User Guide

Wireless-N Router

IN SEARCH OF INCREDIBLE

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1 Getting to know your wireless router

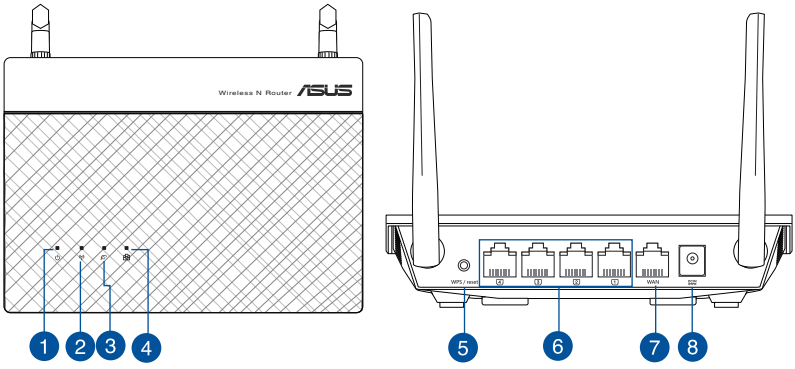
1.1 Package contents

☑ Wireless-N Router
☑ Power adapter
☑ Warranty Card
☑ Quick Start Guide

NOTES:

- If any of the items are 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.

1.2 Your wireless router



1 Power LED

Off: No power.

On: Device is ready.

2 2.4GHz LED

Off: No 2.4GHz signal.

On: Wireless system is ready.

3 WAN LED

Off: No power or no physical connection.

On: Has physical connection to a wide area network (WAN).

4 LAN 1~4 LED

Off: No power or no physical connection.

On: Has physical connection to a local area network (LAN).

5 WPS / reset button (2-in-1)

This button launches the WPS wizard or resets / restores the system to its factory default settings.

6 LAN 1 ~ 4 port

Connect network cables into these ports to establish LAN connection.

7 WAN port

Connect a network cable into this port to establish WAN connection.

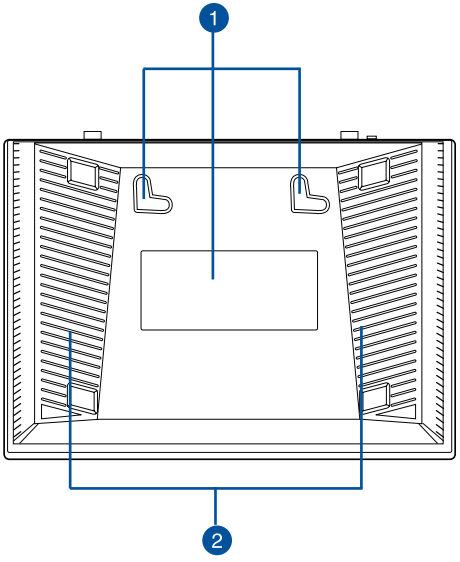
8 **Power (DC-IN) port**
Insert the bundled AC adapter into this port and connect your router to a power source.

NOTES:

- 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 1.75A current;		
Operating Temperature	0~40°C	Storage	0~70°C
Operating Humidity	50~90%	Storage	20~90%

Bottom panel



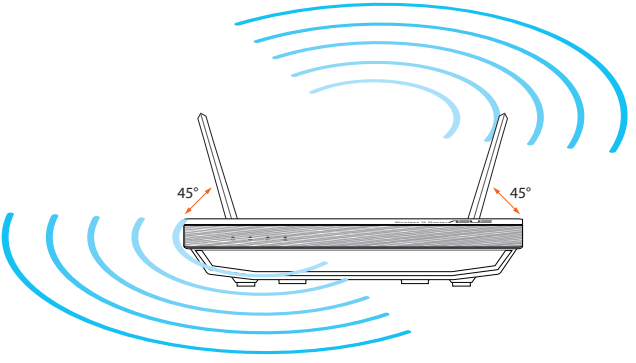
Item	Description
1	**Mounting hooks** Use the mounting hooks to mount your router on concrete or wooden surfaces using two round head screws.
2	**Air vents** These vents provide ventilation to your router.

NOTE: Mounting the wireless router to a wall is not recommended as it reduces wireless performance.

1.3 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 **http://www.asus.com** to get the latest firmware updates.
- To ensure the best wireless signal, orient the three detachable antennas as shown in the drawing below.



1.4 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 802.11b/g/n wireless capability
- An installed TCP/IP service
- Web browser such as Internet Explorer, Firefox, Safari, or Google Chrome

NOTES:

- If your computer does not have built-in wireless capabilities, you may install an IEEE 802.11b/g/n WLAN adapter to your computer to connect to the network.
- If your computer does not have built-in wireless capabilities, you may install a WLAN adapter to your computer to connect to the network.
- The Ethernet RJ-45 cables that will be used to connect the network devices should not exceed 100 meters.

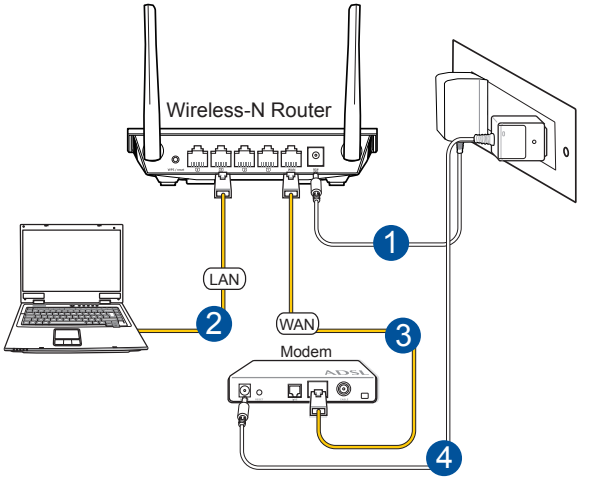
1.5 Router Setup

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).

1.5.1 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.

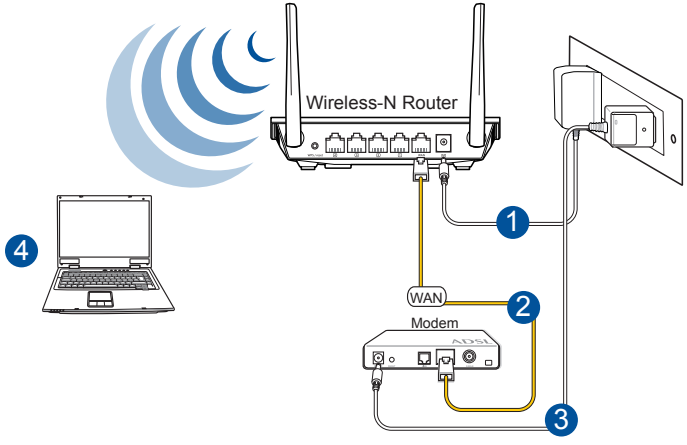
2. Using the bundled network cable, connect your computer to your wireless router's LAN port.

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.

1.5.2 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 802.11b/g/n WLAN adapter on your computer.

NOTES:

- 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.

2 Getting started

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:

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

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 Auto-detection

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

NOTES:

- 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.
- 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 **4.7.2 System**.
- 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.

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

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

NOTES:

- 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 **Manual setting** and manually configure your connection settings.

2. Assign the wireless network name (SSID) and security key for your 2.4GHz wireless connection.

3. Your Internet and wireless settings are displayed.
4. Read the wireless network connection tutorial.

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:

1. On your computer, select the wireless network you want to connect to.
2. Wait while your computer establishes connection to the wireless network successfully.

NOTE: Refer to the next chapters for more details on configuring your wireless network's settings.

3 Configuring the General settings

3.1 Network Map

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

3.1.1 Set up the wireless security

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

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.

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5. Key in your security passkey.
6. Click **Apply** when done.

3.1.2 Manage your network clients

To manage your network clients:

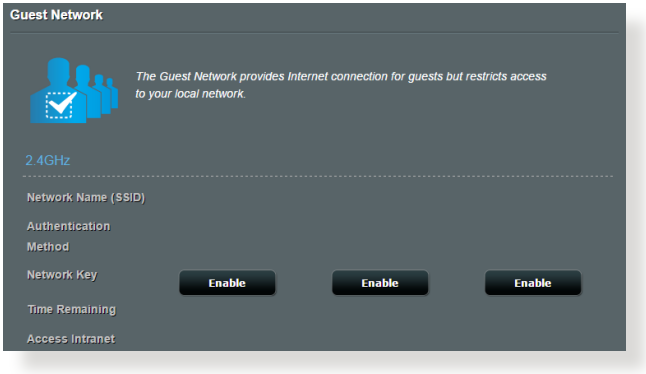
1. From the navigation panel, go to **General** > **Network Map** tab.
2. On the Network Map screen, select the **Client** icon to display your network client's information.

3.2 Create 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.

To create a guest network:

1. From the navigation panel, go to **General** > **Guest Network**.
2. Click **Enable**.

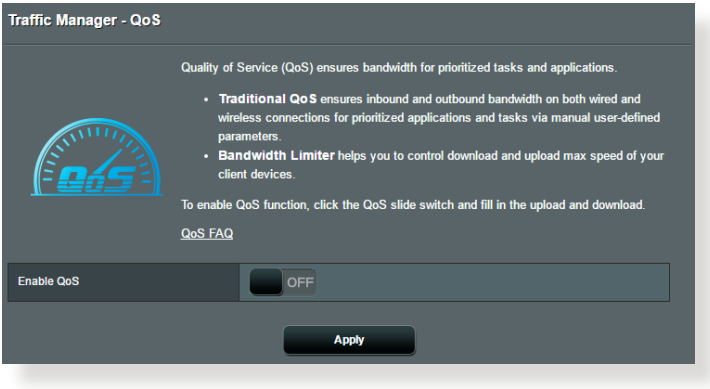


3. Assign a wireless name (SSID) for your temporary network, select an authentication method and finish other settings. When done, click **Apply**.

3.3 Traffic Manager

3.3.1 Manage QoS (Quality of Service) Bandwidth

Quality of Service (QoS) allows you to set the bandwidth priority and manage network traffic.



To set up bandwidth priority:

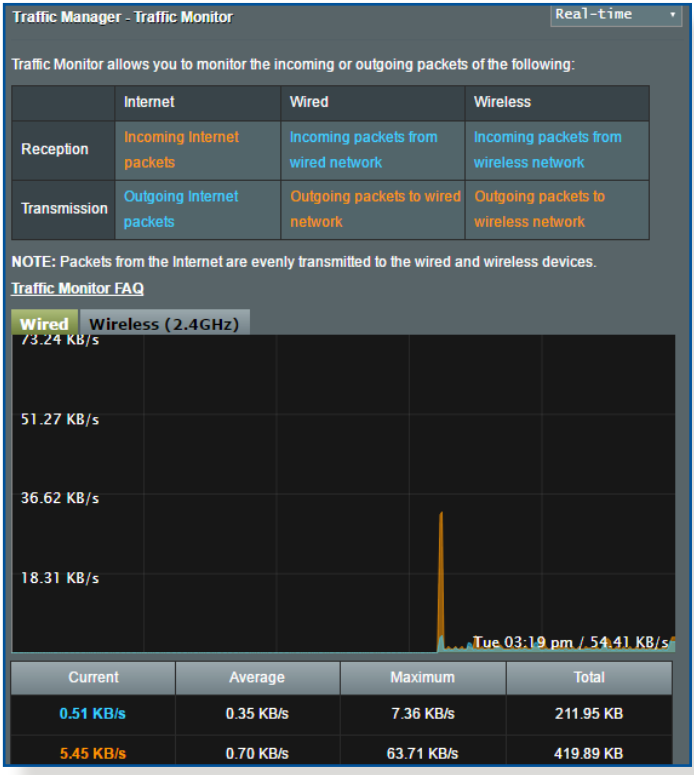
1. From the navigation panel, go to **General** > **Traffic Manager** > **QoS** tab.
2. Click **ON** to enable QoS. Fill in the upload and download bandwidth fields.

NOTE: Get the bandwidth information from your ISP.

3. Click **Apply**.

3.3.2 Traffic Monitor

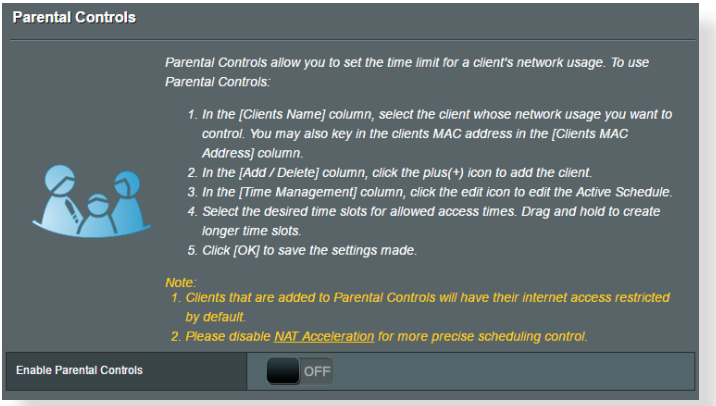
The traffic monitor function allows you to access the bandwidth usage and speed of your Internet, wired, and wireless networks. It allows you to monitor network traffic even on a daily basis.



NOTE: Packets from the Internet are evenly transmitted to the wired and wireless devices.

3.4 Set up Parental Controls

Parental Controls allow you to control the Internet access time. Users can set the time limit for a client's network usage.



To use the parental control function:

1. From the navigation panel, go to **General** > **Parental Controls**.
2. Click **ON** to enable Parental Controls.
3. Select the client whose network usage you want to control. You may also key in the client's MAC address.

NOTE: Ensure that the client name does not contain special characters or spaces as this may cause the router to function abnormally.

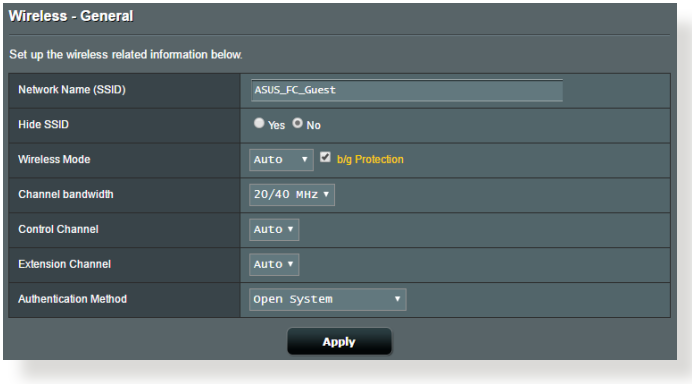
4. You can add or delete the client's profile.
5. Set up the allowed time limit in **Time Management** map.
6. Click **Apply** to save the settings.

4 Configure Advanced Settings

4.1 Wireless

4.1.1 General

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



To configure basic wireless settings:

1. From the navigation panel, go to **Advanced Settings** > **Wireless** > **General** tab.
2. 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.

3. 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.
4. 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 802.11n, 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.
5. Select any of these channel bandwidth to accommodate higher transmission speeds:

   20/40MHz (default): Select this bandwidth to automatically select the best bandwidth for your wireless environment.

   20MHz: Select this bandwidth if you encounter some issues with your wireless connection.

   40MHz: Select this bandwidth to maximize the wireless throughput.
6. Select the operating channel for your wireless router. Select **Auto** to allow the wireless router to automatically select the channel that has the least amount of interference.
7. If 20/40MHz, 20MHz or 40MHz is selected, you can define an upper or lower adjacent channel in the Extension Channel field to be accommodated.
8. Select any of these authentication methods:
   - **Open System**: This option provides no security.

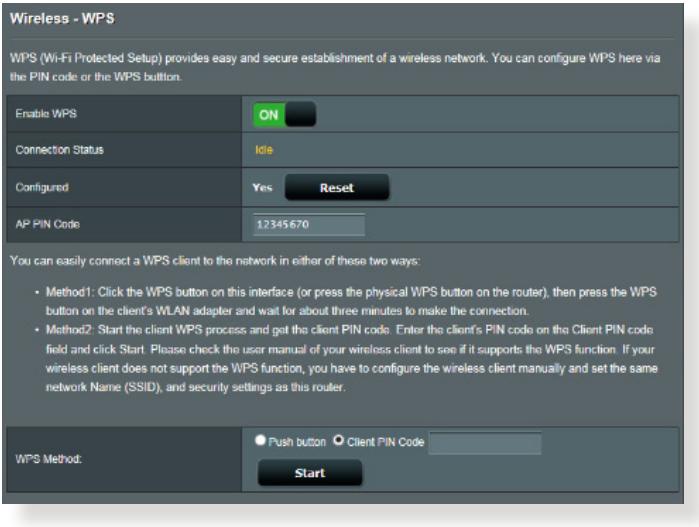
- **WPA2 Personal/WPA Auto-Personal**: This option provides strong security. If you select this option, you must use TKIP + AES encryption and enter the WPA passphrase (network key).
- **WPA2 Enterprise/WPA Auto-Enterprise**: This option provides very strong security. It is with integrated EAP server or an external RADIUS back-end authentication server.

9. 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:

1. From the navigation panel, go to **Advanced Settings** > **Wireless** > **WPS** tab.
2. In the **Enable WPS** field, move the slider to **ON**.

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 WDS

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.

To set up the wireless bridge:

1. From the navigation panel, go to **Advanced Settings** > **Wireless** > **WDS** tab.
2. In the **AP Mode** field, select any of these options:
   - **AP Only**: Disable the wireless bridge function.
   - **WDS Only**: Enable the wireless bridge feature but prevents other wireless devices/stations from connecting to the router.
   - **Hybrid**: Enable 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.

3. 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.
4. The router is set to **auto** by default to let the router select the channel with the least amount of interference automatically. If you want to modify it, click the link to return to the **General** page to modify the channel selection.

NOTE: Channel availability varies per country or region.

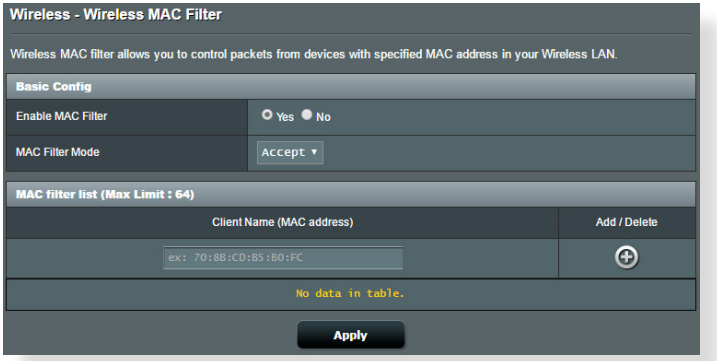
5. On the **Remote AP List**, key in a MAC address to add the MAC address of other available access points.

NOTE: Any access point added to the list should be on the same control channel as the ASUS wireless router.

6. 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.

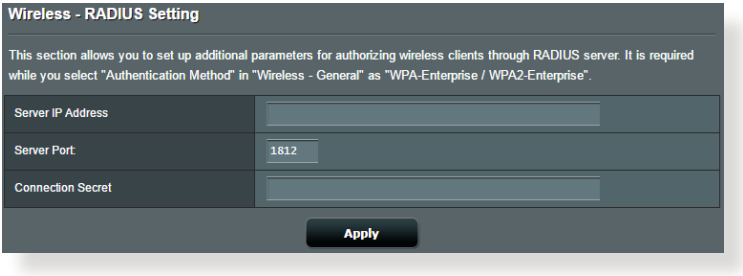


To set up the Wireless MAC filter:

1. From the navigation panel, go to **Advanced Settings** > **Wireless** > **Wireless MAC Filter** tab.
2. 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.
3. On the MAC filter list, key in the MAC address of the wireless device to add one.
4. 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.



To set up wireless RADIUS settings:

1. Ensure that the wireless router's authentication mode is set to WPA-Enterprise, WPA2-Enterprise, or Radius with 802.1x.

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

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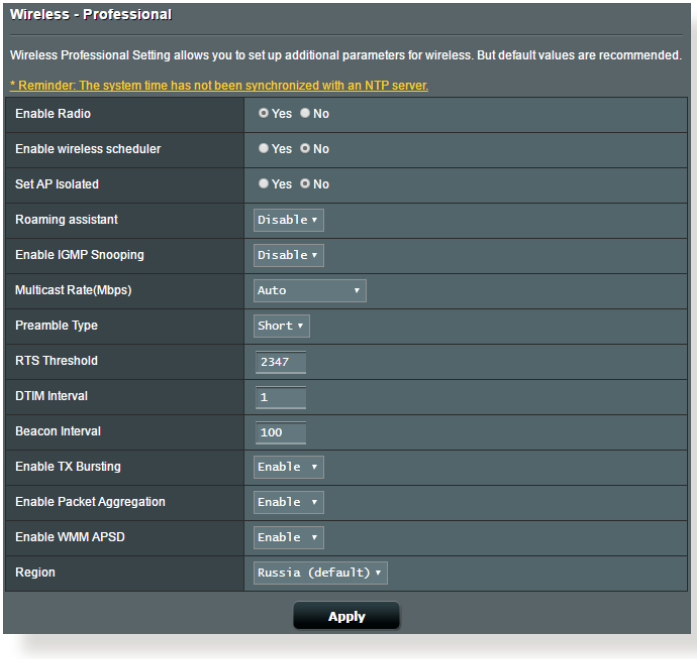
2. From the navigation panel, go to **Advanced Settings** > **Wireless** > **RADIUS Setting**.
3. In the **Server IP Address** field, key in your RADIUS server's IP Address.
4. In the **Connection Secret** field, assign the password to access your RADIUS server.
5. Click **Apply**.

4.1.6 Professional

The Professional screen provides advanced configuration options.

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



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

- **Enable Radio**: Select **Yes** to enable wireless networking. Select **No** to disable wireless networking.

- **Set AP Isolated**: Prevent 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.
- **Multicast Rate (Mbps)**: Select the multicast transmission rate or click **Disable** to switch off simultaneous single transmission.
- **Preamble Type**: Define the length of time that the router spent for CRC (Cyclic Redundancy Check). CRC is a method of detecting errors during data transmission. Select **Long** if your wireless network is composed of older or legacy wireless devices. Select **Short** for a busy wireless network with high network traffic.
- **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 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**: 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**: Improve 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.

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.

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.

To configure the DHCP server:

1. From the navigation panel, go to **Advanced Settings** > **LAN** > **DHCP Server** tab.
2. In the **Enable the DHCP Server** field, select **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.
7. In the **DNC and WINS Server Setting** 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.

To configure the LAN Routing table:

1. 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. Add 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.

4.3 WAN

4.3.1 Internet Connection

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

To configure the WAN connection settings:

1. From the navigation panel, go to **Advanced Settings** > **WAN** > **Internet Connection** tab.
2. Configure the following settings below. When done, click **Apply**.

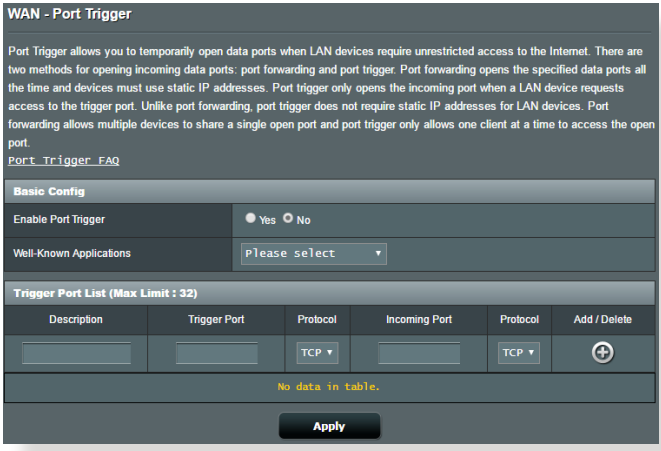
- **WAN Connection Type**: Choose your Internet Service Provider type. The choices are **Automatic IP**, **Static IP**, **PPPoE**, **PPTP** or **L2TP**. Consult your ISP if the router is unable to obtain a valid IP address or if you are unsure the WAN connection type.
- **Enable WAN**: Select **Yes** 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.

4.3.2 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.



To set up Port Trigger:

1. From the navigation panel, go to **Advanced Settings** > **WAN** > **Port Trigger** tab.
2. Configure the following settings below. When done, click **Apply**.
   - **Enable Port Trigger**: Choose **Yes** to enable Port Trigger.
   - **Well-Known Applications**: Select popular games and web services to add to the Port Trigger List.
   - **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.

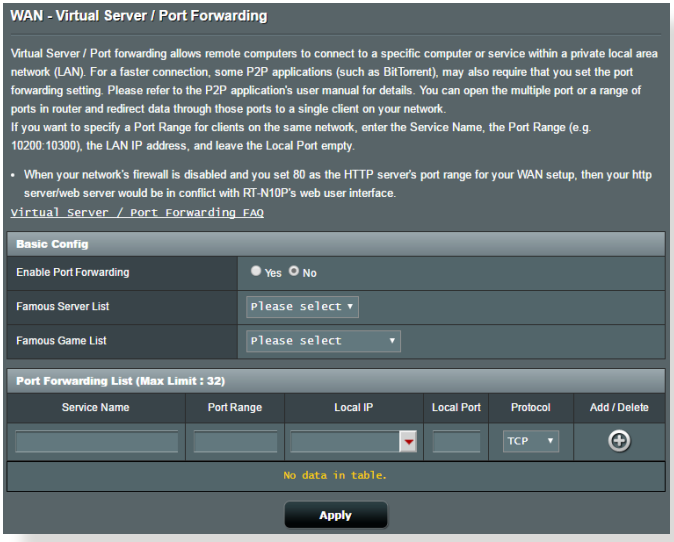
NOTES:

- 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.

4.3.3 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:

1. From the navigation panel, go to **Advanced Settings** > **WAN** > **Virtual Server / Port Forwarding** tab.

2. Configure the following settings below. When done, click **Apply**.

- **Enable Port Forwarding**: Choose **Yes** to enable Port Forwarding.
- **Famous Server List**: Determine which type of service you want to access.
- **Famous Game List**: This item lists ports required for popular online games to work correctly.
- **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**.

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:

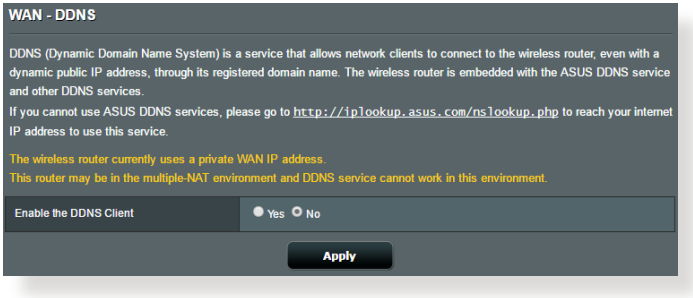
1. From the navigation panel, go to **Advanced Settings** > **WAN** > **DMZ** tab.
2. Configure the setting below. When done, click **Apply**.
   - **IP address of Exposed Station:** Key in the client's LAN IP address that will provide the DMZ service and be exposed on the Internet. Ensure that the server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



To set up DDNS:

1. 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.

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**.

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.

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 Firewall

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

NOTE: The Firewall feature is enabled by default.

4.5.1 General

To set up basic Firewall settings:

1. 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**.

4.5.2 URL Filter

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

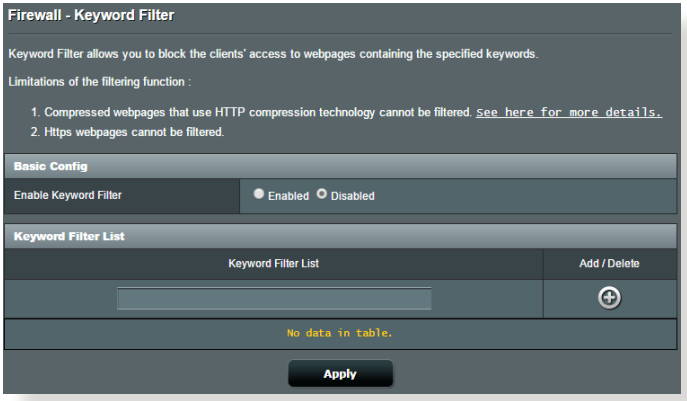
NOTE: The URL Filter is based on a DNS query. If a network client has already accessed a website such as http://www.abcxxx.com, then the website will not be blocked (a DNS cache in the system stores previously visited websites). To resolve this issue, clear the DNS cache before setting up the URL Filter.

To set up a URL filter:

1. 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 add button.
4. Click **Apply**.

4.5.3 Keyword filter

Keyword filter blocks access to webpages containing specified keywords.



To set up a keyword filter:

1. 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.

4.5.4 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.

To set up a Network Service filter:

1. 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 add a network service filter, enter the Source IP, Destination IP, Port Range, and Protocol.
6. Click **Apply**.

4.6 IPv6 Firewall

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

4.7 Administration

4.7.1 Operation Mode

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

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. In this mode, the router takes an existing signal from a wireless router or access point and rebroadcasts it to create a second network.
   - **Repeater mode**: In this mode, the router takes an existing signal from a wireless router or access point and rebroadcasts it to create a second network.
   - **Access Point mode**: In this mode, the router creates a new wireless network on an existing network.
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.
   - **WPS button behavior**: The physical WPS button on the wireless router can be used to activate WPS or toggle Radio.
   - **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 prevent access.
   - **Only allow specific IP**: Click **Yes** if you want to specify the IP addresses of devices that are allowed access to the wireless router GUI settings.
   - **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 **http://www.asus.com**

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.

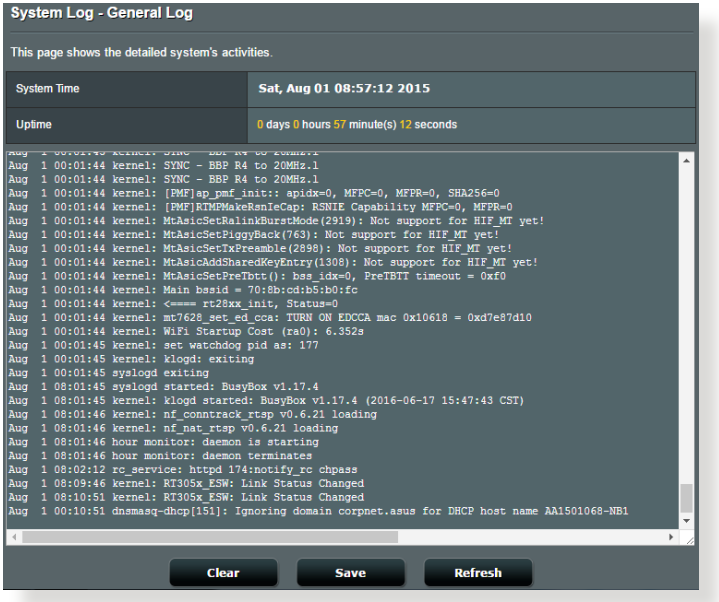
4.8 System Log

System Log contains your recorded network activities.

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

To view your system log:

1. From the navigation panel, go to **Advanced Settings** > **System Log**.
2. You can view your network activities in any of these tabs:
   - General Log
   - Wireless Log
   - DHCP Lease
   - IPv6
   - Routing Table
   - Port Forwarding
   - Connections



5 Utilities

NOTES:

- Download and install the wireless router's utilities at ASUS support site. http://support.asus.com
- For MAC OS, please download and install at Mac App Store.

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:

- You can find it on your computer in the following folder **ASUS Utility** > **Wireless Router**.

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.

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

NOTE: Before launching utilities, please remove all the network and wireless cards including virtual ones, except the one you are using. If your Windows® operating system is later than Windows® 7, please right-click on your computer to launch utilities as administrator.

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

4. Find it on your computer in the following folder **ASUS Utility** > **Wireless Router**.
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.

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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: http://support.asus.com/ 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.

1. 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 ASUS global website 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 method, 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** icon, 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:

  1. Launch Internet Explorer 8, then click **Tools** > **Internet Options**.
  2. 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.

- **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:**
  1. Launch the web GUI. Go to **General** > **Network Map**> **Clients** and search for the device that you want to connect to the router.
  2. 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**.
- 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**.
- 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**.

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 **Time Management**.

- 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

  Router Login: http://router.asus.com

  SSID: ASUS_XX

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.

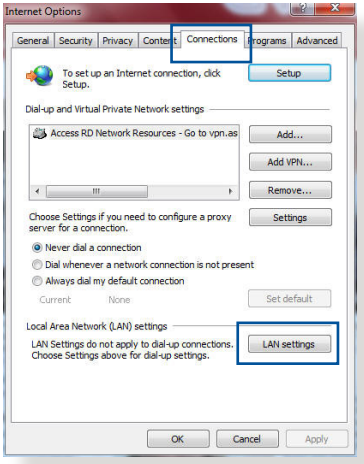
Cannot access Web GUI

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

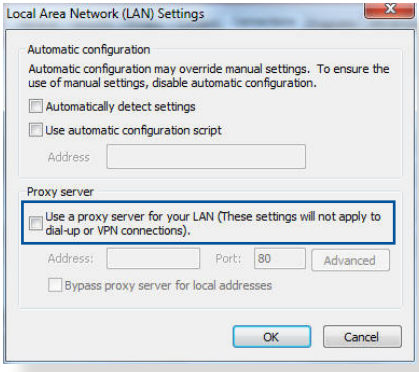
A. Disable the proxy server, if enabled.

Windows® 7

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

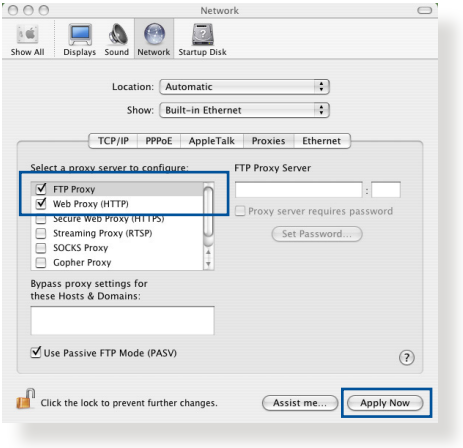


3. From the Local Area Network (LAN) Settings screen, untick **Use a proxy server for your LAN**.
4. Click **OK** when done.



MAC OS

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

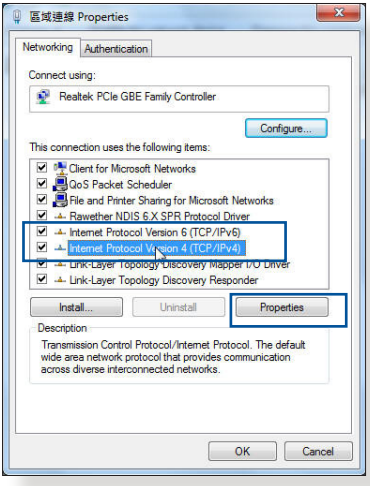


NOTE: Refer to your browser's help feature for details on disabling the proxy server.

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

Windows® 7

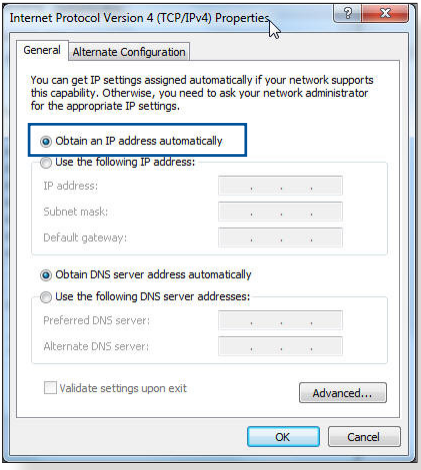
1. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Manage network connections.**
2. Select **Internet Protocol Version 4 (TCP/IPv4)** or **Internet Protocol Version 6 (TCP/IPv6)**, then click **Properties**.



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

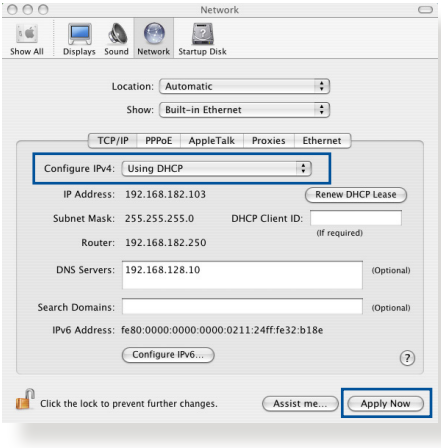
   To obtain the IPv6 IP settings automatically, tick **Obtain an IPv6 address automatically**.

4. Click **OK** when done.



MAC OS

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

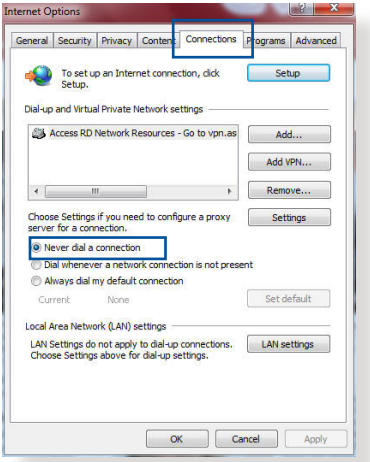


NOTE: Refer to your operating system's help and support feature for details on configuring your computer's TCP/IP settings.

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 http://csr.asus.com/english/Takeback.htm 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: (1) This device may not cause harmful interference, and (2) 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 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 Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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

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 20cm between the radiator & your body.

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

- EN60950-1/A12:2011+A2:2013
- Safety of Information Technology Equipment

- EN 62311:2008

Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz-300 GHz) (IEC 62311:2007 (Modified))

- EN 300 328 V1.9.1:2015

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2.4GHz ISM band andusing wide band modulation techniques; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive

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- EN 301 489-1 V1.9.2:2011

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

- EN 301 489-17 V2.2.1:2012

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for Broadband Data Transmission Systems.

Industry Canada statement

This device complies with ISED's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d' ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Radiation Exposure Statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

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

NCC 警語

低功率電波輻射性電機管理辦法

第十二條　經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條　低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

MPE警語

「電磁波曝露量MPE標準值1mW/cm2，送測產品實測值為0.270 mW/cm2」

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ASUS Contact information

ASUSTeK COMPUTER INC. (Asia Pacific)

Address	15 Li-Te Road, Peitou, Taipei, Taiwan 11259
Website	www.asus.com.tw

Technical Support

Telephone	+886228943447
Fax	+88628947761
Online support	support.asus.com

ASUS COMPUTER INTERNATIONAL (America)

Address	800 Corporate Way, Fremont, CA 94539, USA
Telephone	+15107393777
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ASUS COMPUTER GmbH (Germany and Austria)

Address	Harkort Str. 21-23, D-40880 Ratingen, Germany
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Technical Support

Telephone (Component)	+49-2102-5789555
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Support Fax	+49-2102-959911
Online support	support.asus.com

Networks Global Hotline Information

Region	Country	Hotline Number	Service Hours
Europe	Cyprus	800-92491	09:00-13:00 ; 14:00-18:00 Mon-Fri
	France	0033-170949400	09:00-18:00 Mon-Fri
	Germany	0049-1805010920 0049-1805010923 (component support) 0049-2102959911 (Fax)	09:00-18:00 Mon-Fri 10:00-17:00 Mon-Fri
	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
	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	0044-1442265548	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

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Asia-Pacific	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 09:00-17:00 Sat-Sun
		0081-473905630 (Non-Toll Free)	09:00-18:00 Mon-Fri 09:00-17:00 Sat-Sun
	Korea	0082-215666868	09:30-17:00 Mon-Fri
	Thailand	0066-24011717 1800-8525201	09:00-18:00 Mon-Fri
	Singapore	0065-64157917 0065-67203835 (Repair Status Only)	11:00-19:00 Mon-Fri 11:00-19:00 Mon-Fri 11:00-13:00 Sat
	Malaysia	0060-320535077	10:00-19:00 Mon-Fri
	Philippine	1800-18550163	09:00-18:00 Mon-Fri
	India India(WL/NW)	1800-2090365	09:00-18:00 Mon-Sat 09:00-21:00 Mon-Sun
	Indonesia	0062-2129495000 500128 (Local Only)	09:30-17:00 Mon-Fri 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
Americas	USA Canada	1-812-282-2787	8:30-12:00 EST Mon-Fri 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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Middle East + Africa	Egypt	800-2787349	09:00-18:00 Sun-Thu
	Saudi Arabia	800-1212787	09:00-18:00 Sat-Wed
	UAE	00971-42958941	09:00-18:00 Sun-Thu
	Turkey	0090-2165243000	09:00-18:00 Mon-Fri
	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
Balkan Countries	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
		00359-29889170	09:30-18:00 Mon-Fri
	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	08:00-16:00 Mon-Fri
		00368-59045401	
	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

NOTES:

- UK support e-mail: **network_support_uk@asus.com**.
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	Address:	4F, No. 150, LI-TE RD., PEITOU, TAIPEI 112, TAIWAN
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