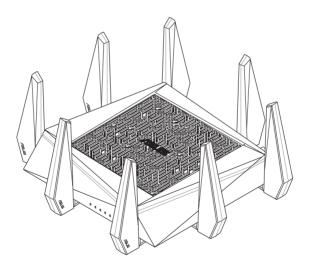
User Guide

RT-AC5300

Wireless-AC5300 Tri-band Gigabit Router





E10434 First Edition June 2015

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1 Getting to know your wireless router

1.1 Welcome!

Thank you for purchasing an ASUS RT-AC5300 Wireless Router! The ultra-thin and stylish RT-AC5300 features 2.4GHz, 5GHz-1 and 5 GHz-2 triple bands for an unmatched concurrent wireless HD streaming; SMB server, UPnP AV server, and FTP server for 24/7 file sharing; a capability to handle 300,000 sessions; and the ASUS Green Network Technology, which provides up to 70% powersaving solution.

1.2 Package contents

- ☑ RT-AC5300 Wireless Router
- ✓ Network cable (RJ-45)
- ☑ AC adapter
- Quick Start Guide
- Support CD (Manual)

- If any of the items is damaged or missing, contact ASUS for technical inquiries and support, Refer to the ASUS Support Hotline list at the back of this user manual.
- Keep the original packaging material in case you would need future warranty services such as repair or replacement.

1.3 Your wireless router
Power button Press this button to power on or off the system.
 Power (DC-IN) port Insert the bundled AC adapter into this port and connect your router to a power source.
3 USB 3.0 port Insert USB 3.0 devices such as USB hard disks or USB flash drives into this port.
WAN (Internet) port Connect a network cable into this port to establish WAN connection.
5 LAN 1 ~ 4 ports Connect network cables into these ports to establish LAN connection.
6 Power LED Off: No power. On: Device is ready. Flashing slow: Rescue mode.
 2.4GHz LED Off: No 2.4GHz signal. On: Wireless system is ready. Flashing: Transmitting or receiving data via wireless connection.
 SGHz LED Off: No 5GHz signal. On: Wireless system is ready. Flashing: Transmitting or receiving data via wireless connection.

9	WAN (Internet) LED
	Red: No IP or no physical connection.
	On : Has physical connection to a wide area network (WAN).
10	LAN LED
	Off: No power or no physical connection.
	On : Has physical connection to a local area network (LAN).
A	WPS LED
	Off: WPS verification process is off or completed.
	Flashing: WPS verification process is activated.
12	USB 2.0 port
	Insert USB 2.0 devices such as USB hard disks or USB flash drives into this port.
13	LED On/Off button
	Press this button to turn on/off the LEDs on the panel.
14	WPS button
	This button launches the WPS Wizard.
15	Wi-Fi On/Off button

- Use only the adapter that came with your package. Using other adapters may damage the device.
- Specifications:

DC Power adapter	DC Output: +19V with max 3.42A current		
Operating Temperature	0~40°C	Storage	0~70°C
Operating Humidity	50~90%	Storage	20~90%

1.4 Positioning your router

For the best wireless signal transmission between the wireless router and the network devices connected to it, ensure that you:

- Place the wireless router in a centralized area for a maximum wireless coverage for the network devices.
- Keep the device away from metal obstructions and away from direct sunlight.
- Keep the device away from 802.11g or 20MHz only Wi-Fi devices, 2.4GHz computer peripherals, Bluetooth devices, cordless phones, transformers, heavy-duty motors, fluorescent lights, microwave ovens, refrigerators, and other industrial equipment to prevent signal interference or loss.
- Always update to the latest firmware. Visit the ASUS website at <u>http://www.asus.com</u> to get the latest firmware updates.

1.5 Setup Requirements

To set up your wireless network, you need a computer that meets the following system requirements:

- Ethernet RJ-45 (LAN) port (10Base-T/100Base-TX/ 1000BaseTX)
- IEEE 802.11a/b/g/n/ac wireless capability
- An installed TCP/IP service
- Web browser such as Internet Explorer, Firefox, Safari, or Google Chrome

- If your computer does not have built-in wireless capabilities, you may
 install an IEEE 802.11a/b/g/n/ac WLAN adapter to your computer to
 connect to the network.
- With its triple band technology, your wireless router supports 2.4GHz, 5GHz-1 and 5GHz-2 wireless signals simultaneously. This allows you to do Internet-related activities such as Internet surfing or reading/writing e-mail messages using the 2.4GHz band while simultaneously streaming high-definition audio/video files such as movies or music using the 5GHz band.
- Some IEEE 802.11n devices that you want to connect to your network may or may not support 5GHz band. Refer to the device's manual for specifications.
- The Ethernet RJ-45 cables that will be used to connect the network devices should not exceed 100 meters.

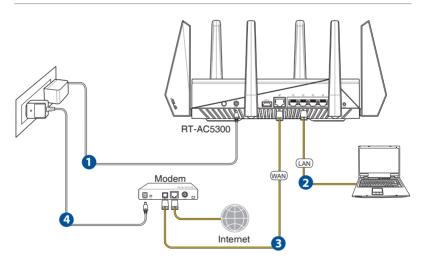
1.6 Router Setup

IMPORTANT!

- Use a wired connection when setting up your wireless router to avoid possible setup problems.
- Before setting up your ASUS wireless router, do the following:
 - If you are replacing an existing router, disconnect it from your network.
 - Disconnect the cables/wires from your existing modem setup. If your modem has a backup battery, remove it as well.
 - Reboot your cable modem and computer (recommended).

1.6.1 Wired connection

NOTE: You can use either a straight-through cable or a crossover cable for wired connection.



To set up your wireless router via wired connection:

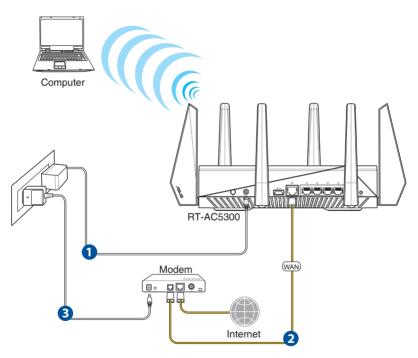
1. Insert your wireless router's AC adapter to the DC-IN port and plug it to a power outlet.

2. Using the bundled network cable, connect your computer to your wireless router's LAN port.

IMPORTANT! Ensure that the LAN LED is blinking.

- 3 Using another network cable, connect your modem to your wireless router's WAN port.
- 4. Insert your modem's AC adapter to the DC-IN port and plug it to a power outlet.

1.6.2 Wireless connection



To set up your wireless router via wireless connection:

1. Insert your wireless router's AC adapter to the DC-IN port and plug it to a power outlet.

- 2 Using the bundled network cable, connect your modem to your wireless router's WAN port.
- 3. Insert your modem's AC adapter to the DC-IN port and plug it to a power outlet.
- 4. Install an IEEE 802.11a/b/g/n/ac WLAN adapter on your computer.

- For details on connecting to a wireless network, refer to the WLAN adapter's user manual.
- To set up the security settings for your network, refer to the section Setting up the wireless security settings in Chapter 3 of this user manual.

Getting started 2

2.1 Logging into the Web GUI

Your ASUS wireless router comes with an intuitive web graphical user interface (GUI) that allows you to easily configure its various features through a web browser such as Internet Explorer, Firefox, Safari, or Google Chrome.

NOTE: The features may vary with different firmware versions.

To log into the web GUI:

- On your web browser, manually key in the wireless router's 1. default IP address: http://router.asus.com.
- On the login page, key in the default user name (admin) and 2. password (admin).
- 3. You can now use the Web GUI to configure various settings of your ASUS Wireless Router.



Top command buttons

NOTE: If you are logging into the Web GUI for the first time, you will be directed to the Quick Internet Setup (QIS) page automatically.

2.2 Quick Internet Setup (QIS) with Autodetection

The Quick Internet Setup (QIS) function guides you in quickly setting up your Internet connection.

NOTE: When setting the Internet connection for the first time, press the Reset button on your wireless router to reset it to its factory default settings.

To use QIS with auto-detection:

1. Log into the Web GUI. The QIS page launches automatically.

Windows Security				
The server 192.168.50.1 is asking for your user name and password. The server reports that it is from RT-AC88U.				
Warning: Your user name and password will be sent using basic authentication on a connection that isn't secure.				
User name Password Remember my credentials				
OK Cancel				

- By default, the login username and password for your wireless router's Web GUI is admin. For details on changing your wireless router's login username and password, refer to section 4.6.2 System.
- The wireless router's login username and password is different from the 2.4GHz/5GHz network name (SSID) and security key. The wireless router's login username and password allows you to log into your wireless router's Web GUI to configure your wireless router's settings. The 2.4GHz/5GHz network name (SSID) and security key allows Wi-Fi devices to log in and connect to your 2.4GHz/5GHz network.

2. The wireless router automatically detects if your ISP connection type is **Dynamic IP**, **PPPoE**, **PPTP** and **L2TP**. Key in the necessary information for your ISP connection type.

IMPORTANT! Obtain the necessary information from your ISP about the Internet connection type.

for Automatic IP (DHCP)



for PPPoE, PPTP and L2TP

Skip Setup Wizard	Account Setting	
Quick Internet Setup Check Connection Internet Setup Router Setup	Please enter your username and password User Name 2 Password 2 MAC Address(optional) 2 MAC Cone	Internet Connection Information To the Pressment on an an analysis Account Hang
	Enable VPN client	User Name 🔹
	Special Requirement from ISP	Password 🕡 🚥
	Previous Next	Enter the user name and password for your Internet connection information. These settings were given by your Internet Service Provider (ISP).

- The auto-detection of your ISP connection type takes place when you configure the wireless router for the first time or when your wireless router is reset to its default settings.
- If QIS failed to detect your Internet connection type, click **Skip to manual setting** and manually configure your connection settings.
- 3. Assign the wireless network name (SSID) and security key for your 2.4GHz and 5 GHz wireless connection. Click **Apply** when done.

	A REAL PROPERTY AND A REAL				
品 Skip Setup Wizard	Wireless Setting				
Quick Internet Setup					
Internet Setup	Assign a unique name or SSID (Service Set Identifier) to help identify your wireless network.				
	2.4 GHz - Security				
Router Setup	Network Name (SSID) 👔 ASUS				
	Network Key 👔				
	5 GHz-1 - Security IZ Copy 2.4 GHz network key to 5 GHz-1 settings				
	Network Name (SSID) 👔 ASUS_5G-1				
	Network Key 👔				
	5 GHz-2 - Security Copy 5 GHz-1 network key to 5 GHz-2 settings				
	Network Name (SSID) 👔 ASUS_5G-2				
	Network Key 👔				
	Enter a network key between II and 63 characterighters, numbers of a combination) or 64 hes digits. The default windows accurity setting is WMA2-Renoul ALS. If you do not want to set the network accurity, leave the security key field blank, but the expose your network to unauthorized acces.				
	Арріу				

- 4. Your Internet and wireless settings are displayed. Click **Next** to continue.
- 5. Read the wireless network connection tutorial. When done, click **Finish**.

Skip Setup Wizard Completed Network Configuration Summary					
System Time: Fri, May 15 07:28:54 2015 (GMT)					
Quick Internet Setup					
Check	Network Name (SSID)				
Connection	Network Key	anne1234			
	Wireless Security	WPA2-Personal - AES			
2) Internet Setup					
~	Network Name (SSID)				
3 Router Setup	Network Key	anne1234			
	Wireless Security	WPA2-Personal - AES			
	Network Name (SSID)	ASUS_5G-2			
	Network Key	anne1234			
	Wireless Security	WPA2-Personal - AES			
	WAN Connection Type	Automatic IP			
	WAN IP				
	LAN IP				
	MAC address				
		Next			
		IN AL			

2.3 Connecting to your wireless network

After setting up your wireless router via QIS, you can connect your computer or other smart devices to your wireless network.

To connect to your network:

- On your computer, click the network icon in the notification area to display the available wireless networks.
- 2. Select the wireless network that you want to connect to, then click **Connect**.
- 3. You may need to key in the network security key for a secured wireless network, then click **OK**.
- 4. Wait while your computer establishes connection to the wireless network successfully. The connection status is displayed and the network icon displays the connected status.

- Refer to the next chapters for more details on configuring your wireless network's settings.
- Refer to your device's user manual for more details on connecting it to your wireless network.

3 Configuring the General settings

3.1 Using the Network Map

Network Map allows you to configure your network's security settings, manage your network clients, and monitor your USB device.



3.1.1 Setting up the wireless security settings

To protect your wireless network from unauthorized access, you need to configure its security settings.

To set up the wireless security settings:

- 1. From the navigation panel, go to **General** > **Network Map**.
- 2. On the Network Map screen and under **System status**, you can configure the wireless security settings such as SSID, security level, and encryption settings.

NOTE: You can set up different wireless security settings for 2.4GHz and 5GHz bands.

2.4GHz security settings



5GHz-2 security settings



5GHz-1 security settings



- 3. On the **Wireless name (SSID)** field, key in a unique name for your wireless network.
- 4. From the **Authentication Method** dropdown list, select the authentication method for your wireless network.

If you select WPA-Personal or WPA-2 Personal as the authentication method, key in the WPA-PSK key or security passkey.

IMPORTANT! The IEEE 802.11n/ac standard prohibits using High Throughput with WEP or WPA-TKIP as the unicast cipher. If you use these encryption methods, your data rate will drop to IEEE 802.11g 54Mbps connection.

5 Click **Apply** when done.



3.1.2 Managing your network clients

To manage your network clients:

- 1. From the navigation panel, go to **General** > **Network Map** tab.
- 2. On the **Network Map** screen, select the **Clients** icon to display your network client's information.
- 3. Click View List below the **Clients** icon to display all the clients.
- 4. To block a client's access to your network, select the client and click the open lock icon.

3.1.3 Monitoring your USB device

The ASUS wireless router provides two USB ports for connecting USB devices or USB printer to allow you to share files and printer with clients in your network.



- To use this feature, you need to plug a USB storage device, such as a USB hard disk or USB flash drive, to the USB 3.0/2.0 ports on the rear panel of your wireless router. Ensure that the USB storage device is formatted and partitioned properly. Refer to the Plug-n-Share Disk Support List at <u>http://event.asus.com/networks/disksupport</u>
- The USB ports support two USB drives or one printer and one USB drive at the same time.

IMPORTANT! You first need to create a share account and its permission /access rights to allow other network clients to access the USB device via an FTP site/third-party FTP client utility, Servers Center, Samba, or AiCloud. For more details, refer to the section **3.5 Using the USB Application** and **3.6 Using AiCloud** in this user manual.

To monitor your USB device:

- 1. From the navigation panel, go to **General** > **Network Map**.
- 2. On the Network Map screen, select the **USB Disk Status** icon to display your USB device's information.
- 3. On the AiDisk Wizard field, click **GO** to set up an FTP server for Internet file sharing.

- For more details, refer to the section **3.5.2 Using Servers Center** in this user manual.
- The wireless router works with most USB HDDs/Flash disks (up to 4TB size) and supports read-write access for FAT16, FAT32, NTFS, and HFS+.

Safely removing the USB disk

IMPORTANT: Incorrect removal of the USB disk may cause data corruption.

To safely remove the USB disk:

- 1. From the navigation panel, go to **General** > **Network Map**.
- In the upper right corner, click > Eject USB disk. When the USB disk is ejected successfully, the USB status shows Unmounted.



3.2 Creating a Guest Network

The Guest Network provides temporary visitors with Internet connectivity via access to separate SSIDs or networks without providing access to your private network.

NOTE: RT-AC5300 supports up to nine SSIDs (three 2.4GHz, three 5GHz-1 and three 5GHz-2).

To create a guest network:

- 1. From the navigation panel, go to **General** > **Guest Network**.
- 2. On the Guest Network screen, select 2.4Ghz or 5Ghz frequency band for the guest network that you want to create.
- 3. Click Enable.

Guest Network				
	The Guest Network provides Int your local network.	ernet connection for guests but a	estricts access to	
	Enable	Enable	Enable	
Network Name (SS				
Authentication Met				
Network Key				
Time Remaining	Enable	Enable	Enable	
	Enable	Enable	Enable	
PHelp & Support Ma	nual Utility	FAQ		

- 4. To change a guest's settings, click the guest settings you want to modify. Click **Remove** to delete the guest's settings.
- 5. Assign a wireless name for your temporary network on the Network Name (SSID) field.

Guest Network			
	uest Network provides In scal network.	lemet connection for guests but re	estricts access to
2.4GHz			
Network Name (SSID)	ASUS_Guest1		
Authentication Method	Open System		
Network Key	None	Enable	Enable
Time Remaining	Limitless		
Access Intranet			
	Remove		
5GHz-1			
Network Name (SSID)	ASUS_5G-1_Guest1		
Authentication Method	Open System		
Network Key	None	Enable	Enable
Time Remaining	Limitless	Ellable	
Access Intranet			
	Remove		
5GHz-2			
Network Name (SSID)	ASUS_5G-2_Guest1		
Authentication Method	Open System		
Network Key	None	Enable	Enable
Time Remaining	Limitless		
Access Intranet			
	Remove		
Help & Support Manual U	lility	FAQ	P

- 6. Select an Authentication Method.
- 7. If you select a WPA authentication method, select a WPA Encryption.
- 8. Specify the Access time or choose Limitless.
- 9. Select **Disable** or **Enable** on the Access Intranet item.
- 10. When done, click **Apply**.

3.3 AiProtection

AiProtection provides real-time monitoring that detects malware, spyware, and unwanted access. It also filters unwanted websites and apps and allows you to schedule a time that a connected device is able to access the Internet.

-	J	_				
	General	AiProtection				
品	Network Map	before it reaches	vour PC or connected of	ime network monitoring to dete levices. Parental Controls let y restrict unwanted websites ar	ou schedule times that a c	ther intrusions onnected device is
*	Guest Network					
Ê	AiProtection			Network Protection Router Security Assessment Malicious Sites Blocking		
<u> </u>	Adaptive QoS			Mailcious Sites Blocking Vulnerability Protection Infected Device Prevention	on and Blocking	
ŧ	USB Application					
<u></u>	AiCloud 2.0		A 1	Parental Controls		
٨	lvanced Settings			 Time Scheduling Web & Apps Filters 		
00	Wireless					
	LAN					
⊕	WAN					
	IPv6					
×\$	VPN					
Q	Firewall					
&	Administration					
	System Log					
2	Network Tools					
		Help & Support	Manual Utility		FAQ	٩ (

3.3.1 Network Protection

Network Protection prevents network exploits and secures your network from unwanted access.



Configuring Network Protection

To configure Network Protection:

- 1. From the navigation panel, go to **General** > **AiProtection**.
- 2. From the **AiProtection** main page, click on **Network Protection**.
- 3. From the Network Protection tab, click Scan.

When done scanning, the utility displays the results on the **Router Security Assessment** page.

	exploit. Router Security Assessment access.		์ โ
P	Default router login username and password changed -	No	
	Wireless password strength check -	Very Weak	
	Wireless encryption enabled -	Weak	
	WPS disabled -	Yes	
	UPnP service disabled -		
	Web access from WAN disabled -	Yes	Can
	PING from WAN disabled -	Yes	
	DMZ disabled -	Yes	
	Port trigger disabled -	Yes	
	Port forwarding disabled -	Yes	
((Anonymous login to FTP share disabled -	Yes	OFF
	Disable guest login for Network Place Share -	Yes	
	Malicious Website Blocking enabled -		OFF
	Vulnerability Protection enabled -		
	Infected Device Prevention and Blocking -		
	Close Secure Your Router		

IMPORTANT! Items marked as **Yes** on the **Router Security Assessment** page is considered to be at a **safe** status. Items marked as **No**, **Weak**, or **Very Weak** is highly recommended to be configured accordingly.

- 4. (Optional) From the **Router Security Assessment** page, manually configure the items marked as **No**, **Weak**, or **Very Weak**. To do this:
 - a. Click an item.

NOTE: When you click an item, the utility forwards you to the item's setting page.

b. From the item's security settings page, configure and make the necessary changes and click **Apply** when done.

c. Go back to the **Router Security Assessment** page and click **Close** to exit the page.

- 5. To automatically configure the security settings, click **Secure Your Router.**
- 6. When a message prompt appears, click OK.

Malicious Sites Blocking

This feature restricts access to known malicious websites in the cloud database for an always-up-to-date protection.

NOTE: This function is automatically enabled if you run the **Router Weakness Scan**.

To enable Malicious Sites Blocking:

- 1. From the navigation panel, go to **General** > **AiProtection**.
- 2. From the **AiProtection** main page, click on **Network Protection**.
- 3. From the Malicious Sites Blocking pane, click ON.

Vulnerability protection

This feature resolves common exploits within the router configuration.

NOTE: This function is automatically enabled if you run the **Router Weakness Scan**.

To enable Vulnerability protection:

- 1. From the navigation panel, go to **General** > **AiProtection**.
- 2. From the **AiProtection** main page, click on **Network Protection**.
- 3. From the **Vulnerability protection** pane, click **ON**.

Infected Device Prevention and Blocking

This feature prevents infected devices from communicating personal information or infected status to external parties.

NOTE: This function is automatically enabled if you run the **Router Weakness Scan**.

To enable Vulnerability protection:

- 1. From the navigation panel, go to **General** > **AiProtection**.
- 2. From the **AiProtection** main page, click on **Network Protection**.
- 3. From the **Infected Device Prevention and Blocking** pane, click **ON**.

To configure Alert Preference:

- 1. From the Infected Device Prevention and Blocking pane, click Alert Preference.
- 2. Select or key in the e-mail provider, e-mail account, and password then click **Apply**.

3.3.2 Setting up Parental Controls

Parental Control allows you to control the Internet access time or set the time limit for a client's network usage.

To go to the Parental Controls main page:

- 1. From the navigation panel, go to **General** > **AiProtection**.
- 2. From the **AiProtection** main page, click on the **Parental Controls** tab.



Web & Apps Filters

Web & Apps Filters is a feature of **Parental Controls** that allows you to block access to unwanted web sites or applications.

To configure Web & Apps Filters:

- 1. From the navigation panel, go to **General** > **AiProtection.**
- 2. From the **AiProtection** main page, click on the **Parental Controls** icon to go to the **Parental Controls** tab.
- 3. From the Enable Web & Apps Filters pane, click ON.
- 4. When the End Users License Agreement (EULA) message prompt appears, click **I agree** to continue.
- 5. From the **Client List** column, select or key in the client's name from the drop down list box.
- 6. From the **Content Category** column, select the filters from the four main categories: **Adult, Instant Message and Communication, P2P and File Transfer, and Streaming and Entertainment**.
- 7. Click 🕑 to add the client's profile.
- 8. Click **Apply** to save the settings.

Time Scheduling

Time Scheduling allows you to set the time limit for a client's network usage.

NOTE: Ensure that your system time is synchronized with the NTP server.

/ISUS	Logout	Reboot		English 🔻	
Quick Internet	Operation Mode: Wireless row		on: SSID: <u>Asus Asus_sg</u>	9 & G 🗲 B	
General	AiProtection - Time Schedul	ing	Web & Apps Filters	Time Scheduling	
Guest Network	Time Scheduling allows you to set the time limit for a client's network usage. To use Time Scheduling.				
AiProtection	In the (Clents Name) column, select the clent whose network usage you want i control. You may also key in the clents MAC address in the (Clents MAC Address) column. In the (Add / Deletel) column, click the plus(+) con to add the clent				
USB Application	In the pado J beeled coulinn, cask the plust / younn a add the cleft. In the Time Management (coulinn, ick the edit icon ick edit the Add son ick edit the Add son ick edit the ick icon ick edit the ick icon ick ick edit con ick ick edit icon ick icon ick edit icon ick ick edit icon ick ick edit icon ick ick edit icon ick edit icon ick ick edit icon ick ick edit icon ick ed				
AiCloud 2.0	5. Click (OK) to save the settings made. • Click to open the lutorial video.				
Advanced Settings		: Clients that are addec icted by default.		their internet access	
察 Wireless	Enable Time Scheduling	ON			
🚮 LAN	System Time	Wed, Nov 12 1 * Remind: The Sys	0:11:39 2014 dem lime zone is different from your k	ocale setting,	
🜐 wan	Client List (Max Limit : 16)				
1Pv6	Clients Na	me	Clients MAC Address	Time Management Add / Delete	
VPN		▼ No data	in table.	- 🕀	
Firewall	Λορίν				
Administration					
System Log					
Network Tools					
	Help & Support Manual Utility		FAQ	P	

To configure Time Scheduling:

- 1. From the navigation panel, go to **General** >**AiProtection** > **Parental Controls** > **Time Scheduling**.
- 2. From the **Enable Time Scheduling** pane, click **ON**.

3. From the **Clients Name** column, select or key in the client's name from the drop down list box.

NOTE: You may also key in the client's MAC address in the **Client MAC Address** column. Ensure that the client name does not contain special characters or spaces as these may cause the router to function abnormally.

- 4. Click log to add the client's profile.
- 5. Click **Apply** to save the settings.

3.4 Adaptive QoS

3.4.1 Bandwidth Monitor

This feature allows you to monitor the bandwidth of WAN/LAN and displays the upload and download speed of your connection.

/ISUS	Logout Reboot		English 🔻
++++ Quick Internet Setup	Operation Mode: <u>Wireless router</u> Fi	irmware Version: SSID: ASUS AS	us_sg 🧧 🧏 📴 🔶 🗉
Setup	Bandwidth Monitor QoS Web History Traffi	ic Monitor	
General	Adaptive QoS - WAN/LAN Bandwidth	Monitor	Apps analysis
Retwork Map			
🖧 Guest Network	Upload	Download	1111
AiProtection	10.4 20.4 30.4 5.4 bits per vecond 50.4	104	80 - 30
Adaptive QoS	- 1" 75 au too		75w -
USB Application	20.03		5.47
AiCloud 2.0		ighest 🥚 High 🥚 Medium 🌔 I	Low Lowest Empty
Advanced Settings	Jieming-NB		5.5 Mb 🔻
🛜 Wireless	Jieming-FC	-	6.0 Mb ▲ 10.9 Mb ▼
			11.0 Mb 🔺
💮 WAN			20.1 Mb 🔻
1Pv6			
VPN			
Firewall			
Administration			
System Log			
Network Tools			
	WAN/LAN Bandwidth Monitor FAQ	Apply	
	Help & Support Manual Utility	FAQ	٩

Apps analysis

To enable Apps analysis:

From the **Bandwidth Monitor** tab, go to the **Apps Analysis** pane, click **ON**.

3.4.2 QoS

This feature ensures bandwidth for prioritized tasks and applications.

/isus	Logout	Reboot English 🔻
Quick Internet Setup		<u>s router</u> Firmware Version: SSID: <u>ASUS ASUS SG</u> 🦞 <u>A</u> 🤓 🚓 <u>B</u> eb History Traffic Monitor
General	Adaptive QoS - QoS to c	configuration
Retwork Map	-	Quality of Service (QoS) ensures bandwidth for prioritized tasks and applications.
🔊 Guest Network		 Adaptive QoS ensures inbound and outbound bandwidth on both wired and wireless connections for prioritized applications and tasks via pre-defined, drag-and-
AiProtection	IIIIIII	drop presets: garning, media streaming, VoIP, web surfing and file transferring. • Traditional QoS ensures inbound and outbound bandwidth on both wired and
Adaptive QoS		wireless connections for prioritized applications and tasks via manual user-defined parameters.
USB Application		To enable QoS function, click the QoS slide switch , and fill in the upload and download Get the bandwidth information from ISP or go to <u>http://speedtest.net</u> to check bandwidth.
AiCloud 2.0		QoS FAQ
Advanced Settings	Enable Smart QoS	OFF
🛜 Wireless		Арріу
🔂 LAN		
💮 wan		
IPv6		

To enable the QoS function:

- From the navigation panel, go to General > Adaptive QoS> QoS tab.
- 2. From the Enable Smart QoS pane, click ON.
- 3. Fill in the upload and download bandwidth fields.

NOTE: Get the bandwidth information from your ISP. You can also go to <u>http://speedtest.net</u> to check and get your bandwidth.

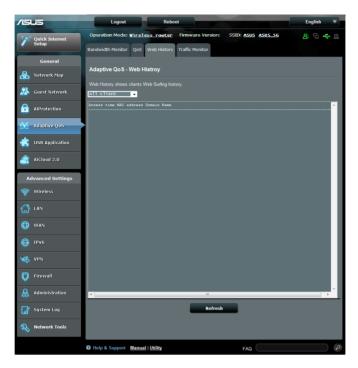
4. Select the QoS Type (Adaptive or Traditional) for your configuration.

NOTE: The definition of the QoS Type is displayed on the QoS tab for your reference.

5. Click **Apply**.

3.4.3 Web History

This feature displays the history and details of the sites or URLs that the client visited.



To view the Web History:

- 1. From the navigation panel, go to **General** > **Traffic Analyzer**> **Traffic Monitor** tab.
- 2. (Optional) Click **Refresh** to clear the list.

3.4.4 Traffic Monitor

The traffic monitor feature allows you to access the bandwidth usage and speed of your Internet, wired, or wireless networks. It allows you to monitor network traffic in real-time or on a daily basis. It also offers an option to display the network traffic within the last 24 hours.

Operation Mode:	Wineles									
		s rout	<u>er</u> Firm	ware Versio	n: SSIC	ASUS	ASUS_5G	¥	8 9	•
Bandwidth Monitor	QoS W	eb Histor	y Traffic	Monitor						
Traffic Manage	r - Traffi	c Monit	or							
Traffic Monitor allows	you to mon	itor the in	coming or or	utgoing packet	ls of the follow	ving:				
	Internet			Wired			Wireless			
Reception										ss
Transmission										
NOTE: Packets from	the internet :	are eveni;	y transmitted	l to the wired a	ind wireless (levices.				
Traffic Monitor FAQ	WAN)	Wired	Wireles	s (2.4GHz)	Wireles	s (5GHz)				
85.45 KB/s										
59.81 KB/s										
42.72 KB/s										
21.36 KB/s										
									7-1-1	
					_	_				
0.00 KB/s			0.01 кви			37 KB/s			4285	
	Traffic Monitor allow: Reception Transmission NOT: Pashelis from Iraffic Monitor FAO Statistics 99.81 KB/s 99.81 KB/s 42.72 KB/s 21.36 KB/s 21.36 KB/s	Traffic Monther allows you to more Internet Reception Internet Transmission Outputing NOTE: Packalls from the Internet Traffic Monther EAO States WARI (WARI) States Kala States Company States Company S	Traffic Monther allows you to monitor the internet internet Reception increasing binnet pl Transmission Codgoing binnet pl Transmission Codgoing binnet pl Traffic Montoe FAG S 45 82(5 5) 81 82(5 2) 36 83(5 2) 36 83(5	Internet Reception Incorring Internet packatts Transmaston Culgaring Internet packatts NOTE: Packats from the Internet are everity transmitter Timth: Mening EAC S. 45 X2/s S. 55 X2/s S. 51 X2/s S. 51 X2/s S. 45 X2/s S. 51 X2/s	Traffic Monitor allows you to monitor the incoming or outgoing packate Internet Weed Reception locaring bitmit packate Transmission Outgoing Internet packate Outgoing Internet packate NOTE: Packate from the internet are evenly transmitted to the wind at Traffic Monitor EAG Wireless (2.4.GHz) S. 45.Kd /s Wireless (2.4.GHz)	Traffic Monitor allows you is monitor the incoming or outgoing packets of the follow Internet Wree Reception Incoming binding blacks Prantmission Outgoing blacks Outgoing packets around an event packets Outgoing packets from with releases Transmission Outgoing blacks Wree Control packets Transmission Outgoing blacks Outgoing packets of the wree Outgoing packets of the wree Transmission Outgoing blacks Wree Bit wree Transmission Outgoing blacks Wree Bit wree Transmission Outgoing blacks Wree Wree Side State Different wree Value Wree Value Wree Value Average Material Average	Traffic Monitor allows you to monitor the incoming of outgoing packets of the following: Internet Wired Reception Internet Transmission Outgoing Internet packet Outgoing Internet packet Outgoing Internet packet Transmission Outgoing Internet packet Outgoing Internet are wenty transmitted to the wired and wireless devices. Traffic Monitor ECO There WWI (WAN) Wired Vireless (2.4G1tz) Wireless (5G1tz) 5.45 #3(s)	Traffic Monitor allows you to monitor the incoming or outgoing packets of the following: Internet Wored Woreless Reception Internet Internet Internet Reception Internet Internet Internet Transmission Outgoing backets from wired Internet Transmission Outgoing backets Internet Transmission Outgoing backets Internet Transmission Outgoing backets Internet Transmission Outgoing backet bis weet and wireless davices. Internet Transmission Outgoing backet bis weet and wireless davices. Total Kaly Wireless (3.4GHz) Wireless (3.6Hz) 5 ds 8/s Outgoing backet bis weet and wireless davices. 2 1 36 48/s Outgoing backet bis weet and wireless davices. 2 1 36 48/s Outgoing backet bis weet and wireless davices. 2 1	Traine membra is a compared of outgoing galactes of the following: Traine membra is a memory of outgoing galactes of the following: Reception bit ameng tablend galactes World World Transmission Outgoing tablend galactes Outgoing galactes to soviel mixed. Outgoing galactes to soviel mixed. NOTE: Packets from the internet are evenly transmitted to the wired and wireless devices. Transmission Outgoing internet galactes Outgoing galactes to soviel mixed. Themes WW (WAN) Wired Wireless (2.4Gitz) Wireless (3Gitz) Site 5.45 / Site 5.	Traffic Monifor allows you to monifor the incoming of outgoing packets of the following: Internet Wired Wired Wiredess Reception Incoming packets Reception Reception Reception Outgoing Internet accents Outgoing packets to wired Reception Reception Transmission Outgoing Internet accents Outgoing packets to wired Reception Mittee Reception Outgoing Internet accents Outgoing packets to wired Reception Transmission Outgoing Internet accents Outgoing packets to wired Reception Mittee Reception Outgoing Internet accents Outgoing packets to wired Reception Transmission Outgoing Internet accents Outgoing Internet accents Reception Tester Mittee Reception Wireless (2.4G182) Wireless (5G182) S 45 50/s S 45 50/s S 45 50/s S 45 50/s 2 27 2 K0/s S 45 50/s S 45 50/s S 45 50/s 2 3 35 60/s S 45 50/s S 45 50/s S 45 50/s

To configure Traffic Monitor:

- 1. From the navigation panel, go to **General** > **Traffic Analyzer**> **Traffic Monitor** tab.
- 2. (Optional) From the **Traffic Manager Traffic Monitor** pane, select an option (**Real-Time, Last 24 Hours,** or **Daily**) from the drop down list box.

3.5 Using the USB Application

The USB Applications function provides AiDisk, Servers Center, Network Printer Server and Download Master submenus.

IMPORTANT! To use the server functions, you need to insert a USB storage device, such as a USB hard disk or USB flash drive, in the USB 2.0 port on the rear panel of your wireless router. Ensure that the USB storage device is formatted and partitioned properly. Refer to the ASUS website at http://event.asus.com/2009/networks/disksupport/ for the file system support table.

3.5.1 Using AiDisk

AiDisk allows you to share files stored on a connected USB device through the Internet. AiDisk also assists you with setting up ASUS DDNS and an FTP server.

To use AiDisk:

- 1. From the navigation panel, go to **General** > **USB application**, then click the **AiDisk** icon.
- 2. From the Welcome to AiDisk wizard screen, click Go.



3. Select the access rights that you want to assign to the clients accessing your shared data.



4. Create your domain name via the ASUS DDNS services, read the Terms of Service and then select I will use the service and accept the Terms of service and key in your domain name. When done, click Next.

General Retwork Map Cuest Network AiProtection AiProtection State Adaptive Ques USII Application	Image: Constraint of the service and accept Image: Constraint of the service and accept
AiCloud 2.0	
Advanced Settings	Previous Next

You can also select **Skip ASUS DDNS settings** then click **Next** to skip the DDNS setting.

- 5. Click **Finish** to complete the setting.
- To access the FTP site that you created, launch a web browser or a third-party FTP client utility and key in the ftp link (ftp://<domain name>.asuscomm.com) you have previously created.

3.5.2 Using Servers Center

Servers Center allows you to share the media files from the USB disk via a Media Server directory, Samba share service, or FTP share service. You can also configure other settings for the USB disk in the Servers Center.

Using Media Server

Your wireless router allows DLNA-supported devices to access multimedia files from the USB disk connected to your wireless router.

NOTE: Before using the DLNA Media Server function, connect your device to the RT-AC5300's network.

/ISUS	Logout Reboot	English 🔻
*** Quick Internet	Operation Mode: <u>Wireless router</u> Firmware Version: SSID: ASUS ASUS_SG	<mark>!</mark> & 🖕 4 🗉
Setup	Media Server Network Place (Samba) Share / Cloud Disk FTP Share	
General	Media Server	
Hetwork Map	Set up the iTunes and DLNA media server.	
Suest Network	Trunes Server Enable Trunes Server? OFF	
AiProtection	Media Server	
Adaptive QoS	Enable DLNA Media Server ON	
USB Application	Media Server Name ASUS	
	Media Server Status Idle	
AiCloud 2.0	Media Server Path Setting O All Disks Shared • Manual Media Server Path	
Advanced Settings	Apply	

To launch the Media Server setting page, go to **General** > **USB application** > **Media Services and Servers** > **Media Servers** tab. Refer to the following for the descriptions of the fields:

- Enable iTunes Server?: Select ON/OFF to enable/disable the iTunes Server.
- Enable DLNA Media Server: Select ON/OFF to enable/ disable the DLNA Media Server.
- Media Server Status: Displays the status of the media server.
- Media Server Path Setting: Select All Disks Shared or Manual Media Server Path.

Using Network Place (Samba) Share service

Network Place (Samba) Share allows you to set up the accounts and permissions for the Samba service.

Setup	Media Server Network Place	(Samba) Share / Cloud Disk	FTP Share	
General				
📇 Network Map	USB Application - Networ			$\mathbf{\overline{v}}$
🔏 Guest Network	Set the account and permission of Enable Share	network place(samba) service.		
f AiProtection	Allow guest login	OFF		sary to log in network place
Maptive QoS	Device Name			
usb Application	Work Group			
AiCloud 2.0	NTFS Sparse Files Support	Disable 💌		
Advanced Settings		Аррі	ly	
察 Wireless	${ { { $			R 🖻 🔊
🔂 LAN		touter Kingston DT 101 G2	R/W	R No
💮 wan			Save Permission	

To use Samba share:

 From the navigation panel, go to General > USB application > Media Services and Servers > Network Place (Samba) Share / Cloud Disk tab.

NOTE: Network Place (Samba) Share is enabled by default.

2. Follow the steps below to add, delete, or modify an account.

To create a new account:

- a) Click 🕑 to add new account.
- b) In the **Account** and **Password** fields, key in the name and password of your network client. Retype the password to confirm. Click **Add** to add the account to the list.

Add new account lace(s	amba) Share / Cloud <mark>X</mark> D s
New account has no re	ead/write access rights.
Account:	
Password:	
Retype password:	
	Add
RT-AC66U	

To delete an existing account:

- a) Select the account that you want to delete.
- b) Click \varTheta.
- c) When prompted, click **Delete** to confirm the account deletion.

To add a folder:

- a) Click 🖳
- b) Enter the folder name, and click **Add**. The folder that you created will be added to the folder list.

The default access rights for a new folder is read/write.				
able Share with account Folder Name:				
Add				

- 3. From the list of folders, select the type of access permission that you want to assign for specific folders:
 - R/W: Select this option to assign read/write access.
 - R: Select this option to assign read-only access.
 - No: Select this option if you do not want to share a specific file folder.
- 4. Click **Apply** to apply the changes.

Using the FTP Share service

FTP share enables an FTP server to share files from USB disk to other devices via your local area network or via the Internet.

IMPORTANT:

- Ensure that you safely remove the USB disk. Incorrect removal of the USB disk may cause data corruption.
- To safely remove the USB disk, refer to the section **Safely removing** the USB disk under 3.1.3 Monitoring your USB device.

/isus	Logout Reboot	English 🔻
+st Quick Internet	Operation Mode: Wireless router Firmware Version: SSID: ASUS ASUS SO	: <mark>?</mark> & ⊡ ← s
Setup	Media Server Network Place (Samba) Share / Cloud Disk FTP Share	
General		
品 Network Map	USB Application - FTP Share	
	Set the account and permission of FTP service.	
Guest Network	Enable FTP ON	
AiProtection	Allow anonymous login OFF Usemame and password is necessar	
Adaptive QoS	Maximum number of concurrent connections 5	
USB Application	Character set on FTP Server	
AiCloud 2.0	Apply	
Advanced Settings	$\odot \odot \oslash$	🛱 🖻 🕅
🛜 Wireless	Admin Router R/W 1	R No
	Save Permission	

To use FTP Share service:

NOTE: Ensure that you have set up your FTP server through AiDisk. For more details, refer to the section **3.5.1 Using AiDisk**.

- From the navigation panel, click General > USB application > Media Services and Servers > FTP Share tab.
- 2. From the list of folders, select the type of access rights that you want to assign for specific folders:
 - R/W: Select to assign read/write access for a specific folder.
 - W: Select to assign write only access for a specific folder.
 - **R**: Select to assign read only access for a specific folder.
 - No: Select this option if you do not want to share a specific folder.
- 3. If you prefer, you can set the **Allow anonymous login** field to **ON**.
- 4. In the **Maximum number of concurrent connections** field, key in the number of devices that can simultaneously connect to the FTP share server.
- 5. Click **Apply** to confirm the changes.
- To access the FTP server, key in the ftp link ftp://<hostname>.asuscomm.com and your user name and password on a web browser or a third-party FTP utility.

3.5.3 3G/4G

3G/4G USB modems can be connected to RT-AC5300 to allow Internet access.

NOTE: For a list of verified USB modems, please visit: http://event.asus.com/2009/networks/3gsupport/

To set up 3G/4G internet access:

- 1. From the navigation panel, click **General** > **USB application** > **3G/4G**.
- 2. In the Enable USB Modem field, select Yes.
- 3. Set up the following:
 - Location: Select your 3G/4G service provider's location from the dropdown list.
 - **ISP**: Select your Internet Service Provider (ISP) from the dropdown list.
 - APN (Access Point Name) service (optional): Contact your 3G/4G service provider for detailed information.
 - **Dial Number and PIN code**: The 3G/4G provider's access number and PIN code for connection.

NOTE: PIN code may vary from different providers.

- Username / Password: The username and password will be provided by the 3G/4G network carrier.
- **USB Adapter**: Choose your USB 3G / 4G adapter from the dropdown list. If you are not sure of your USB adapter's model or the model is not listed in the options, select **Auto**.
- 4. Click **Apply**.

NOTE: The router will reboot for the settings to take effect.

3.6 Using AiCloud 2.0

AiCloud 2.0 is a cloud service application that allows you to save, sync, share, and access your files.



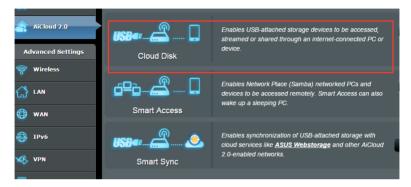
To use AiCloud:

- 1. From Google Play Store or Apple Store, download and install the ASUS AiCloud app to your smart device.
- 2. Connect your smart device to your network. Follow the instructions to complete the AiCloud setup process.

3.6.1 Cloud Disk

To create a cloud disk:

- 1. Insert a USB storage device into the wireless router.
- 2. Turn on Cloud Disk.



3. Go to <u>https://router.asus.com</u> and enter the router login account and password. For better user experience, we recommend that you use **Google Chrome** or **Firefox**.

AiCloud	
Welcome. Who's coming home?	
Your Name.	
Your Password.	
${igeo}$	

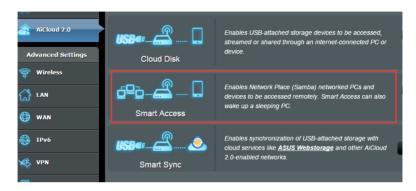
4. You can now start accessing Cloud Disk files on devices connected to the network.

NOTE: When accessing the devices that are connected to the network, you need to enter the device's user name and password manually, which will not be saved by AiCloud for security reason.

Last login: 2014/11/19 13:57:09,	IP address: 192.168.1.80	English
ASUS AiCloud ش		
	Select an available device from the list on the left panel to start using AiCloud.	
sda1 [2.41 GB / 7.46 GB]		
ANNE1_CHEN-NB1		
The Suffrage C. Datasets		ISTAK Camputer for All debut server
± Setting C Refresh	N5	USTeK Computer Inc. All rights reserve

3.6.2 Smart Access

The Smart Access function allows you to easily access your home network via your router's domain name.



NOTES:

- You can create a domain name for your router with ASUS DDNS. For more details, refer to section 4.3.5 DDNS.
- By default, AiCloud provides a secure HTTPS connection. Key in <u>https://[yourASUSDDNSname].asuscomm.com</u> for a very secure Cloud Disk and Smart Access usage.

3.6.3 Smart Sync

	Logout	Reboot		English 🔻
++++ Quick Internet Setup	Operation Mode: <u>Wirele</u>		Version: SSID: Asus Asus	se 🔉 🔁 🔶 🗉
General	AiCloud 2.0 Smart Sync S	Sync Server Settings L	og	
Retwork Map	AiCloud 2.0 - Smart Sy	nc		
Guest Network		Enables S	mart Sync functionality. For step-by	v-step instructions an to
AiProtection			loud-faq.asuscomm.com/aicloud	
Adaptive QoS	OFF			
USB Application	Cloud List			
	Provider User M	Name Rule	Folder Name	Connection Status Delete
AiCloud 2.0				
Advanced Settings				
察 Wireless		Ad	d new account	

To use Smart Sync:

- 1. Launch AiCloud, click **Smart Sync** > **Go**.
- 2. Select **ON** to enable Smart Sync.
- 3. Click Add new account.
- 4. Enter your ASUS WebStorage account password and select the directory that you want to sync with WebStorage.
- 5. Click **Apply**.

4 Configuring the Advanced Settings

4.1 Wireless

4.1.1 General

The General tab allows you to configure the basic wireless settings.

+x+ Quick Internet	Operation Mode: Wireless router F	Firmware Version: SSID: ASUS ASUS SG 🛛 😨 🐣 🖻 🔶 🚇				
Setup	General WPS WDS Wireless MAC F	ilter RADIUS Setting Professional				
General	Wireless - General					
船 Network Map						
Guest Network	Set up the wireless related information below					
	Enabled Smart Connect	OFF				
AiProtection	Band	2.4GHZ •				
Maptive QoS	SSID					
Main Traffic Analyzer	Hide SSID	• Yes O No				
	Wireless Mode	Auto Oplimized for Xbox 🗹 big Protection				
USB Application	Channel bandwidth	20/40 мнz				
AiCloud 2.0	Control Channel	AUTO -				
Advanced Settings	Extension Channel	Auto				
	Authentication Method	WPA2-Personal				
🛜 Wireless	WPA Encryption	AES				
🔂 LAN	WPA Pre-Shared Key	12345678				
💮 WAN	Protected Management Frames	Disable •				
1Pv6	Network Key Rotation Interval	3600				

To configure the basic wireless settings:

- From the navigation panel, go to Advanced Settings > Wireless > General tab.
- 2. Select 2.4GHz or 5GHz as the frequency band for your wireless network.
- 3. If you want to use the Smart Connect function, move the slider to **ON** in the **Enable Smart Connect** field. This function automatically connect the clients in your network to the appropriate band 2.4GHz or 5GHz for optimal speed.

4. Assign a unique name containing up to 32 characters for your SSID (Service Set Identifier) or network name to identify your wireless network. Wi-Fi devices can identify and connect to the wireless network via your assigned SSID. The SSIDs on the information banner are updated once new SSIDs are saved to the settings.

NOTE: You can assign unique SSIDs for the 2.4 GHz and 5GHz frequency bands.

- 5. In the **Hide SSID** field, select **Yes** to prevent wireless devices from detecting your SSID. When this function is enabled, you would need to enter the SSID manually on the wireless device to access the wireless network.
- 6. Select any of these wireless mode options to determine the types of wireless devices that can connect to your wireless router:
 - Auto: Select Auto to allow 802.11ac, 802.11n, 802.11g, and 802.11b devices to connect to the wireless router.
 - **N only**: Select **N only** to maximize wireless N performance. This setting prevents 802.11g and 802.11b devices from connecting to the wireless router.
 - **Legacy**: Select **Legacy** to allow 802.11b/g/n devices to connect to the wireless router. Hardware that supports 802.11n natively, however, will only run at a maximum speed of 54Mbps.
- 7. Select the operating/control channel for your wireless router. Select **Auto** to allow the wireless router to automatically select the channel that has the least amount of interference.
- 8. Select the channel bandwidth to accommodate higher transmission speeds.
- 9. Select the authentication method.
- 10. When done, click **Apply**.

4.1.2 WPS

WPS (Wi-Fi Protected Setup) is a wireless security standard that allows you to easily connect devices to a wireless network. You can configure the WPS function via the PIN code or WPS button.



NOTE: Ensure that the devices support WPS.

To enable WPS on your wireless network:

- From the navigation panel, go to Advanced Settings > Wireless > WPS tab.
- 2. In the Enable WPS field, move the slider to ON.
- WPS uses 2.4GHz by default. If you want to change the frequency to 5GHz, turn OFF the WPS function, click Switch Frequency in the Current Frequency field, and turn WPS ON again.

NOTE: WPS supports authentication using Open System, WPA-Personal, and WPA2-Personal. WPS does not support a wireless network that uses a Shared Key, WPA-Enterprise, WPA2-Enterprise, and RADIUS encryption method.

- 3. In the WPS Method field, select **Push Button** or **Client PIN** code. If you select **Push Button**, go to step 4. If you select **Client PIN** code, go to step 5.
- 4. To set up WPS using the router's WPS button, follow these steps:
 - a. Click **Start** or press the WPS button found at the rear of the wireless router.
 - b.Press the WPS button on your wireless device. This is normally identified by the WPS logo.

NOTE: Check your wireless device or its user manual for the location of the WPS button.

- c. The wireless router will scan for any available WPS devices. If the wireless router does not find any WPS devices, it will switch to standby mode.
- 5. To set up WPS using the Client's PIN code, follow these steps:
 - a. Locate the WPS PIN code on your wireless device's user manual or on the device itself.
 - b.Key in the Client PIN code on the text box.
 - c. Click **Start** to put your wireless router into WPS survey mode. The router's LED indicators quickly flash three times until the WPS setup is completed.

4.1.3 Bridge

Bridge or WDS (Wireless Distribution System) allows your ASUS wireless router to connect to another wireless access point exclusively, preventing other wireless devices or stations to access your ASUS wireless router. It can also be considered as a wireless repeater where your ASUS wireless router communicates with another access point and other wireless devices.

+*	Quick Internet Setup	Operation	n Mode:	Wireles	<u>s router</u> Fir	mware	Version: SSID:	ASUS ASUS_SG	8 🕞 🔶 🖻
		General	WPS	Bridge	Wireless MAC	: Filter	RADIUS Setting	Professional	
	General	Wirelog	• Drid						
品	Network Map		Wireless - Bridge						
*	Guest Network	WDS may able to us	Bridge (or named WDS - Wireless Distribution System) function allows your Router to connect to an access point wirelessity WDS may also be considered a repeater mode. But with this method, the devices connected to the access point will only be able to use half of the access point's original wireless speed. To enable WDS to extend the wireless signal, please follow these steps: 1. The function only support (Dopen System/XDRE: Open System/XPEP) security authentication method.						
D	AiProtection								
₩	Adaptive QoS	In the transformer of the approximation of the							
۲	USB Application								
<u></u>	AiCloud 2.0	(2.4GHz.MAC) 10BF-48D84978 (GGHz MAC) 10BF-48D8497C 5. You as country using the Auto channel. Click tegr.g to modify							
A	lvanced Settings	Basic Co	_		_				
	Wireless	Frequenc					IZ 💌		
4	LAN	AP Mode					ily 👻		
لما م		Connect	o APs in I	ist		• Yes	No		
¢	WAN	Remote AP List							
	IPv6	Remote AP List Add / Delete							
XB	VPN Server	• • • • • • • • • • • • • • • • • • •							
\sim		No data in table.							
Q	Firewall	Apply							
&	Administration								

To set up the wireless bridge:

- 1. From the navigation panel, go to **Advanced Settings** > **Wireless** > **WDS** tab.
- 2. Select the frequency band for the wireless bridge.

- 3. In the **AP Mode** field, select any of these options:
 - **AP Only**: Disables the Wireless Bridge function.
 - **WDS Only**: Enables the Wireless Bridge feature but prevents other wireless devices/stations from connecting to the router.
 - **HYBRID**: Enables the Wireless Bridge feature and allows other wireless devices/stations to connect to the router.

NOTE: In Hybrid mode, wireless devices connected to the ASUS wireless router will only receive half the connection speed of the Access Point.

- 4. In the **Connect to APs in list** field, click **Yes** if you want to connect to an Access Point listed in the Remote AP List.
- 5. By default, the operating/control channel for the wireless bridge is set to **Auto** to allow the router to automatically select the channel with the least amount of interference.

You can modify the **Control Channel** from **Advanced Settings** > **Wireless** > **General** tab.

NOTE: Channel availability varies per country or region.

 On the Remote AP List, key in a MAC address and click the Add button (1) to enter the MAC address of other available Access Points.

NOTE: Any Access Point added to the list should be on the same Control Channel as the ASUS wireless router.

7. Click **Apply**.

4.1.4 Wireless MAC Filter

Wireless MAC filter provides control over packets transmitted to a specified MAC (Media Access Control) address on your wireless network.

/isus	Maria Maria		Logout			Reboo	ot						En	glish	•
++++ Quick	Internet	Operation	n Mode:	Wirel	ess ro	outer	Firmv	are Version	n: S	GID: ASUS	ASUS_5G		8	<u>ب</u>	e
Setup		General	WPS	WDS	Wireles	ss MAC F	ilter	RADIUS Set	ting F	rofessiona					
Gen	eral	Wireless - Wireless MAC Filter													
🔠 Netwo	rk Map														
💦 Guest	Network	Wireless N	MAC filter	allows	you to co	ontrol pac	ckets fr	om devices w	vith spec	ified MAC	address in you	ur Wireless	LAN.		
All Chiese	NELWOIK	Basic Co	onfig		_	_	_								
🔒 AiProte	ection	Enable M	AC Filter				O Yes ● No								
Adaptin	10.005	MAC Filter	r Mode					ept							
		MAC filts	er list (M	ax Lim	it : 64)	_	_	_	_		_	_		-	
💼 USB A	oplication						MAC fi	ler list					Add /	Delete	
AiCloue	d 2.0												(Ð	
No data in table.															
Advanced	Advanced Settings														
🛜 Wireless										·					

To set up the Wireless MAC filter:

- From the navigation panel, go to Advanced Settings > Wireless > Wireless MAC Filter tab.
- 2. Tick Yes in the Enable Mac Filter field.
- 3. In the MAC Filter Mode dropdown list, select either Accept or Reject.
 - Select Accept to allow devices in the MAC filter list to access to the wireless network.
 - Select **Reject** to prevent devices in the MAC filter list to access to the wireless network.
- 4. On the MAC filter list, click the **Add** 💿 button and key in the MAC address of the wireless device.
- 5. Click **Apply**.

4.1.5 RADIUS Setting

RADIUS (Remote Authentication Dial In User Service) Setting provides an extra layer of security when you choose WPA-Enterprise, WPA2-Enterprise, or Radius with 802.1x as your Authentication Mode.

/ISUS	Logout Rebo	pt	English 🔻			
Quick Internet	Operation Mode: <u>Wireless router</u>	Firmware Version: SSID: ASUS ASUS 5G	8 @ \$ 8			
Setup	General WPS WDS Wireless MAC F	Filter RADIUS Setting Professional				
General						
船 Network Map	Wireless - RADIUS Setting					
🖧 Guest Network		parameters for authorizing wireless clients through RADIUS "Wireless - General" as "WPA-Enterprise/ WPA2-Enterprise				
AiProtection	Frequency	2.4GHz				
	Server IP Address					
Adaptive QoS	Server Port					
USB Application	Connection Secret					
AiCloud 2.0		Apply				
Advanced Settings						
察 Wireless						

To set up wireless RADIUS settings:

1. Ensure that the wireless router's authentication mode is set to WPA-Enterprise or WPA2-Enterprise.

NOTE: Please refer to section **4.1.1 General** section for configuring your wireless router's Authentication Mode.

- 2. From the navigation panel, go to **Advanced Settings** > **Wireless** > **RADIUS Setting**.
- 3. Select the frequency band.
- 4. In the **Server IP Address** field, key in your RADIUS server's IP Address.
- 5. In the **Server Port** field, key in the server port.
- 6. In the **Connection Secret** field, assign the password to access your RADIUS server.
- 7. Click Apply.

4.1.6 Professional

The Professional screen provides advanced configuration options.

NOTE: We recommend that you use the default values on this page.

-	Logout Reb					
Quick Internet Setup	General W75 WD5 Wireless HAC					
General						
Network Map	Wireless - Professional					
Guest Network	 Weeless Professional Setting allows you t Remind. The System Inte cone is different to 	o set up additional parameters for wireless. But default values are recommended.				
	Frequency	2.4GHz				
AiProtection	Enable Radio	O Yes No				
👍 Adaptive QoS	Enable wireless scheduler					
USB Application	Date to Enable Radio (week days)					
AiCloud 2.0	Time of Day to Enable Radio					
	Date to Enable Radio (weekend)					
Advanced Settings	Time of Day to Enable Radio					
Wireless	Set AP located					
	Reaming assistant	Disable				
🕽 wan	Enable KMP Snooping	oisable				
3 1Pv6	Multicast Rate(Mbps)	Auto				
	Preamble Type	Long				
🖇 VPN	AMPDU RTS	Enable				
🕽 Firewall	RTS Threshold					
Administration	DTIM Interval					
🖉 System Log	Beacon Interval					
	Enable TX Bursting	Enable •				
Network Tools	Enable WMM APSD	snable •				
	Enhanced interlarence management	Disable -				
	Reducing USB 3.0 interference	Disable -				
	Optimize AMPOU appregation	Disable -				
	Turbo QAM	Enable				
	Explicit beamforming	Enable				
	Universal Beamforming	Enable				
	Tx power adjustment	100 %				
		Apply				
	Help & Support Menual Utility	FAQ (

In the **Professional Settings** screen, you can configure the following:

- **Frequency**: Select the frequency band that the professional settings will be applied to.
- **Enable Radio**: Select **Yes** to enable wireless networking. Select **No** to disable wireless networking.
- Date to Enable Radio (weekdays): You can specify which days of the week wireless networking is enabled.
- **Time of Day to Enable Radio**: You can specify a time range when wireless networking is enabled during the week.

- Date to Enable Radio (weekend): You can specify which days of the weekend wireless networking is enabled.
- **Time of Day to Enable Radio**: You can specify a time range when wireless networking is enabled during the weekend.
- Set AP isolated: The Set AP isolated item prevents wireless devices on your network from communicating with each other. This feature is useful if many guests frequently join or leave your network. Select **Yes** to enable this feature or select **No** to disable.
- Roaming Assistant: In network configurations that involve multiple Access, Points or wireless repeater, wireless clients sometimes cannot connect automatically to thefts available AP because they are still connected to the main wireless router. Enable this setting so that the client will disconnect from the main wireless router if the signal strength is under a specific threshold and connect to a stronger signal.
- **Enable IGMP Snooping:** Enable this function allows the IGMP (Internet Group Management Protocol) to be monitored among devices and optimizes wireless multicast traffic.
- **Multicast rate (Mbps)**: Select the multicast transmission rate or click **Disable** to switch off simultaneous single transmission.
- **Preamble Type**: Preamble Type defines the length of time that the router spent for CRC (Cyclic Redundancy Check). CRC is a method of detecting errors during data transmission. 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.
- **AMPDU RTS**: Enable this function allows to build a group of frames before they are transmitted and use RTS for every AMPDU for communication among 802.11g and 802.11b devices.
- **RTS Threshold**: Select a lower value for RTS (Request to Send) Threshold to improve wireless communication in a busy or noisy wireless network with high network traffic and numerous wireless devices.

- **DTIM Interval**: DTIM (Delivery Traffic Indication Message) 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 three milliseconds.
- **Beacon Interval**: Beacon Interval is the time between one DTIM and the next. The default value is 100 milliseconds. Lower the Beacon Interval value for an unstable wireless connection or for roaming devices.
- **Enable TX Bursting**: Enable TX Bursting improves transmission speed between the wireless router and 802.11g devices.
- **Enable WMM APSD**: Enable WMM APSD (Wi-Fi Multimedia Automatic Power Save Delivery) to improve power management between wireless devices. Select **Disable** to switch off WMM APSD.
- **Reducing USB 3.0 interference**: Enable this function ensures the best wireless performance on the 2.4 GHz band. Disabling this feature increase USB 3.0 port's transmission speed and may affect the 2.4 GHz wireless range.
- **Optimize AMPDU aggregation**: Optimize the max number of MPDUs in an AMPDU and avoid packets get lost or corrupted during transmission in error-prone wireless channels
- **Optimize ack suppression**: Optimize the max number of ack to suppress in a raw.
- **Turbo QAM**: Enable this function allows to support 256-QAM (MCS 8/9) on the 2.4GHz band to achieve better range and throughput on that frequency.
- Airtime Fairness: With airtime fairness, the speed of the network is not determined by the slowest traffic. By allocating time equally among clients, Airtime Fairness allows every transmission to move at its highest potential speed.
- **Explicit Beamforming**: The client's WLAN adapter and router both support beam forming technology. This technology allows these device to communicate the channel estimation and steering direction to each other to improve download and uplink speed.

- Universal Beamforming: For legacy wireless network adapter that do not support beam forming, the router estimates the channel and determines the steering direction to improve the downlink speed.
- **TX Power adjustment**: TX Power adjustment refers to the milliWatts (mW) needed to power the radio signal output of the wireless router. Enter a value between 0 to 100.

NOTE: Increasing the TX Power adjustment values may affect the stability of the wireless network.

4.2 LAN

4.2.1 LAN IP

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

NOTE: Any changes to the LAN IP address will be reflected on your DHCP settings.

/ISUS	Logout	Reboo	ot		English 🔻
Quick Internet	Operation Mode: <u>Wireless</u>	outer	Firmware Version:	SSID: ASUS ASUS 5G	8 🔁 🗲 🗉
Setup	LAN IP DHCP Server Route	IPTV	Switch Control		
General					
Retwork Map	LAN - LAN IP				
	Configure the LAN setting of RT-A	C3200.			
Guest Network	IP Address				
AiProtection	Subnet Mask				
Adaptive QoS			Apply		
USB Application					

To modify the LAN IP settings:

- 1. From the navigation panel, go to **Advanced Settings** > **LAN** > **LAN IP** tab.
- 2. Modify the IP address and Subnet Mask.
- 3. When done, click **Apply**.

4.2.2 DHCP Server

Your wireless router uses DHCP to assign IP addresses automatically on your network. You can specify the IP address range and lease time for the clients on your network.

+	Quick Internet	Operation Mo	de: <u>Wirel</u>	ess rout	<u>er</u> Fir	mware Version:	SSID: ASUS ASUS	<u>sc</u>	8 G 🔶 🛛	
_	Setup	LAN IP DH	CP Server	Route	IPTV	Switch Control				
	General									
品	Network Map		LAN - DHCP Server							
*	Guest Network	can assign ea	DHCP (Dynamic Host Configuration Protocol) is a protocol for the automatic configuration used on IP networks. The DHCP server can assign each client an IP address and informs the client of the of DNS server IP and default gateway IP. Hanual 1) x Assigned 1.P. around. The DHCP 1151 (1) st. 1) init: 132. FAQ							
	AiProtection	Basic Config	Basic Config							
4	Adaptive QoS	Enable the DH	ICP Server			⊙ Yes ⊙ No				
		Router's Domain Name								
•	USB Application	IP Pool Starting Address								
â	AiCloud 2.0	IP Pool Ending Address								
A	dvanced Settings	Lease Time								
6	Wireless	Default Gatew	ay							
•		DNS and WINS Server Setting								
ដ	LAN	DNS Server								
٢	WAN	WINS Server								
	IPv6	Enable Manua	I Assignmen	t	_		_	_		
		Enable Manua	al Assignmen	t		● Yes O No				
×	VPN Server	Manually Assigned IP around the DHCP list(list limit:32)								
Q	Firewall	MAC address					IP Address		Add / Delete	
R	Administration					•			(
						No data i	n table.			
	System Log	Apply								

To configure the DHCP server:

- From the navigation panel, go to Advanced Settings > LAN > DHCP Server tab.
- 2. In the Enable the DHCP Server field, tick Yes.
- 3. In the **Domain Name** text box, enter a domain name for the wireless router.
- 4. In the **IP Pool Starting Address** field, key in the starting IP address.

- 5. In the **IP Pool Ending Address** field, key in the ending IP address.
- 6. In the **Lease Time** field, 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.

NOTES:

- We recommend that you use an IP address format of 192.168.1.xxx (where xxx can be any number between 2 and 254) when specifying an IP address range.
- An IP Pool Starting Address should not be greater than the IP Pool Ending Address.
- 7. In the **DNS and Server Settings** section, key in your DNS Server and WINS Server IP address if needed.
- 8. Your wireless router can also manually assign IP addresses to devices on the network. On the **Enable Manual Assignment** field, choose **Yes** to assign an IP address to specific MAC addresses on the network. Up to 32 MAC Addresses can be added to the DHCP list for manual assignment.

4.2.3 Route

If your network makes use of more than one wireless router, you can configure a routing table to share the same Internet service.

NOTE: We recommend that you do not change the default route settings unless you have advanced knowledge of routing tables.

Quick Internet	Operation Mode: <u>Wireless router</u> F	firmware Version:	SSID: ASUS ASUS_SO	8	ē 🔶 🗐				
· Stap	LAN IP DHCP Server Route IPTV	Switch Control							
General									
品 Network Map	LAN - Route								
Guest Network	This function allows you to add routing rules into Router. It is useful if you connect several routers behind Router to share the same connection to the Internet.								
AiProtection	Basic Config	_							
	Enable static routes	OYes ON0							
Adaptive QoS	Static Route List	_		_					
LUSB Application	Network/Host IP	Netmask	Gateway	Metric Interface	Add / Delete				
-				LAN 🝷	Ð				
AiCloud 2.0	No data in table.								
Advanced Settings		Apply							
🛜 Wireless									

To configure the LAN Routing table:

- From the navigation panel, go to Advanced Settings > LAN > Route tab.
- 2. On the Enable static routes field, choose Yes.
- 3. On the **Static Route List**, enter the network information of other access points or nodes. Click the **Add** or **Delete** button to add or remove a device on the list.
- 4. Click Apply.

4.2.4 IPTV

The wireless router supports connection to IPTV services through an ISP or a LAN. The IPTV tab provides the configuration settings needed to set up IPTV, VoIP, multicasting, and UDP for your service. Contact your ISP for specific information regarding your service.

/ISUS	Logout Reboo	t in the second s	English 🔻				
+++ Quick Internet	Operation Mode: Wireless router	Firmware Version: SSID: ASUS ASUS_5G	8 G 🔶 🗉				
Śetup	LAN IP DHCP Server Route IPTV	Switch Control					
General							
🔠 Network Map	LAN - IPTV						
🔏 Guest Network	To watch IPTV, the WAN port must be connected to the Internet. Please go to <u>WAN - Dual WAN</u> to confirm that WAN port is assigned to primary WAN.						
AiProtection	Port						
	Select ISP Profile	None					
Adaptive QoS	Choose IPTV STB Port	None					
USB Application	Special Applications						
AiCloud 2.0	Use DHCP routes	Microsoft					
AICIOUU 2.0	Enable multicast routing (IGMP Proxy)	Disable -					
Advanced Settings	Enable efficient multicast forwarding (IGMP Snooping)	Disable -					
察 Wireless	UDP Proxy (Udpxy)						
		Apply					

4.3 WAN

4.3.1 Internet Connection

The Internet Connection screen allows you to configure the settings of various WAN connection types.

+	Quick Internet Setup	Operation Mode: <u>Wireless router</u>	Firmware Version: SSID: ASUS ASUS SG 🕂 🖧 🔁 🔶 🚇					
_	Setup	Internet Connection Port Trigger	Virtual Server / Port Forwarding DMZ DDNS NAT Passthrough					
	General							
品	Network Map	WAN - Internet Connection						
*	Guest Network		o WAN (wide area network) These types are selected from the dropdown menu beside iffer depending on the connection type you selected.					
		Basic Config						
_	AiProtection	WAN Connection Type	Automatic IP 🗸					
<u> </u>	Adaptive QoS	Enable WAN	© Yes ● No					
*	USB Application	Enable NAT	O Yes ● No					
	AiCloud 2.0	Enable UPnP UPnP FAQ	© Yes ● No					
		WAN DNS Setting						
Ac	lvanced Settings	Connect to DNS Server automatically	© Yes ● No					
00	Wireless	Account Setting						
ដ	LAN	Authentication	None					
	WAN	Password						
		Special Requirement from ISP						
	IPv6	Host Name						
×	VPN Server	MAC Address	MAC Clone					
Q	Firewall		Apply					

To configure the WAN connection settings:

- From the navigation panel, go to Advanced Settings > WAN > Internet Connection tab.
- 2. Configure the following settings below. When done, click **Apply**.
 - WAN Connection Type: Choose your Internet Service Provider type. The choices are Automatic IP, PPPOE, PPTP, L2TP or static IP. Consult your ISP if the router is unable to obtain a valid IP address or if you are unsure the WAN connection type.
 - Enable WAN: Select Yes to allow the router Internet access. Select No to disable Internet access.

- Enable NAT: NAT (Network Address Translation) is a system where one public IP (WAN IP) is used to provide Internet access to network clients with a private IP address in a LAN. The private IP address of each network client is saved in a NAT table and is used to route incoming data packets.
- Enable UPnP: UPnP (Universal Plug and Play) allows several devices (such as routers, televisions, stereo systems, game consoles, and cellular phone), to be controlled via an IP-based network with or without a central control through a gateway. UPnP connects PCs of all form factors, providing a seamless network for remote configuration and data transfer. Using UPnP, a new network device is discovered automatically. Once connected to the network, devices can be remotely configured to support P2P applications, interactive gaming, video conferencing, and web or proxy servers. Unlike Port forwarding, which involves manually configuring port settings, UPnP automatically configures the router to accept incoming connections and direct requests to a specific PC on the local network.
- **Connect to DNS Server automatically**: Allows this router to get the DNS IP address from the ISP automatically. A DNS is a host on the Internet that translates Internet names to numeric IP addresses.
- **Authentication**: This item may be specified by some ISPs. Check with your ISP and fill them in if required.
- Host Name: This field allows you to provide a host name for your router. It is usually a special requirement from your ISP. If your ISP assigned a host name to your computer, enter the host name here.

- MAC Address: MAC (Media Access Control) address is a unique identifier for your networking device. Some ISPs monitor the MAC address of networking devices that connect to their service and reject any unrecognized device that attempt to connect. To avoid connection issues due to an unregistered MAC address, you can:
 - Contact your ISP and update the MAC address associated with your ISP service.
 - Clone or change the MAC address of the ASUS wireless router to match the MAC address of the previous networking device recognized by the ISP.
- **DHCP query frequency**: Changes the DHCP Discovery interval settings to avoid overloading the DHCP server.

4.3.2 Dual WAN

Your ASUS wireless router provides dual WAN support. You can set the dual WAN feature to any of these two modes:

- Failover Mode: Select this mode to use the secondary WAN as the backup network access.
- Load Balance Mode: Select this mode to optimize bandwidth, minimize response time and prevent data overload for both primary and secondary WAN connections.

/1545	Logout Rebo	pot	English 🔻
Quick Internet		ort Virtual Server / Port DMZ DDNS	8 🔁 < 🗷
General	Connection WAN Tria	iaer Forwarding	Passthrough
🚠 Network Map	WAN - Dual WAN		
😹 Guest Network			
AiProtection	Basic Config		
Maptive QoS	Enable Dual WAN	ON	
duse Application	Primary WAN	WAN	
-Use application	Secondary WAN	USB 🗧	
AiCloud 2.0	Dual WAN Mode	Fail Over	
Advanced Settings	Ping Time Watch Dog		
察 Wireless	Interval		
-	Delay		
🔂 LAN	Fail Count		
🕕 WAN	Enable Watch Dog	• Yes • No	
🛞 IPv6		Αρρίγ	

4.3.3 Port Trigger

Port range triggering opens a predetermined incoming port for a limited period of time whenever a client on the local area network makes an outgoing connection to a specified port. Port triggering is used in the following scenarios:

- More than one local client needs port forwarding for the same application at a different time.
- An application requires specific incoming ports that are different from the outgoing ports.

	Logout	Reboo	ot				English 🦷
*** Quick Internet	Operation Mode: Mirel	ess router	Firmware Versio	n: SSID: <u>ASU</u>	<u>5 ASUS_5G</u>		8 🕤 🔶 🖻
Setup		Dual Port VAN Trigg		Server / Port rwarding	DMZ D		NAT assthrough
General	WAN - Port Trigger						
Retwork Map							
Suest Network	Port Trigger allows you to to two methods for opening in the time and devices must	coming data ports	: port forwarding an	I port trigger. Port f	orwarding ope	ens the speci	fied data ports all
AiProtection	access to the trigger port. U forwarding allows multiple d	Jnlike port forward	ding, port trigger doe	s not require static	IP addresses	for LAN dev	ices. Port
Adaptive QoS	port. <u>Port Trigger FAQ</u>						
USB Application	Basic Config		_	_			_
	Enable Port Trigger		• Yes • No				
AiCloud 2.0	Well-Known Applications			•			
Advanced Settings	Trigger Port List (Max L	imit : 32)					
🞯 Wireless	Description	Trigger P	ort Protoco	I Incoming	Port	Protocol	Add / Delete
			тср			тср	Ð
<u>س</u> س							
🕕 WAN			Apr	ly			

To set up Port Trigger:

- From the navigation panel, go to Advanced Settings > WAN > Port Trigger tab.
- 2. On the Enable Port Trigger field, tick Yes.
- 3. On the **Well-Known Applications** field, select the popular games and web services to add to the Port Trigger List.

- 4. On the **Trigger Port List** table, key in the following information:
 - **Description**: Enter a short name or description for the service.
 - **Trigger Port**: Specify a trigger port to open the incoming port.
 - Protocol: Select the protocol, TCP, or UDP.
 - **Incoming Port**: Specify an incoming port to receive inbound data from the Internet.
 - Protocol: Select the protocol, TCP, or UDP.
- 5. Click the **Add** 💮 to enter the port trigger information to the list. Click the **Delete** 🗿 button to remove a port trigger entry from the list.
- 6. When done, click **Apply**.

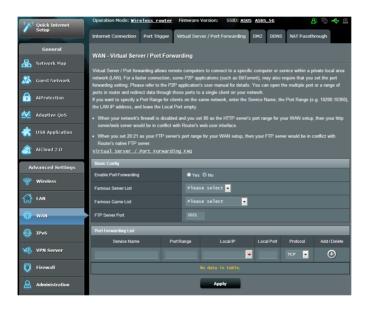
NOTES:

- When connecting to an IRC server, a client PC makes an outgoing connection using the trigger port range 66660-7000. The IRC server responds by verifying the username and creating a new connection to the client PC using an incoming port.
- If Port Trigger is disabled, the router drops the connection because it is unable to determine which PC is requesting for IRC access. When Port Trigger is enabled, the router assigns an incoming port to receive the inbound data. This incoming port closes once a specific time period has elapsed because the router is unsure when the application has been terminated.
- Port triggering only allows one client in the network to use a particular service and a specific incoming port at the same time.
- You cannot use the same application to trigger a port in more than one PC at the same time. The router will only forward the port back to the last computer to send the router a request/trigger.

4.3.4 Virtual Server/Port Forwarding

Port forwarding is a method to direct network traffic from the Internet to a specific port or a specific range of ports to a device or number of devices on your local network. Setting up Port Forwarding on your router allows PCs outside the network to access specific services provided by a PC in your network.

NOTE: When port forwarding is enabled, the ASUS router blocks unsolicited inbound traffic from the Internet and only allows replies from outbound requests from the LAN. The network client does not have access to the Internet directly, and vice versa.



To set up Port Forwarding:

- From the navigation panel, go to Advanced Settings > WAN > Virtual Server / Port Forwarding tab.
- 2. On the Enable Port Forwarding field, tick Yes.

- 3. On the **Famous Server List** field, select the type of service you want to access.
- 4. On the **Famous Game List** field, select the popular game that you want to access. This item lists the port required for your selected popular online game to work properly.
- 5. On the **Port Forwarding List** table, key in the following information:
 - Service Name: Enter a service name.
 - **Port Range**: If you want to specify a Port Range for clients on the same network, enter the Service Name, the Port Range (e.g. 10200:10300), the LAN IP address, and leave the Local Port empty. Port range accepts various formats such as Port Range (300:350), individual ports (566,789) or Mix (1015:1024,3021).

NOTES:

- When your network's firewall is disabled and you set 80 as the HTTP server's port range for your WAN setup, then your http server/web server would be in conflict with the router's web user interface.
- A network makes use of ports in order to exchange data, with each port assigned a port number and a specific task. For example, port 80 is used for HTTP. A specific port can only be used by one application or service at a time. Hence, two PCs attempting to access data through the same port at the same time would fail. For example, you cannot set up Port Forwarding for port 100 for two PCs at the same time.
 - Local IP: Key in the client's LAN IP address.

NOTE: Use a static IP address for the local client to make port forwarding work properly. Refer to section **4.2 LAN** for information.

- Local Port: Enter a specific port to receive forwarded packets. Leave this field blank if you want the incoming packets to be redirected to the specified port range.
- Protocol: Select the protocol. If you are unsure, select BOTH.
- 5. Click the **Add** 💮 to enter the port trigger information to the list. Click the **Delete** 🗿 button to remove a port trigger entry from the list.
- 6. When done, click **Apply**.

To check if Port Forwarding has been configured successfully:

- Ensure that your server or application is set up and running.
- You will need a client outside your LAN but has Internet access (referred to as "Internet client"). This client should not be connected to the ASUS router.
- On the Internet client, use the router's WAN IP to access the server. If port forwarding has been successful, you should be able to access the files or applications.

Differences between port trigger and port forwarding:

- Port triggering will work even without setting up a specific LAN IP address. Unlike port forwarding, which requires a static LAN IP address, port triggering allows dynamic port forwarding using the router. Predetermined port ranges are configured to accept incoming connections for a limited period of time. Port triggering allows multiple computers to run applications that would normally require manually forwarding the same ports to each PC on the network.
- Port triggering is more secure than port forwarding since the incoming ports are not open all the time. They are opened only when an application is making an outgoing connection through the trigger port.

4.3.4 DMZ

Virtual DMZ exposes one client to the Internet, allowing this client to receive all inbound packets directed to your Local Area Network.

Inbound traffic from the Internet is usually discarded and routed to a specific client only if port forwarding or a port trigger has been configured on the network. In a DMZ configuration, one network client receives all inbound packets.

Setting up DMZ on a network is useful when you need incoming ports open or you want to host a domain, web, or e-mail server.

CAUTION: Opening all the ports on a client to the Internet makes the network vulnerable to outside attacks. Please be aware of the security risks involved in using DMZ.

To set up DMZ:

- From the navigation panel, go to Advanced Settings > WAN > DMZ tab.
- 2. Configure the setting below. When done, click **Apply**.
 - IP address of Exposed Station: Key in the client's LAN IP address that will provide the DMZ service and be exposed on the Internet. Ensure that the server client has a static IP address.

To remove DMZ:

- 1. Delete the client's LAN IP address from the **IP Address of Exposed Station** text box.
- 2. When done, click **Apply**.

4.3.5 DDNS

Setting up DDNS (Dynamic DNS) allows you to access the router from outside your network through the provided ASUS DDNS Service or another DDNS service.

/ISUS	Logout		Reboot					Er	ıglish	•
*** Quick Internet	Operation Mode:	fireless	router Firmv	ware Version:	SSID: ASUS	ASUS_SG		8	<u>ب</u>	E
Setup	Internet Connection	Dual WAN	Port Trigger	Virtual Serve Forward		DMZ I	DDNS	N/ Passtr		
General										
品 Network Map	WAN - DDNS									
🔉 Guest Network	DDNS (Dynamic Dom dynamic public IP ad and other DDNS serv	dress, throug								
AiProtection	The wireless router c This router may be in									
Adaptive QoS	Enable the DDNS Cliv	ent	• Y	es O No						
USB Application				Apply						
AiCloud 2.0										

To set up DDNS:

- From the navigation panel, go to Advanced Settings > WAN > DDNS tab.
- 2. Configure the following settings below. When done, click **Apply**.
 - **Enable the DDNS Client**: Enable DDNS to access the ASUS router via the DNS name rather than WAN IP address.
 - Server and Host Name: Choose ASUS DDNS or other DDNS. If you want to use ASUS DDNS, fill in the Host Name in the format of xxx.asuscomm.com (xxx is your host name).
 - If you want to use a different DDNS service, click FREE TRIAL and register online first. Fill in the User Name or E-mail Address and Password or DDNS Key fields.

• **Enable wildcard**: Enable wildcard if your DDNS service requires one.

NOTES:

DDNS service will not work under these conditions:

- When the wireless router is using a private WAN IP address (192.168. x.x, 10.x.x.x, or 172.16.x.x), as indicated by a yellow text.
- The router may be on a network that uses multiple NAT tables.

4.3.6 NAT Passthrough

NAT Passthrough allows a Virtual Private Network (VPN) connection to pass through the router to the network clients. PPTP Passthrough, L2TP Passthrough, IPsec Passthrough and RTSP Passthrough are enabled by default.

To enable / disable the NAT Passthrough settings, go to the **Advanced Settings** > **WAN** > **NAT Passthrough** tab. When done, click **Apply**.

	Logout Rebo	ot	English 🔻
Quick Internet	Internet Dual Por	Firmware Version: SSID: <u>ASUS ASUS SG</u> t Virtual Server / Port DMZ DDNS	¥ & ⊡ ← E
General	Connection WAN Triac		Passthrough
🔏 Guest Network	Enable NAT Passthrough to allow a Virtual F	rivate Network (VPN) connection to pass through the router	to the network clients.
AiProtection	L2TP Passthrough	Enable	
Adaptive QoS	IPSec Passthrough	Enable 🔼	
disk Application	RTSP Passthrough	Enable 🔼	
AiCloud 2.0	H.323 Passthrough SIP Passthrough	Enable -	
Advanced Settings	Enable PPPoE Relay	Disable <mark>-</mark>	
🛜 Wireless		Apply	
🔂 LAN			
🔘 WAN			

4.4 IPv6

This wireless router supports IPv6 addressing, a system that supports more IP addresses. This standard is not yet widely available. Contact your ISP if your Internet service supports IPv6.

/ISUS	Logout Reboo	t Carlot	English 🔻
Quick Internet Setup	Operation Mode: <u>Wireless router</u> Fi	irmware Version: SSID: <u>ASUS ASUS +KG</u>	8 9 4 2
General			
品 Network Map	IPv6		
🔏 Guest Network	Configure the IPv6 Internet setting of Router. <u>IPv6_FAQ</u>		
AiProtection	Basic Config		_
	Connection type	Disable 💌	
Adaptive QoS	Auto Configuration Setting		
discrete USB Application	Enable Router Advertisement	Enable 👻	
AiCloud 2.0		Арріу	

To set up IPv6:

- 1. From the navigation panel, go to **Advanced Settings** > **IPv6**.
- 2. Select your **Connection Type**. The configuration options vary depending on your selected connection type.
- 3. Enter your IPv6 LAN and DNS settings.
- 4. Click **Apply**.

NOTE: Please refer to your ISP regarding specific IPv6 information for your Internet service.

4.5 VPN Server

VPN (Virtual Private Network) provides a secure communication to a remote computer or remote network using a public network such as the Internet.

NOTE: Before setting up a VPN connection, you would need the IP address or domain name of the VPN server you are trying to access.

/ISUS	Logout Re	boot		English 🔻		
4.4	Operation Mode: Wireless router	Firmware Version:	SSID: ASUS ASUS_SG	8 6 4 S		
Quick Internet Setup	VPN Server VPN Client					
General	VPN Server - PPTP		PPTP	OpenVPN		
品 Network Map		VEN Selvel - FF IF				
Suest Network	Basic Config					
_	Enable VPN Server					
AiProtection	VPN Details		•			
Adaptive QoS	Network Place (Samba) Support	● Yes © No				
dusb Application	The VPN server allows you to access you					
-	To use the VPN server. Please follow thes (1) Enable the PPTP VPN server					
AiCloud 2.0	(2) Set the IP pool for client IP. (Maximum (3) Set up the username and password for					
Advanced Settings	(4) Open the VPN connection program on					
察 Wireless	(5) Add a new PPTP VPN connection and (6) If your WAN IP address is dynamic,					
wireless	• <u>VPN Server FAQ</u>					
🚮 lan	Username and Password (Max Limit : 16)					
💮 wan	Connection Status User I	Vame	Password	Add / Delete		
	•			•		
🍪 IPv6		No data in :	table.			
VPK		Apply				

To set up access to a VPN server:

- 1. From the navigation panel, go to **Advanced Settings** > **VPN Server**.
- 2. On the Enable VPN Server field, select Yes.
- 3. On the **VPN Details** dropdown list, select **Advanced Settings** if want to configure advanced VPN settings such as broadcast support, authentication, MPPE Encryption, and Client IP address range.
- 4. On the Network Place (Samba) Support field, select Yes.
- 5. Enter the user name and password for accessing the VPN server. Click the 💿 button.
- 6. Click **Apply**.

4.6 Firewall

The wireless router can serve as a hardware firewall for your network.

NOTE: The Firewall feature is enabled by default.

4.6.1 General

To set up basic Firewall settings:

- From the navigation panel, go to Advanced Settings > Firewall > General tab.
- 2. On the Enable Firewall field, select Yes.
- 3. On the **Enable DoS protection**, select **Yes** to protect your network from DoS (Denial of Service) attacks though this may affect your router's performance.
- 4. You can also monitor packets exchanged between the LAN and WAN connection. On the Logged packets type, select **Dropped**, **Accepted**, or **Both**.
- 5. Click Apply.

4.6.2 URL Filter

You can specify keywords or web addresses to prevent access to specific URLs.

NOTE: The URL Filter is based on a DNS query. If a network client has already accessed a website such as http://www.abcxxx.com, then the website will not be blocked (a DNS cache in the system stores previously visited websites). To resolve this issue, clear the DNS cache before setting up the URL Filter.

To set up a URL filter:

- From the navigation panel, go to Advanced Settings > Firewall > URL Filter tab.
- 2. On the Enable URL Filter field, select Enabled.
- 3. Enter a URL and click the 💮 button.
- 4. Click Apply.

4.6.3 Keyword filter

Keyword filter blocks access to webpages containing specified keywords.

/isus	Logout Rebo	ot	English 🔻
ternet	Operation Mode: Wireless router	Firmware Version: SSID: ASUS ASUS_SG	<mark>9</mark> & 🔁 🔶 🖻
Setup	General URL Filter Keyword Filter	Network Services Filter IPv6 Firewall	
General	E' 11 16 1 E'''		
🔠 Network Map	Firewall - Keyword Filter		
🖧 Guest Network	Keyword Filter allows you to block the client Limitations of the filtering function :	s' access to webpages containing the specified keywords	
AiProtection	 Compressed webpages that use HTT Https webpages cannot be filtered. 	P compression technology cannot be filtered. <u>See here</u>	<u>for more details.</u>
Adaptive QoS	Basic Config		
USB Application	Enable Keyword Filter	Enabled O Disabled	
<u>~</u>	Keyword Filter List		
AiCloud 2.0	К	eyword Filter List	Add / Delete
Advanced Settings			Ð
🛜 Wireless			
د الم		Αρρίγ	

To set up a keyword filter:

- From the navigation panel, go to Advanced Settings > Firewall > Keyword Filter tab.
- 2. On the Enable Keyword Filter field, select Enabled.

- 3. Enter a word or phrase and click the **Add** button.
- 4. Click **Apply**.

NOTES:

- The Keyword Filter is based on a DNS query. If a network client has already accessed a website such as http://www.abcxxx.com, then the website will not be blocked (a DNS cache in the system stores previously visited websites). To resolve this issue, clear the DNS cache before setting up the Keyword Filter.
- Web pages compressed using HTTP compression cannot be filtered. HTTPS pages also cannot be blocked using a keyword filter.

4.6.4 Network Services Filter

The Network Services Filter blocks LAN to WAN packet exchanges and restricts network clients from accessing specific web services such as Telnet or FTP.

ISUS	Logout Rebo	ot	English			
Quick Internet	Operation Mode: <u>Wireless</u> router	Firmware Version: SSID: ASUS ASUS	s_ss 💡 ৪ 🕞 🔶 I			
General	General URL Filter Keyword Filter	Network Services Filter IPv6 Firewall				
🏪 Network Map	Firewall - Network Services Filter					
🐕 Guest Network	services.	Network Services filter blocks the LAN to WAN packet exchanges and restricts devices from using specific network vices. example, if you do not want the device to use the Internet service, key in 80 in the destination port. The traffic that uses port				
AiProtection	80 will be blocked.					
🞽 Adaptive QoS	the specified duration, all the clients in LAN					
USB Application		duration, clients in the White List can ONLY us nite List and other network clients will not be al				
AiCloud 2.0						
Advanced Settings	* Remind: The System lime zone is different from					
🛜 Wireless	Network Services Filter					
	Enable Network Services Filter	• Yes O No				
ᠿ lan	Filter table type	Black List				
🜐 wan	Well-Known Applications	User Defined				
1Pv6	Date to Enable LAN to WAN Filter	Mon Tue Wed Thu Fri				
K VPN	Time of Day to Enable LAN to WAN Filter					
S VPN	Date to Enable LAN to WAN Filter					
🔍 Firewall	Time of Day to Enable LAN to WAN Filter					
Administration	Filtered ICMP packet types					
📝 System Log	Network Services Filter Table (Max Lin Source IP Port Range	nit : 32) Destination IP Port Range	Protocol Add / Delete			
💫 Network Tools			тср			
		Apply				
	A Help & Support Manual Utility	FAQ				

To set up a Network Service filter:

- From the navigation panel, go to Advanced Settings > Firewall > Network Service Filter tab.
- 2. On the Enable Network Services Filter field, select Yes.
- 3. Select the Filter table type. **Black List** blocks the specified network services. **White List** limits access to only the specified network services.
- 4. Specify the day and time when the filters will be active.
- 5. To specify a Network Service to filter, enter the Source IP, Destination IP, Port Range, and Protocol. Click the 🕢 button.
- 6. Click **Apply**.

4.6.5 IPv6 Firewall

By default, your ASUS wireless router blocks all unsolicited incoming traffic. The IPv6 Firewall function allows incoming traffic coming from specified services to go through your network.

лs	us	Logout	Rebo	pot			inglish 🔻
_		Operation Mode	: <u>Wireless router</u>	Firmware Version:	SSID: ASUS ASUS_SG	8	
1	Quick Internet Setup	General URL Fi	lter Keyword Filter	Network Services Filt	er IPv6 Firewall		
	General						
品	Network Map	Firewall - IPv6	Firewall				
*	Guest Network	must be specifical	y allowed here.		as well as related inbound traff		
ß	AiProtection	You can leave the for example)	remote IP empty to allow	/ traffic from any remote h	nost. A subnet can also be spe	cified. (2001::1	11:222:333/64
11	Adaptive QoS	Basic Config	_				
		Enable IPv6 Firewa	all	🛛 Yes 🔍 No			
۰	USB Application	Famous Server Lis		Please select			
<u>a</u>	AiCloud 2.0	Inbound Firewall R	ules (Max Limit : 128)	_			
		Service Name	Remote IP/CIDR	Local I	P Port Range	Protocol	Add / Delete
Ac	dvanced Settings					тср 🔻	Ð
00)	Wireless			No data in 1	able.		
්	LAN			Apply			

4.7 Administration

4.7.1 Operation Mode

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

/isus	Logout Reboot	English 🔻
Quick Internet	Operation Mode: Wireless router Firmware Version: SSID: ASUS ASUS 5G	8 ⊡ ♦ 8
	Infermet Operation Mode: Kirztess zouter: Pimware Version: SSID: ASIS ASIS ASIS. A Operation Mode: Kirztess zouter: Pimware Upgrade: Restore/Save/Upload Setting Arcal Administration - Operation Mode Restore/Save/Upload Setting Administration - Operation Mode Restore/Save/Upload Setting Metwork ection we Qo5 pplication	
General		
品 Network Map		
🔏 Guest Network	Router supports several operation modes to meet dimetent requirements. Please select the mode that man	cn your situation.
AiProtection		
Adaptive QoS	wireless network to LAN clients or devices. In this mode, NAT, firewall, and DHCP server are enabled by defa	ult. UPnP and
disb Application	any wired/wireless routers.	
AiCloud 2.0		
Advanced Settings		
察 Wireless		
🔂 LAN		
💮 wan		
🚳 ІРV6	Save	

To set up the operating mode:

- 1. From the navigation panel, go to **Advanced Settings** > **Administration** > **Operation Mode** tab.
- 2. Select any of these operation modes:
 - Wireless router mode (default): In wireless router mode, the wireless router connects to the Internet and provides Internet access to available devices on its own local network.
 - Access Point mode: In this mode, the router creates a new wireless network on an exising network.
 - **Media Bridge**: This setup requires two wireless routers. The second router serves as a media bridge where multiple devices such as Smart TVs and gaming consoles can be connected via ethernet.

3. Click Apply.

NOTE: The router will reboot when you change the modes.

4.7.2 System

The **System** page allows you to configure your wireless router settings.

To set up the System settings:

- 1. From the navigation panel, go to **Advanced Settings** > **Administration** > **System** tab.
- 2. You can configure the following settings:
 - **Change router login password**: You can change the password and login name for the wireless router by entering a new name and password.
 - Time Zone: Select the time zone for your network.
 - **NTP Server**: The wireless router can access a NTP (Network time Protocol) server in order to synchronize the time.
 - Enable Telnet: Click Yes to enable Telnet services on the network. Click No to disable Telnet.
 - Authentication Method: You can select HTTP, HTTPS, or both protocols to secure router access.
 - Enable Web Access from WAN: Select Yes to allow devices outside the network to access the wireless router GUI settings. Select No to to prevent access.

- Allow only specified IP address: Click Yes if you want to specify the IP addresses of devices that are allowed access to the wireless router GUI settings from WAN.
- Client List: Enter the WAN IP addresses of networking devices allowed to access the wireless router settings. This list will be used if you clicked Yes in the Only allow specific IP item.
- 3. Click **Apply**.

4.7.3 Firmware Upgrade

NOTE: Download the latest firmware from the ASUS website at <u>http://www.asus.com</u>

To upgrade the firmware:

- 1. From the navigation panel, go to **Advanced Settings** > **Administration** > **Firmware Upgrade** tab.
- 2. In the **New Firmware File** field, click **Browse** to locate the downloaded file.
- 3. Click **Upload**.

NOTES:

- When the upgrade process is complete, wait for some time for the system to reboot.
- If the upgrade process fails, the wireless router automatically enters rescue mode and the power LED indicator on the front panel starts flashing slowly. To recover or restore the system, refer to section 5.2 Firmware Restoration.

4.7.4 Restore/Save/Upload Setting

To restore/save/upload wireless router settings:

- 1. From the navigation panel, go to Advanced Settings > Administration > Restore/Save/Upload Setting tab.
- 2. Select the tasks that you want to do:
 - To restore to the default factory settings, click **Restore**, and click **OK** in the confirmation message.
 - To save the current system settings, click **Save**, navigate to the folder where you intend to save the file and click **Save**.
 - To restore from a saved system settings file, click **Browse** to locate your file, then click **Upload**.

If issues occur, upload the latest firmware version and configure new settings. Do not restore the router to its default settings.

4.8 System Log

System Log contains your recorded network activities.

NOTE: System log resets when the router is rebooted or powered off.

To view your system log:

- From the navigation panel, go to Advanced Settings > System Log.
- 2. You can view your network activities in any of these tabs:
 - General Log
 - DHCP Leases
 - Wireless Log
 - Port Forwarding
 - Routing Table

76	545	Logout Reboot	English 🔻
+*	Quick Internet Setup	Operation Mode: <u>Wireless router</u> Firmware Version: SSID: <u>ASUS_ASUS_SG</u>	8 🔂 🔶 🗊
_		General Log DHCP leases Wireless Log Port Forwarding Routing Table	
	General		
品	Network Map	System Log - General Log This page shows the detailed system's activities.	
*	Guest Network	I ma page shows the detailed systems accoulds. System Time Sat, Jan 01 00:49:51 2011	
ß	AiProtection	Uptime 0 days 0 hours 49 minutes 50 seconds	
<u>*</u>	Adaptive QoS	Jan 1 00:31:27 kernel: ethl: Broadcom BCM4331 802.11 Wireless Controller 6.30.102.9 (r36617 Jan 1 00:31:27 kernel: eth2: Broadcom BCM4360 802.11 Wireless Controller 6.30.102.9 (r36617 Jan 1 00:31:27 kernel: device ethl entered promiseruous mode	
*	USB Application	Jan 1 00:31:27 kernel: br0: port 2 (ethl) entering listening state Jan 1 00:31:27 kernel: vlc_phy_cal_init_acphy: NOT Implemented Jan 1 00:31:27 kernel: br0: port 2 (ethl) entering learning state	
	AiCloud 2.0	Jan 1 00:31:27 kernel: br0: topology change detected, propagating Jan 1 00:31:27 kernel: br0: port 2(eth) entering forwarding state Jan 1 00:31:27 kernel: device eth2 entered promiscuous mode Jan 1 00:31:27 kernel: br0: port 3(eth) entering listening state	
A	dvanced Settings	Jan 1 00:31:27 kernel: bx0: port 3(eth2) entering learning state Jan 1 00:31:27 kernel: device v10.1 entered promiscuous mode Jan 1 00:31:27 kernel: bx0: port 4(v10.1) entering listening state Jan 1 00:31:27 kernel: bx0: port device the prompation	
00	Wireless	Jan 1 00:31:27 kernel: br0: topology change detected, propagating Jan 1 00:31:27 kernel: br0: port 3(eth2) entering forwarding state Jan 1 00:31:27 kernel: br0: port 4(w10.1) entering learning state Jan 1 00:31:27 kernel: br0: poot Joogy change detected, propagating	
ជ	LAN	Jan 1 00:31:27 kernel: br0: port 4(w10.1) entering forwarding state Jan 1 00:31:39 dnemseq-dhcp[510]: DHCPERQUEST(br0) 192.168.1.60 e4:6a:b7:89:8f:97 Jan 1 00:31:39 dnmmaeq-dhcp[510]: DHCPACK(br0) 192.168.1.60 e4:6a:b7:89:8f:97 android-b9d80	832df634239
۲	WAN	Jan 1 00:32:12 dramasq-dhep[510]: DRCPIND90(htp) 192.168.1.197 10:bf.48:4c:b9:f0 Jan 1 00:32:12 dramasq-dhep[510]: DRCPKCh(bc) 32:168.1.197 10:bf.48:4c:b9:f0 Jan 1 00:33:08 dramasq-dhep[510]: DRCPKCh(bc) 32:168.1.19 b0:ec:71.ac:f7:96 Jan 1 00:33:08 dramasq-dhep[510]: DRCPKCh(bc) 32:168.1.189 b0:ec:71.ac:f7:96	
۲	IPv6	Jan 1 00:33:34 dnsmasq-dhcp[510]: DHCPREQUEST bb:0) 192.168.1.3 3c:d0:f8:bb:11:7d Jan 1 00:33:34 dnsmasq-dhcp[510]: DHCPRACK(bc0) 192.168.1.3 3c:d0:f8:bb:11:7d 1Phone4s	
×	VPN Server	Clear Save Refresh	• //
Q	Firewall	Save Kelesii	

4.9 Smart Connect

Smart Connect is designed to automatically steer clients to one of three radios (one 2.4 GHz, one lowband 5 GHz, one high-band 5 GHz) to maximize total wireless throughput use.

4.9.1 Setting up Smart Connect

You can enable Smart Connect from the Web GUI through the following two ways:

- Via the Wireless screen
- 1. On your web browser, manually key in the wireless router's default IP address: <u>http://router.asus.com</u>.
- 2. On the login page, key in the default user name (**admin**) and password (**admin**) and click **OK**. The QIS page launches automatically.
- 3. From the navigation panel, go to **Advanced Settings** > **Wireless** > **General** tab.
- 4. Move the slider to **ON** in the **Enable Smart Connect** field. This function automatically connect the clients in your network to the appropriate band for optimal speed.

• Quick Internet Setup	Operation Mode: <u>wincless route</u>	Firmware Version: SSID: Asus Asus SG 🛛 🛂 🖄 🕞 🔶 🖻
Semp	General WPS WDS Wireless M	IAC Filter RADIUS Setting Professional
General	Wireless - General	
Network Map	Set up the wireless related information	below
Guest Network	Enabled Smart Connect	OFF
AiProtection	Band	2.4GHz
Adaptive QoS	SSID	
Traffic Analyzer	Hide SSID	● Yes: ◎ No
	Wireless Mode	Auto Dptmized for Xbox 🖬 big Protection
USB Application	Channel bandwidth	20/40 мнz +
AiCloud 2.0	Control Channel	AUTO
	Extension Channel	AUEO
Advanced Settings	Authentication Method	WPA2-Personal
and the second	WPA Encryption	AES. •
S LAN	WPA Pre-Shared Key	
WAN	Protected Management Frames	Disable
IPv6	Network Key Rotation Interval	

- Via the Network Map screen
- 1. Follow the first two steps in the above section to log into the Web GUI.
- 2. From the navigation panel, go to **General** > **Network Map**.
- 3. On the Network Map screen and under **System status**, move the slider to **ON** in the **Smart Connect** field.

System Status	
2.4GHz 5GHz-1 5GHz-2 Stat	us
Smart Connect: OFF	
Wireless name(SSID)	
ASUS	
Authentication Method	
WPA2-Personal	
WPA Encryption	
AES •	
WPA-PSK key	
Apply	7

After Smart Connect is enabled, you can check Smart Connect status on the Network Map screen. If you want to change more wireless configurations, click **On/Off** to go to the settings page.



When Smart Connect is enabled, your router will automatically adjust the wireless mode, channel bandwidth, control bandwidth and extension channel settings according to your networking conditions. You can check the changes from the Wireless screen.

Quick Internet	Operation Mode: <u>wireless router</u> F SSID: <u>Alen-AC68</u> General WPS WDS Wireless MAC F		
General	Wireless - General	ner voluo seuny rivessona	
Retwork Map	Set up the wireless related information below.		
Guest Network	Enabled Smart Connect	ON	
AlProtection	SSID	Alen-AC3200	
Adaptive QoS	Hide SSID	● Yes Ø No	
Traffic Analyzer	Wireless Mode	Auto \$	
	Channel bandwidth	Auto :	
USB Application	Control Channel	Auto ¢	
AlCloud 2.0	Extension Channel	Auto ¢	
	Authentication Method	WPA2-Personal +	
Advanced Settings	WPA Encryption		
🛜 Wireless	WPA Pre-Shared Key	qwas1234	
🖓 LAN	Protected Management Frames	Disable \$	
💮 wan	Network Key Rotation Interval	3600	
IPv6		Apply	

4.9.2 Smart Connect Rule

ASUSWRT provides default condition settings to trigger switching mechanism. You can also change the trigger conditions according to your networking surroundings. To change the settings, go to the Smart Connect Rule tab on the Network Tools screen.

Quick Internet	SSID: ASUSPM-Public		version: <u>3.0.0.4.378_4129</u>	28 🖻 🔶 B
	Network Analysis Net	stat Wake on LAN	Smart Connect Rule	
General	Wireless - Smart Connect Rule			
Retwork Map	Set up the Smart Connect related information below.			
🕵 Guest Network	Steering Trigger Condition			
AlProtection	Band	2.4GHz	5GHz-1	5GHz-2
<u> </u>	Bandwidth Utilization	0%		0%
Adaptive QoS	Enable Load Balance	🔿 Yes 💿 No	🔿 Yes 💿 No	🔿 Yes 💿 No
Traffic Analyzer	RSSI	Greater ‡ -58	dBm Less \$ 0	dBm Less 🛟 0 dBm
USB Application	PHY Rate Less	Disable	• • • • •	Mbps < 433 Mbps
AlCloud 2.0	PHY Rate Greater	> 110 N	Abps	13 Mbps Disable
	VHT			
Advanced Settings	STA Selection Policy			
🛜 Wireless	RSSI	Greater ‡ -58	dBm Less \$ -76	dBm Less 🛟 0 dBm
🕼 LAN	PHY Rate Less	Disable	Disa	ble 🗾 🛁 Kara Kara Kara Kara Kara Kara Kara Kar
💮 wan	PHY Rate Greater	>110 M	tbps	3 Mbps Disable
	VHT			A11 ÷
	Interface Select and Qua	lify Procedures		
VPN	Target Band	1: 5GHz-2 \$ 2: 5GHz	z-1 ‡ 1: 5GHz-2 ‡ 2: 2	.4GHz \$ 1: 5GHz-1 \$ 2: 2.4GHz \$
Firewall	Bandwidth Utilization	0%	—— — 60%	0%
Administration	Bounce Detect			
	Window Time	180 seconds		
System Log	Counts			
Network Tools	Dwell Time	1800 seconds		
		D	efault Apply	

Smart Connect Rule controls are divided into four sections:

- Steering Trigger Condition
- STA Selection Policy
- Interface Select and Qualify Procedures
- Bounce Detect

Steering Trigger Condition

This set of controls sets the criteria to initiate band steering.

Band	2.4GHz	5GHz-1	5GHz-2
Bandwidth Utilization	0%	 80%	0%
Enable Load Balance	🔵 Yes 💽 No	🔿 Yes 💿 No	•Yes •No
RSSI	Greater ‡ -58 dBm	Less 💠 0 dBm	Less 🛟 0 dBm
PHY Rate Less	Disable	54 Mbps	433 Mbps
PHY Rate Greater	> 110 Mbps		Disable
VHT	A11 \$	¢ [[A]]	¢ 11A

Bandwidth Utilization

When bandwidth use exceeds this percentage, steering will be initiated. Broadcom's documentation does not say how utilization is measured.

Enable Load Balance

This controls load balancing. Broadcom's documentation does not indicate how balancing is done.

RSSI

If the received signal level of any associated client meets this criteria, steering will be triggered.

• PHY Rate Less / PHY Rate Greater

These controls determine STA link rates that trigger band steering.

• VHT

This controls determines how 802.11ac and non-ac clients are handled.

- ALL (default) means any type of client can trigger steering.
- AC only means a client must support 802.11ac to trigger steering.
- **Not-allowed** means only non-802.11ac clients will trigger steering, i.e. 802.11a/b/g/n.

STA Selection Policy

Once steering has been triggered, ASUSWRT will follow the STA Selection Policy to select a client(STA) that is going to be steered to the most appropriate band.

RSSI	Greater ‡ -58 dBm	Less 💠 -76 dBm	Less 🛟 0 dBm
PHY Rate Less	Disable	Disable	<433 Mbps
PHY Rate Greater	> 110 Mbps	> 433 Mbps	Disable
VHT	A11 +	A11 ÷	A11 ÷

Interface Select and Qualify Procedures

These controls determine where the steered client will end up. The **Target Band** controls specify first and second choice of steering targets. Clients meeting the STA selection policy criteria for the radio will be steered to the first target if that radio's **Bandwidth Utilization** is less than the set value. Otherwise, the client will be sent to the second **Target Band** radio.



Bounce Detect

This set of controls determines how often a client can be steered. This is intended to prevent clients from constantly moving around. It does not, however, prevent clients from disconnecting on their own, or counting them as bounces if they do. Each client can be steered N **Counts** within the **Window Time**. When the Count limit is hit, the client will not be steered again for **Dwell Time**.

Bounce Detect	
Window Time	180 seconds
Counts	
Dwell Time	1800 seconds

5 Utilities

NOTES:

- Download and install the wireless router's utilities from the ASUS website:
 - Device Discovery v1.4.7.1 at <u>http://dlcdnet.asus.com/pub/ASUS/ LiveUpdate/Release/Wireless/Discovery.zip</u>
 - Firmware Restoration v1.9.0.4 at <u>http://dlcdnet.asus.com/pub/</u> <u>ASUS/LiveUpdate/Release/Wireless/Rescue.zip</u>
 - Windows Printer Utility v1.0.5.5 at <u>http://dlcdnet.asus.com/pub/</u> <u>ASUS/LiveUpdate/Release/Wireless/Printer.zip</u>
- The utilities are not supported on MAC OS.

5.1 Device Discovery

Device Discovery is an ASUS WLAN utility that detects an ASUS wireless router device, and allows you to configure the wireless networking settings.

To launch the Device Discovery utility:

 From your computer's desktop, click
 Start > All Programs > ASUS Utility > RT-AC5300 Wireless Router > Device Discovery.

NOTE: When you set the router to Access Point mode, you need to use Device Discovery to get the router's IP address.

5.2 Firmware Restoration

Firmware Restoration is used on an ASUS Wireless Router that failed during its firmware upgrading process. It uploads the firmware that you specify. The process takes about three to four minutes.

limware Restor	ation	×
<u>F</u> ilename:		<u>B</u> rowse
Status After locating t	he firmware file, click Upload.	
	<u>U</u> pload <u>C</u> lose	

IMPORTANT: Launch the rescue mode on the router before using the Firmware Restoration utility.

NOTE: This feature is not supported on MAC OS.

To launch the rescue mode and use the Firmware Restoration utility:

- 1. Unplug the wireless router from the power source.
- 2. Hold the Reset button at the rear panel and simultaneously replug the wireless router into the power source. Release the Reset button when the Power LED at the front panel flashes slowly, which indicates that the wireless router is in the rescue mode.

3. Set a static IP on your computer and use the following to set up your TCP/IP settings:

IP address: 192.168.1.x

Subnet mask: 255.255.255.0

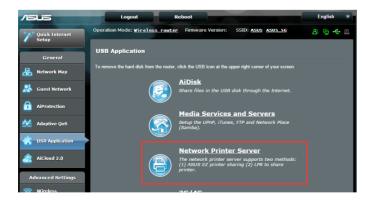
- From your computer's desktop, click
 Start > All Programs > ASUS Utility RT-AC5300 Wireless
 Router > Firmware Restoration.
- 5. Specify a firmware file, then click **Upload**.

NOTE: This is not a firmware upgrade utility and cannot be used on a working ASUS Wireless Router. Normal firmware upgrades must be done through the web interface. Refer to **Chapter 4: Configuring the Advanced Settings** for more details.

5.3 Setting up your printer server

5.3.1 ASUS EZ Printer Sharing

ASUS EZ Printing Sharing utility allows you to connect a USB printer to your wireless router's USB port and set up the print server. This allows your network clients to print and scan files wirelessly.



NOTE: The print server function is supported on Windows® XP, Windows® Vista, and Windows® 7.

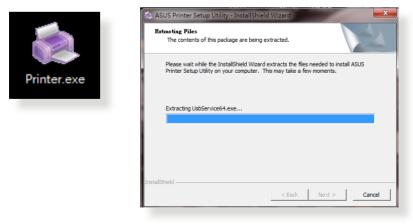
To set up the EZ Printer sharing mode:

- 1. From the navigation panel, go to **General** > **USB Application** > **Network Printer Server**.
- 2. Click **Download Now!** to download the network printer utility.

Quick Internet	Operation Mode: <u>Wireless router</u> Firmware Version: SSID: <u>ASUS ASUS SG</u>	8 © \$ 8
General	Network Printer Server	5
Hetwork Map	The network printer server supports two methods: (1) ASUS EZ printer sharing (2) LPR to share printer.	
🔏 Guest Network	ASUS EZ printer sharing (Windows OS only) FAQ Download Now! Use LPR protocol to sharing printing FAQ (Windows)	
AiProtection	Use LPR protocol to sharing printing FAQ (MAC)	
Adaptive QoS		
K USB Application	•	

NOTE: Network printer utility is supported on Windows[®] XP, Windows[®] Vista, and Windows[®] 7 only. To install the utility on Mac OS, select **Use LPR protocol for sharing printer**.

3. Unzip the downloaded file and click the Printer icon to run the network printer setup program.



4. Follow the onscreen instructions to set up your hardware, then click **Next**.

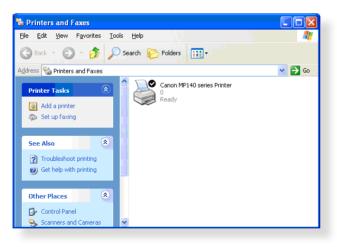


- 5. Wait a few minutes for the initial setup to finish. Click **Next**.
- 6. Click **Finish** to complete the installation.

7. Follow the Windows[®] OS instructions to install the printer <u>driver</u>.



8. After the printer's driver installation is complete, network clients can now use the printer.

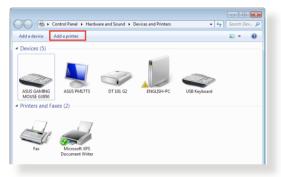


5.3.2 Using LPR to Share Printer

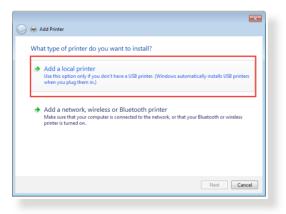
You can share your printer with computers running on Windows[®] and MAC operating system using LPR/LPD (Line Printer Remote/ Line Printer Daemon).

Sharing your LPR printer To share your LPR printer:

1. From the Windows[®] desktop, click **Start** > **Devices and Printers** > **Add a printer** to run the **Add Printer Wizard**.



2. Select Add a local printer and then click Next.



3. Select Create a new port then set Type of Port to Standard TCP/IP Port. Click New Port.

🖣 🖶 Add Printer	<u>-</u> *
Choose a printer port	
A printer port is a type of cor	nnection that allows your computer to exchange information with a printer.
Use an existing port:	LPT1: (Printer Port)
Oreate a new port:	
Type of port:	Standard TCP/IP Port
	Net Cancel

4. In the **Hostname or IP address** field, key in the IP address of the wireless router then click **Next**.

🚱 🖶 Add Printer		x
Type a printer hostname or IP address		
Device type:	TCP/IP Device	Ŧ
Hostname or IP address:	192.168.1.1	
Port name:	192.168.1.1	
Query the printer and auto	matically select the driver to use	
	Next	Cancel

- 5. Select **Custom** then click **Settings**.
 - Add Printer

 Additional port information required

 The device is not found on the network. Be sure that:

 1. The device is not formation required

 The device is not formation the network. Be sure that:

 2. The device is properly configured.

 3. The device is properly configured.

 4. The device is not correct. Gick Back to return to the previous page. Then correct the
 address in the previous page is correct.

 4. Standard Eventor Eventor the network. If you are sure the address is correct, select the
 device type below.

 5. Device Type

 6. Standard Eventor Network Card

 6. Custom
 5. Standard
 1. Net
 Cancel
- 6. Set **Protocol** to **LPR**. In the **Queue Name** field, key in **LPRServer** then click **OK** to continue.

Configure Standard TCP/IP Por	t Monitor
Port Settings	
Port Name:	192.168.1.1
Printer Name or IP Address:	192.168.1.1
Protocol	
🔘 Raw	LPR
Raw Settings	
Port Number:	9100
LPR Settings	
Queue Name:	LPRServer
LPR Byte Counting Ena	bled
SNMP Status Enabled	
Community Name:	public
SNMP Device Index:	1
	OK Cancel

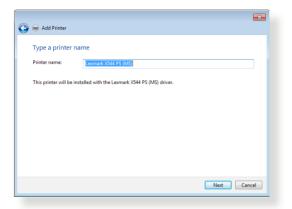
7. Click **Next** to finish setting up the standard TCP/IP port.

😋 🜧 Add Printer	
Additional port	information required
 The device is to The network is The device is p The address on If you think the address 	connected. Topely configured. the previous page is correct. dress in not correct, click Back to return to the previous page. Then correct the m another search on the network. If you are sure the address is correct, select the
Device Type Standard © Custom	Generic Network Card Settings_
	Next Cancel

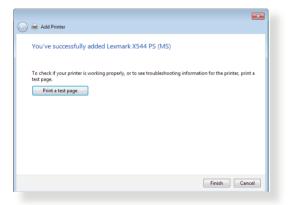
8. Install the printer driver from the vendor-model list. If your printer is not in the list, click **Have Disk** to manually install the printer drivers from a CD-ROM or file.

Install the printer driver Choose your printer from the list. Click Windows Update to see more models. To install the driver from an installation CD, click Have Disk. Manufacturer Printes Printes Pri	0 -		×
Choose your printer from the list. Click Windows Update to see more models. To install the driver from an installation CD, click Have Disk. Manufacturer Printers Lamer Lamer Lemark X422 (MS) Lemark X423 PS (MS) Lemark X423 (MS) Lemark X424 (MS) More soft More More More More More Soft More More More More More More More More	🌀 🖶 Add Printer		
Workers Construction Lanier Construction Lexmark X422 (MS) Lexmark X425 PS (MS) Lexmark X44 PS (MS) Lexmark X44 PS (MS) Line This driver is digitally signed. Tell me why driver signing is important	Choose your pri	inter from the list. Click Windows Update to see more models.	
	Kyocera Lanier Lexmark Microsoft NDC	y signed.	•
Next Cancel		Next Cance	1

9. Click **Next** to accept the default name for the printer.



10. Click **Finish** to complete the installation.



5.4 Download Master

Download Master is a utility that helps you download files even while your laptops or other devices are switched off.

NOTE: You need a USB device connected to the wireless router to use Download Master.

To use Download Master:

1. Click **General** > **USB application** > **Download Master** to download and install the utility automatically.

NOTE: If you have more than one USB drive, select the USB device you want to download the files to.

- 2. After the download process is finished, click the Download Master icon to start using the utility.
- 3. Click Add to add a download task.



4. Select a download type such as BitTorrent, HTTP, or FTP. Provide a torrent file or a URL to begin downloading.

NOTE: For details on Bit Torrent, refer to section **5.4.1 Configuring the Bit Torrent download settings**.

- Task
 General Setting

 Settings
 Refresh rate

 Settings
 Apply

 Ceneral
 Settings

 Settings
 Apply
- 5. Use the navigation panel to configure the advanced settings.

5.4.1 Configuring Bit Torrent download settings

/isus		
Task	Bit Torrent Setting	
🧾 Task	Port	
Settings	Use the default port Use the following port	
32	Incoming port	
General General	Speed Limits:	
	Maximum download speed:	KB/S
Bit Torrent	Maximum upload speed:	KB/S
	BitTorrent Network setting	
🔊 мав	BitTorrent protocol encryption	Encryption disabled
	Max peers allowed per torrent	100
	DHT network	Enable DHT to activate trackless torrent download.
		Арріу

To configure BitTorrent download settings:

- 1. From Download Master's navigation panel, click **Bit Torrent** to launch the **Bit Torrent Setting** page.
- 2. Select a specific port for your download task.
- 3. To prevent network congestion, you can limit the maximum upload and download speeds under **Speed Limits**.
- 4. You can limit the maximum number of allowed peers and enable or disable file encryption during downloads.

5.4.2 NZB settings

You can set up a USENET server to download NZB files. After entering USENET settings, **Apply**.

/ISUS	CALL OF THE OWNER	
Task		
Task	NZB Setting	
Task	Setup USENET server to download NZB files:	
Settings	USENET Server	
12	USENET Server Port	119
General	Maximum download speed	KB/S
Bit Torrent	SSL/TLS connection only	
3	User name	
NZB	Password	
	Confirm Password	
	Number of connections per NZB tasks	2
		Αρρίγ
		2011 ASUSTeK Computer Inc. All rights reserved.

6 Troubleshooting

This chapter provides solutions for issues you may encounter with your router. If you encounter problems that are not mentioned in this chapter, visit the ASUS support site at:

<u>http://support.asus.com/</u> for more product information and contact details of ASUS Technical Support.

6.1 Basic Troubleshooting

If you are having problems with your router, try these basic steps in this section before looking for further solutions.

Upgrade Firmware to the latest version.

- Launch the Web GUI. Go to Advanced Settings > Administration > Firmware Upgrade tab. Click Check to verify if the latest firmware is available.
- 2. If the latest firmware is available, visit the ASUS global website at <u>http://www.asus.com/Networks/Wireless_Routers/</u><u>RTAC5300/#download</u> to download the latest firmware.
- 3. From the **Firmware Upgrade** page, click **Browse** to locate the firmware file.
- 4. Click **Upload** to upgrade the firmware.

Restart your network in the following sequence:

- 1. Turn off the modem.
- 2. Unplug the modem.
- 3. Turn off the router and computers.
- 4. Plug in the modem.
- 5. Turn on the modem and then wait for 2 minutes.
- 6. Turn on the router and then wait for 2 minutes.
- 7. Turn on computers.

Check if your Ethernet cables are plugged properly.

- When the Ethernet cable connecting the router with the modem is plugged in properly, the WAN LED will be on.
- When the Ethernet cable connecting your powered-on computer with the router is plugged in properly, the corresponding LAN LED will be on.

Check if the wireless setting on your computer matches that of your computer.

 When you connect your computer to the router wirelessly, ensure that the SSID (wireless network name), encryption mehtod, and password are correct.

Check if your network settings are correct.

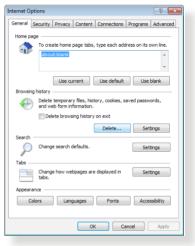
- Each client on the network should have a valid IP address. ASUS recommends that you use the wireless router's DHCP server to assign IP addresses to computers on your network.
- Some cable modem service providers require you to use the MAC address of the computer initially registered on the account. You can view the MAC address in the web GUI, Network Map > Clients page, and hover the mouse pointer over your device in Client Status.



6.2 Frequently Asked Questions (FAQs)

I cannot access the router GUI using a web browser

- If your computer is wired, check the Ethernet cable connection and LED status as described in the previous section.
- Ensure that you are using the correct login information. The default factory login name and password is "admin/admin".
 Ensure that the Caps Lock key is disabled when you enter the login information.
- Delete the cookies and files in your web browser. For Internet Explorer 8, follow these steps:
 - Launch Internet Explorer 8, then click Tools > Internet Options.
 - In the General tab, under Browsing history, click Delete..., select Temporary Internet Files and Cookies then click Delete.



NOTES:

- The commands for deleting cookies and files vary with web browsers.
- Disable proxy server settings, cancel the dial-up connection, and set the TCP/IP settings to obtain IP addresses automatically. For more details, refer to Chapter 1 of this user manual.
- Ensure that you use CAT5e or CAT6 ethernet cables.

The client cannot establish a wireless connection with the router.

NOTE: If you are having issues connecting to 5Ghz network, make sure that your wireless device supports 5Ghz or features dual band capabilities.

- Out of Range:
 - Move the router closer to the wireless client.
 - Try to adjust antennas of the router to the best direction as described in section **1.4 Positioning your router**.
- DHCP server has been disabled:
 - Launch the web GUI. Go to General > Network Map> Clients and search for the device that you want to connect to the router.
 - If you cannot find the device in the Network Map, go to Advanced Settings > LAN > DHCP Server, Basic Config list, select Yes on the Enable the DHCP Server.

/ISUS	Logout Reboo	t de la companya de la	English 🔻
Quick Internet	Operation Mode: <u>Wireless router</u> Fi	rmware Version: SSID: ASUS ASUS_SG	8 👳 🗲 🖻
	LAN IP DHCP Server Route IPTV	Switch Control	
General	LAN - DHCP Server		
品 Network Map			
🞊 Guest Network		is a protocol for the automatic configuration used on IP net orms the client of the of DNS server IP and default gateway DHCP_list(list_limit:32)_FAQ	
AiProtection	Basic Config		
Adaptive QoS	Enable the DHCP Server	© Yes ● No	
Le Haspare gas	Router's Domain Name		
USB Application	IP Pool Starting Address		
AiCloud 2.0	IP Pool Ending Address		
Advanced Settings	Lease Time		
👳 Wireless	Default Gateway		
v ot	DNS and WINS Server Setting		
🞧 LAN	DNS Server		
💮 wan	WINS Server		
6 IPv6	Enable Manual Assignment		
	Enable Manual Assignment	● Yes O No	
VPN Server	Manually Assigned IP around the DHCP list(lis	st limit:32)	
💭 Firewall	MAC address	IP Address	Add / Delete
Administration			Ð
_		No data in table.	
System Log		Apply	

SSID has been hidden. If your device can find SSIDs from other routers but cannot find your router's SSID, go to Advanced Settings > Wireless > General, select No on Hide SSID, and select Auto on Control Channel.

/ISUS	Logout Reboo	English 🔻
Quick Internet	Operation Mode: <u>Wireless router</u> Fi	
General	Wireless - General Set up the wireless related information below	
🔉 Guest Network	Frequency	2.4GHz 🔽
AiProtection	SSID	
Adaptive QoS	Hide SSID	● Yes © No
distance use Application	Wireless Mode	Auto 💌 🗹 blg Protection
	Channel bandwidth	20/40 MHz 🔽
AiCloud 2.0	Control Channel	Auto 🔽
Advanced Settings	Authentication Method	Open System
察 Wireless	WEP Encryption	None
🔂 LAN		Αρρίγ

- If you are using a wireless LAN adapter, check if the wireless channel in use conforms to the channels available in your country/area. If not, adjust the channel, channel bandwidth, and wireless mode.
- If you still cannot connect to the router wirelessly, you can reset your router to factory default settings. In the router GUI,click Administration > Restore/Save/Upload Setting and click Restore.

/ISUS	Logout Reb	oot	English
Quick Internet	Operation Mode: <u>Wireless router</u>	Firmware Version: SSID: ASUS ASUS_SG	8 🗟 🔶 🗉
Setup	Operation Mode System Firmware	e Upgrade Restore/Save/Upload Setting	
General			
品 Network Map	Administration - Restore/Save/U		
•2	This function allows you to save current se	ttings of Router to a file, or load settings from a file.	
Guest Network	Factory default	Restore	
AiProtection	Save setting	Save	
Adaptive QoS	Restore setting	Upload Choose File No file chosen	
dis Application			
AiCloud 2.0			

Internet is not accessible.

- Check if your router can connect to your ISP's WAN IP address. To do this, launch the web GUI and go to General> Network Map, and check the Internet Status.
- If your router cannot connect to your ISP's WAN IP address, try restarting your network as described in the section **Restart your network in following sequence** under **Basic Troubleshooting**.



- The device has been blocked via the Parental Control function. Go to General > Parental Control and see if the device is in the list. If the device is listed under Client Name, remove the device using the Delete button or adjust the Time Management Settings.
- If there is still no Internet access, try to reboot your computer and verify the network's IP address and gateway address.
- Check the status indicators on the ADSL modem and the wireless router. If the WAN LED on the wireless router is not ON, check if all cables are plugged properly.

You forgot the SSID (network name) or network password

- Setup a new SSID and encryption key via a wired connection (Ethernet cable). Launch the web GUI, go to Network Map, click the router icon, enter a new SSID and encryption key, and then click Apply.
- Reset your router to the default settings. Launch the web GUI, go to Administration > Restore/Save/Upload Setting, and click Restore. The default login account and password are both "admin".

How to restore the system to its default settings?

 Go to Administration > Restore/Save/Upload Setting, and click Restore.

The following are the factory default settings:

User Name:	admin
Password:	admin
Enable DHCP:	Yes (if WAN cable is plugged in)
IP address:	http://router.asus.com (or 192.168.1.1)
Domain Name:	(Blank)
Subnet Mask:	255.255.255.0
DNS Server 1:	192.168.1.1
DNS Server 2:	(Blank)
SSID (2.4GHz):	ASUS
SSID (5GHz):	ASUS_5G

Firmware upgrade failed.

Launch the rescue mode and run the Firmware Restoration utility. Refer to section **5.2 Firmware Restoration** on how to use the Firmware Restoration utility.

Cannot access Web GUI

Before configuring your wireless router, do the steps described in this section for your host computer and network clients.

A. Disable the proxy server, if enabled.

Windows[°] 7

- Click Start > Internet Explorer to launch the browser.
- Click Tools > Internet options > Connections tab > LAN settings.



- 3. From the Local Area Network (LAN) Settings screen, untick **Use a proxy server for your LAN**.
- 4. Click OK when done.

utomatic configuration utomatic configuration m se of manual settings, di			
Automatically detect s	ettings		
Use automatic configu	ration script		
Address			
roxy server			
Use a proxy server for dial-up or VPN connect		e settings	will not apply to
		e settings	will not apply to Advanced
dial-up or VPN connect	Port:	80	7,
dial-up or VPN connect	Port:	80	7,
dial-up or VPN connect	Port:	80	7,

MAC OS

- From your Safari browser, click Safari
 Preferences > Advanced > Change Settings...
- From the Network screen, deselect FTP Proxy and Web Proxy (HTTP).
- 3. Cllick **Apply Now** when done.

	Location:	Automatic	:	
	Show:	Built–in Ethernet	:	
	TCP/IP PPPo	E AppleTalk Prox	ies Ethernet	
	v server to confid	aure: FTP Pro>	y Server	
FTP Pro:	(y xy (HTTP)	0		
	xy (HTTP) Veb Proxy (HTTPS)	Proxy	server requires pass	vord
	ng Proxy (RTSP)	U .	Set Password	
SOCKS F		Ç.		
Gopher	Proxy	Ţ		
	y settings for			
	& Domains:			
these Hosts				
these Hosts				
	ve FTP Mode (PAS			

NOTE: Refer to your browser's help feature for details on disabling the proxy server.

B. Set the TCP/IP settings to automatically obtain an IP address.

Windows[°] 7

- 1. Click Start > Control Panel > Network and Internet > Network and Sharing Center > Manage network connections.
- 2. Select Internet Protocol Version 4 (TCP/IPv4) or Internet Protocol Version 6 (TCP/IPv6), then click Properties.

Connect using:		
Realtek PCIe GI	BE Family Controller	
		Configure
This connection uses t		
Client for Micr		
QoS Packet S	scheduler er Sharing for Microsoft	Networks
	IS 6.X SPR Protocol E	
	col Version 6 (TCP/IP)	
Internet Proto	col Version 4 (TCP/IP)	(4)
💌 🛥 Link-Layer To	pology Discovery Map	
 ✓ unk-Layer To ✓ Link-Layer To 	pology Discovery Res	ponder
💌 🛥 Link-Layer To		
A Link-Layer To A Link-Layer To Install Description	pology Discovery Res Uninstall	Properties
	Uninstall	Properties
A Link-Layer To A Link-Layer To Instal Description Transmission Contro wide area network p	pology Discovery Res Uninstall	Properties
A Link-Layer To A Link-Layer To Instal Description Transmission Contro wide area network p	Uninstall	Properties
	Uninstall	Properties

3. To obtain the IPv4 IP settings automatically, tick **Obtain an IP address automatically**.

> To obtain the IPv6 IP settings automatically, tick **Obtain an IPv6 address automatically**.

4. Click **OK** when done.

General	Alternate Configuration				
this cap	n get IP settings assigned autor ability. Otherwise, you need to appropriate IP settings.				
o Oł	otain an IP address automatica	ly.			
O Us	e the following IP address:	_			
IP ac	ldress:				
Subr	et mask:		10	×.	
Default gateway:		i.	140	a.	
() Oł	otain DNS server address autor	natically			11
O Us	e the following DNS server add	lresses:			
Prefe	erred DNS server:				
Alter	nate DNS server:		39		
V	alidate settings upon exit			Adva	inced
				59 	

MAC OS

- Click the Apple icon located on the top left of your screen.
- Click System Preferences > Network > Configure...
- From the TCP/IP tab, select Using DHCP in the Configure IPv4 dropdown list.
- 4. Cllick **Apply Now** when done.

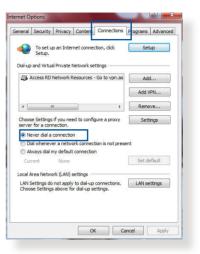
ι	ocation: Automatic	-	
	Show: Built-in Ethernet	-	
ТСР	/IP PPPoE AppleTalk	Proxies Ethe	rnet
Configure IPv4:	Using DHCP	•	1
IP Address:	192.168.182.103	R	enew DHCP Lease
Subnet Mask:	255.255.255.0 Di	ICP Client ID:	
Router:	192.168.182.250	(1	f required)
DNS Servers:	192.168.128.10		(Optional)
Search Domains:			(Optional)
IPv6 Address:	fe80:0000:0000:0000:02	1:24ff:fe32:b18e	,
	Configure IPv6		(?)

NOTE: Refer to your operating system's help and support feature for details on configuring your computer's TCP/IP settings.

C. Disable the dial-up connection, if enabled.

Windows[°] 7

- 1. Click **Start** > **Internet Explorer** to launch the browser.
- 2. Click Tools > Internet options > Connections tab.
- 3. Tick Never dial a connection.
- 4. Click **OK** when done.



NOTE: Refer to your browser's help feature for details on disabling the dial-up connection.

Appendices

Notices

ASUS Recycling/Takeback Services

ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components, as well as the packaging materials. Please go to <u>http://csr.asus.com/english/Takeback.htm</u> for the detailed recycling information in different regions.

REACH

Complying with the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS REACH website at

http://csr.asus.com/english/index.aspx

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

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.

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 31cm between the radiator & your body.

IMPORTANT! This device is restricted for indoor use.

WARNING!

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- Users must not modify this device. Modifications by anyone other than the party responsible for compliance with the rules of the Federal Communications Commission (FCC) may void the authority granted under FCC regulations to operate this device.
- For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

Prohibition of Co-location

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

Safety Information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 31cm between the radiator and your body.

Declaration of Conformity for R&TTE directive 1999/5/EC

Essential requirements - Article 3

Protection requirements for health and safety – Article 3.1a

Testing for electric safety according to EN 60950-1 has been conducted. These are considered relevant and sufficient.

Protection requirements for electromagnetic compatibility – Article 3.1b

Testing for electromagnetic compatibility according to EN 301 489-1 and EN 301 489-17 has been conducted. These are considered relevant and sufficient.

Effective use of the radio spectrum – Article 3.2

Testing for radio test suites according to EN 300 328 & EN 301 893 have been conducted. These are considered relevant and sufficient.

Operate the device in 5150-5250 MHz frequency band for indoor use only.

CE Mark Warning

This is a Class B product, in a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures. This equipment may be operated in AT, BE, CY, CZ, DK, EE, FI, FR, DE, GR, HU, IE, IT, LU, MT, NL, PL, PT, SK, SL, ES, SE, GB, IS, LI, NO, CH, BG, RO, RT.

Canada, Industry Canada (IC) Notices

This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radio Frequency (RF) Exposure Information

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 31cm between the radiator & your body.

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 31cm de distance entre la source de rayonnement et votre corps.

Canada, avis d'Industry Canada (IC)

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

WARNING!

- This radio transmitter (3568A-RTGZ00) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.
- Le présent émetteur radio (3568A-RTGZ00) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur

Table for filed antenna						
Antenna Brand	Medel Name	Antenna Type	Connector	Gain (dBi)		
Antenna	Dranu	Model Name	Antenna Type	Connector	2.4GHz	5GHz
1	PSA	RFDPA131000SBLB805	Dipole Antenna	Reversed-SMA	2.32	3.47
2	PSA	RFDPA131000SBLB805	Dipole Antenna	Reversed-SMA	2.32	3.47
3	PSA	RFDPA131000SBLB805	Dipole Antenna	Reversed-SMA	2.32	3.47
4	PSA	RFDPA131000SBLB805	Dipole Antenna	Reversed-SMA	2.32	3.47
5	PSA	RFDPA131000SBLB805	Dipole Antenna	Reversed-SMA	2.32	3.47
6	PSA	RFDPA131000SBLB805	Dipole Antenna	Reversed-SMA	2.32	3.47
7	PSA	RFDPA131000SBLB805	Dipole Antenna	Reversed-SMA	2.32	3.47

PSA

For product available in the USA/Canada market, only channel 1~11 • can be operated. Selection of other channels is not possible.

RFDPA131000SBLB805 Dipole Antenna Reversed-SMA 2.32

- Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.
- This device and it's antennas(s) must not be co-located or operating . in conjunction with any other antenna or transmitter except in accordance with IC multi-transmitter product procedures.
- Cet appareil et son antenne (s) ne doit pas être co-localisés • ou fonctionnement en association avec une autre antenne ou transmetteur.
- The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.
- 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.

Hz

3.47

NCC 警語

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Version 2, June 1991

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Telephone Austria	
(System/Notebook/Eee/LCD)	+43-820-240513
Support Fax	+49-2102-959911
Online support	support.asus.com

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Region	Country	Hotline Number	Service Hours
	Cyprus	800-92491	09:00-13:00 ; 14:00-18:00 Mon-Fri
	France	0033-170949400	09:00-18:00 Mon-Fri
		0049-1805010920	
	Correction	0049-1805010923	09:00-18:00 Mon-Fri
	Germany	(component support)	10:00-17:00 Mon-Fri
		0049-2102959911 (Fax)	
	Hungary	0036-15054561	09:00-17:30 Mon-Fri
	Italy	199-400089	09:00-13:00 ; 14:00-18:00 Mon-Fri
	Greece	00800-44142044	09:00-13:00 ; 14:00-18:00 Mon-Fri
	Austria	0043-820240513	09:00-18:00 Mon-Fri
	Netherlands/ Luxembourg	0031-591570290	09:00-17:00 Mon-Fri
	Belgium	0032-78150231	09:00-17:00 Mon-Fri
Europe	Norway	0047-2316-2682	09:00-18:00 Mon-Fri
	Sweden	0046-858769407	09:00-18:00 Mon-Fri
	Finland	00358-969379690	10:00-19:00 Mon-Fri
	Denmark	0045-38322943	09:00-18:00 Mon-Fri
	Poland	0048-225718040	08:30-17:30 Mon-Fri
	Spain	0034-902889688	09:00-18:00 Mon-Fri
	Portugal	00351-707500310	09:00-18:00 Mon-Fri
	Slovak Republic	00421-232162621	08:00-17:00 Mon-Fri
	Czech Republic	00420-596766888	08:00-17:00 Mon-Fri
	Switzerland-German	0041-848111010	09:00-18:00 Mon-Fri
	Switzerland-French	0041-848111014	09:00-18:00 Mon-Fri
	Switzerland-Italian	0041-848111012	09:00-18:00 Mon-Fri
	United Kingdom	0044-8448008340	09:00-17:00 Mon-Fri
	Ireland	0035-31890719918	09:00-17:00 Mon-Fri
	Russia and CIS	008-800-100-ASUS	09:00-18:00 Mon-Fri
	Ukraine	0038-0445457727	09:00-18:00 Mon-Fri

Region	Country	Hotline Numbers	Service Hours
	Australia	1300-278788	09:00-18:00 Mon-Fri
	New Zealand	0800-278788	09:00-18:00 Mon-Fri
	Japan	0800-1232787	09:00-18:00 Mon-Fri
		0600-1252/6/	09:00-17:00 Sat-Sun
		0081-570783886	09:00-18:00 Mon-Fri
		(Non-Toll Free)	09:00-17:00 Sat-Sun
	Korea	0082-215666868	09:30-17:00 Mon-Fri
	Thailand	0066-24011717	09:00-18:00 Mon-Fri
		1800-8525201	
	Singapore	0065-64157917	11:00-19:00 Mon-Fri
Asia-Pacific		0065-67203835	11:00-19:00 Mon-Fri
		(Repair Status Only)	11:00-13:00 Sat
	Malaysia	0060-320535077	10:00-19:00 Mon-Fri
	Philippine	1800-18550163	09:00-18:00 Mon-Fri
	India	1800-2090365	09:00-18:00 Mon-Sat
	India(WL/NW)	1800-2090305	09:00-21:00 Mon-Sun
	Indonesia	0062-2129495000	09:30-17:00 Mon-Fri
		500128 (Local Only)	9:30 – 12:00 Sat
	Vietnam	1900-555581	08:00-12:00 13:30-17:30 Mon-Sat
	Hong Kong	00852-35824770	10:00-19:00 Mon-Sat
	USA	1-812-282-2787	8:30-12:00 EST Mon-Fri
Americas	Canada	1-012-202-2/0/	9:00-18:00 EST Sat-Sun
	Mexico	001-8008367847	08:00-20:00 CST Mon-Fri
			08:00-15:00 CST Sat

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	Saudi Arabia	800-1212787	09:00-18:00 Sat-Wed
Middle	UAE	00971-42958941	09:00-18:00 Sun-Thu
East +	Turkey	0090-2165243000	09:00-18:00 Mon-Fri
Africa	South Africa	0861-278772	08:00-17:00 Mon-Fri
	Israel	*6557/00972-39142800	08:00-17:00 Sun-Thu
		*9770/00972-35598555	08:30-17:30 Sun-Thu
	Romania	0040-213301786	09:00-18:30 Mon-Fri
	Bosnia Herzegovina	00387-33773163	09:00-17:00 Mon-Fri
	Bulgaria	00359-70014411	09:30-18:30 Mon-Fri
Balkan		00359-29889170	09:30-18:00 Mon-Fri
Countries	Croatia	00385-16401111	09:00-17:00 Mon-Fri
	Montenegro	00382-20608251	09:00-17:00 Mon-Fri
	Serbia	00381-112070677	09:00-17:00 Mon-Fri
	Slovenia	00368-59045400	
		00368-59045401	08:00-16:00 Mon-Fri
	Estonia	00372-6671796	09:00-18:00 Mon-Fri
	Latvia	00371-67408838	09:00-18:00 Mon-Fri
	Lithuania-Kaunas	00370-37329000	09:00-18:00 Mon-Fri
	Lithuania-Vilnius	00370-522101160	09:00-18:00 Mon-Fri

Networks Global Hotline Information

NOTE: For more information, visit the ASUS support site at: <u>http://support.asus.com</u>

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