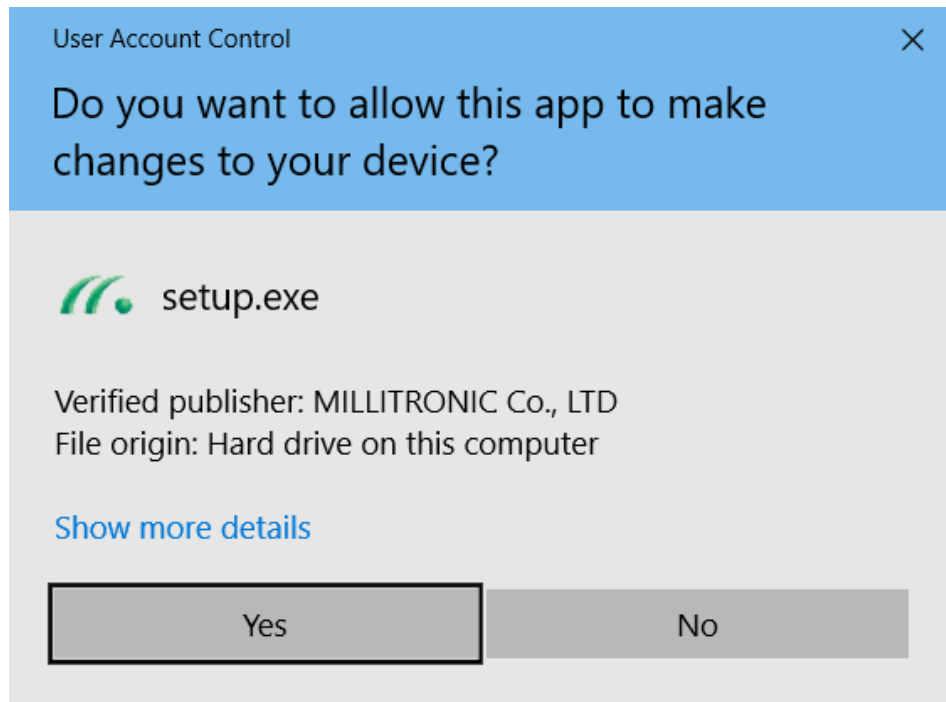


## Step 2 - Start to install

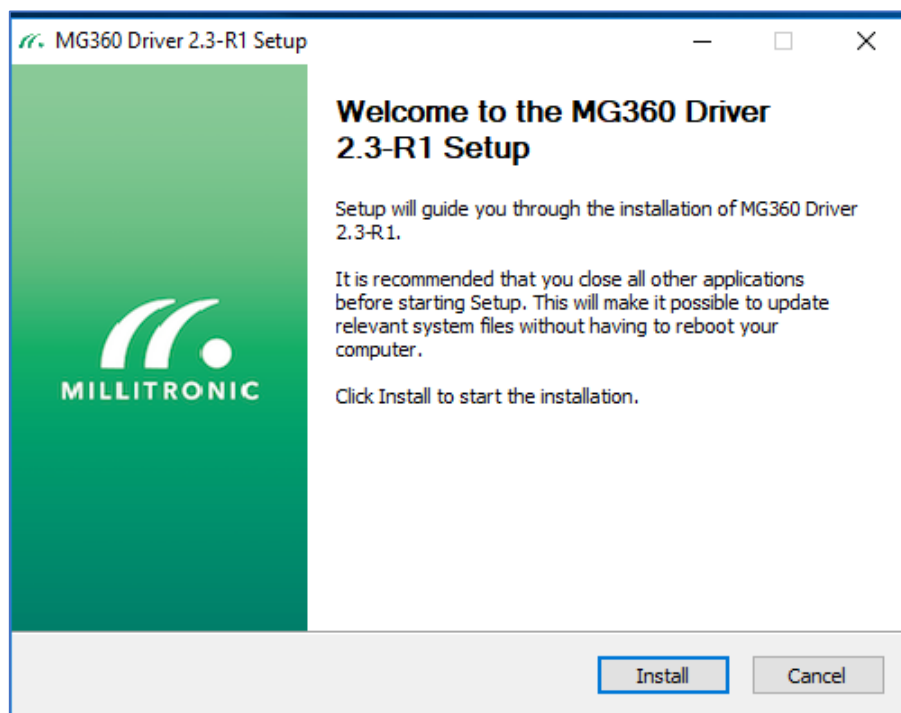
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After executing “**setup.exe**”, it will guide you to install the WiGig driver.

Click “**Yes**” to continue the installation.



Please Click “**Install**” to start the installation.

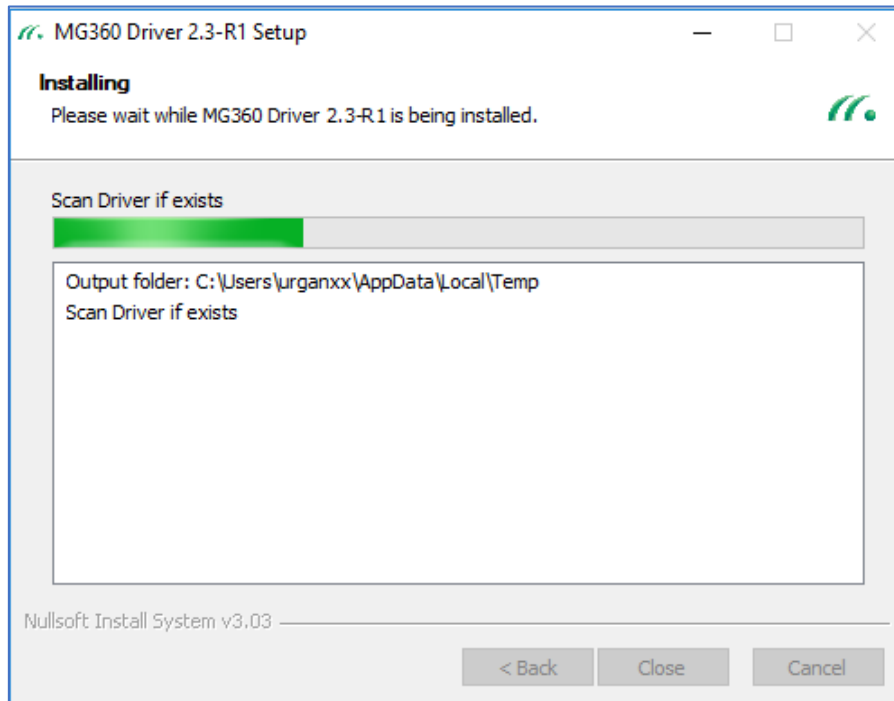


### Step 3 -Install Peraso Driver

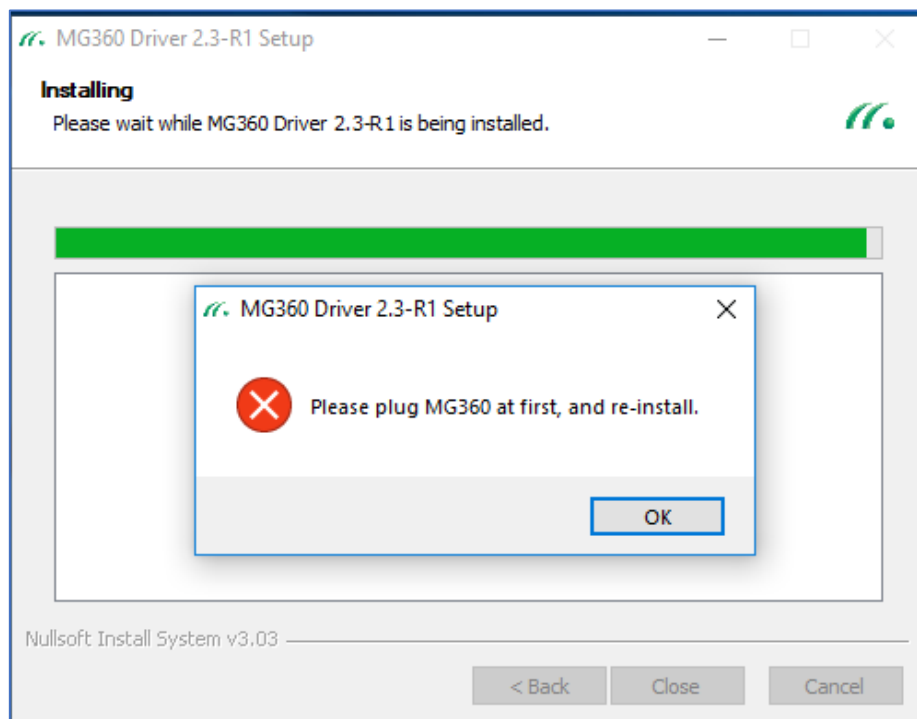
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This is to install the WiGig driver when we ensured the existence of MG360. The installer would check if you had installed previous versions before this driver installed.

Please be patient with completing installation.



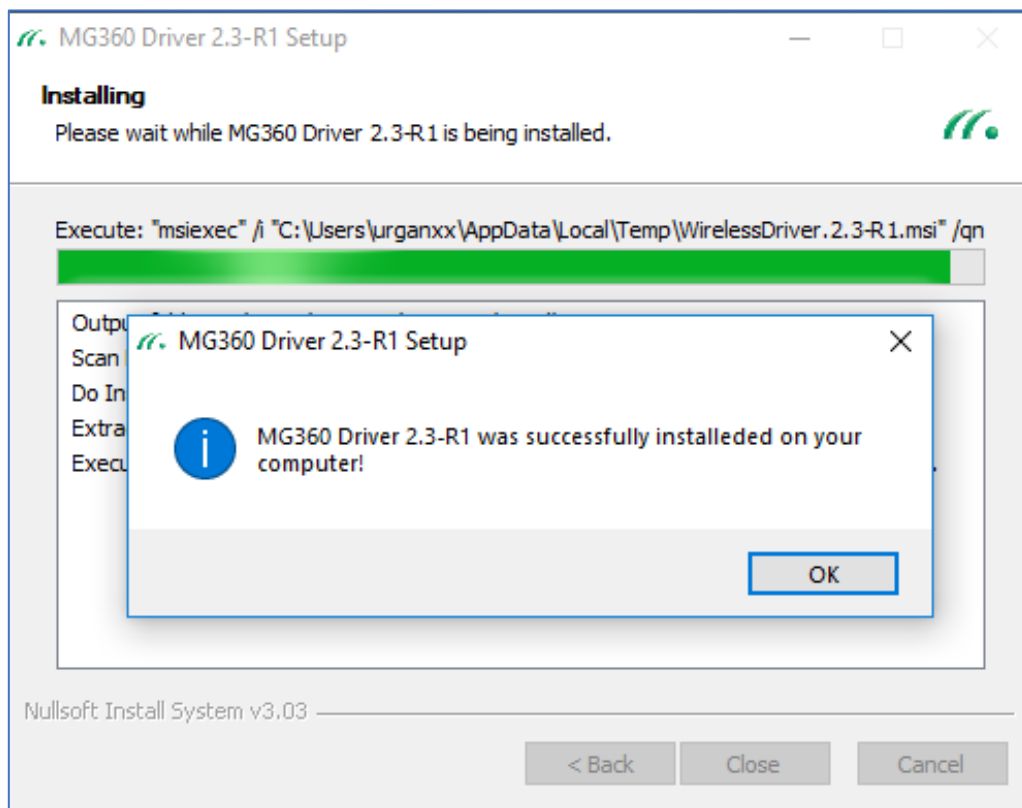
**Warning:** The installer would check our dongle if plugging on your machine.



## Step 4 -Installation Complete


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Click “**OK**” to close this window and complete the installation.



# Chapter 2 – User Manual

## MG360 Connect to the router

This is an example for using MG360 to connect to the Netgear router. At first, Click the icon  in the notification area, then the “Wi-Fi” panel would appear. Select your router from the list of available devices.



2.1: Click "Wi-Fi" panel, and confirm Wi-Fi has turned on. If so, MG360 will scan the vicinity.

2.2: If any hotspot exists, it will be listed. Select the SSID of the Netgear router.



Fig.2.1

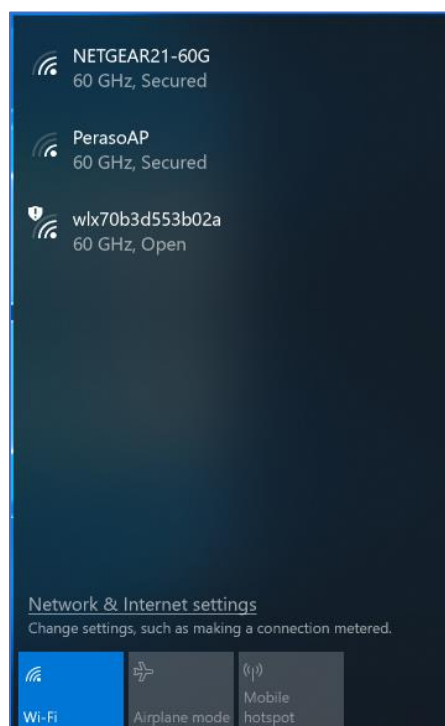


Fig.2.2

2.3: Click "**Connect**"; It needs a password to connect in secured mode, but not in open mode.

2.4: If you can see "**Connected**" as below, it means that it has connected.

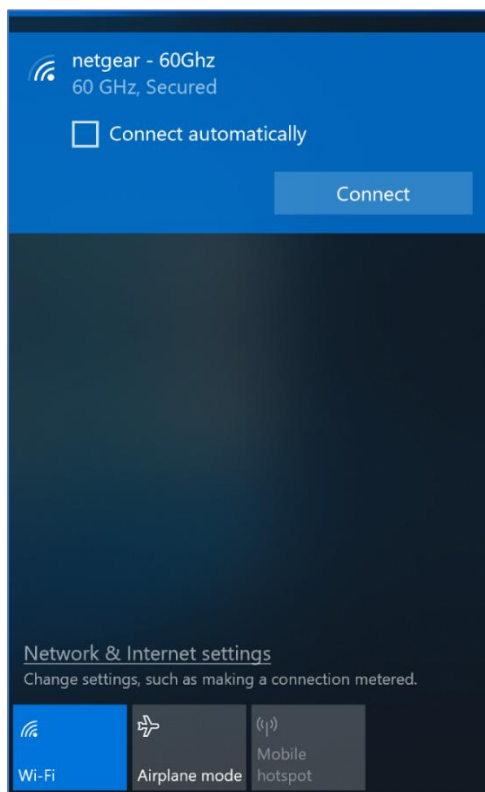


Fig.2.3

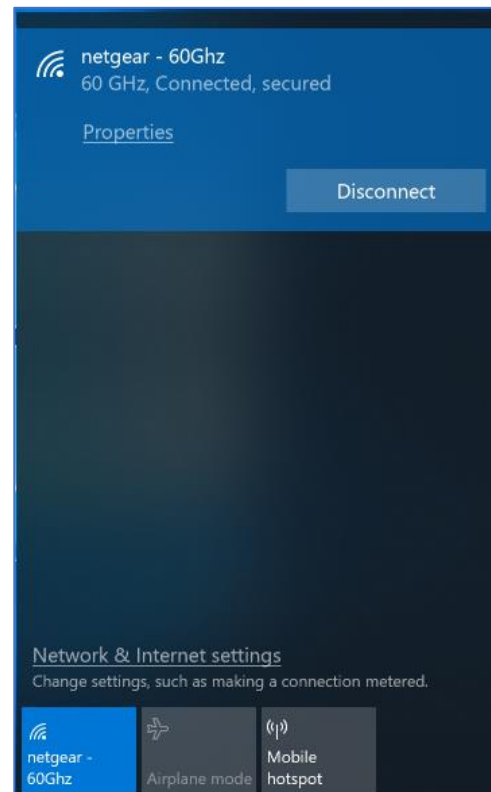


Fig.2.4

# Federal Communication Commission Interference Statement

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## **Millitronic MG360**

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.

## **IMPORTANT NOTE:**

### **FCC 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 minimum distance 7 cm between the radiator & your body.

## Appendix: Light Signals

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### In USB 3.0 Port

<b>Green</b>	<b>Blue</b>	<b>Red</b>	<b>Gray</b>
Ready to Use	Connecting	Error	No power

### In USB 2.0 Port

<b>2 Green + Red</b>	<b>2 Green + Blue</b>
Ready to Use	Connecting

## *Appendix2: Safety Information*

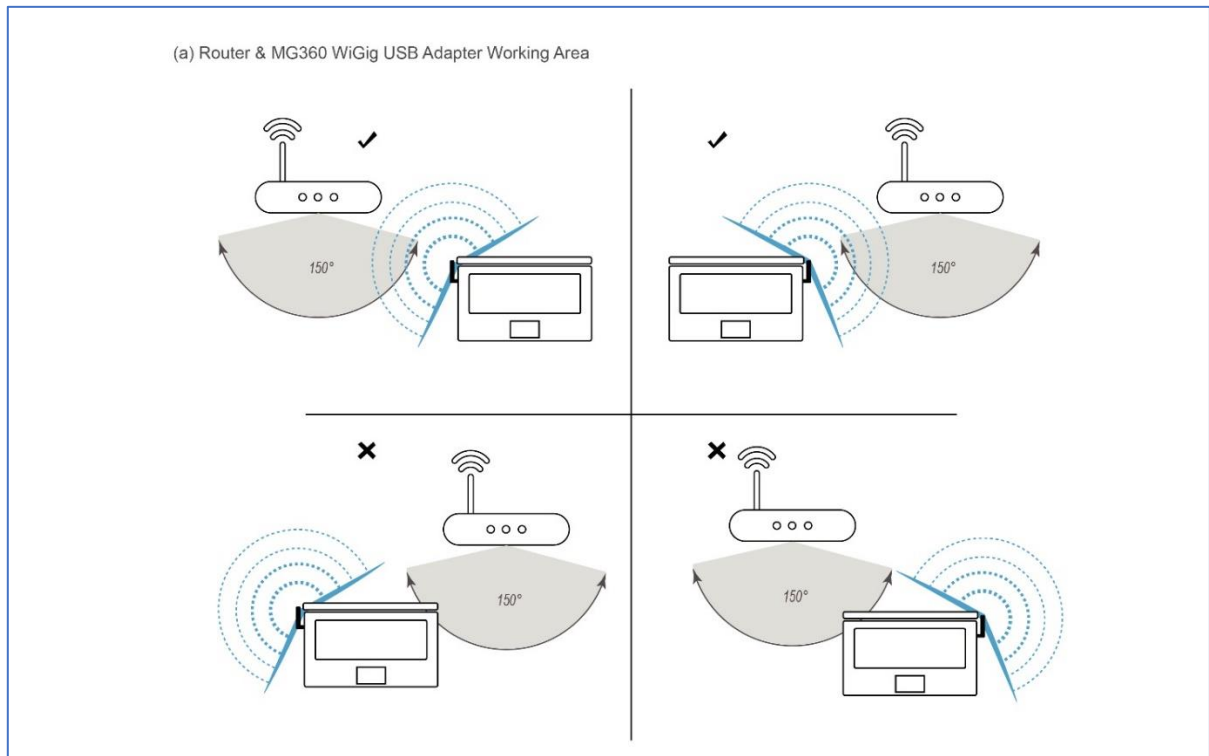
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- (1) This product can only be used in rooms at 26 degrees Celsius (Fahrenheit 78.8), please do not use the product in a non-ventilated place.
- (2) Avoid covering the machine covered when the machine is in use.
- (3) Pull out from the bottom when removing the dongle

## Appendix 3: Frequently Asked Question

Question: Where can I position the router?

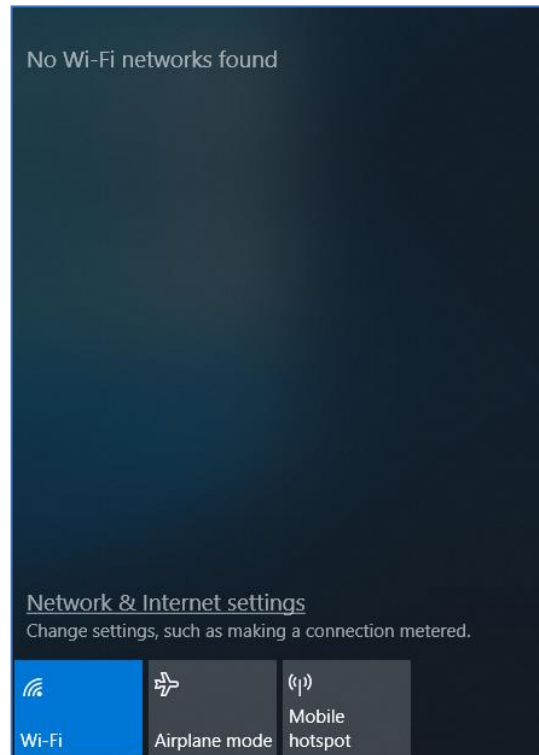
Answer: Follow "**Effective Area**" and then check your router and MG360 placed as below:



Question: How can I connect to others Wi-Fi with MG360?

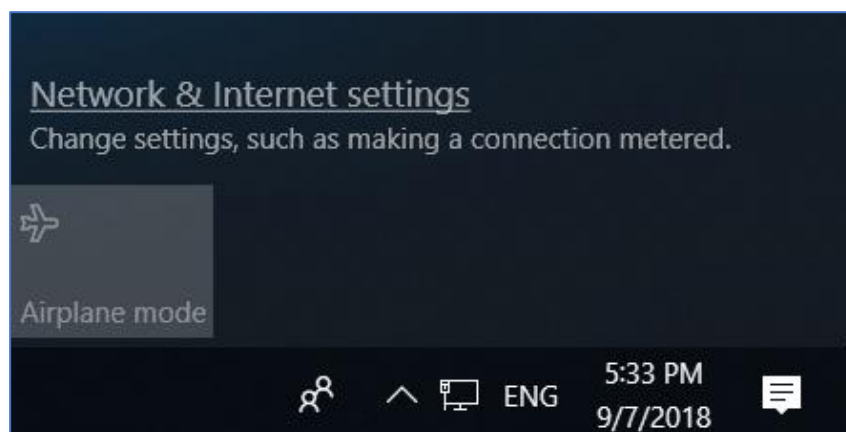
Answer: Yes, but you have to notice the radio of Wi-Fi you want to connect. The radio of some Wi-Fi devices is 2.4Ghz or 5GHz and the radio of MG360 is 60GHz. MG360 is compatible with the same radio of the routers

Question: How could I do when It shows "**No Wi-Fi networks found**" as below?



Answer: Please check the installation of the MG360 driver and follow "**Chapter 2**". Also make sure the light signal is the green light.

Question: What it means it shows without Wi-Fi icon at "**Network & Internet settings**" panel as below after I insert MG360 device?



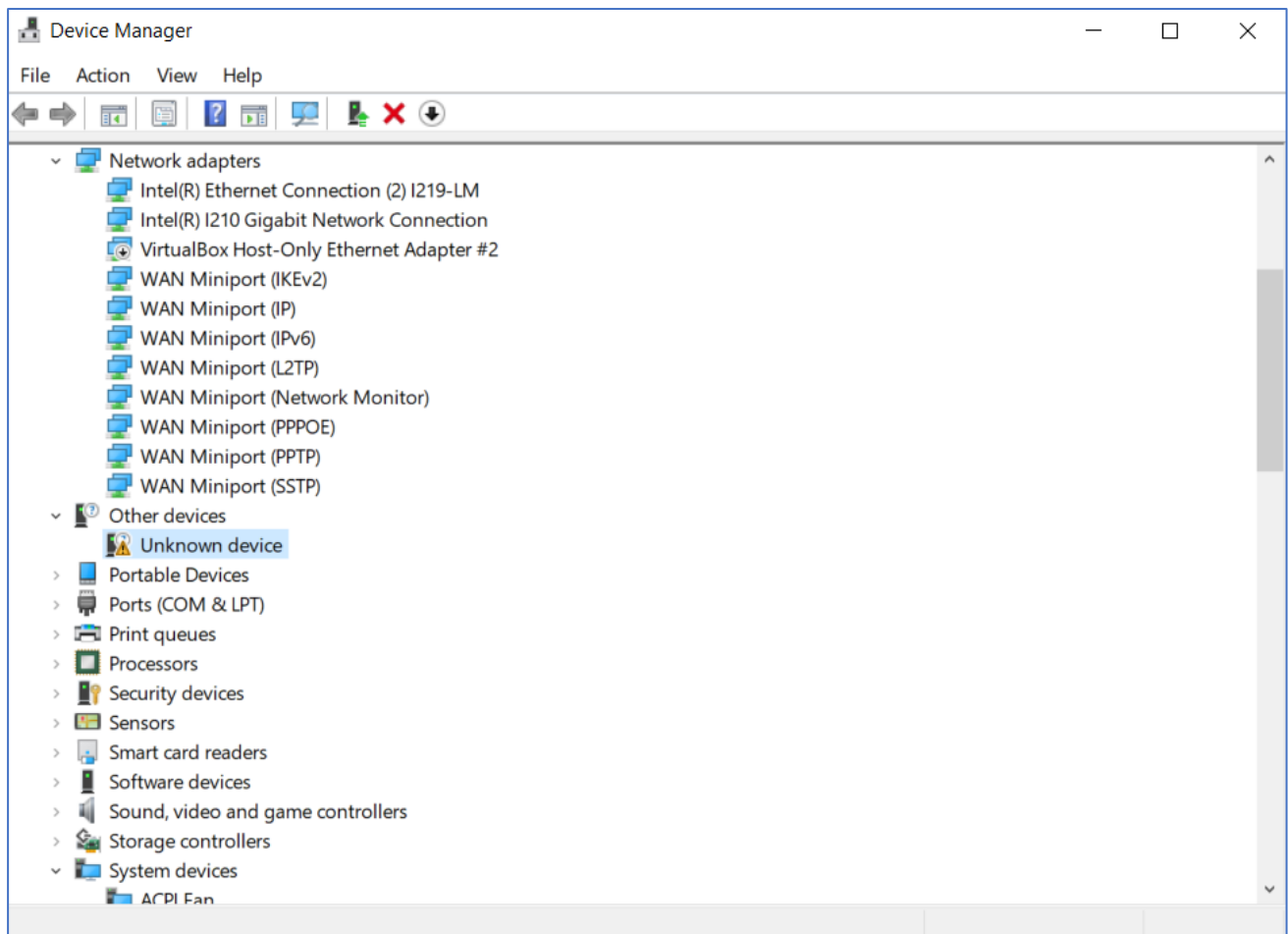
Answer: Please check the installation of the MG360 driver and follow "**Chapter 2**". Also make sure the light signal of MG360 is the green light.

## Question: How do I check the installation of the MG360 driver?

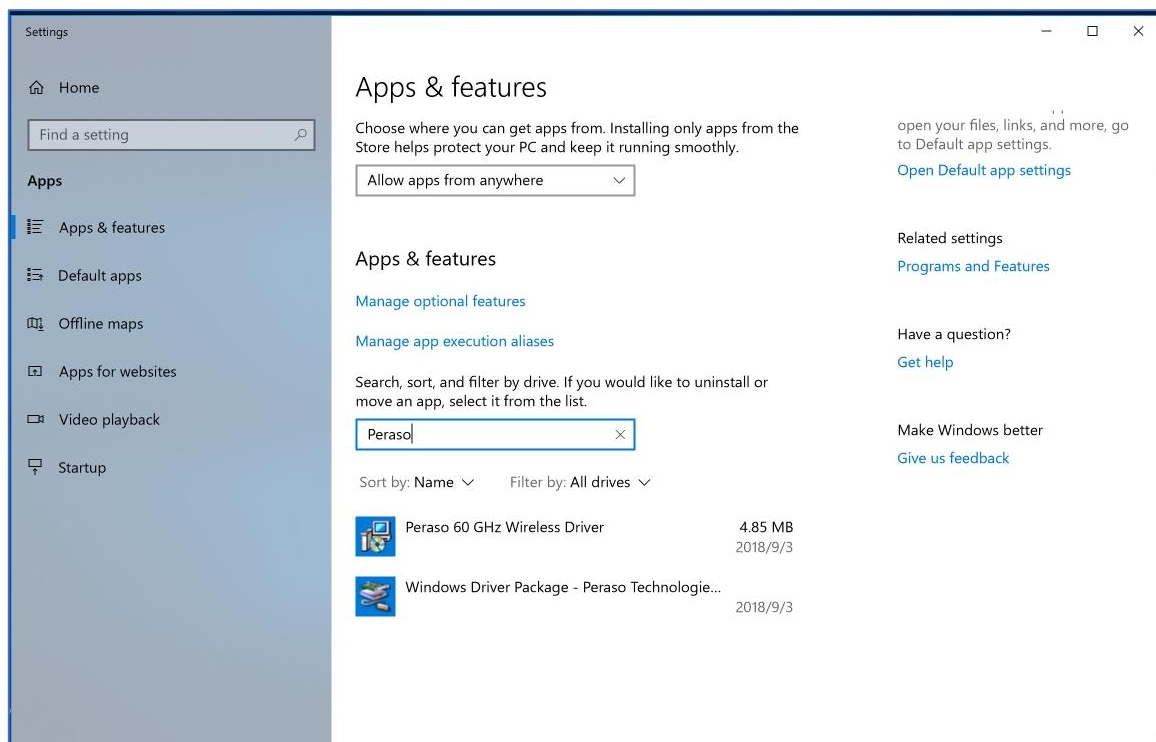
Answer: Recommend two options to check the installation by "**Device Manager**" or "**Apps and Features**". Both of them are listed on the same menu which appeared you move your mouse hovered on Microsoft's Flag and then click right-button of your mouse. You will see the sub-menu as below. And then choose "**Device Manager**" or "**Apps and Features**".



In **"Device Manager"**, If the driver is not installed, it will appear **"Unknown device"** on the list.



In **"Apps & features"**, key in "Peraso" in search-bar field, you will see the result as below. If the driver is installed, two items of the result will appear on the list.

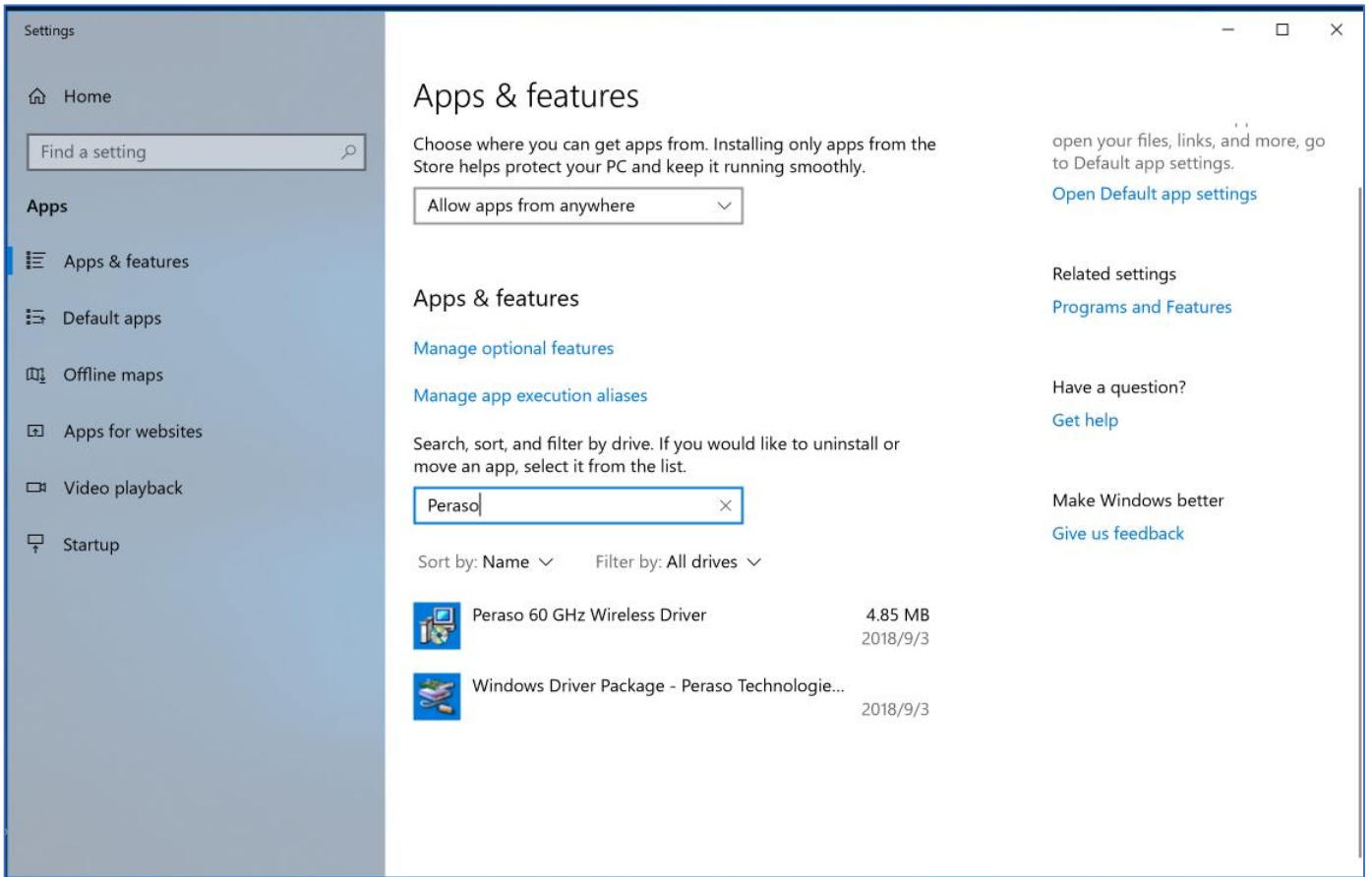


## Question: How to **Uninstall** Our Driver?

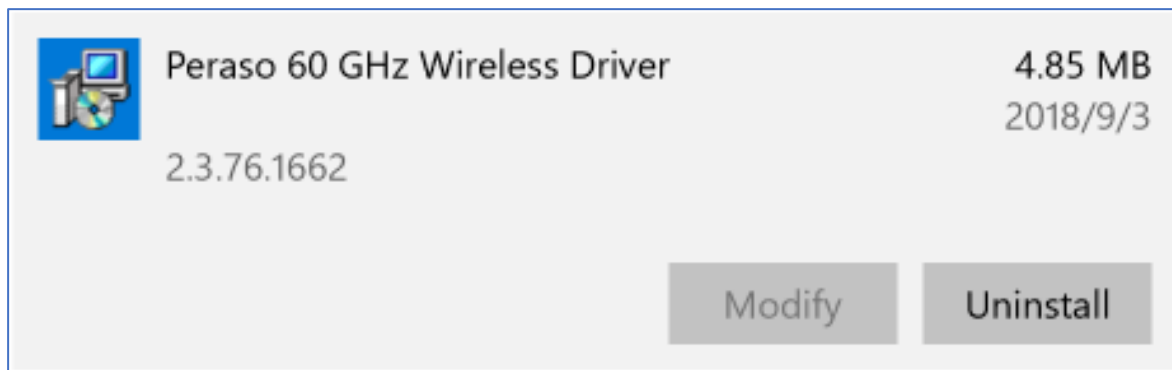
Answer: Open "**App and Features**" Panel. When your mouse hovered on Microsoft's Flag, the menu will appear as below. Click right-button of your mouse, you will see the sub-menu. Then choose "**Apps and Features**".



Key in "Peraso" in search-bar field, you will see the result as below:



Select "**Peraso 60 GHz Wireless Driver**", and click "**Uninstall**". After it has been done, you will see both of them have been removed.



## Question: How to set the router for 60GHz WiGig works

Answer: For example, there is the following instruction for Netgear R9000 router

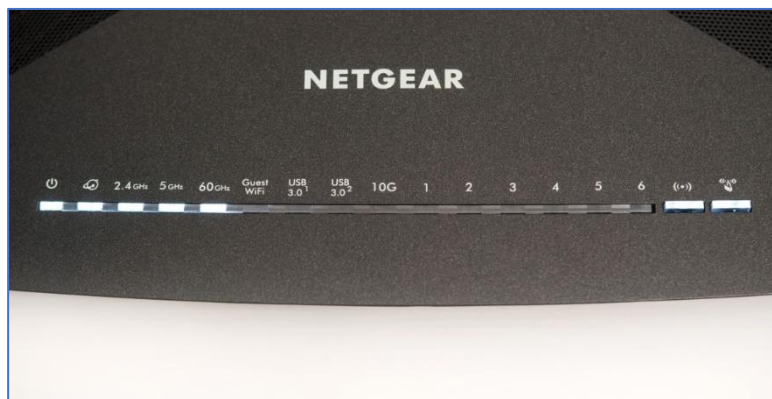
1. Connect Cat6 cable to wan port (yellow) of R9000 and ethernet



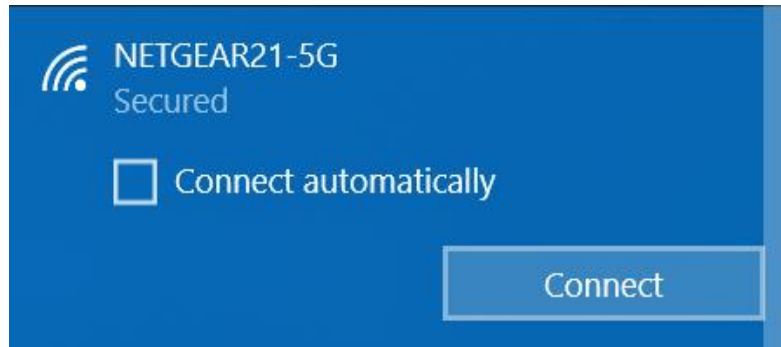
2. Turn on the switch of led



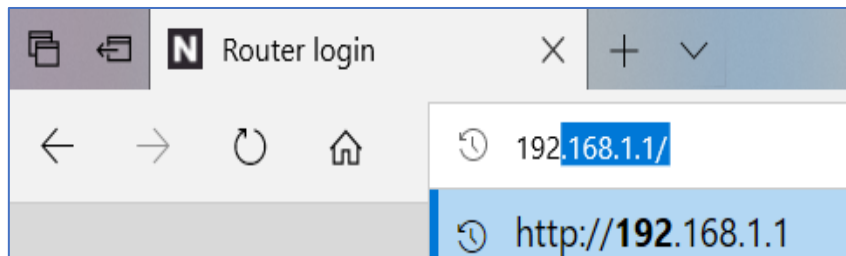
3. Check signal (flashing)



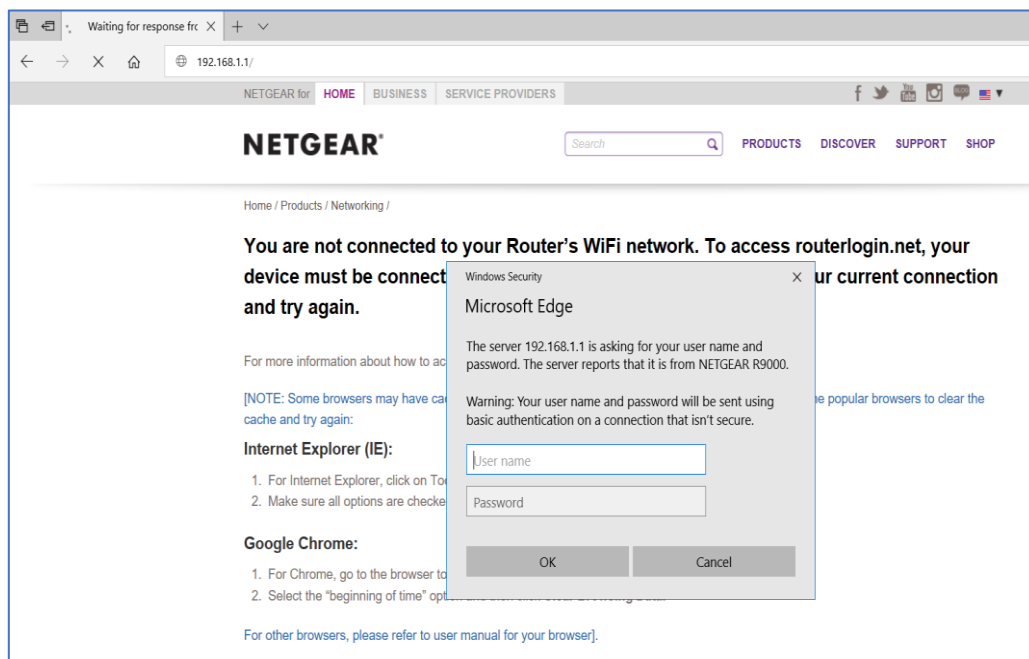
4. Connect the router with Wi-Fi (2.4GHz or 5GHz) or ethernet cable, and check connection



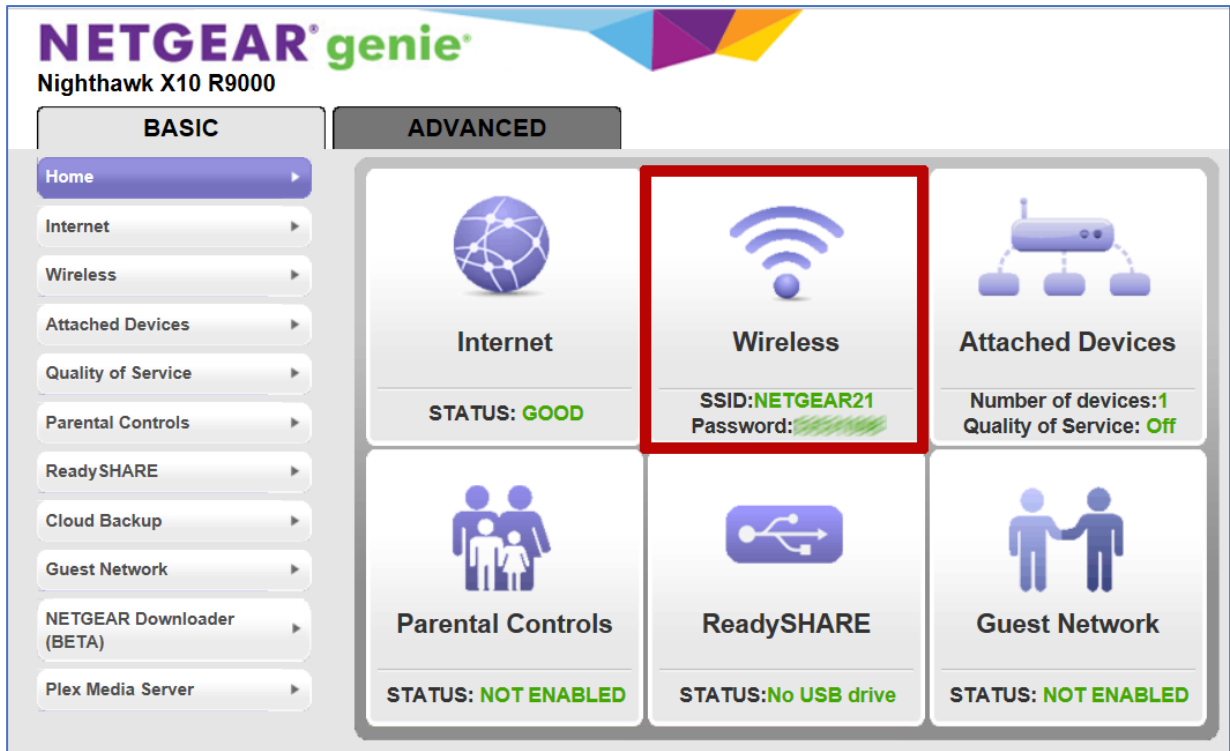
5. Launch a web browser and type <http://www.routerlogin.net> or <http://www.routerlogin.com> or "192.168.1.1". A login window of Netgear opens. Refer to <https://kb.netgear.com/980/How-do-I-log-in-to-my-NETGEAR-home-router> for detail. Please note that, if your router is set into AP mode, you may fail to access the login page. Please refer to <https://community.netgear.com/t5/General-WiFi-Routers-Non/Can-t-access-routerlogin-net-routerlogin-com-or-default-IP/td-p/1165660>



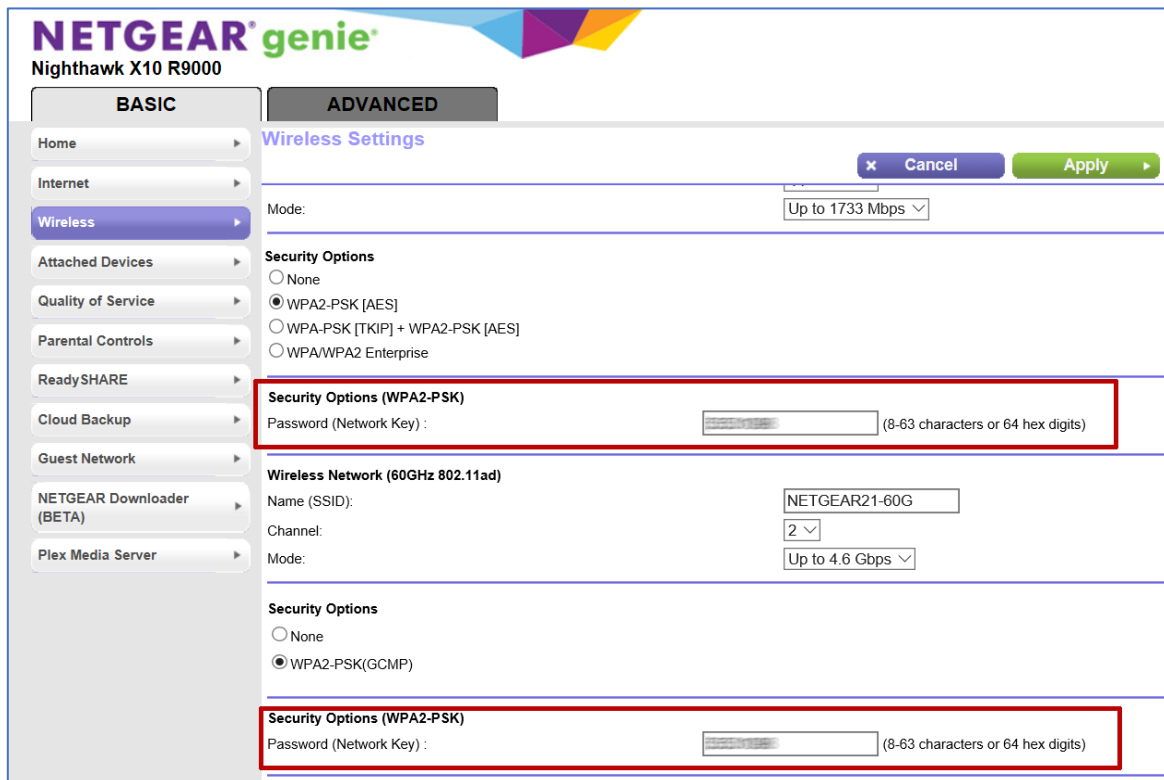
6. Make sure you have Netgear R9000 USERNAME and PASSWORD  
(Default Username: **admin**, Default password: **password**. **If you don't set it up yet, turn to 11.**)



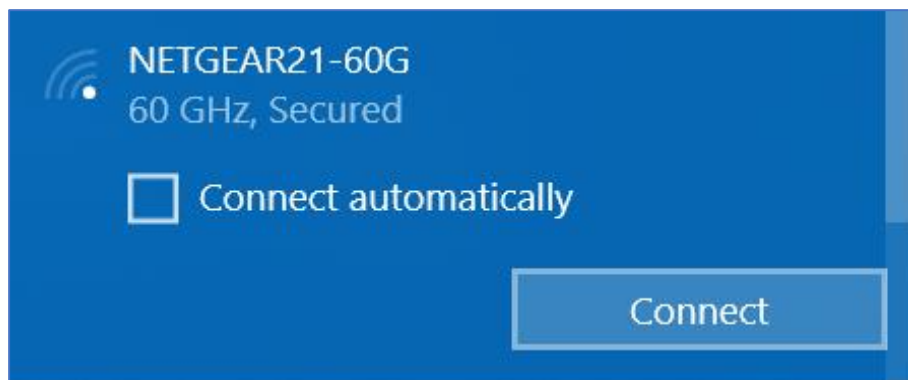
7. Click “Wireless” section at home page



8. You can see the information of “60GHz 802.11ad”. Check and save the password of WPA2-PAK in 60GHz information.



9. After MG360 WiGig driver installation for your laptop, you will be able to scan the 60GHz signal of the router automatically
10. Click the **Connect** button and enter the password shown in 60GHz WPA2-PSK of Netgear R9000



11. If you are the first time to login your router, please refer to <https://kb.netgear.com/12923/Router-Initial-Setup-FAQ>

## Trouble shooting

1. Connect the dongle to the PC
2. [Check LED of the dongle](#)
3. [Check Device Manager](#)
4. [Check the position of the router](#)
5. [Check the setting of the router](#)

### ● Check LED of the dongle

Refer to [Appendix: Light Signals](#). If it is red or NO LED, please re-plug in the dongle. If it still does not work. Connect the dongle to USB3.0 **self-power** hub and connect the hub to the PC.

### ● Check Device Manager

Check <http://www.millitronic.com.tw/support/> and [Question: How do I check the installation of the MG360 driver](#) for driver update. Make sure there is Peraso device in Device Manager.

Do not modify advanced setting. The installation pair the laptop and the dongle. So, if you have more than one dongle, re-install the driver again when using different dongle.

Make sure the Win10 version is 64bit and Rastone3 1709 later. As the following

The screenshot shows the Windows Settings application, specifically the 'About' page. The left sidebar lists various settings categories, with 'About' selected at the bottom. The main content area is divided into three sections: 'About', 'Device specifications', and 'Windows specifications'. The 'About' section shows three status indicators: 'App & browser control', 'Account protection', and 'Device security', all with green checkmarks. A link 'See details in Windows Defender' is provided. The 'Device specifications' section lists hardware details: Device name (MSI), Processor (Intel(R) Core(TM) i7-5700HQ CPU @ 2.70GHz), Installed RAM (8.00 GB), Device ID, Product ID, System type (64-bit operating system, x64-based processor), and Pen and touch (No pen or touch input is available for this display). A 'Rename this PC' button is visible. The 'Windows specifications' section lists: Edition (Windows 10 Home), Version (1803, highlighted with a red box), Installed on (2018/5/7), and OS build (17134.472). A link 'Change product key or upgrade your edition of Windows' is at the bottom.

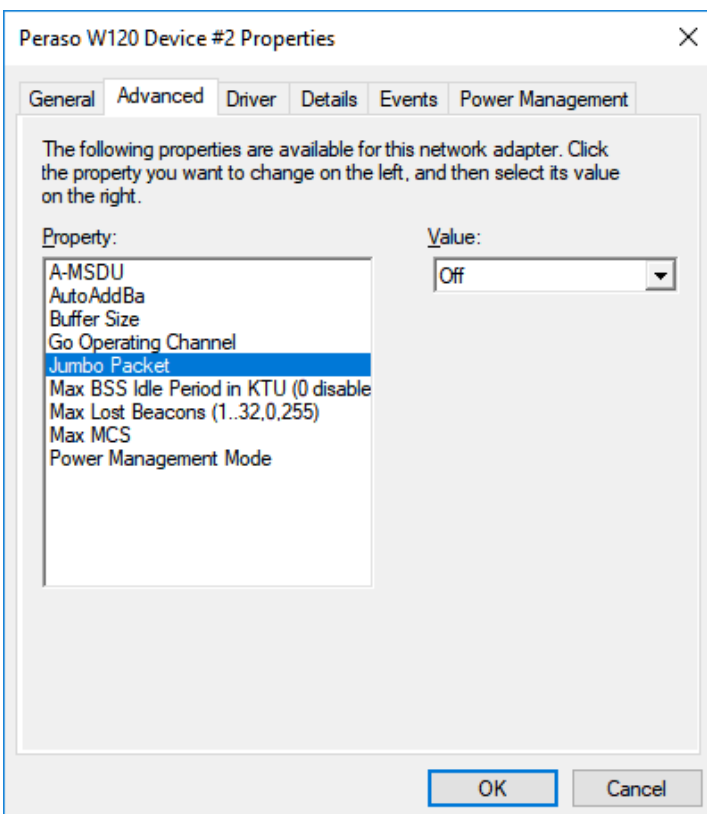
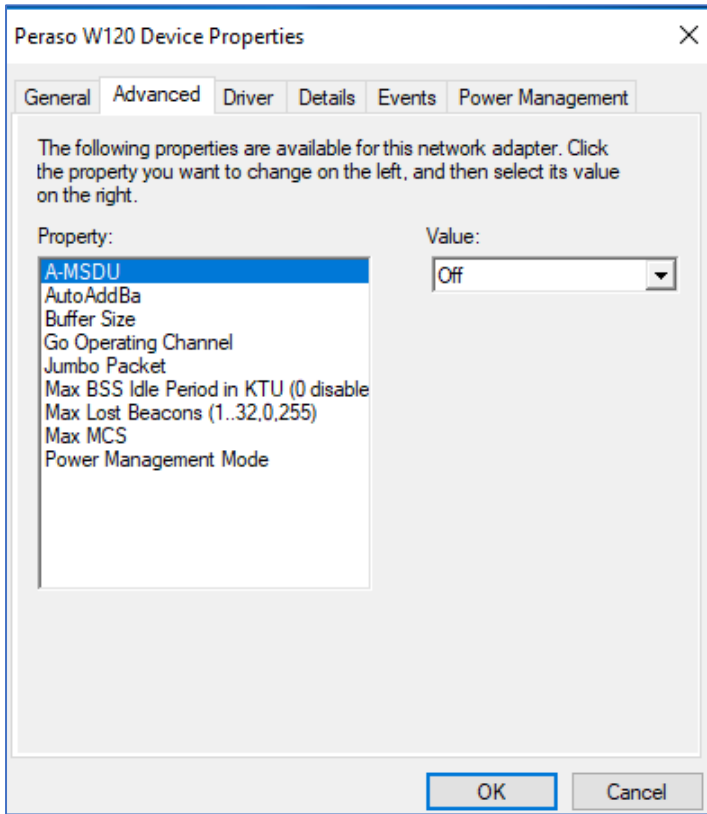
Category	Value
Device name	MSI
Processor	Intel(R) Core(TM) i7-5700HQ CPU @ 2.70GHz
Installed RAM	8.00 GB
Device ID	027AF94D-A6EC-4EC3-8C90-BCBF93423A93
Product ID	00325-95800-00000-AAOEM
System type	64-bit operating system, x64-based processor
Pen and touch	No pen or touch input is available for this display
Edition	Windows 10 Home
Version	1803
Installed on	2018/5/7
OS build	17134.472

Make sure there is Peraso device in Device Manager.

The screenshot shows the Windows Device Manager window. The 'Network adapters' category is expanded, showing a list of installed network devices. A red box highlights the 'Peraso W120 Device #2' entry, which is listed below the 'Killer Wireless-n/a/ac 1525 Wireless Network Adapter' and above the 'WAN Miniport (IPv2)' entry.

- MSI
  - Audio inputs and outputs
  - Batteries
  - Bluetooth
  - Cameras
  - Computer
  - Disk drives
  - Display adapters
  - Firmware
  - Human Interface Devices
  - IDE ATA/ATAPI controllers
  - Jungo
  - Keyboards
  - Memory technology devices
  - Mice and other pointing devices
  - Monitors
  - Network adapters
    - Bluetooth Device (Personal Area Network) #2
    - Bluetooth Device (RFCOMM Protocol TDI)
    - Killer E2200 Gigabit Ethernet Controller
    - Killer Wireless-n/a/ac 1525 Wireless Network Adapter
    - Peraso W120 Device #2**
    - WAN Miniport (IPv2)
    - WAN Miniport (IP)
    - WAN Miniport (IPv6)
    - WAN Miniport (L2TP)

Double click Peraso device in “Network adapter”. Click “**Advanced**”. Make sure “**A-MSDU**” and “**Jumbo Packet**” are off.



## ● Check the position of the router

Refer to [Question: Where can I position the router](#) and [Special notification for Netgear x10 R9000](#). Let the dongle face to the front (yellow part of the image below) of the Netgear R9000. Ensure that no objects are between the router and the dongle.



## ● Check the setting of the router

Refer to [Question: How to set the router for 60GHz WiGig works.](#)

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