



**ASRock
GAMING**

MAKE 'EM PRAY

G10

AC2600

GAMING
ROUTER



USER MANUAL

Version 1.0

Published September 2015

Copyright©2015 ASRock INC. All rights reserved.

Copyright Notice:

No part of this documentation may be reproduced, transcribed, transmitted, or translated in any language, in any form or by any means, except duplication of documentation by the purchaser for backup purpose, without written consent of ASRock Inc.

Products and corporate names appearing in this documentation may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners' benefit, without intent to infringe.

Disclaimer:

Specifications and information contained in this documentation are furnished for informational use only and subject to change without notice, and should not be constructed as a commitment by ASRock. ASRock assumes no responsibility for any errors or omissions that may appear in this documentation.

With respect to the contents of this documentation, ASRock does not provide warranty of any kind, either expressed or implied, including but not limited to the implied warranties or conditions of merchantability or fitness for a particular purpose.

In no event shall ASRock, its directors, officers, employees, or agents be liable for any indirect, special, incidental, or consequential damages (including damages for loss of profits, loss of business, loss of data, interruption of business and the like), even if ASRock has been advised of the possibility of such damages arising from any defect or error in the documentation or product.



Regulatory Information

FCC Statement and Declaration: ASRock Wireless declares that this device complies with Part 15 of the FCC Rules and regulations. Operation of this device is subject to the following two conditions:

- This device may not cause harmful interface.
- This device must accept any interference received, including interference that may cause undesired operation.

FCC Notice: 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 and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to 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.

IMPORTANT NOTE:

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with FCC RF exposure compliance requirement, please follow operation instructions as documented in this manual.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Industry Canada Statement:

This Class B digital apparatus complies with Canadian ICE-003.

Cet appareil numérique de la classe B conforme à la norme NMB-003 du Canada

This device complies with RSS standards of the Industry Canada 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.

Ce dispositif est conforme à la norme CNR- standards d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes:

- (1) le dispositif ne doit pas produire de brouillage préjudiciable, et
- (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

IMPORTANT NOTE

Radiation Exposure Statement:

This equipment complies with IC 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 and your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Caution: 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.

Avertissement: les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

CALIFORNIA, USA ONLY

The Lithium battery adopted on this motherboard contains Perchlorate, a toxic substance controlled in Perchlorate Best Management Practices (BMP) regulations passed by the California Legislature. When you discard the Lithium battery in California, USA, please follow the related regulations in advance.

“Perchlorate Material-special handling may apply, see www.dtsc.ca.gov/hazardouswaste/perchlorate”

The terms HDMI™ and HDMI High-Definition Multimedia Interface, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.



Electrical Powering

The powering of the product must adhere to the power specifications indicated on the marking labels.

The power supply must be class II and a Limited Power Source in accordance with the requirements of IEC60950-1/EN60950-1, Clause 2.5 and rated as indicated on the label on your product. It must be tested and approved to national or local standards.

ASRock Website: <http://www.asrock.com>

Contents

Chapter 1 Introduction	1
1.1 Package Contents	1
1.2 The Wireless Router Label	2
1.3 Positioning Your Router	2
Chapter 2 Wireless Router Overview	3
2.1 The Front View	3
2.2 The Rear View	4
Chapter 3 Setting up the Wireless Router	5
3.1 Connections	5
3.2 Network Configuration	6
3.2.1 Wired Network	6
3.2.2 Wireless Network	7
Chapter 4 Setup Wizard	9
4.1 Starting the Setup Wizard for the First Time	9
Chapter 5 Dashboard	14
5.1 Overview	14
5.2 General Settings	15
5.2.1 WAN Information	15
5.2.2 Wireless Information	16
5.2.3 Client Information	17
5.2.4 USB Information	17
5.2.5 Advanced	18

5.2.6	Guests	18
5.2.7	Parental Control	19
5.2.8	Lighting	19
5.2.9	WiFi	19
Chapter 6 Advanced Settings		20
6.1	Wireless Settings	20
6.1.1	Wireless	21
6.1.2	Guests	23
6.1.3	WPS	24
6.2	LAN Settings	25
6.3	WAN Settings	27
6.3.1	Internet	27
6.3.2	Port Trigger	28
6.3.3	Port Forwarding	28
6.3.4	DMZ	29
6.3.5	DDNS	29
6.4	QoS Settings	31
6.5	Parental Control	32
6.6	Firewall	33
6.7	USB Application	34
6.8	Administration	35
6.8.1	Router Status	35
6.8.2	Operation Mode	35
6.8.3	Set Password	36

6.8.4	Firmware Upgrade	37
6.8.5	Self Healing	37
6.8.6	Restore / Save	38
6.8.7	System Log	39
Chapter 7 ASRock Router APP		40
7.1	Registration	40
7.2	Signing In	42
7.3	Adding Routers	43
7.4	Router Settings	44
7.5	IR Control	45
7.6	Storage	47
Chapter 8 Troubleshooting		48
8.1	How to Restart Your Network	48
8.2	Wireless Settings	48
8.3	Standard LED Behavior When the Router Is Powered On	48
8.4	Unable to Log In to the Router	49
8.5	Unable to Access the Internet	49
8.6	Wireless Connectivity	50
8.7	Restore to the factory default settings	50
Appendix - Factory Default Settings		51
Appendix - Specifications		52

Chapter 1 Introduction

ASRock AC2600 G10 Gaming Router is equipped with four high-performance internal antennas offering a combined speed of 2.53Gbps. Ideal for homes where high volumes of network traffic is needed. The dynamic Quality of Service (QoS) feature optimizes the networking performances on your devices. With the ASRock APP, you can even remote control your home appliances.

1.1 Package Contents



- ASRock AC2600 G10 Gaming Router



- HDMI 2-in-1 Router



- Power Adapter



- Network RJ45 Cable



- Micro USB Cable



- HDMI Cable

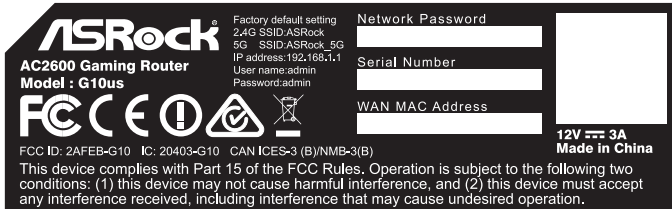


- Quick Installation Guide



Keep the original packaging material in case you would need future warranty services such as repair or replacement.

View the label on the back of the wireless router to identify the serial number, port connectors, and default login information.



**The images in this document are examples only and may be different from the product you purchase.*

The label on the router shows the login information, WiFi network name and network password, MAC address and serial number.

1.3 Positioning Your Router

For the best wireless signal transmission between the wireless router and the connected client device, please follow the guidelines below to position your router.

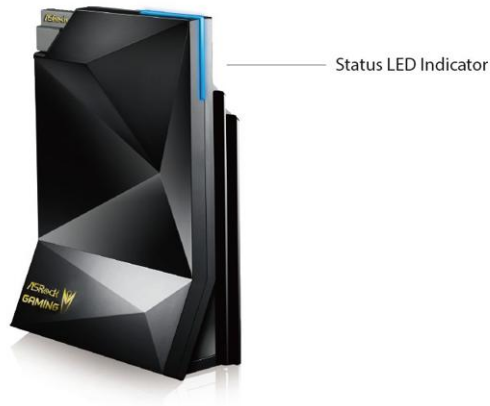
- Place the wireless router in a centralized area for maximum wireless coverage for other network devices.
- Place the wireless router on an elevated location, minimizing the number of walls and ceilings between the router and other devices.
- Place the wireless router away from large metal surfaces, large glass surfaces, and insulated walls.
- Make sure that the wireless router is within reach of an AC power outlet and near Ethernet cables for wired computers.







Chapter 2 Wireless Router Overview

This chapter provides diagrams showing the location of important components of the Wireless Router.

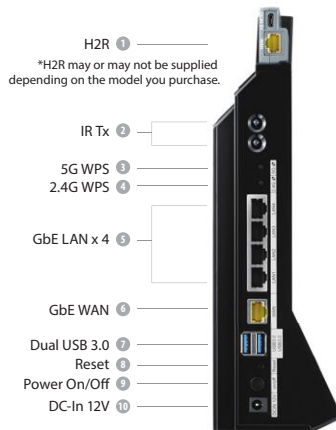
2.1 The Front View

The status LED on the front of the ASRock router allows you to verify various conditions.



					
Flashing Dark Blue	Solid Dark Blue	Flashing Yellow	Solid Yellow	Flashing Light Blue	Solid Light Blue
Starting up	Connected to the internet	ADSL modem not detected / WPS connection failed	Modem detected but no internet connection	Connecting to a WPS-enabled device	WPS connected

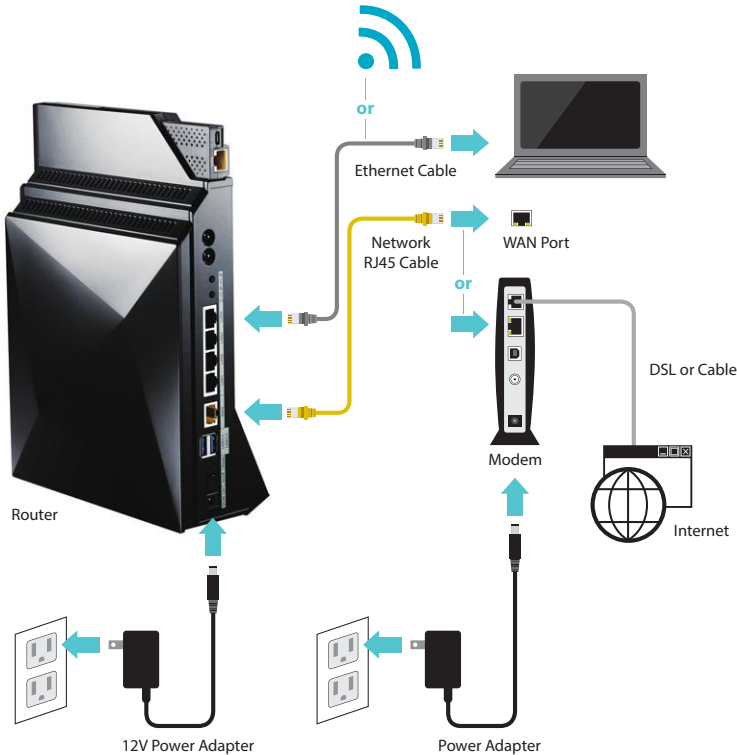
2.2 The Rear View



No.	Description	Function
1	HDMI 2-in-1 Router (H2R)	Wireless access point or HDMI Miracast / EZplay and DLNA <i>*H2R may or may not be supplied depending on the model you purchase.</i>
2	Infrared Transmitters	Communicate with receivers
3	5G WPS Button	Press to connect to a wireless network without password using WPS on 5GHz band.
4	2.4G WPS Button	Press to connect to a wireless network without password using WPS on 2.4GHz band.
5	LAN1~4	Four local Ethernet ports for connecting local computers and other wired network devices
6	WAN Port	Connect a network cable into this port to establish a WAN connection.
7	USB3.0 Ports	Plug the USB printers, flash drives, and other USB devices into this port to share the network connection
8	Reset Button	Press to reset the system or press and hold the button for more than 10 seconds to restore the factory default settings.
9	Power Button	Press to power on or off the router.
10	DC-in Port	Connect the provided AC power adapter to this port.

Chapter 3 Setting up the Wireless Router

3.1 Connections

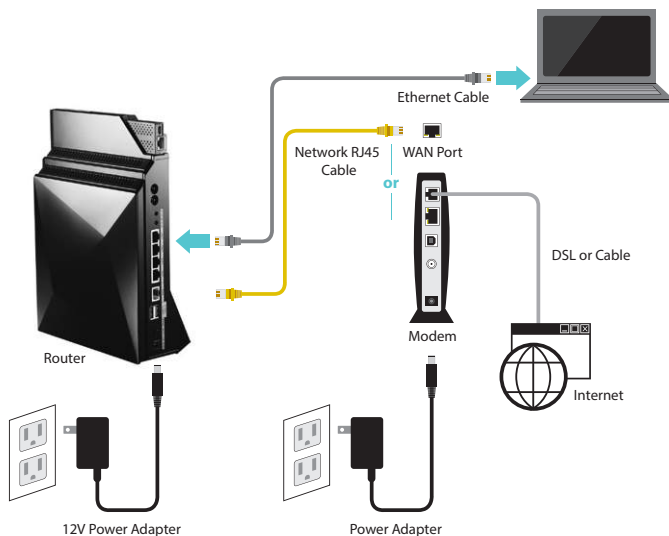


1. Turn on your modem and unplug your existing modem's power supply.
2. Connect one end of the supplied yellow Network RJ45 Cable to the WAN port on the rear of the G10 Gaming Router and the other end to your modem or a WAN port.
3. Plug in the modem's power supply and turn on your modem.
4. Connect one end of the power cord to the port labeled DCIN 12V on the back of the G10 Gaming Router and the other end to a power outlet.
5. Press the on/off button to turn on the router.

3.2 Network Configuration

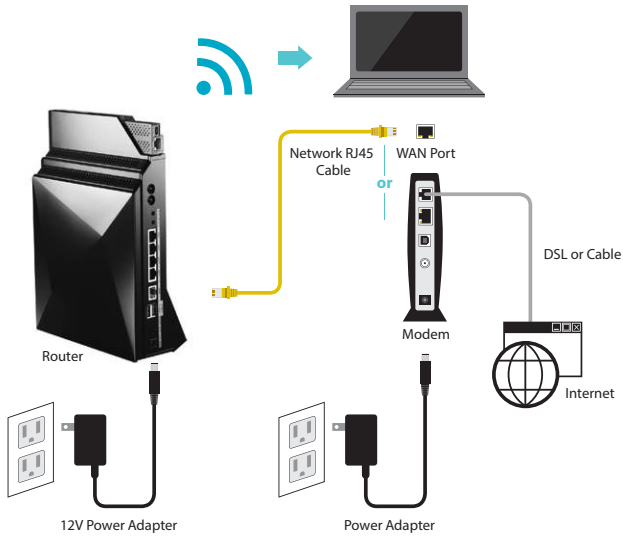
There are two methods to connect your computer, tablet or smartphone to the network on the G10 Gaming Router: Wired or wireless connections.

3.2.1 Wired Network



1. Connect one end of the Ethernet cable to any LAN port on the rear of the G10 Gaming Router and the other end to your device.
2. Make sure that the status LED on the router is lit up dark blue.

3.2.2 Wireless Network



Please make sure your device is wireless-enabled.

** For computers, a wireless card or adaptor is required. For handheld devices, visit your device's WiFi Settings menu and ensure that WiFi is turned on.*

Your device can connect to the wireless network on the G10 Gaming Router in two ways:

(1) Using SSID and Password




On your device, locate and select the Wi-Fi network name (SSID), "ASRock" or "ASRock_5G" in a list of available networks. Enter your wireless password listed on the bottom of the router. Select "Connect".

	SSID	Network Password
2.4 G	ASRock	(Check product label on the bottom of the router)
5G	ASRock_5G	(Check product label on the bottom of the router)

(2) Using WPS (Wi-Fi Protected Setup)

WPS stands for Wi-Fi Protected Setup and it is a wireless networking standard that tries to make connections between a router and wireless devices faster and easier.

Press and hold the WPS 2.4G/5G button on the rear of the G10 Gaming Router for more than 5 seconds. The status LED on the front of the router will flash light blue at this stage.

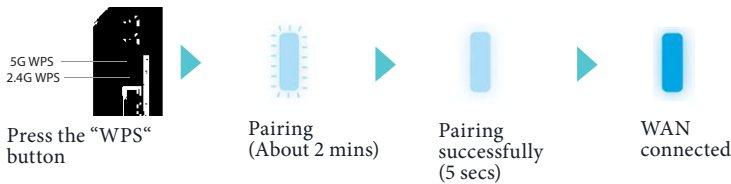
	If you use a handheld device, locate and press the WPS button  shown as two curved arrows to connect.
	If you use a computer, locate and select the Wi-Fi network name (SSID), "ASRock" or "ASRock_5G". Select "Connect".

When WPS is connected successfully, the Status LED indicator on the front of the router turns to a solid light blue.

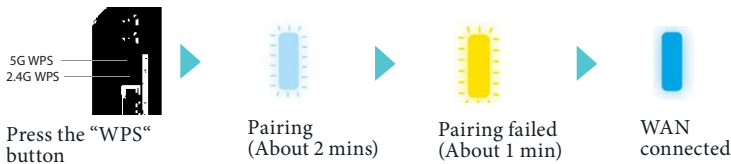
**The WPS function may or may not be supported depending on your device.*

LED Indicator Variations:

Successful Pairing:



Pairing Failed:



Chapter 4 Setup Wizard

4.1 Starting the Setup Wizard for the First Time

Your ASRock router comes with an intuitive wizard that allows you to easily configure its various features through a web browser, such as the Internet Explorer, Firefox, Safari, or Google Chrome.

When your device is successfully connected to the Internet, open your web browser. In the address bar, type in the wireless router's default IP address: **http://192.168.1.1** or **"ASRock.router"** and press Enter.



On the login page, enter the default user name **"admin"** and password **"admin"**.

NOTE: You need to re-login if idle for more than 5 minutes.

IP address	http://192.168.1.1 or ASRock.router
Username	admin
Password	admin

Please follow the step-by-step Setup Wizard to complete the basic configuration and change the SSID and password for your router.

1. Connecting to the Internet

The setup wizard will guide you through setting up the Internet connection.

When your internet service starts, your internet service provider (ISP) typically gives you all the information needed to connect to the Internet.

For digital subscriber line (DSL) service, you might need the following information to set up your router:

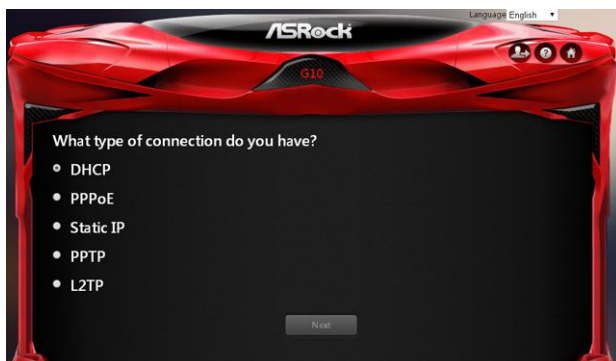
- Fixed or static IP address setting. (Special deployment by ISP)
- ISP login name and password.
- ISP configuration information for your DSL account.

If you do not have the information above, ask your ISP to provide it.

A digital subscriber line (DSL) modem is a device used to connect a computer or router to a telephone line which provides the digital subscriber line service for connectivity to the Internet.

When your Internet connection is already working, you no longer need to launch the ISP login program on your computer to access the Internet.

ASRock G10 router automatically detects your ISP connection type. Or you could manually select the ISP connection type you use.



Select "Next" to continue.

Enter the required information for your ISP connection type.

NOTE: After you complete the Setup Wizard configuration, you can always change the settings afterwards. See 6.3 WAN Settings.

2. Update firmware if required

If a new version of firmware is available, you will see the screen below. Select "Yes" to update the firmware immediately.



Please do not turn off your router while updating the firmware. When the update is complete, the router will restart automatically.

3. Changing default wireless name(SSID) and password

When the Wireless Security Setting page appears, you can check your default wireless name and password.

We strongly recommend you to change the default wireless name and password immediately for better security.



Select "I want to change the wireless name and password" and enter the wireless name and password you desire in the text boxes.

NOTE: A valid password must be comprised of at least 8 characters.

If you select "Copy 2.4G setting to 5G", both 5G and 2.4G network will use the identical password.

If the login page pops up, enter the default user name "**admin**" and password "**admin**" to continue.

4. Checking the bandwidth of Gaming Boost

The router supports Gaming Boost natively, which identifies and intelligently manages your internet traffic, allocating more bandwidth for your online games or video game consoles automatically, so that gamers may have more stable and smoother gameplay.

Please set the correct bandwidth to ensure the best gaming and streaming quality.



Click or tap "Speed Test" to find out your actual uplink and downlink speed.

Select "I want to change the default bandwidth value" and enter the values of your uplink and downlink.

NOTE: For reaching the optimal performance, please connect client and router through a network cable.

Select "Next" to continue.

5. Router reboots automatically

The router will restart automatically to apply the settings.

If you change the default wireless name and/or password in the previous steps, when the router restarts, a message will pop up displaying the new wireless name (SSID) and password (Key).



If your device is "wirelessly" connected to the router, you need to reconnect your device to the router using the new wireless name and password you have just set.

1. On your device, refresh your network list.
2. Select the new Wi-Fi network name (SSID).
3. Enter the new password.
4. Select "Connect".

When successfully connected, you will be automatically directed to the Dashboard page. If not, click or tap "OK" on the "Disconnected from router!" pop up message to enter the Dashboard page.

Chapter 5 Dashboard

5.1 Overview

The dashboard allows you to configure your network’s security settings, manage your network clients, monitor your USB device, and control the general functions.



No	Item	Description
1	Language	The language is set to English by default. Users can select different languages in the drop down list.
2	Login/Logout	Press to log in or log out the site.
3	Help	Press to go to ASRock’s support website.
4	Home	Press to go to the dashboard page.
5	WAN	Displays WAN (wide area network) information
6	Router	Displays wireless network information
7	Client	View the information of the clients that are connected to your router
8	USB	View the information of the connected USB devices
9	Advanced	Press "Enter" to enter the Advanced Settings page.
10	Guest	Guest network configurations
11	Parental Control	Parental control configurations
12	Lighting	Enable or disable the LED indicators on the router
13	WIFI	Enable or disable the wireless SSID broadcast

5.2 General Settings

On the dashboard homepage, you can check and configure general settings. After the configuration, press "Apply" to save the settings and reboot the router for the settings to take effect.

To access advanced settings, click or tap "Enter" under the Advanced item on the dashboard for more options.

5.2.1 WAN Information

Press "WAN" to open up the pop up window where you can configure your WAN information and enable or disable your connection.



- Internet Connection: Allows the router Internet access. The default is set to ON.
- Connection Type: Displays your internet service provider type.
- WAN IP: Displays the WAN IP address.
- WAN MAC Address: Displays the WAN MAC address.
- DNS Information: Displays the DNS address.
- Gateway Information: Displays the Gateway address.
- Port Scan: Protects your network from port scan attacks. The default is set to ON.
- DoS Protection: Protects your network from DoS (Denial of Service) attacks though this may affect your router's performance. The default is set to OFF.

Press "Apply" to save the settings and reboot the router.

5.2.2 Wireless Information

Press "Router" to open up the pop up window where you can easily configure your wireless information.

The screenshot shows a 'Wireless Information' configuration window with three sections: 2.4G, 5G, and Information. Each section has an '(edit)' link. The 2.4G section shows fields for Wireless Name (ASRock_C), Authentication Method (WPA2-AES), WPA-PSK Key (abcdeabcde), 2.4G Wireless MAC address (74:da:38:5d:df:02), and PIN Code (58771576). The 5G section shows fields for Wireless Name (ASRock_C_5G), Authentication Method (WPA2-AES), WPA-PSK Key (abcdeabcde), 5G Wireless MAC address (74:da:38:5d:df:03), and PIN Code (58771576). The Information section shows fields for LAN IP (192.168.1.1) and LAN MAC Address (74:da:38:5d:df:00). At the bottom are 'Apply' and 'Cancel' buttons.

2.4G

- Wireless Name: Displays the unique name of your wireless network. You can modify the name in the field.
- Authentication Method: Displays the encryption method for your wireless network.
- WPA-PSK Key: Displays the WPA-PSK key.
- 2.4G Wireless MAC Address: Displays the 2.4G wireless MAC address.
- PIN Code: Displays the PIN code.

Press "edit" (or go to **Advanced > Wireless > Wireless-2.4G**) to configure the Wireless-2.4GHz settings.

5G

- Wireless name: Displays the unique name of your wireless network. You can modify the name in the field.
- Authentication Method: Displays the encryption method for your wireless network.
- WPA-PSK Key: Displays the WPA-PSK key.
- 5G Wireless MAC Address: Displays the 5G wireless MAC address.
- PIN Code: Displays the PIN code.

Press "edit" (or go to **Advanced > Wireless > Wireless-5G**) to configure the Wireless-5G settings.

Information

- LAN IP address: Displays the default LAN IP address.
- LAN MAC address: Displays the LAN MAC address.

Press "edit" (or go to **Advanced** > **LAN**) to configure the LAN settings.

Press "Apply" to save the settings and reboot the router.

5.2.3 Client Information

Press "Client" to open up the pop up window where you can check your client information. You will see the IP address, device name, MAC address of all the wired and wireless devices connected to your router.

Client information			
Wireless Devices			
	IP address	Device name	MAC address
1	192.168.1.23	Charity_Liu-PC	c4:04:15:29:43:52
2	192.168.1.2	AlexLiu	54:27:1e:75:e3:d1
Wired Devices			
	IP address	Device name	MAC address

5.2.4 USB Information

Press "USB" to open up the pop up window where you can check the device name, total space, free space of the connected USB device(s).

USB information				
Device	Total Space	Free Space	Application	
Lexar-USBFlashDrive	488.0M	380.7M	Storage	<input type="checkbox"/>
Kingston-DataTraveler2.0	488.0M	380.7M	Storage	<input type="checkbox"/>
<div> <div>Safety remove USB device</div> <div>Advanced</div> </div>				

- Safely Remove USB Device: Select the USB device(s) you want to remove and press Safely Remove USB Device to disconnect the USB device(s) safely.
- Advanced: Press "Advanced" (or go to **Advanced** > **USB Application**) to configure advanced settings.

When a USB device is reconnected to the router, press "Home" to go to the dashboard page

and refresh the status.

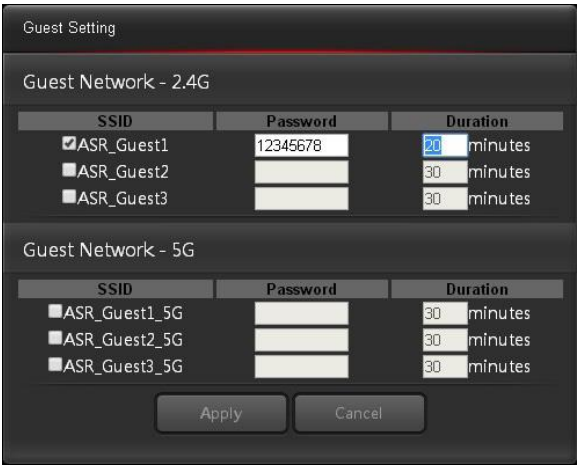
5.2.5 Advanced

Press "Enter" to enter the Advanced Settings page. Once you enter the Advanced Settings page, you will see a preview of information about the router, Internet Port, and Wireless-2.4G and Wireless-5G connections. Select an item on the left panel to configure its advanced settings. For more information, please see the section entitled "Advanced Settings".







5.2.6 Guests

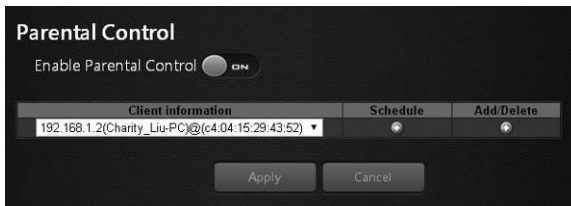
You can enable or disable your guest network and set the guest access passwords and durations in the pop up window. For more options, go to **Advanced > Wireless > Guest**.



5.2.7 Parental Control

Parental control allows you to set the time limit for a client's network usage. Press to enter the parental control settings page or go to **Advanced > Parental Control**.

1. Select a client from the drop down list.
2. Press  under the Schedule column to open up a time management schedule and de-select the time allowed to access the network. The green dots  means the network will be accessible. The gray dots  mean the network will not be accessible.
3. Press  under the Add/Delete column to add the client to the parental control list.
4. Press "Apply" to save the settings and reboot the router for the settings to take effect.



5.2.8 Lighting

You can enable or disable the LED indicators on the router.



5.2.9 WiFi

You can enable or disable the wireless SSID broadcast.

NOTE: If you disable the WiFi connections, when you reboot the router, please use wired connections instead to connect your device to the router and log in the router site where you can enable the WiFi.



Chapter 6 Advanced Settings

6.1 Wireless Settings

The router's internal wireless radios broadcast signals in the 2.4GHz and 5GHz range. By default, they are on so that you can connect wirelessly to the router. When the wireless radios are off, you can still use an Ethernet cable for a LAN connection to the router.



6.1.1 Wireless

Wireless - 2.4G/5G



- **Enable Radio:** Enable or disable wireless radios. By default, the radios are “on”. If you turn off the wireless radios, you can’t log in to the router.
- **Wireless On/Off Schedule:** You can specify which days of the week wireless networking are enabled
- **Wireless Channel:** You can change your WiFi router channel to optimize your wireless signal. If you are not sure how to pick the right channel, keep the default “Auto”.
- **Wireless SSID:** The Service Set Identifier (SSID) is a name used to connect to a wireless network so you can identify your network.
- **Wireless Mode:** By default, the wireless mode is set to “Auto”. 802.11ac, 802.11n, 802.11g and 802.11b devices are allowed to be connected to the wireless router.
- **CTS Protection:** Clear to send (CTS) Protection mode is a wireless setting that ensures computers on a network can connect to a wireless router when many communications devices are present. When an 802.11b and an 802.11g device are both connected to the access point, set the CTS Protection to "ON" (Default). Since an 802.11b device is unable to detect when an 802.11g device is transmitting, CTS protection ensures that each device takes turns transmitting in order to avoid collisions. If the wireless devices connected to the access point are either all 802.11b or all 802.11g, set the CTS protection to "OFF".
- **Bandwidth:** For best performance in a 2.4GHz network using wireless-B, wireless-G and wireless-N devices, keep the default, “20/40”. For a bandwidth of 20MHz, select 20MHz only. For the best performance in a 5GHz network, keep the default

20/40/80MHz.

- **Broadcast SSID:** When wireless clients survey the local area for wireless networks to associate with, they will detect the SSID broadcast by the router. Keep the default "ON" to broadcast the router's SSID. Select "OFF" if you do not want to broadcast the router's SSID.
- **Preamble Type:** By default, the preamble type is set to "Auto". Select "Short" for a busy wireless network with high network traffic. Select "Long" if your wireless network is composed of older or legacy wireless devices.
- **RTS Threshold:** Adjusts the size of RTS (Request to Send) data packets. By default, the RTS value is 2347. Lower values reduce throughput, but allow the system to recover quicker from interference or collisions. Higher values provide the fastest throughput.
- **DTIM Interval:** The Delivery Traffic Indication Message (DTIM) interval helps routers to broadcast wireless traffic to multiple hosts with greater efficiency. DTIM interval or Data beacon rate is the time interval before a signal is sent to a wireless device in sleep mode indicating that a data packet is awaiting delivery. The default value is 3 milliseconds.
- **TX Power Adjustment:** TX power adjustment refers to the milliwatts (mW) needed to power the radio signal output of the wireless router.
- **WMM:** Prioritizes multimedia data over the wireless network.

Wireless Security

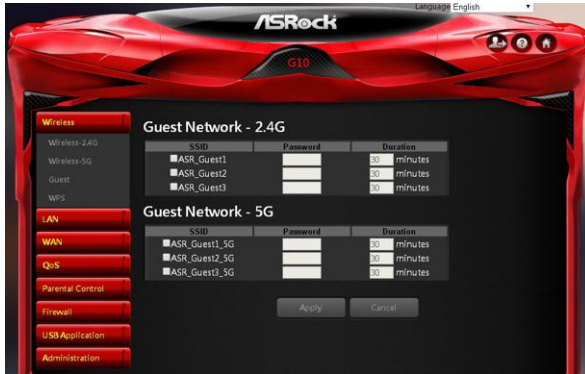
- **Authentication Method:** Select an Authentication method for the wireless network.
- **Password:** Enter a password for protecting your wireless network.

Radius Server

RADIUS (Remote Authentication Dial-In User Service) authenticates the local and remote users on a network. The RADIUS server is identified by its IP address and UDP port numbers for the different services it provides.

- **IP:** Enter the IP address of the RADIUS server.
- **Port:** Make sure that the port number RADIUS uses for authentication appears in the Port text box.
- **Shared Key:** Enter the shared secret key for the RADIUS server.

6.1.2 Guests



Guest Network - 2.4G/5G

The guest network provides temporary visitors with internet connectivity via access to separate SSIDs or networks without providing access to your private network.

Check the checkbox to enable the selected SSID broadcast and set the guest access password and duration. Press "Apply" to save the settings and reboot the router.

6.1.3 WPS



WPS - 2.4G / WPS -5G

WPS (Wi-Fi Protected Setup) is a wireless security standard that allows you to connect devices to a wireless network.

- **WPS Function:** Enable or disable the WPS function. The default is set to "ON".
- **WPS Method:** Choose whether you want to push the WPS "Push button" on the router or enter the "Client PIN code". The default is set to "Push button".
- **PIN Code:** Specify the PIN code by pressing "Start" to initiate WPS. Press the WPS button on the router within two minutes.
- **PIN Code Self:** View the PIN Code of the router.

6.2 LAN Settings

The LAN IP screen allows you to modify the LAN settings of your wireless router.



LAN Setting

- **IP address:** The default IP address is “192.168.1.1”. You can change the IP address of the router.
- **Subnet Mask:** The default subnet mask is “255.255.255.0”.

DHCP

- **DHCP Server:** By default, the DHCP server is set to “ON”.
- **Domain Name:** Enter a domain name for the wireless router.
- **Starting IP Address:** You can specify the IP address range. Enter the starting IP address for assigning IP addresses to connecting devices.
NOTE: This option is skipped when “Auto Setting” is selected.
- **Ending IP Address:** You can specify the IP address range. Enter the last IP address for assigning IP addresses to connecting devices.
NOTE: This option is skipped when “Auto Setting” is selected.
- **Lease Time:** Specify in seconds when an assigned IP address will expire. Once it reaches this time limit, the DHCP server will then assign a new IP address.

Manual IP Assignment

Select a client's MAC address from the drop down list. Assign a fixed IP address for your

client device. Press  under the Add/Delete column to add the client to the list.

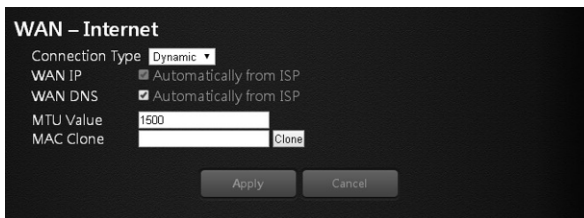
Press "Apply" to save the settings and reboot the router.

6.3 WAN Settings

You can view or configure Wide Area Network (WAN) settings for the internet port. You can set up a demilitarized zone (DMZ) server, change the maximum transmit unit (MTU) size, and so on.



6.3.1 Internet



- **Connection Type:** Choose your internet service provider type. Options include: Dynamic IP, PPPoE, PPPoA, L2TP, and PPTP.
- **WAN IP:** By default, the IP address is acquired from your ISP automatically.
- **WAN DNS:** By default, the DNS address is acquired from your ISP automatically.
- **MTU Value:** The Maximum Transmit Unit (MTU) defines the largest size of packets that an interface can transmit without the need to fragment. Change the MTU value only when it is necessary for your ISP connection.
- **MAC Clone:** The Router can use a MAC (Media Access Control) address that you define as its own. This is often used when an internet provider only authorizes one MAC address to access the internet.

Press "Apply" to save the settings and reboot the router.

6.3.2 Port Trigger

Some internet applications use alternate ports to communicate between the server and LAN host. When you want to use these applications, enter the triggering (outgoing) port and alternate incoming port in the port triggering table. Then the router will forward the incoming packets to the specified LAN host.

Service	Trigger Port	Incoming Port	TCP/UDP	Add/Delete
			TCP ▼	+


- Service: Enable Port Trigger and add a service.
- Trigger Port: Enter the port number for the service.
- Incoming Port: Enter the starting and ending port numbers of the trigger port range.
- TCP/UDP: Choose the protocol.
- : Add a service.

6.3.3 Port Forwarding

You may use this function to establish a web server or FTP server via an IP gateway. Make sure that you enter a valid IP address. (You may need to establish a static IP address in order to properly run an internet server.) For added security, internet users will be able to communicate with the server, but they will not actually be connected. The packets will simply be forwarded through the router.

Service	Port Range	Local IP	Local Port	TCP/UDP	Add/Delete
				Both ▼	+

- Service: Enable Port Forwarding and add a service.
- Port Range: Enter the port range.
- Local IP: Enter the LAN IP address of the server that you want the internet users to access.

- Local Port: Enter a specific port to receive forwarded packets.
- TCP/UDP: Choose the required protocol.
- : Add a service.

6.3.4 DMZ

The router is programmed to recognize some of the applications and to work correctly with them, but other applications might not function well. In some cases, one local computer can run the application correctly if the IP address for that computer is entered as the default DMZ server. Using DMZ (Demilitarized Zone) can eliminate the need to specify many individual port forwarding rules. However, by exposing all the ports on the local device, the local device may become more susceptible to attacks.

WARNING:

DMZ servers pose a security risk. A computer designed as the default DMZ server loses much of the protection of the firewall and is exposed to exploits from the internet. If compromised, the DMZ server computer can be used to attack other computers on your networks.

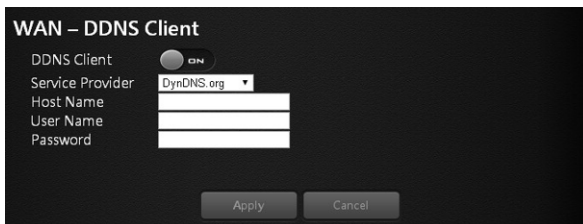


The screenshot shows the 'WAN - DMZ' configuration window. It has a title bar 'WAN - DMZ'. Below it, 'DMZ' is followed by a toggle switch set to 'ON'. Underneath, 'Host IP Address' is followed by a text input field. At the bottom, there are 'Apply' and 'Cancel' buttons.

- Host IP Address: Enable DMZ and select an IP address.

6.3.5 DDNS

Setting up DDNS allows you to access the router from outside your network through the DDNS service.



The screenshot shows the 'WAN - DDNS Client' configuration window. It has a title bar 'WAN - DDNS Client'. Below it, 'DDNS Client' is followed by a toggle switch set to 'ON'. Underneath, there are four fields: 'Service Provider' with a dropdown menu showing 'DynDNS.org', 'Host Name', 'User Name', and 'Password'. At the bottom, there are 'Apply' and 'Cancel' buttons.

- Service Provider: Enable DDNS and choose a service provider for DDNS.
- Host Name: Enter the host name.
- User Name: Enter the user name for your account.
- Password: Enter the password for your DDNS account.

Press "Apply" to save the settings and reboot the router.

6.4 QoS Settings



QoS

Add Gaming Boost web page.

- Gaming Boost: Enable or disable the Gaming Boost.

Bandwidth

The router supports Gaming Boost natively, which identifies and intelligently manages your internet traffic. Allocating more bandwidth for your online games or video game consoles automatically, so that gamers may have more stable and smoother gameplay. Please set the correct bandwidth to ensure the best gaming and streaming quality.

1. Press "Speed Test" to find out your actual uplink and downlink speed.
2. Enter the values of your uplink and downlink.

NOTE: For reaching the optimal performance, please connect the client and router through a network cable.

Priority





The table lists the devices connected to your router. Press "Refresh Status" to get the latest information.

Select the priority of the connected devices to allocate the bandwidth from the drop down list.

6.5 Parental Control

Parental Control allows you to control the internet access time, by setting the time limit for a client's network usage.



- **Enable Parental Control:** The default is "OFF". Switch the button to enable the service.
- **Client Information:** Select the client whose network usage you want to control.
- **Schedule:** Set up the allowed time limit in time management table. Press  to open up a time management schedule and deselect the time allowed to be access the network. The green dots  mean the network will be accessible. The gray dots  mean the network will not be accessible.
- : Add or delete the client's profile.

6.6 Firewall

The router provides a firewall for your network.




Firewall

- Firewall: Enable or disable the firewall.
- Ping Block: Enable or disable the ICMP ping block.
- DoS Protection: Protect your network from DoS (Denial of Service) attacks though this may affect your router's performance.
- Port Scan Block: Protect your network from port scan attacks.

Access Block List

You can deny certain devices from connecting to the internet if necessary.

1. Select the devices from the drop down list.
2. Press  to add it into the list.

Press "Apply" to save the settings and reboot the router.


6.7 USB Application

The USB Application function provides the information of USB storage status and USB printer status, and allows you to configure USB storage server, media server, and download agent.

Insert a USB storage device, such as a flash driver or external hard drive to the USB port on the back of the router. The computer must be connected to the router to access the storage device. You may also want to map the network drive so it shows up as a standard drive on your computer for easier access.



USB Storage Status

Displays the information of the connected device(s). Press  to remove the USB device(s) safely. Press "Refresh Status" to update the status.

USB Printer Status

Displays the information of the connected device(s). Press "Refresh Status" to update the status.

USB Storage Server

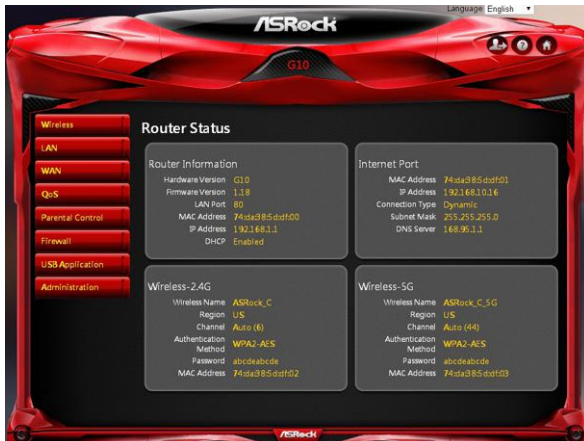
Enable or disable the USB storage server.

- Account: Specify the account to access the USB storage server.
- Password: Specify the password to access the USB storage server.

Media Server

- Media Server Name: Enable the media server and specify the media server name.

6.8 Administration



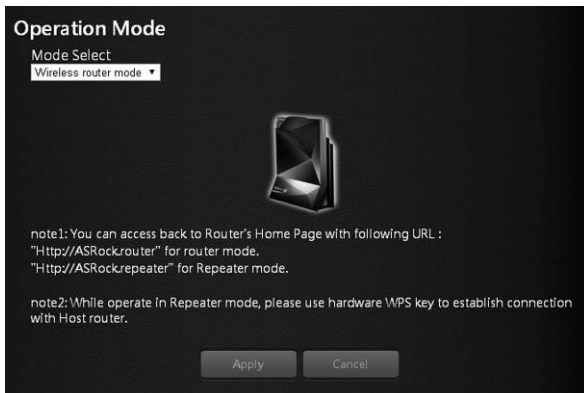
6.8.1 Router Status

Here displays the router status and usage information.

1. Select **Advanced > Administration > Router Status**.
2. View the information.

6.8.2 Operation Mode

The operation mode page allows you to select the appropriate mode for your network.



To set up the operation mode.

1. Select **Advanced > Administration > Operation Mode**.
2. Select any of these operation modes:
 - Wireless router mode (Default): In wireless router mode, the router connects to the internet and provides internet access to available devices on its own local network.
 - Repeater mode: In wireless repeater mode, the repeater will extend your current wireless signal for smart devices.

6.8.3 Set Password

Lets you change the default password and user name to log in the router. This password is not the one that you use for wireless access.

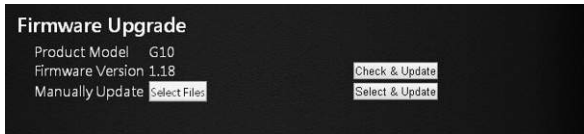


To set a new password and user name:

1. Select **Administration > Set Password**.
2. Router Login Name: Type the new log-in name for your router. The default is “admin”.
3. Old Password: Display the default password or type the previously set password.
4. Set Password: Type the new password for your router.
5. Repeat New Password: Type the new password for your router again to double check.
6. Press “Apply” to change the setting. Reboot the router for the settings to take effect.

6.8.4 Firmware Upgrade

The router firmware is stored in flash memory. You can check to see if new firmware is available and update your product.



To check for new firmware and update your router:

1. Select **Administration > Firmware Upgrade**.
2. Press "Check & Update". If there is newer firmware available on the server, you will see a message: "New firmware available and download process initiating".
3. Press "OK". Start to download the new firmware.

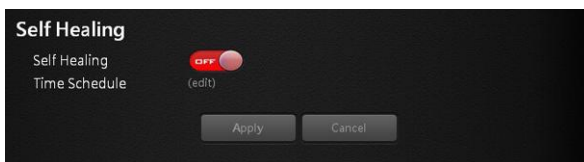
WARNING: To avoid the risk of corrupting the firmware, do not turn off the router and interrupt the upgrade.

Manual Update

To manually update the new firmware for your router, press "Select Files" and then "Select and Update".

6.8.5 Self Healing

The self-healing feature is a way to have the router automatically rebooted itself.



Select **Advanced > Administration > Self Healing**.

- Self Healing: Press the button to ON/OFF the function.
- Time Schedule: Press "Edit" to set a time for the self-healing. In the table, press to select the time to reboot the router automatically.

6.8.6 Restore / Save

The configuration settings of the router are stored within the router in a configuration file. You can export this file to your computer, restore it, or reset it to the factory default settings.



Restore to Factory Default Setting

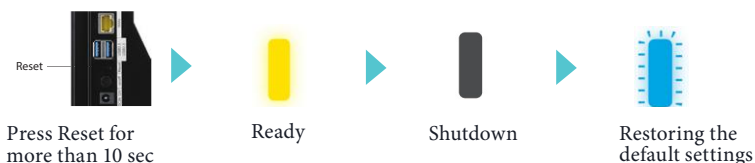
You can erase the current configuration and restore the default settings.

1. Select **Advanced > Administration > Restore/Save**.
2. Press the **Restore** button.

The factory default settings are restored. The user name is "admin", the password is "admin", and the LAN IP address is 192.168.1.1.

You can also press and hold the "Reset" button for more than 10 seconds on the rear of the router to restore the default settings.

LED Indicator Variations:



Exporting Router Configurations

1. Select **Advanced > Administration > Restore/Save**.
2. Press the **Export** button.

A copy of the current setting is saved in the location you specified.

Importing Router Configuration

1. Select **Advanced > Administration > Restore/Save**.
2. Press the **Select Files** button.

3. Press the **Upload** button.

The file is uploaded to the router and the router will reboot.

6.8.7 System Log

The log is a detailed record of the websites you access or attempted to access and other router actions.

System Log					
System Time		9/10/2015 17:37:24			
Operation Time		0 day 1 hours 47 minutes 9 seconds			
Log information				Save	Restore
Jan	1	00:00:39	(none) syslog.info syslogd start		
Jan	1	00:00:41	(none) daemon.info dnsmasq[3226]		
Jan	1	00:00:41	(none) daemon.info dnsmasq[3226]		
Jan	1	00:00:41	(none) daemon.info dnsmasq[3226]		
Jan	1	00:00:41	(none) daemon.info dnsmasq[3226]		
Jan	1	00:00:43	(none) daemon.info dnsmasq[3411]		
Jan	1	00:00:43	(none) daemon.info dnsmasq[3411]		
Jan	1	00:00:43	(none) daemon.info dnsmasq[3411]		
Jan	1	00:00:43	(none) daemon.info dnsmasq[3411]		
Jan	1	00:00:43	(none) daemon.info dnsmasq[3411]		
Jan	1	00:00:50	(none) user.warn igmpmproxy[3414]		
Jan	1	00:00:58	(none) daemon.info hostapd: ath1		
Jan	1	00:00:58	(none) user.warn igmpmproxy[3414]		
Jan	1	00:01:00	(none) daemon.info hostapd: ath0		
Jan	1	00:01:00	(none) daemon.info hostapd: ath0		

1. Select **Advanced > Administration > System Log**.
2. You can view the history of your network activities.

Press "Save" to save a copy of the event log to your device. Press "Restore" to clear event logs.

Chapter 7 ASRock Router APP

ASRock Router app allows you to control ASRock G10 Gaming Router, including configuring router settings, remotely controlling home appliances, and accessing the external storage of the router.

Before using this application, please make sure of the following:

- You are running the Setup Wizard of your router through a web browser. For more details, please refer to Chapter 4: Setup Wizard.
- Your ASRock G10 Gaming Router has updated to the latest firmware. See "Firmware Upgrade" in Chapter 6.

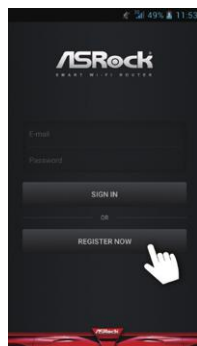
7.1 Registration

Download and install the ASRock Router app on your smartphone or tablet. For first time users, please register an account.

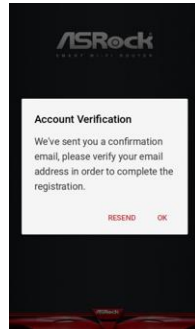
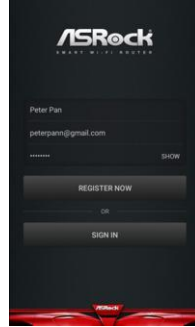
1. Tap to launch the ASRock Router app.



2. Tap "REGISTER NOW".



3. Enter your name, email address and password. Tap "Show" if you want to reveal the password.
 4. Tap "REGISTER NOW" to continue.
-
5. A confirmation email is sent to your registered email address. Check your email and activate your account.



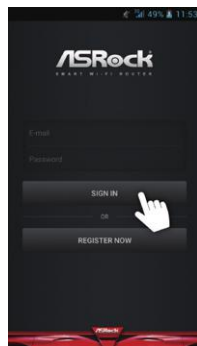
7.2 Signing in

Before you sign in the app, make sure your smartphone or tablet is wirelessly connected to the router. For more details, please refer to "Wireless Network" in Chapter 3.

NOTE: If you have changed your SSID and password in the Setup Wizard or Dashboard, remember to use your new SSID and password.

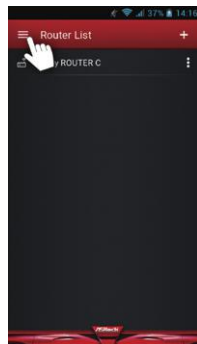
Sign in the app

1. Tap to launch the ASRock Router app.
2. Tap "SIGN IN".
3. Enter your email address and password.

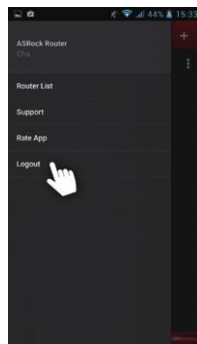


Log out the app

1. If you want to log out the app, tap the "Settings" icon on the upper left corner.



2. Tap "Logout".

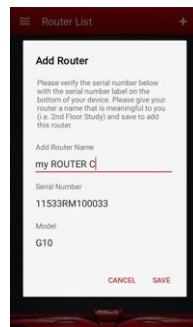


7.3 Adding Routers

When you successfully sign in the app, you can add as many routers as you want in the "Router List" page.

NOTE: Before adding a router in the app, please make sure your smartphone or tablet is successfully wirelessly connected to the router.

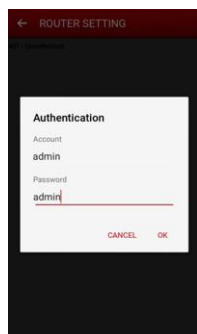
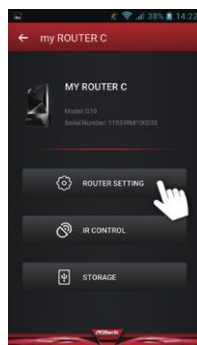
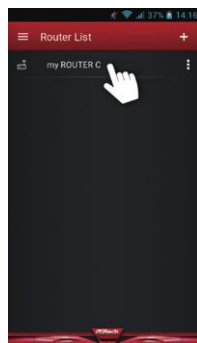
1. Tap add icon "+" on the upper right corner.
2. Verify the listed serial number and check if it is identical with the number on the bottom of your router.
3. Rename your router.
4. Tap "SAVE" to add the router to the list.
5. Tap "OK" when the router is successfully added.
6. You will find the router you have just added to the Router List.



7.4 Router Settings

You can change the configurations of the router in "Router Setting".

1. Tap to select the router to be configured in "Router List".
2. Tap "ROUTER SETTING" to open up the browser to enter the Dashboard page.
3. Enter the username and password to log in. Tap "OK".
NOTE: The default account and password are both "admin". For more details, please refer to "Setup Wizard" in Chapter 4.
4. Configure the settings of the router.
For more instructions, please refer to Chapter 5 and 6.

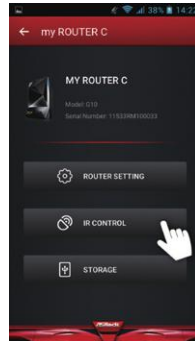


7.5 IR Control

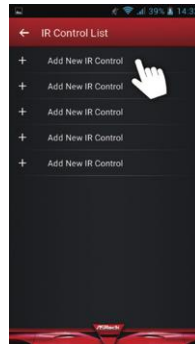
The IR Control feature can let your device learn the codes of other infrared devices and turn your smartphone or tablet into a universal remote controller for your home appliances.

To learn the infrared signals of your remote controller, please follow the steps below.

1. Tap "IR CONTROL".



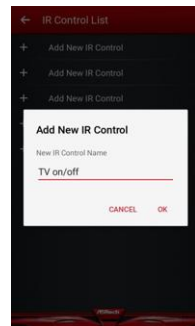
2. In the "IR Control List", tap "Add New IR Control". You can add up to five commands for each router.



3. Rename the IR Control.

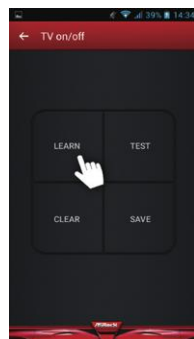
Note: For example, if you want to learn the signals of the TV on/off button on your remote controller, you can name the IR Control Name as TV on/off, so you can clearly know what function it is.

4. Tap "OK".

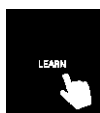


5. Tap "LEARN".

The LED indicator on the front of the router will be flashing light blue.



6. Now point your remote controller directly to the front panel of your G10 router (within 10 cm) and press the button on your remote controller. If the signal is successfully learned, the front LED indicator will turn into solid light blue.
7. You can tap "TEST" to check if the command is copied.



Tap "LEARN"



Learning
(About 15 secs)



Done
(About 5 secs)

OR



Failed
(Flashes twice)

8. Tap "SAVE" to save the setting.
Tap "CLEAR" to clear the learned command.
9. Now you can use your mobile device to remotely manipulate your router to control your home appliances.



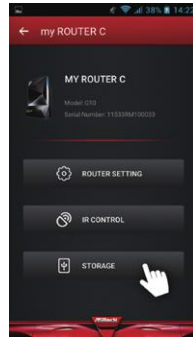
7.6 Storage

You can access the files in the USB storage devices connected to your G10 router through this app.

1. Make sure your USB storage device is properly installed into the USB ports on the router.



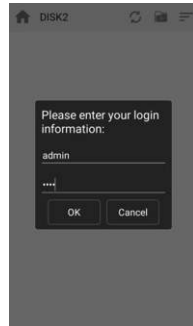
2. Tap "STORAGE".



3. Enter your storage login username and password. Tap "OK".
The default username is "admin" and the default password is "1234".
You can change the default username and password in the "ROUTER SETTING".

NOTE: To change Storage username and password, go to "ROUTER SETTING" > "USB" > "Advanced" and enter the new account and password in the fields under the "USB Storage Server" section. For more details, please refer to "USB Application" in Chapter 6.

4. Tap the disk to enter the disk and access the files.



Chapter 8 Troubleshooting

This section describes tips for troubleshooting some common problems.

8.1 How to Restart Your Network

When you need to restart your network, follow this sequence:

- 1. Turn off and unplug the modem.
- 2. Turn off the router
- 3. Plug in the modem and turn it on.
- 4. Turn on the router and wait.







8.2 Wireless Settings

Make sure that the wireless settings on the computer and router match exactly. The wireless network name (SSID) and wireless security settings of the router and wireless computer must match exactly.

If you set up an access list in the Advanced Wireless Settings screen, you must add each wireless computer's MAC address to the router's access list.

8.3 Standard LED Behavior When the Router Is Powered On

After you turn on power to the router, the following sequence of events occurs:

					
Flashing Dark Blue	Solid Dark Blue	Flashing Yellow	Solid Yellow	Flashing Light Blue	Solid Light Blue
Starting up	Connected to the internet	ADSL modem not detected / WPS connection failed	Modem detected but no internet connection	Connecting to a WPS-enabled device	WPS connected

8.4 Unable Log In to the Router

If you cannot log in to the router from a computer or wireless devices on your local network, please check the following:

- If you use an Ethernet connected computer, check if the Ethernet connection between the computer and the router is working.
- If you use a wireless connected computer or wireless devices, check if the wireless SSID connection between computer and wireless devices are working.
- If your router's IP address was changed and you do not know the current IP address, clear the router's configuration to factory default. This sets the router's IP address to 192.168.1.1.
- Make sure that you are using the correct login information. The default user name is "admin", and the default password is "admin". Make sure that Caps Lock is off when you enter this information.

8.5 Unable Access the Internet

If you can access your router but not the internet, check to see if the router can obtain an IP address from your internet service provider (ISP). Unless your ISP provides a fixed IP address, your router requests an IP address from the ISP.

To check the WAN IP address:

1. Launch a web browser from a computer or wireless device that is connected to the network.
2. Select an external site such as www.asrock.com.tw.
3. Type asrock.router or 192.168.1.1. A login screen should appear.
4. Enter the router's user name and password. The default user name is "admin", and the default password is "admin".
5. Press ADVANCED > Next button. The ADVANCED home screen should appear.
6. Check if a valid IP address is shown for the internet port. If 0.0.0.0 is shown, it means your router has not obtained an IP address from your ISP. If your router cannot obtain an IP address from the ISP, you may need to force your cable or DSL modem to recognize your new router by restarting your network.

If your router is still unable to obtain an IP address from the ISP, the problem might be one of the following:

- Your internet service provider (ISP) might require a login program.
- If your ISP requires a login, the login name and password might be set incorrectly.
- Your ISP might check for your computer's host name.
- If your ISP allows only one Ethernet MAC address to connect to internet and checks

for your computer's MAC address, do one of the following:

- Inform your ISP that you bought a new network device and ask them to use the router's MAC address.
- Configure your router to clone your computer's MAC address.

8.6 Wireless Connectivity

If you are having trouble to connect wireless to the router, try to isolate the problem:

Does the wireless device or computer that you are using find your wireless network?

- If you disable the router's SSID broadcast, then your wireless network will be hidden and will not be displayed in your wireless client's scanning list.
- If not, check the dashboard Wi-Fi on/off button from the Web GUI. If it is off, you can press the Wi-Fi on/off button on the dashboard to turn the router wireless radios back on.

If your wireless device finds your network but the signal strength is weak, check these conditions:

- Is your router too far from your computer or too close? Place your computer near the router but at least 6 feet away and see whether the signal strength improves.

8.7 Restore to the factory default settings

You can return the router to its factory settings. Use the end of a paper clip or a similar object to press and hold the Reset button on the back of the router for at least ten seconds.

Go to **Advanced > Administration > Restore/Save**, and press "Restore".

Appendix - Factory default settings

The router resets and returns to the factory configuration settings shown in the following table.

Feature		Default Behavior
Router Login	User Login URL	192.168.1.1 or ASRock.router
	User Name	admin
	Login Password	admin
Internet Connection	WAN MAC Address	Use default hardware address
	WAN MTU Size	1436
	Port Speed	AutoSensing
Local Network (LAN)	LAN IP	192.168.1.1
	Subnet Mask	255.255.255.0
	DHCP Server	Enable
	DHCP Range	192.168.1.2 to 192.168.1.254
	DHCP Starting IP Address	192.168.1.2
	DHCP Ending IP Address	192.168.1.254
Wireless	Wireless Radio	Enable
	Wireless Name	See router label
	Security	WPA2-AES
	Broadcast SSID	Enable
	Country/Region	Varies by region
	RF Channel	Auto for 2.4GHz/5GHz
Operating Mode		Router Mode: Up to 800Mbps at 2.4GHz, 1733Mbps at 5GHz

Appendix - Specifications

Dimensions	G10 Router	266.5 x 184 x 82 mm
	H2R	115 x 35 x 17.3 mm
Weight	G10 Router	620g
	H2R	43g
Wireless Standard	802.11a/b/g/n/ac	
Frequency Band	2.4GHz, 5GHz Simultaneous	
Wireless Speed	2.4GHz: 800Mbps	
	5GHz: 1733Mbps	
Amplifiers	4 x 2.4GHz Amplifiers	
	4 x 5GHz Amplifiers	
	8 x Low Noise Amplifiers	
Wireless Security	WPA, WPA2,Mixed, WPS	
Wireless Access Scheduling	Specific day and time	
Wireless TX power adj	0~100%	
Antennas	8 x internal high performance antennas	
Ports	1 x RJ45 10/100/1000 WAN Port (WAN Port)	
	4 x RJ45 10/100/1000 LAN Ports (LAN Ports)	
	2 x USB 3.0 Ports for USB Storage / Printer Server	
Features	Easy Setup	
	Guest Wireless Networks (Up to 6 additional)	
	Parental Control	
	Self-healing	
	Smart Gamingboost	
	Beamforming	
	MU-MIMO	
Power Source	APP Cloud Service	
	Model : Asian Power Device WA-36A12R	
	Input: 100-240V~ 50/60Hz 0.9A max	
Warranty	Output: 12Vdc / 3A	
	1 Year	
Package Contents	AC2600 G10 Gaming Router	
	H2R (HDMI 2-in-1 Router)	
	12V Power Adapter	
	Network RJ45 Cable	
	Micro USB Cable	
	HDMI Cable	
Operating temperature	Quick Installation Guide	
	0 ° to 40 ° (32 ° to 104 ° F)	
Operating humidity	90% maximum relative humidity, noncondensing	
Certification	FCC, IC , CE	