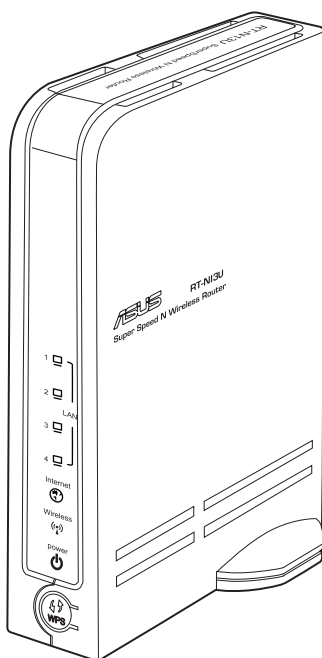




RT-N13U

ASUS Wireless N Router with All-in-One Printer Server



User Manual

E5145

Second Edition V2

May 2010

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About this guide

This user guide contains information that you need to install and configure the ASUS Wireless Router.

How this guide is organized

This guide contains the following parts:

- **Chapter 1: Knowing your wireless router**

This chapter provides information on the package contents, system requirements, hardware features, and LED indicators of the ASUS Wireless Router.

- **Chapter 2: Getting started**

This chapter provides instructions on setting up the Router, Repeater, and Access Point modes of the ASUS Wireless Router.

- **Chapter 3: Configuring the network clients**

This chapter provides instructions on setting up the clients in your network to work with your ASUS Wireless Router.

- **Chapter 4: Configuring via the web GUI**

This chapter provides instructions on configuring the ASUS Wireless Router using its web graphics user interface (web GUI).

- **Chapter 5: Installing the utilities**

This chapter provides information on the utilities that are available from the support CD.

- **Chapter 6: Troubleshooting**

This chapter provides you with a troubleshooting guide for solving common problems you may encounter when using the ASUS Wireless Router.

- **Appendices**

This chapter provides you with the regulatory Notices and Safety Statements.

Conventions used in this guide



WARNING: Information to prevent injury to yourself when trying to complete a task.



CAUTION: Information to prevent damage to the components when trying to complete a task.



IMPORTANT: Instructions that you **MUST** follow to complete a task.



NOTE: Tips and additional information to aid in completing a task.

1

Knowing your wireless router

Package contents

Check the following items in your ASUS Wireless Router package.

- ☒ RT-N13U Wireless Router
- ☒ Power adapter
- ☒ Support CD (manual, utilities)
- ☒ RJ45 cable
- ☒ Quick Start Guide



Note: If any of the items is damaged or missing, contact your retailer.

System requirements

Before installing the ASUS Wireless Router, ensure that your system/network meets the following requirements:

- An Ethernet RJ-45 port (10Base-T/100Base-TX)
- At least one IEEE 802.11b/g/n device with wireless capability
- An installed TCP/IP and Internet browser

Before you proceed

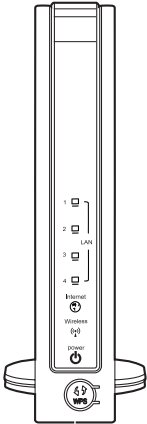
Take note of the following guidelines before installing the ASUS Wireless Router:

- The length of the Ethernet cable that connects the device to the network (hub, ADSL/cable modem, router, wall patch) must not exceed 100 meters.
- Place the device on a flat and stable surface as far from the ground as possible.
- Keep the device clear from metal obstructions and away from direct sunlight.
- Keep the device away from transformers, heavy-duty motors, fluorescent lights, microwave ovens, refrigerators, and other industrial equipment to prevent signal loss.
- Install the device in a central area to provide ideal coverage for all wireless mobile devices.





- Install the device at least 20cm from a person to ensure that the product is operated in accordance with the RF Guidelines for Human Exposure adopted by the Federal Communications Commission.

Hardware features


Front panel



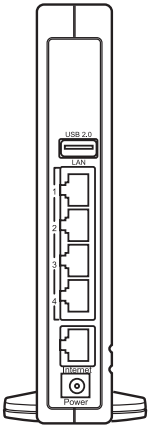
Status indicators

LED	Status	Indication
 (Power)	Off	No power / USB disk initializing
	On	System ready
	Flashing-slow	Rescue mode / Restored to the factory default settings
	Flashing-quick	WPS processing
 (Wireless)	Off	No power
	On	Wireless system ready
	Flashing	Transmitting or receiving data (wireless)
 LAN 1-4 (Local Area Network)	Off	No power or no physical connection
	On	Has physical connection to an Ethernet network
	Flashing	Transmitting or receiving data (through Ethernet cable)
 (Internet)	Off	No power or no physical connection
	On	Has physical connection to an Ethernet network
	Flashing	Transmitting or receiving data (through Ethernet cable)

Buttons

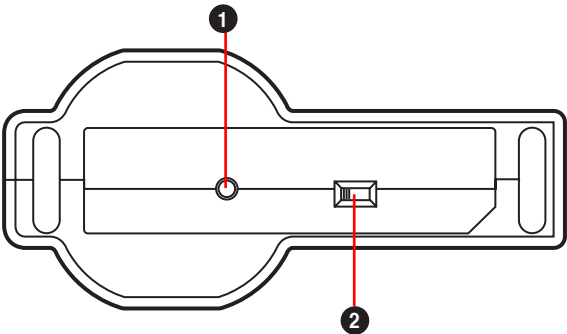
Button	Indication
 (WPS)	Press this button to establish wireless connection.

Rear panel



Label	Description
Internet	Connect an RJ-45 Ethernet cable to this port to establish WAN connection.
LAN1-LAN4	Connect RJ-45 Ethernet cables to these ports to establish LAN connection.
USB 2.0	Insert a USB 2.0 device such as a USB hard disk and a USB flash drive (at least 2GB capacity) into this port.
Power	Insert the AC adapter into this port to connect your router to a power source.

Bottom panel



Item	Description
1	<p>Restore button</p> <p>Press this button for more than five seconds to restore the system to its factory default settings.</p>
2	<p>Operation mode selector</p> <p>Use this selector to choose an operation mode:</p> <p>Router (IP Sharing mode): In this mode, RT-N13U connects to WAN (Internet) by PPPoE, Automatic IP, or Static IP, and provides wireless radio, NAT, firewall, and IP sharing services in LAN.</p> <p>Repeater: In this mode, RT-N13U extends your wireless network and provides higher quality wireless radio to users. NAT, firewall, and IP sharing services are disabled automatically.</p> <p>AP (Access Point): In this mode, RT-N13U receives the WAN IP address from the router connected to the WAN port and provides wireless radio to users. NAT, firewall, and IP sharing services are disabled automatically.</p>

Getting started 2

Setting up the wireless router

The ASUS Wireless Router includes a web graphics user interface (web GUI) that allows you to configure the wireless router using your web browser on your computer.



Note: For details on configuring your wireless router using the web GUI, refer to **Chapter 4: Configuring via the web GUI**.

You can set up the wireless router in any of these three operation modes: Router (IP Sharing), Repeater, and Access Point (AP). Set up the wireless router in the Router (IP Sharing) and Repeater modes via the Quick Internet Setup (QIS), and the AP mode via the web GUI.



Note: To set up the wireless router in the AP mode, use Device Discovery included in the support CD to access the web GUI.

Using the Quick Internet Setup (QIS)

The Quick Internet Setup (QIS) function, which is integrated in the wireless router's web GUI, detects the Internet connection type automatically and guides you in setting up your network quickly.

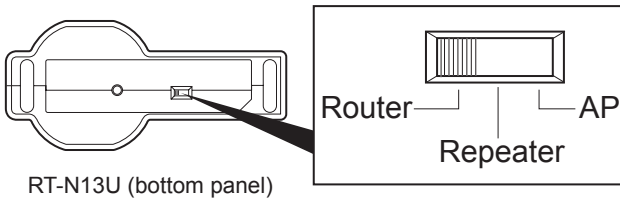
The QIS web page appears automatically after you connected all your devices and launched your web browser. You may also launch the QIS from the **Network Map** page in the web GUI. To do this, click **Go** in the **QIS** field under **Internet status**.

Setting up the wireless router in Router mode

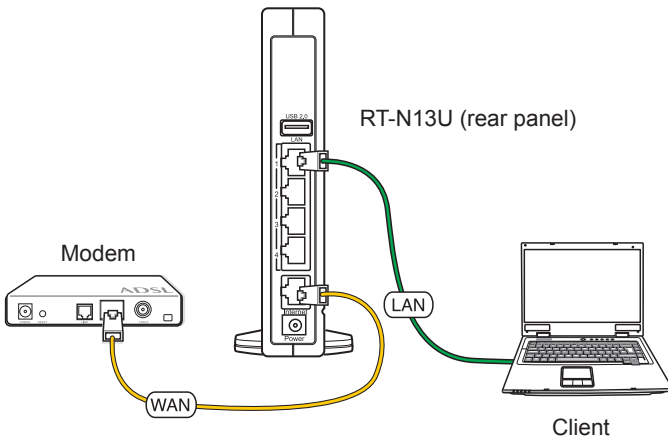
In the Router mode, the wireless router connects to the Internet via PPPoE, Automatic IP, or Static IP, and provides you with wireless radio signals. The NAT, firewall, and IP sharing services for LAN clients are enabled.

To set up the wireless router in Router mode:

1. Choose the Router mode.

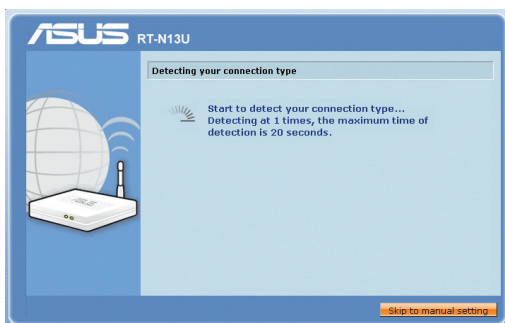


2. Connect your devices.



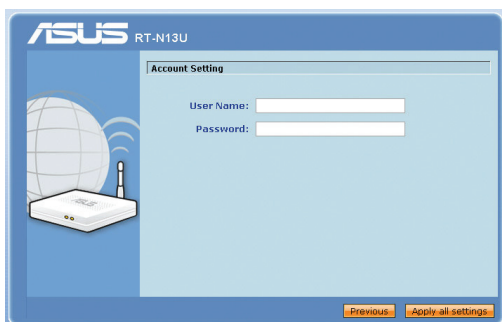
Note: We recommend that you use an Ethernet cable (wired connection) to connect your computer to the wireless router for initial configuration to avoid possible setup problems due to wireless uncertainty.

3. Launch your web browser and the QIS starts to detect your Internet connection type.



Note: If the QIS web page does not appear after you launched your web browser, disable the proxy settings on your web browser.

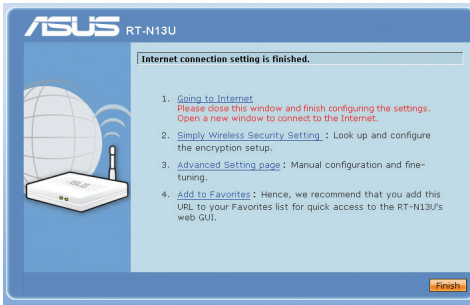
4. Key in the user name and password. Click **Apply all settings**.



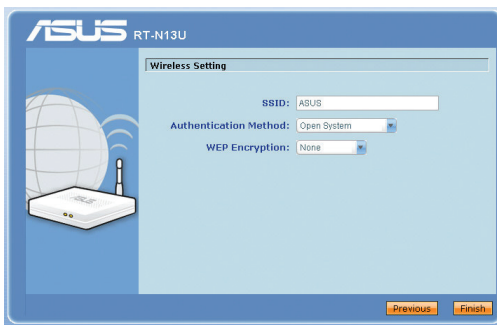
Note:

- The PPPoE Internet connection type is used in this setup case. The setup screen varies with different Internet connection types.
- Obtain the required information such as the username and password from your Internet Service Provider (ISP).

5. The Internet connection setup is completed.



- Click **Going to Internet** to surf the Internet.
- Click **Simply Wireless Security Setting** to configure the basic security settings including the SSID, authentication, and encryption methods for the wireless router.



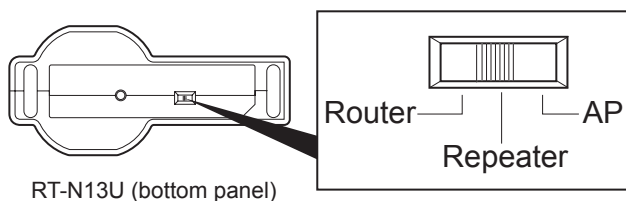
- Click **Advanced Setting page** to manually configure the advanced settings for the wireless router.
- Click **Add to Favorites** to add this URL to your Favorites list for quick access to the web GUI.

Setting up the wireless router in Repeater mode

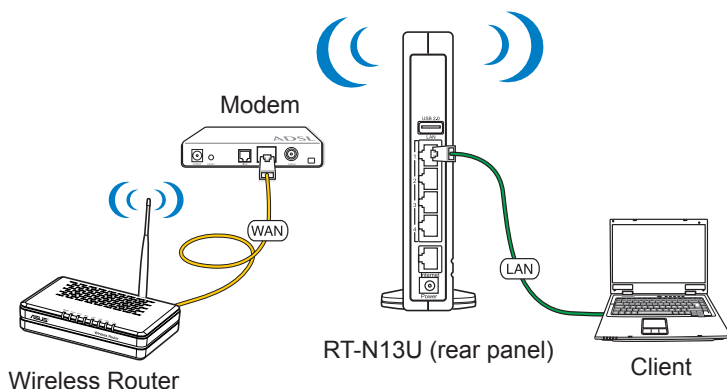
In the Repeater mode, the wireless router extends your wireless network coverage and provides you with higher quality wireless radio signals. The NAT, firewall, and IP sharing services are disabled.

To set up the wireless router in Repeater mode:

1. Choose the Repeater mode.

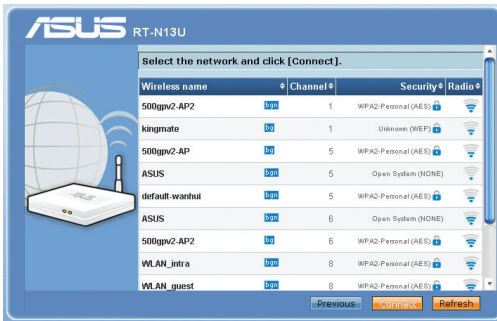


2. Connect your devices.



Note: We recommend that you use an Ethernet cable (wired connection) to connect your computer to the wireless router for initial configuration to avoid possible setup problems due to wireless uncertainty.

3. Launch your web browser and the QIS web page appears automatically. Select the AP whose wireless signal you want to extend, then click **Connect**.



Note:

- If the QIS web page does not appear after you launched your web browser, disable the proxy settings on your web browser.
- Use Device Discovery included in the support CD to access the router's web GUI and configure the router's various features.

Setting up the wireless router in AP mode

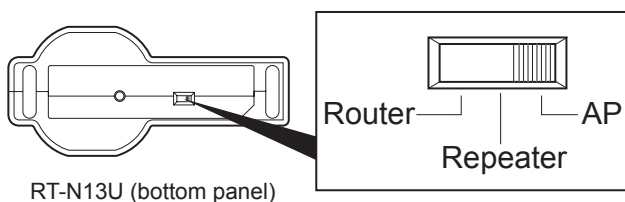


Note: To set up the wireless router in the AP mode, use Device Discovery included in the support CD to access the web GUI.

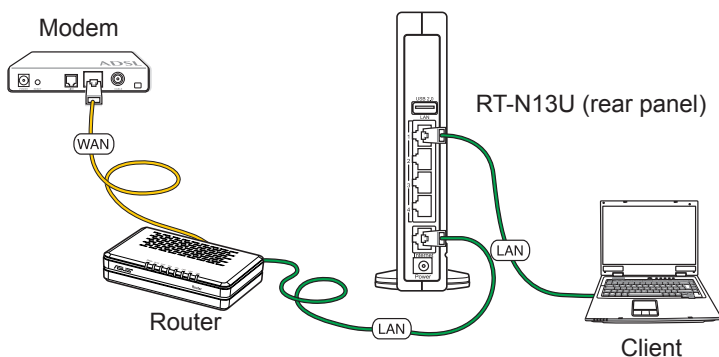
In the AP mode, the wireless router receives the WAN IP address from the router connected to the WAN port and provides you with wireless radio signals. The NAT, firewall, and IP sharing services are disabled.

To set up the wireless router in AP mode:

1. Choose the AP mode.

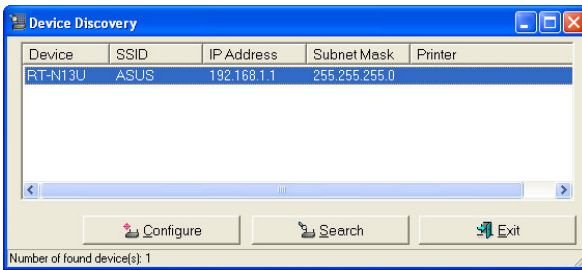


2. Connect your devices.

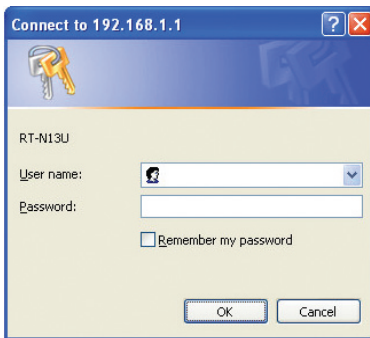


Note: We recommend that you use an Ethernet cable (wired connection) to connect your computer to the wireless router for initial configuration to avoid possible setup problems due to wireless uncertainty.

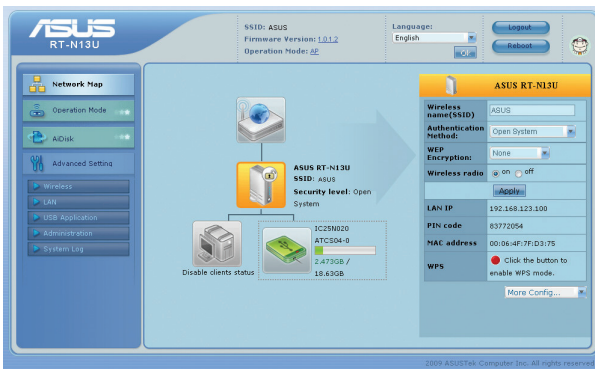
3. Launch the Device Discovery utility and click **Configure** to access the web GUI.



4. On the login page, key in the default user name (**admin**) and password (**admin**).



5. From the main page, click the navigation menu or links to configure the various features of the wireless router.



3

Configuring the network clients

Accessing the wireless router

Setting an IP address for wired or wireless client

To access the ASUS Wireless Router, you must have the correct TCP/IP settings on your wired or wireless clients. Ensure that the clients' IP addresses are within the same subnet as the ASUS Wireless Router.

By default, the ASUS Wireless Router integrates the DHCP server function, which automatically assigns IP addresses to the clients in your network.

But in some instances, you may want to manually assign static IP addresses on some of the clients or computers in your network rather than automatically getting IP addresses from your wireless router.

Follow the instructions below that correspond to the operating system installed on your client or computer.

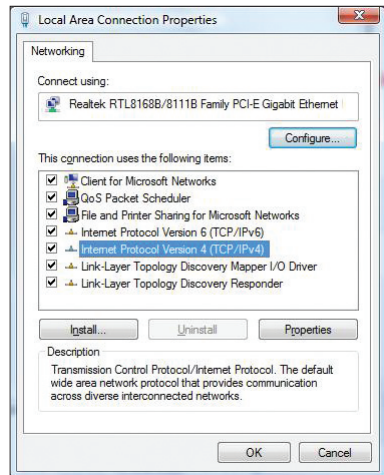


Note: In the Router mode, if you want to manually assign an IP address to your client, we recommend that you use the following settings:

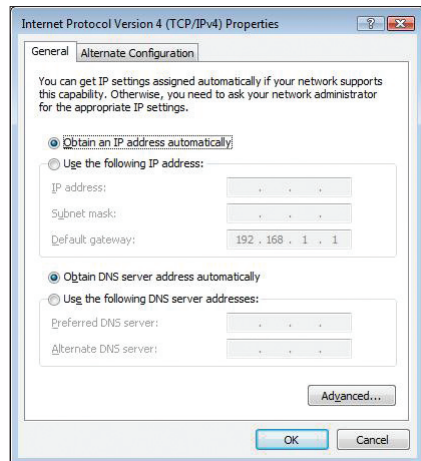
- **IP address:** 192.168.1.xxx (xxx can be any number between 2 and 254. Ensure that the IP address is not used by another device)
 - **Subnet Mask:** 255.255.255.0 (same as the ASUS Wireless Router)
 - **Gateway:** 192.168.1.1 (IP address of the ASUS Wireless Router)
 - **DNS:** 192.168.1.1 (ASUS Wireless Router) or assign a known DNS server in your network
-

Windows® Vista

1. Go to **Start > Control Panel > Network and Internet > Network and Sharing Center**. Click **View status > Properties > Continue**.

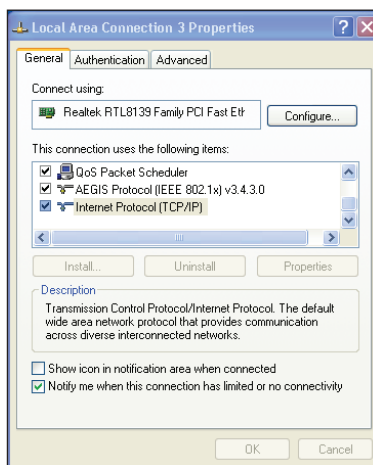


2. Select **Internet Protocol Version 4 (TCP/IPv4)**, then click **Properties**.
3. Select **Obtain an IP address automatically** if you want the IP settings to be assigned automatically. Otherwise, select **Use the following IP address:** and key in **IP address** and **Subnet mask**.
4. Select **Obtain DNS server address automatically** if you want the DNS server settings to be assigned automatically. Otherwise, select **Use the following DNS server addresses:** and key in the **Preferred** and **Alternate DNS server**.
5. Click **OK** when done.

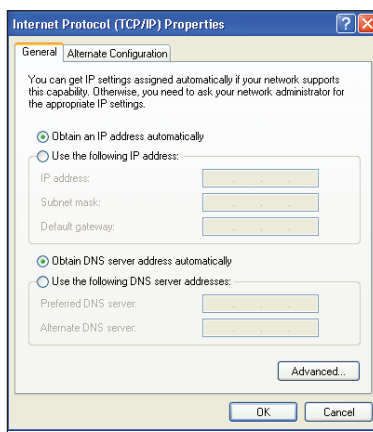


Windows® XP

1. Click **Start > Control Panel > Network Connection**. Right-click **Local Area Connection** then select **Properties**.

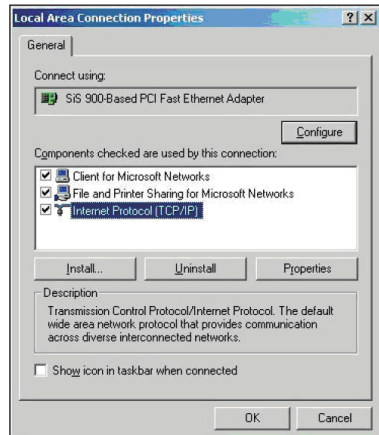


2. Select **Internet Protocol (TCP/IP)**, then click **Properties**.
3. Select **Obtain an IP address automatically** if you want the IP settings to be assigned automatically. Otherwise, select **Use the following IP address:** and key in **IP address**, **Subnet mask**, and **Default gateway**.
4. Select **Obtain DNS server address automatically** if you want the DNS server settings to be assigned automatically. Otherwise, select **Use the following DNS server addresses:** and key in the **Preferred** and **Alternate DNS server**.
5. Click **OK** when done.

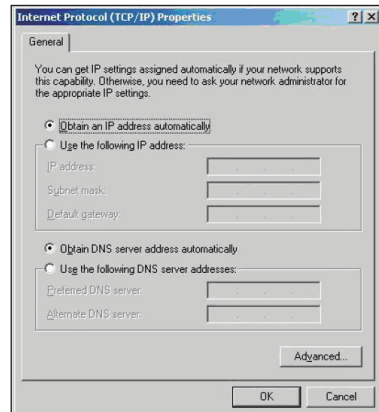


Windows® 2000

1. Click **Start > Control Panel > Network and Dial-up Connection**. Right-click **Local Area Connection** then click **Properties**.

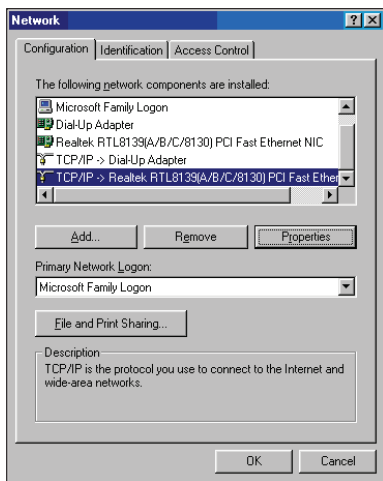


2. Select **Internet Protocol (TCP/IP)**, then click **Properties**.
3. Select **Obtain an IP address automatically** if you want the IP settings to be assigned automatically. Otherwise, select **Use the following IP address:** and key in **IP address**, **Subnet mask**, and **Default gateway**.
4. Select **Obtain DNS server address automatically** if you want the DNS server settings to be assigned automatically. Otherwise, select **Use the following DNS server addresses:** and key in the **Preferred** and **Alternate DNS server**.
5. Click **OK** when done.

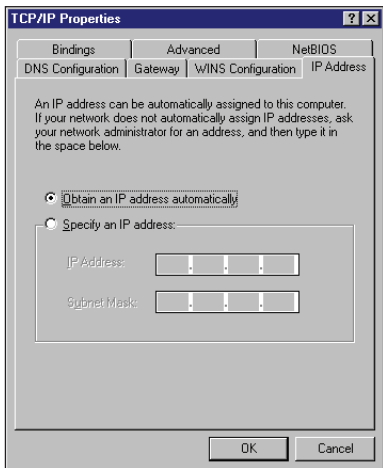


Windows® 9x/ME

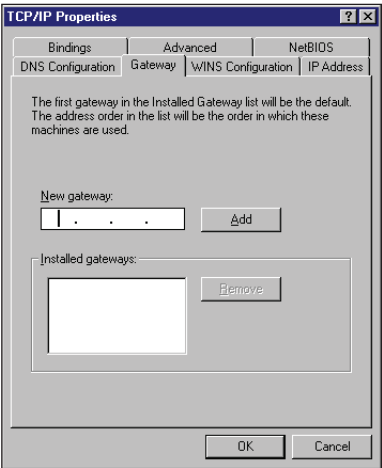
1. Click **Start > Control Panel > Network** to display the Network setup window.
2. Select **TCP/IP** then click **Properties**.



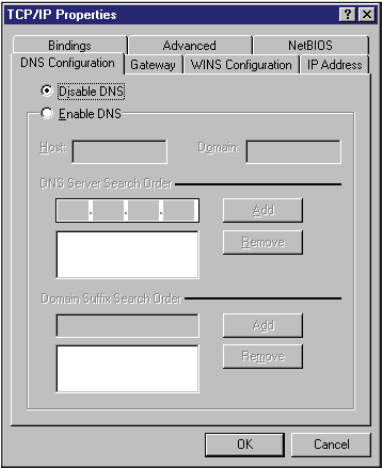
3. If you want your computer to automatically obtain an IP address, click **Obtain an IP address automatically** then click OK. Otherwise, click **Specify an IP address**, then key in the **IP address** and **Subnet Mask**.



4. Select the **Gateway** tab, and key in **New gateway** then click **Add**.

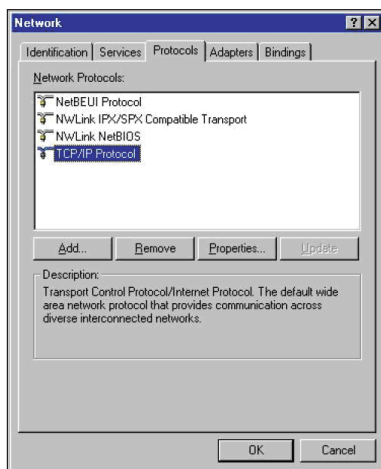


5. Select the **DNS configuration** tab and click **Enable DNS**. Key in **Host**, **Domain**, and **DNS Server Search Order**, then click **Add**.
6. Click **OK**.

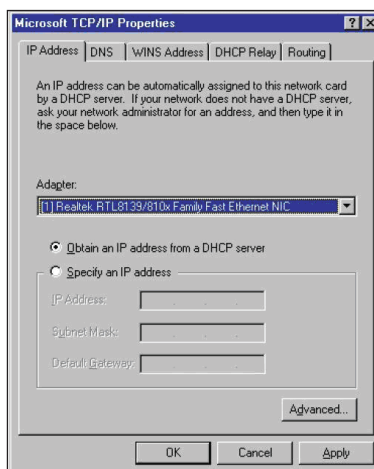


Windows® NT4.0

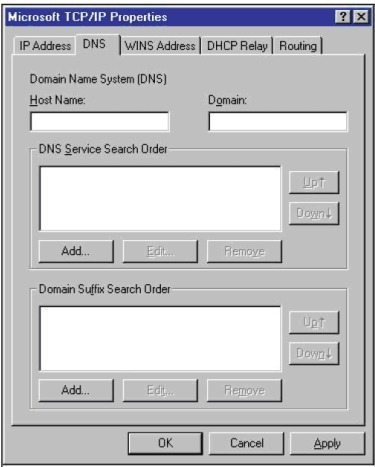
1. Go to **Control Panel > Network** to display the Network setup window then select the **Protocols** tab.
2. Select **TCP/IP Protocol** from the Network Protocols list then click **Properties**.



3. From the **IP Address** tab of the Microsoft TCP/IP Properties window, you can:
 - Select the type of network adapter installed in your system.
 - Set the router to assign IP address automatically.
 - Manually set up the IP address, subnet mask, and default gateway.



4. Select the **DNS** tab then click **Add** under the **DNS Service Search Order** and key in DNS.



4

Configuring via the web GUI

Configuring via the web GUI

The router's web graphics user interface (web GUI) allows you to configure these features: **Network Map**, **AiDisk**, and **EZQoS Bandwidth Management**.

To access the web GUI:

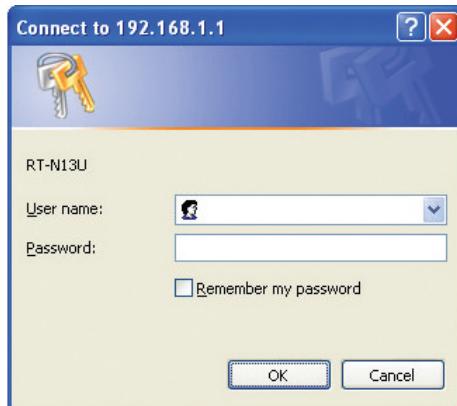
1. Launch a web browser, then key in the router's IP address. The login page of the router's web GUI appears.



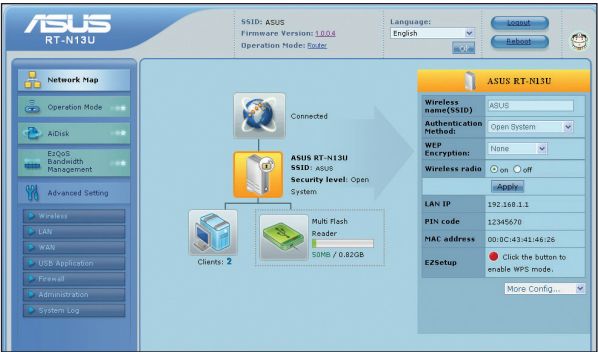
Note:

- In the Router mode, the router's default IP address is **192.168.1.1**.
- In the Repeater and AP modes, use Device Discovery included in the support CD to find the router's IP address.

2. On the login page, key in the default user name (**admin**) and password (**admin**).








3. From the main page, click the navigation menu or links to configure the various features of the ASUS Wireless Router.



Using the Network Map

Network Map allows you to view the status and configure the connection settings of the Internet, system, and clients in your network. It enables you to quickly set up your Wide Area Network (WAN) using the Quick Internet Setup (QIS) feature, or to quickly set up your Local Area Network (LAN) using the WPS function.

To view the status or configure the settings, click any of these icons displayed on the main page:

Icon	Description
	Internet status Click this icon to display information on the Internet connection status, WAN IP address, DNS, connection type, and gateway address. From the Internet status screen, use the Quick Internet Setup (QIS) feature to quickly set up your network.
	System status Click this icon to display information on the SSID, authentication and encryption methods, LAN IP, PIN code, MAC address, or turn the wireless radio on/off. From the System status screen, click the virtual WPS button to establish a wireless connection between the router and a client.
	Client status Click this icon to display information about the clients or computers in the network, and allows you to block/unblock a client.
	USB disk status Click this icon to display information about the USB disk connected to the wireless router.
	USB printer status Click this icon to display information about the USB printer connected to the wireless router.

Using AiDisk

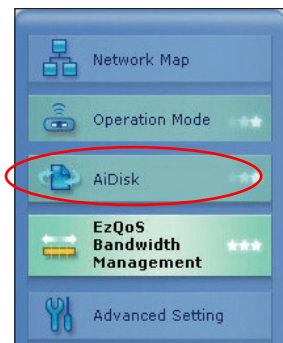
AiDisk allows you to set up an FTP server and share the content of a USB disk with the clients in your network.



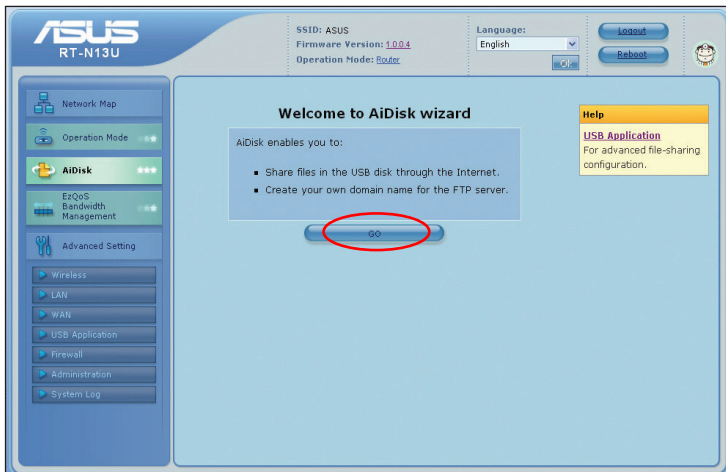
Note: Before using AiDisk, ensure that you have inserted a USB disk into the USB port of your wireless router.

To use AiDisk:

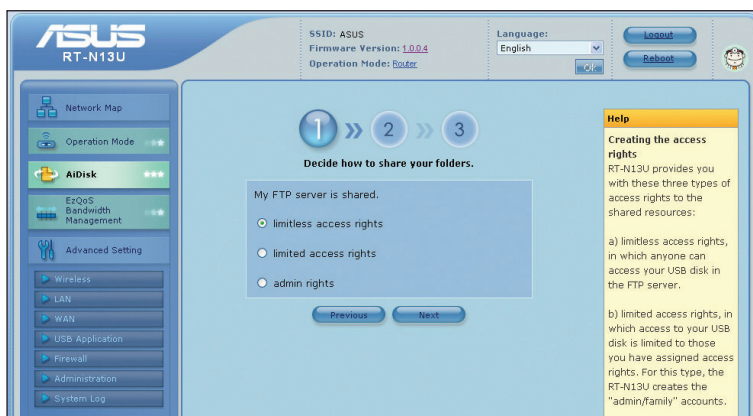
1. Click **AiDisk** from the navigation menu at the left side of your screen.



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, then click **Next**.



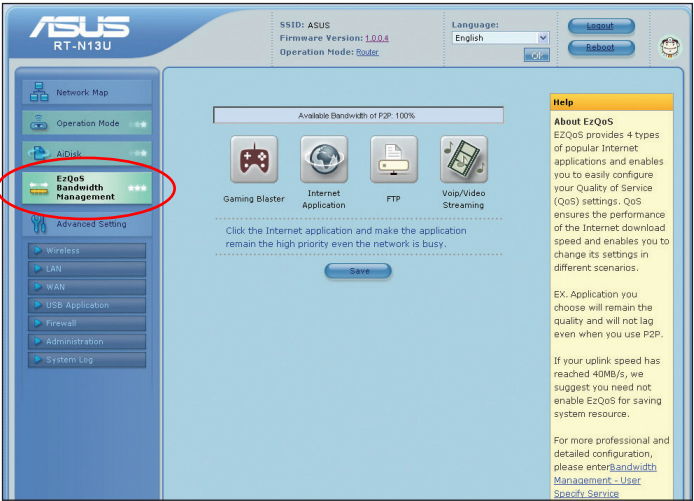
4. If you want to create your own domain name for your FTP site via the ASUS DDNS services, select **I will use the service and accept the Terms of service**. Otherwise, select **Skip ASUS DDNS setting**. Click **Next** to finish the setup.
5. When done, click **Finish**.
6. To access the FTP site that you created, launch a web browser and key in the ftp link (**ftp://<domain name>**).

Managing bandwidth with EzQoS

EzQoS enables you to set the bandwidth priority and manage the network traffic.

To set up the bandwidth priority:

1. Click **EzQoS Bandwidth Management** from the navigation menu at the left side of your screen.



2. Click each of these four applications to set the bandwidth priority:

Icon	Description
	Gaming Blaster The router handles gaming traffic at first priority.
	Internet Application The router handles the e-mail, web browsing and other Internet applications traffic at first priority.
	FTP The router handles at first priority the traffic of downloading/ uploading data to/from the FTP server.
	Voip/Video Streaming The router handles the audio/video traffic at first priority.

3. Click **Save** to save the configuration settings.



Note: For advanced bandwidth configuration, refer to **Managing Bandwidth with QoS** on the next page for details.

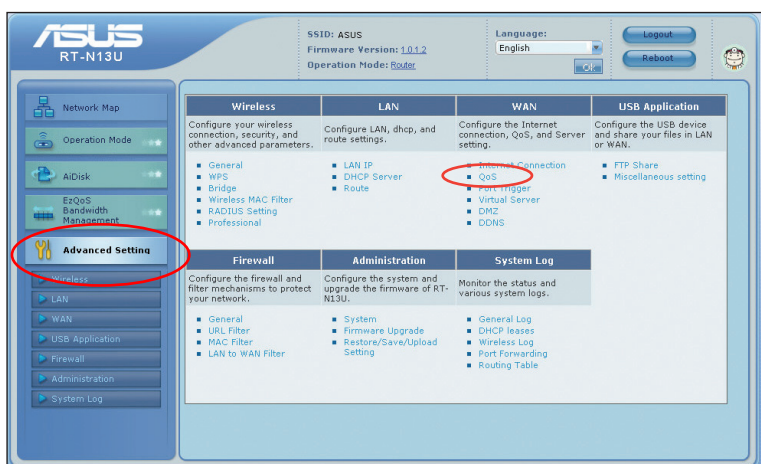
Configuring the advanced settings

Managing bandwidth with QoS

QoS (Quality of Service) is an advanced network traffic control mechanism that manages bandwidth based on LAN clients and applications.

To manage bandwidth with QoS:

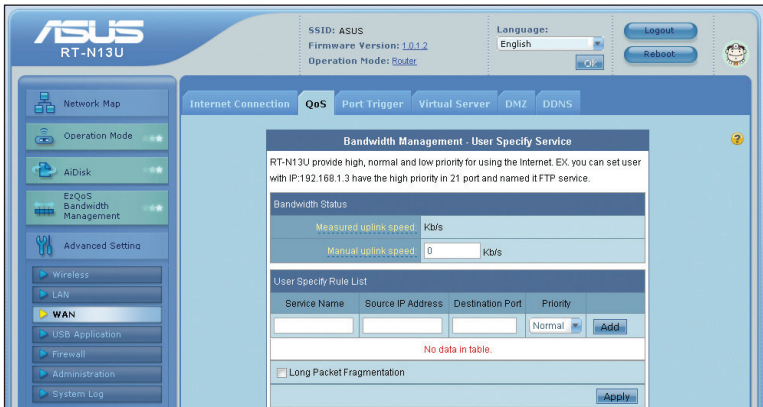
1. Click **Advanced Setting** from the navigation menu at the left side of your screen.
2. Under the **WAN** menu, click **QoS**.



3. Create a bandwidth management rule.

- To create a rule on a certain application for all LAN computers:
 - a. Leave the **Source IP Address** field blank.
 - b. In the **Service Name** field, key in the name for the new rule.
 - c. In the **Destination Port** field, key in the port number of the application.
 - d. From the **Priority** drop-down menu, select the priority.
 - e. Click **Add**.
- To create a rule on a certain application for a certain LAN computer:
 - a. In the **Service Name** field, key in the name for the new rule.
 - b. In the **Source IP Address** field, key in the IP address of the LAN computer.
 - c. In the **Destination Port** field, key in the port number of the application.
 - d. From the **Priority** drop-down menu, select the priority.
 - e. Click **Add**.

- To create a rule on all applications for a certain LAN computer:
 - a. Leave the **Destination Port** field blank.
 - b. In the **Service Name** field, key in the name for the new rule.
 - c. In the **Source IP Address** field, key in the IP address of the LAN computer.
 - d. From the **Priority** drop-down menu, select the priority.
 - e. Click **Add**.
4. Click **Apply** to save the new settings.

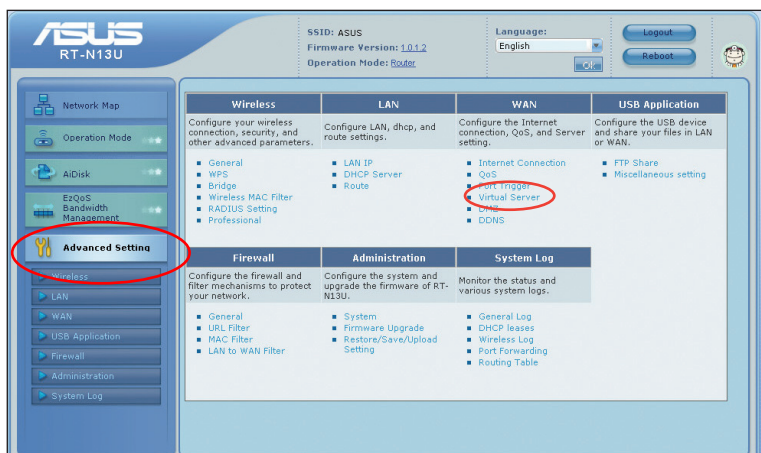


Setting up Virtual Server in your LAN

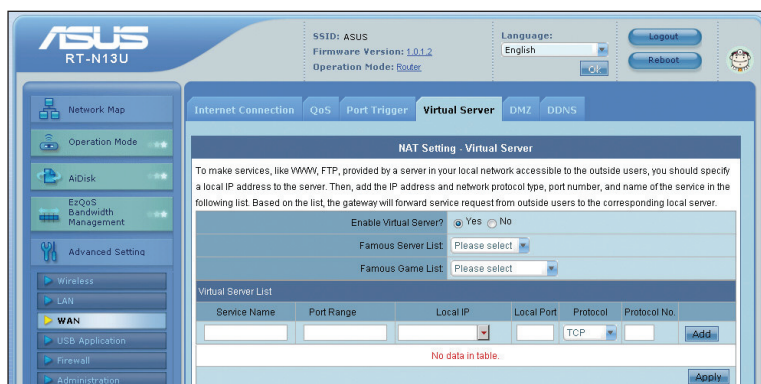
Virtual Server is a Network Address Translation (NAT) function that turns a computer within a LAN into a server and allows data packets of certain services, such as HTTP, from the Internet.

To set up Virtual Server in your LAN:

1. Click **Advanced Setting** from the navigation menu at the left side of your screen.
2. Under the **WAN** menu, click **Virtual Server**.



3. Select **Yes** to enable the Virtual Server function.
4. Select an application from the **Famous Server List** or **Famous Game List** drop-down menu.
5. Select the server computer from the **Local IP** drop-down menu, then the **Service Name**, **Port Range** and **Protocol** fields are automatically populated.
6. Click **Add** to add the new virtual server.
7. Click **Apply** to save the new settings.



Setting up Virtual DMZ in your LAN

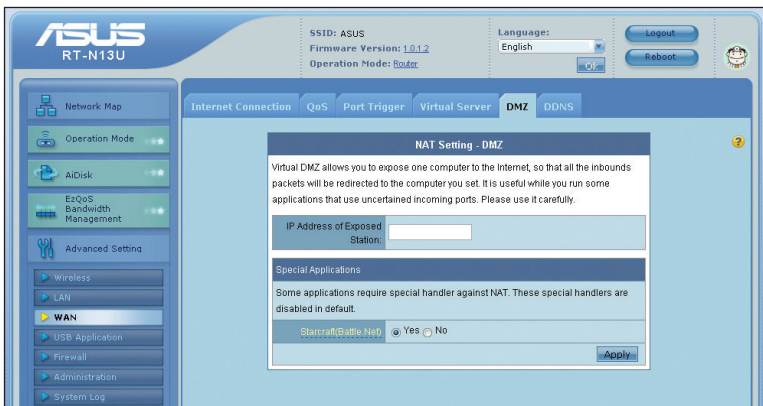
To expose an internal host to the Internet and make all services provided by this host available to outside users, enable the Virtual DMZ function to open all ports of the host. This function is useful when the host plays multiple roles such as HTTP server and FTP server. However, in doing this, your network becomes less secure.

To set up Virtual DMZ in your LAN:

1. Click **Advanced Setting** from the navigation menu at the left side of your screen.
2. Under the **WAN** menu, click **DMZ**.



3. Key in the IP address of the host that you want to expose to the Internet.
4. Click **Apply** to save the new settings.



Upgrading the firmware



Note: Download the latest firmware from the ASUS website at www.asus.com.

To upgrade the firmware:

1. Click **Advanced Setting** from the navigation menu at the left side of your screen.
2. Under the **Administration** menu, click **Firmware Upgrade**.



3. In the **New Firmware File** field, click **Browse** to locate the new firmware on your computer.
4. Click **Upload**. The uploading process takes about three minutes.

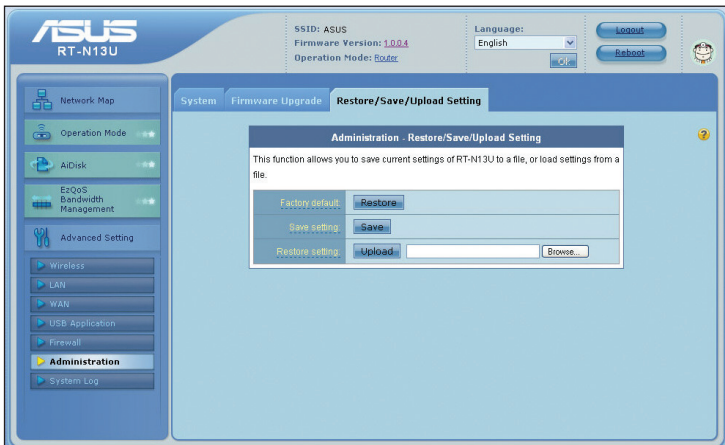


Note: If the upgrade process fails, use the Firmware Restoration utility to restore the system. For details on this utility, refer to the section **Firmware Restoration** in Chapter 5 of this user manual.

Restoring/Saving/Uploading settings

To restore/save/upload the settings:

1. Click **Advanced Setting** from the navigation menu at the left side of your screen.
2. Under the **Administration** menu, click **Restore/Save/Upload Setting**.



3. 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**, and click **Save** in the file download window to save the system file in your preferred path.
 - To restore previous system settings, click **Browse** to locate the system file that you want to restore, then click **Upload**.

Using the USB application

The ASUS Wireless Router provides one USB 2.0 port for connecting USB devices such as a USB storage device and USB printer, to allow you to share files and a printer with clients in your network.




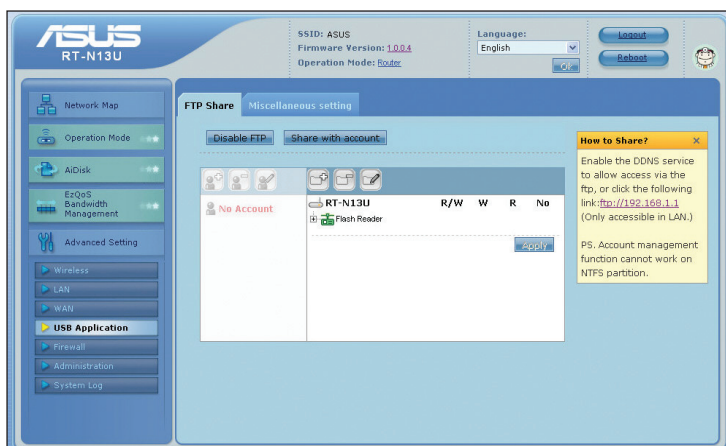
Note: To use this feature, you need to plug a USB storage device, such as a USB hard disk or USB flash drive, to the USB 2.0 port on the rear panel of your wireless router. Ensure that the USB storage device is formatted and partitioned properly. Refer to the ASUS website at www.asus.com for the HD file system support table.

Creating a user account

You need to create user accounts before you can share the files or data in the USB storage device.

To create a user account:

1. Click **Advanced Setting > USB Application** from the navigation menu at the left side of your screen.
2. Click **Share with account**, and click **OK** to enable the sharing feature.
3. Click the Add account  icon.



4. In the **Account** and **Password** fields, key in the name and password of the client/computer in your network. Retype the password to confirm. Click **Add** to add the account to the list.

Setting up an FTP site

The ASUS Wireless Router enables you to share files from your USB storage device with computers in LAN or through the Internet.

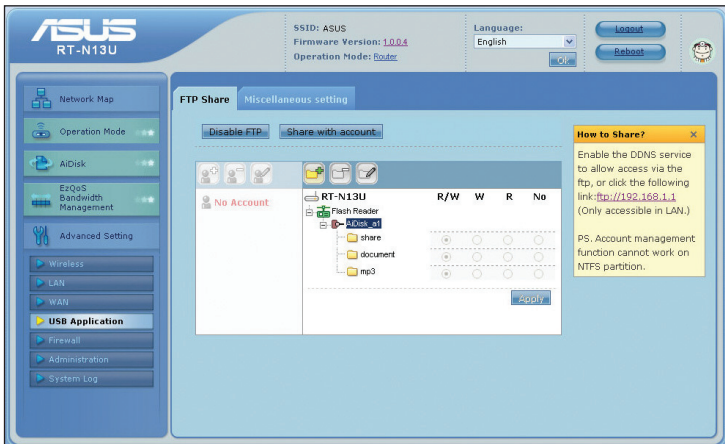


Notes:

- To use this feature, you need to insert a USB storage device, such as a USB hard disk or USB flash drive, to the USB2.0 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 www.asus.com for the HD file system support table.
- To access the FTP, you may either enable the DDNS service or key in the ftp link <ftp://192.168.1.1> from any computer in LAN.

To set up an FTP site:

1. Click **Advanced Setting** > **USB Application** from the navigation menu at the left side of your screen.
2. From the **FTP Share** tab, select the account that you want to assign access rights to.



3. From the list of file folders, select the type of access rights that you want to assign for specific file folders:
 - **R/W**: Select this option to assign read/write access for a specific file folder.
 - **W**: Select this option to assign write only access for a specific file folder.
 - **R**: Select this option to assign read only access for a specific file folder.
 - **No**: Select this option if you do not want to share a specific file folder.
4. Click **Apply** to apply the changes.
5. From any LAN computer, key in **ftp://192.168.1.1** on a web browser.

Turning RT-N13U into a mobile router

Turn RT-N13U into a mobile router through a 3G USB adapter.

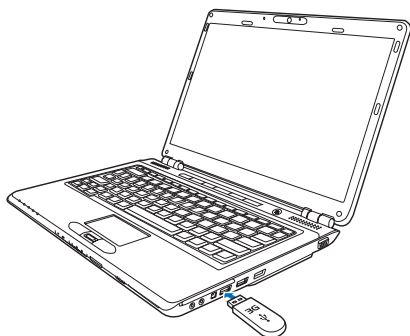


Note:

- Only the H/W Version B1 model supports the mobile router feature. Check the bottom of the router for its H/W version.
 - The 3G USB adapter is purchased separately. Obtain a list of supported 3G USB adapters from the ASUS website at www.asus.com.
-

To set up RT-N13U as a mobile router:

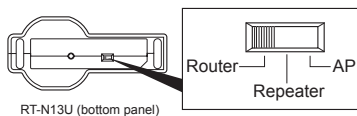
1. Activate your 3G USB dongle.
2. Insert the 3G USB dongle into your computer's USB port and verify if you can access the Internet through the 3G USB dongle.



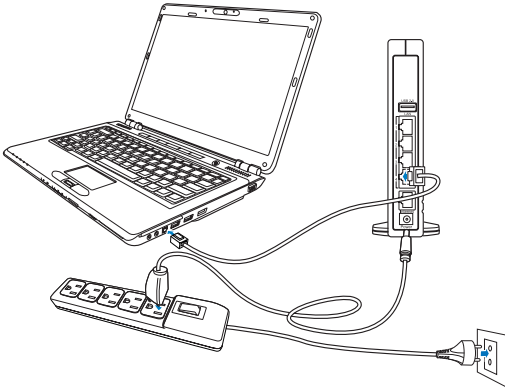
Note:

Refer to the documentation that came with your 3G USB dongle or contact your ISP (Internet Service Provider) for instructions on how to activate it and access the Internet through it.

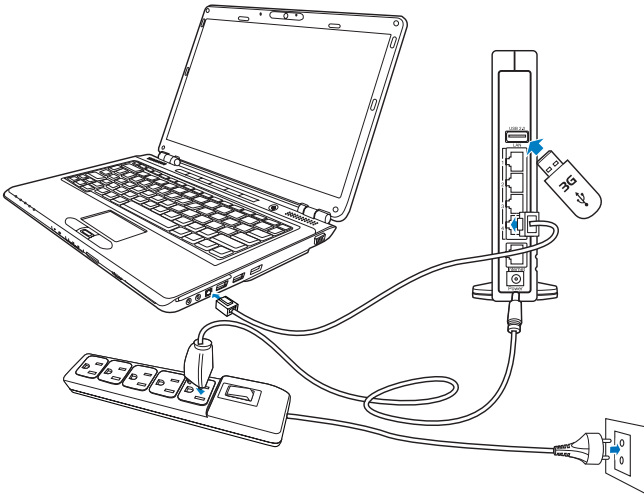
3. Remove the 3G adapter from your computer.
4. Set the operation mode selector at the bottom of your router to Router.



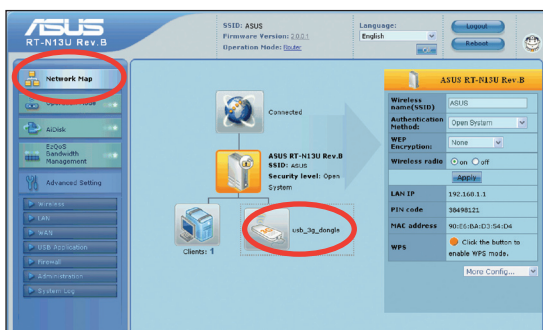
5. Connect one end of the supplied RJ-45 cable to a LAN port at the rear of your router and the other end to your computer's LAN port.
6. Connect one end of the supplied power adapter to the power port at the rear of your router and the other end to a power outlet.



7. Insert the 3G USB adapter into the USB port at the rear of your router.



8. From your computer, log in the router's Web GUI. You can find the 3G USB adapter icon in the network map.



9. From the navigation menu, click **Advanced Setting > USB Application**.

10. Click the **HSDPA** tab, then configure the following settings:

Enable HSDPA: Select Enable.

3G/3.5G USB Adapter: Select your 3G USB adapter.

Location: Select your ISP's location.

ISP: Select your ISP.

APN service (optional): Key in your APN service name.

PIN: Key in the PIN (Personal Identification Number) code.

Dial Number: Key in your dial number.

Username: Key in your username.

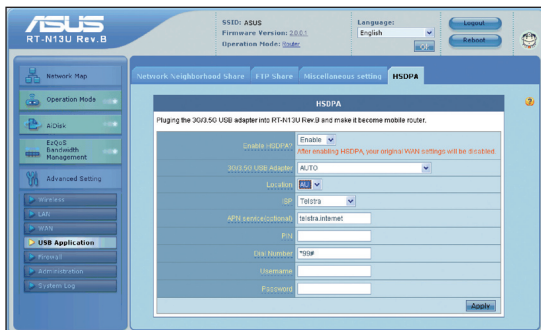
Password: Key in your password.



Note:

Obtain the APN service name, PIN code, dial number, username, and password from your ISP.

11. Click **Apply**, then you are prompted to configure your Wi-Fi network.



Connecting a USB printer

Connect a compatible USB printer to the USB 2.0 port of the ASUS Wireless Router and share the USB printer with your LAN clients.



Note: Visit the ASUS Website at www.asus.com for compatible printer vendor and models.

Installing the printer using the ASUS Network Printer Setup Program

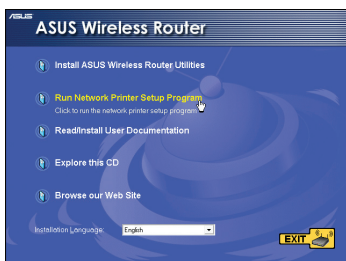
To install the printer using the ASUS Network Printer Setup Program:

1. Place the support CD into the optical drive. An autorun screen appears if Autorun is enabled on your computer.

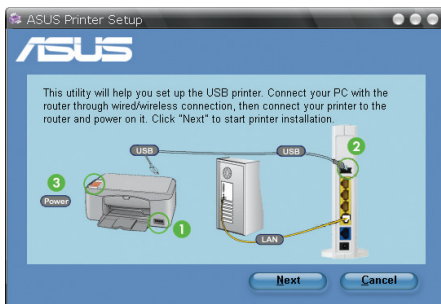


Note: If Autorun is disabled on your computer, double-click **setup.exe** from the root directory of the support CD.

2. Click **Run Network Printer Program**.



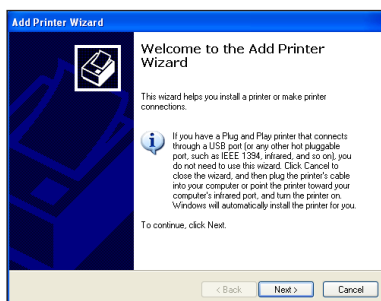
3. Follow the onscreen instructions to install the USB printer on your computer.



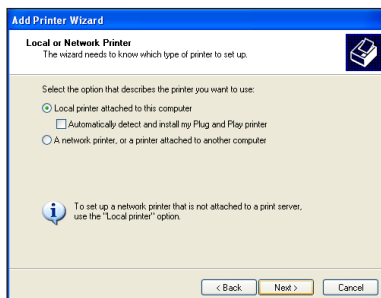
Installing the printer on Windows® XP using the Windows® Add Printer Wizard

To install the printer on Windows® XP using the Windows® Add Printer Wizard:

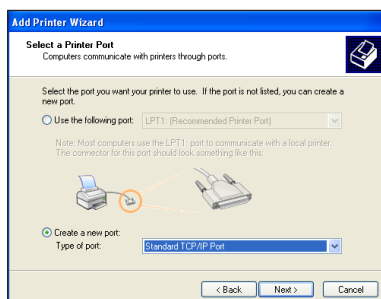
1. Run the Add Printer Wizard from **Start > Printers and Faxes > Add a printer.**



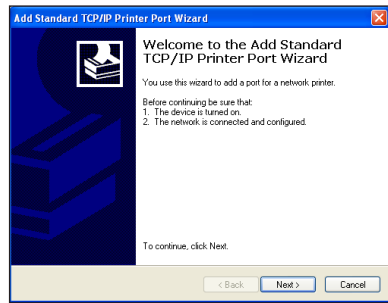
2. Select **Local printer attached to this computer** and click **Next**.



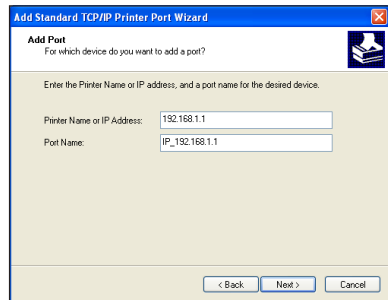
3. Select **Create a new port** and set Type of port to **Standard TCP/IP Port**, then click **Next**.



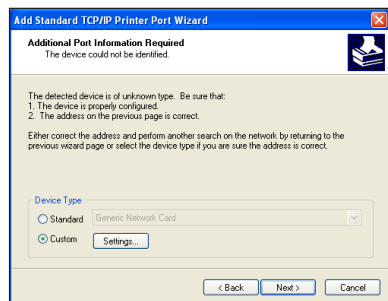
4. Click **Next** to set up the TCP/IP port for accessing the network printer.



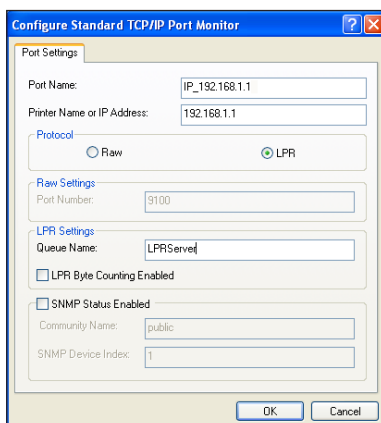
5. Key in the IP address of the wireless router in the **Printer Name or IP Address** field and click **Next**.



6. Select **Custom** and click **Settings...**

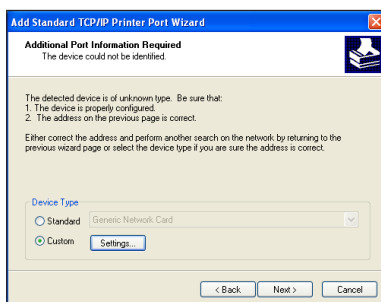


7. Set **Protocol** to **LPR** and type **LPRServer** in **Queue Name** field. Click **OK** to continue.



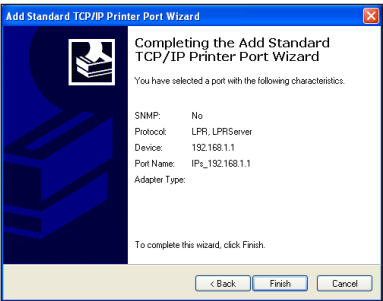
The screenshot shows the 'Configure Standard TCP/IP Port Monitor' dialog box. It has a 'Port Settings' tab. The 'Port Name' field contains 'IP_192.168.1.1'. The 'Printer Name or IP Address' field contains '192.168.1.1'. Under the 'Protocol' section, the 'LPR' radio button is selected. The 'Raw Settings' section has a 'Port Number' field with '3100'. The 'LPR Settings' section has a 'Queue Name' field with 'LPRServer'. There are checkboxes for 'LPR Byte Counting Enabled' and 'SNMP Status Enabled', both of which are unchecked. The 'Community Name' field contains 'public' and the 'SNMP Device Index' field contains '1'. At the bottom are 'OK' and 'Cancel' buttons.

8. Press **Next** to finish the standard TCP/IP port setting.

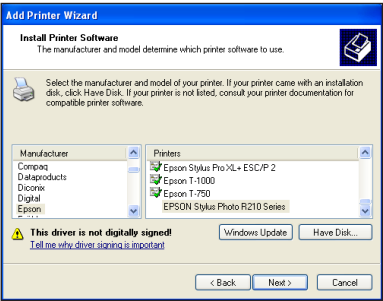


The screenshot shows the 'Add Standard TCP/IP Printer Port Wizard' dialog box. It has a title bar 'Add Standard TCP/IP Printer Port Wizard'. The main text says 'Additional Port Information Required' and 'The device could not be identified.' Below this, it says 'The detected device is of unknown type. Be sure that: 1. The device is properly configured. 2. The address on the previous page is correct.' It then says 'Either correct the address and perform another search on the network by returning to the previous wizard page or select the device type if you are sure the address is correct.' Under the 'Device Type' section, the 'Custom' radio button is selected. The 'Standard' radio button is also selected, and the 'Generic Network Card' is shown in a dropdown menu. There is a 'Settings...' button next to the 'Custom' radio button. At the bottom are '< Back', 'Next >', and 'Cancel' buttons.

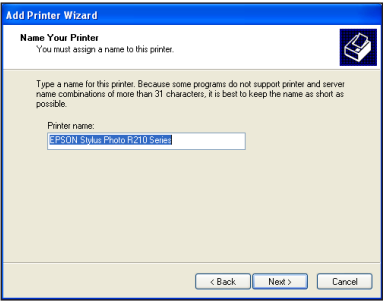
9. Press **Finish** to complete the settings and return to the Add Printer Wizard.



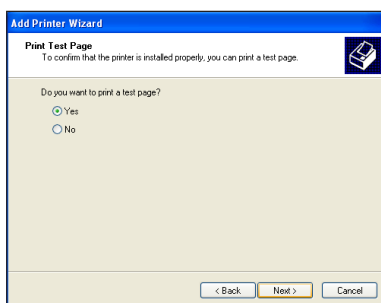
10. Install the printer driver from the vendor-model list. If your printer came with an installation disk, click **Have Disk** to manually assign the location of driver.



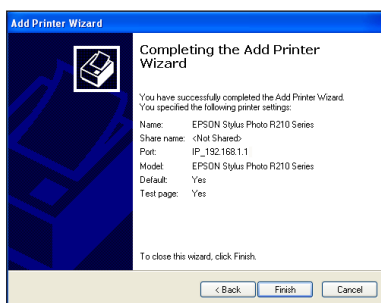
11. Click **Next** to accept the default name for the printer.



12. Select **Yes** to print a test page.
Click **Next** to print.



13. The installation is complete. Click **Finish** to quit the Add Printer Wizard.



14. After connecting your USB printer and installing the printer driver, you can now see the printer name and status on the wireless router's web GUI.



Note: If you have already installed the printer locally on your computer, right click the printer icon and select **Property > Port** tab to add a standard TCP/IP port. Click **Add Port** then select **Standard TCP/IP Port** and click **New Port** button. Refer to steps 5-8 for setting procedures.



Note: If you use Windows® 98 or ME which does not support Standard TCP/IP port, you need to use Remote Port which is supported by the ASUS Wireless Router.

5

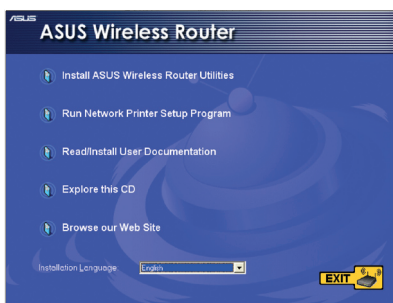
Installing the utilities

Installing the utilities

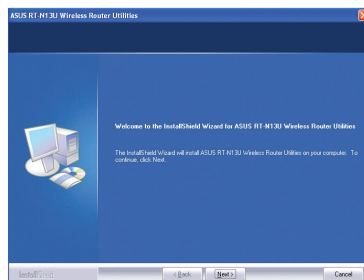
The support CD contains the utilities for configuring the ASUS Wireless Router. To install the ASUS WLAN Utilities in Microsoft® Windows, insert the support CD in the CD drive. If Autorun is disabled, run **setup.exe** from the root directory of the support CD.

To install the utilities:

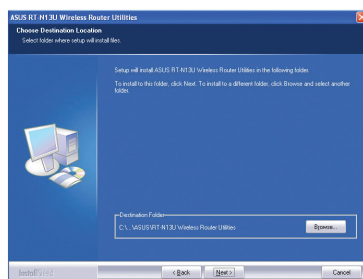
1. Click **Install...Utilities**.



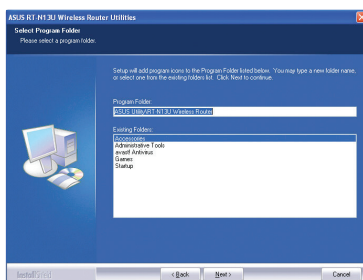
2. Click **Next**.



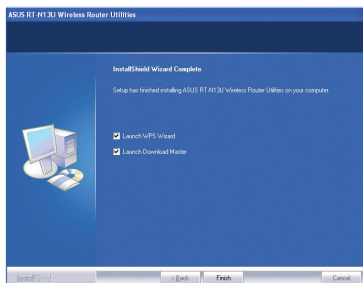
3. Click **Next** to accept the default destination folder or click **Browse** to specify another path.



4. Click **Next** to accept the default program folder or enter another name.



5. Click **Finish** when setup is completed.

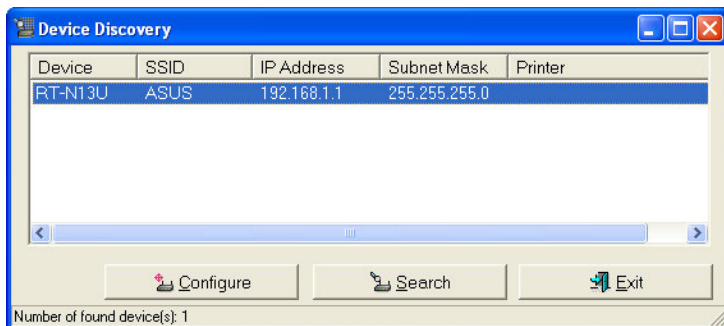


Device Discovery

Device Discovery is an ASUS WLAN utility that detects an ASUS wireless router and enables you to configure the device.

To launch the Device Discovery utility:

From your computer's desktop, click **Start > All Programs > ASUS Utility > RT-N13U Wireless Router > Device Discovery**.



- Click **Configure** to access the web GUI and configure the wireless router.
- Click **Search** to search for ASUS wireless routers within range.
- Click **Exit** to exit the application.

Firmware Restoration

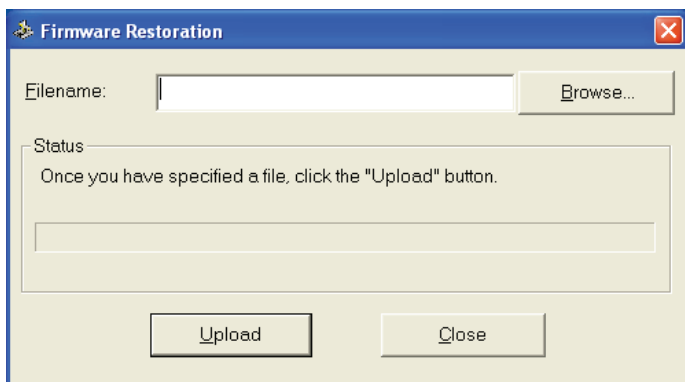
Firmware Restoration is used on an ASUS Wireless Router that failed during its firmware upgrading process. It uploads the firmware that you specify. The process takes about three to four minutes.



Important: Launch the rescue mode before using the Firmware Restoration utility.

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

1. Unplug the wireless router from the power source.
2. Hold the Restore button at the bottom panel and simultaneously re-plug the wireless router into the power source. Release the Restore button when the Power LED at the front panel flashes slowly, which indicates that the wireless router is in the rescue mode.
3. From your computer's desktop, click **Start > All Programs > ASUS Utility > RT-N13U Wireless Router > Firmware Restoration**.



4. 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 **Upgrading the firmware** in Chapter 4 of this user manual for details.

WPS Wizard

WPS (Wi-Fi Protected Setup) allows you to set up a secure and protected wireless network easily.

Using WPS Wizard

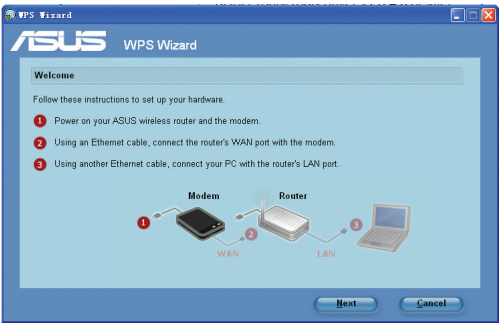


- Ensure that you use a wireless LAN dapter with WPS function.
- Windows® operating systems and wireless LAN cards/adapters that support WPS:

OS Support	Wireless Adapter Support
Vista 32/64	Intel wireless LAN card
	ASUS 167gv2 driver v3.0.6.0 or later
	ASUS 160N/130N driver v2.0.0.0 or later
XP SP2	Intel wireless LAN card
	ASUS 167gv2 driver v1.2.2.0 or later
	ASUS 160N/130N driver v1.0.4.0 or later
XP SP1 and 2000	ASUS LAN card with ASUS WLAN Utility
	ASUS 167gv2 driver v1.2.2.0 or later
	ASUS 160N/130N driver v1.0.4.0 or later

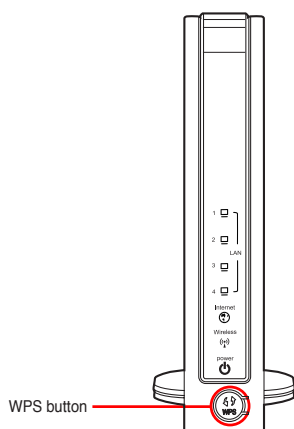
To use WPS Wizard:

1. Follow the onscreen instructions to set up your hardware. When done, click **Next**.



Note: Use the WPS Wizard with one wireless client at a time. If the wireless client cannot discover the wireless router, shorten the distance between the client and the router.

2. Push the WPS button on the front panel of the wireless router for more than five seconds.



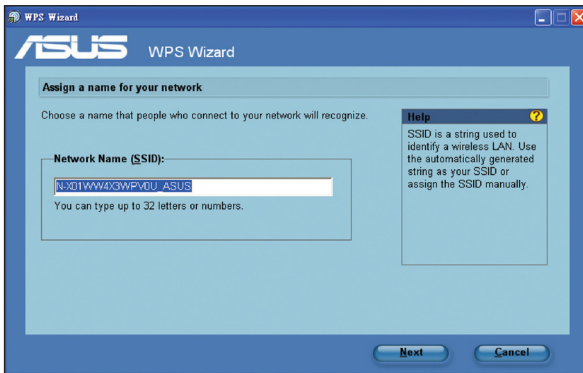
3. On the WPS Wizard, click **Next** to continue.



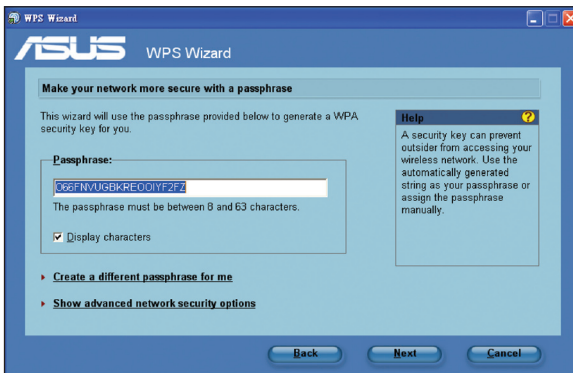
Notes:

- When running WPS, the Internet connection pauses briefly then reestablishes the connection.
- If the WPS button is pushed without running the WPS Wizard, the PWR indicator flashes and Internet connection pauses briefly and then reestablishes the connection.

4. Assign a name to your network, then click **Next**.



5. Use the auto-generated passphrase as your network's security key or manually assign a passphrase containing between 8 and 63 characters. Click **Next**.

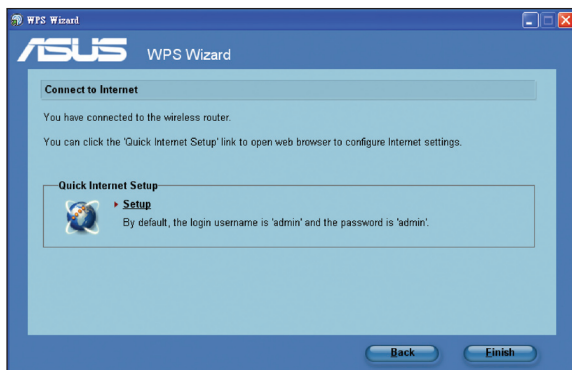


- Installation is completed. Click **Save or print settings** for future reference or **Save settings to a USB flash drive** to add other devices to the network. Click **Next** to connect to the Internet.



Note: For more details on adding devices to the network using a USB flash drive, refer to the section **Adding network devices using a USB flash drive** on the next page.

- You have connected to the wireless router. If you want to configure the Internet settings, click **Setup**. Click **Finish** to close the WPS Wizard.

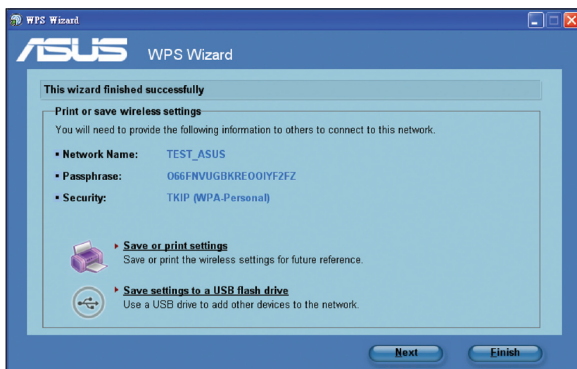


Adding network devices using a USB flash drive

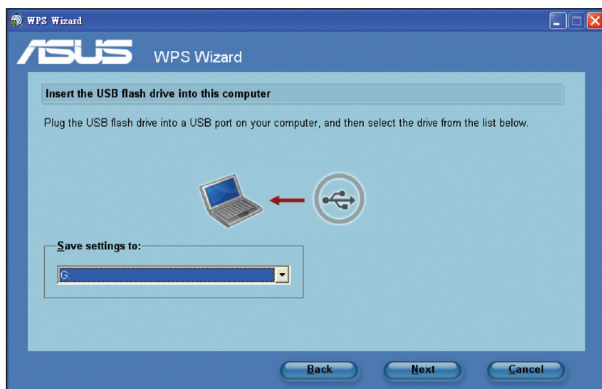
With the WPS utility, you can add devices to your network using a USB flash drive.

To add network devices using a USB flash drive:

1. In the WPS Wizard, click **Save settings to a USB flash drive**.



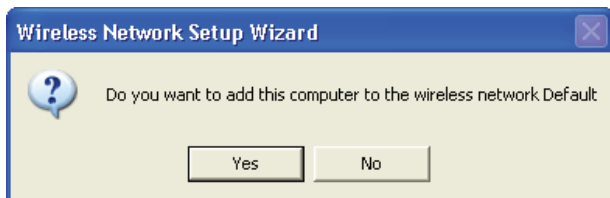
2. Plug a USB flash drive into the USB port on your computer, and then select the drive from the dropdown list. When done, click **Next** to continue.



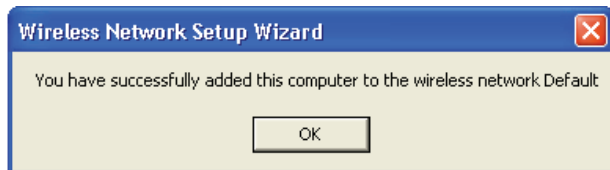
3. Remove the USB flash drive from this computer, and then plug to the computer that you want to add to the wireless network.



4. Locate the **SetupWireless.exe** from the USB drive, and double-click to run it. Click **Yes** to add the computer to the wireless network.



5. Click **OK** to exit the **Wireless Network Setup Wizard**.



Download Master

Download Master is a utility that allows you to organize your HTTP, FTP, and BT (BitTorrent) download tasks.

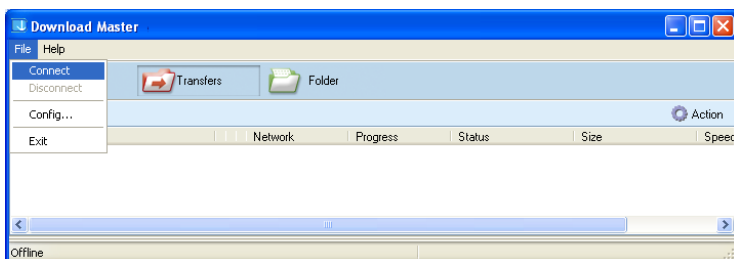
Using the Download Master

To use the Download Master:



Note: 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 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 www.asus.com for the HD file system support table.

1. Launch the Download Master from **Start > All Programs > ASUS Utility > RT-N13U Wireless Router > Download Master**. Click **File > Connect** to connect to the wireless router.



2. Follow the instructions below to organize the download tasks that you want to perform.

HTTP download

To perform an HTTP download, do any of the following:

- Right-click the download link on the web page and select **Download using ASUS Download**.
- Right-click the download link on the web page and select **Properties**. Copy the download Address (URL).

If you select **Download using ASUS Download**, you can see the download task is added to the **Transfer** list. The blue bars indicate the progress rate of the download tasks.

If you copy the download address, click the **Assign** button in the utility. Paste the address into **Getting File From** box, select **HTTP** from **Options**, and click **Download** button to start.

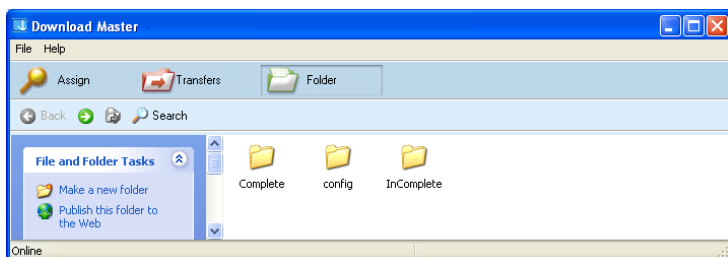
FTP download

Click the **Assign** button of the Download Master and select **FTP** in the **Options** field. Key in the FTP site address, Port number, User Name, Password. Click **Download** to start.

BT download

Save the BT seed on your computer. Click the **Assign** button of the Download Master and select **BT** in the **Options** field. Click **Browser** to locate the seed file and click **Download** to start.

3. Click the **Folder** button to view the download file. Open the **Complete** folder to view or copy the finished files to your local hard disk. The incomplete tasks are kept in the **InComplete** folder.



Troubleshooting

Troubleshooting

This troubleshooting guide provides solutions to some common problems that you may encounter while installing or using the ASUS Wireless Router. These problems require simple troubleshooting that you can perform by yourself. Contact the ASUS Technical Support if you encounter problems not mentioned in this chapter.

Problem	Action
I cannot access a web browser for configuring the router.	<ol style="list-style-type: none">1. Launch a web browser, then click Tools > Internet Options...2. Under Temporary Internet files, click Delete Cookies... and Delete Files...
The client cannot establish a wireless connection with the router.	<p>Out of Range:</p> <ul style="list-style-type: none">• Put the router closer to the wireless client.• Try to change the channel settings. <p>Authentication:</p> <ul style="list-style-type: none">• Use wired connection to connect to the router.• Check the wireless security settings.• Press the Restore button at the bottom panel for more than five seconds. <p>Cannot find the router:</p> <ul style="list-style-type: none">• Press the Restore button at the bottom panel for more than five seconds.• Check the setting in the wireless adapter such as SSID and encryption settings.

Problem	Action
Cannot access the Internet via wireless LAN adapter	<ul style="list-style-type: none"> • Move the router closer to the wireless client. • Check whether the wireless adapter is connected to the correct wireless router. • Check whether the wireless channel in use conforms to the channels available in your country/area. • Check the encryption settings. • Check if the ADSL or Cable connection is correct. • Retry using another Ethernet cable.
Internet is not accessible	<ul style="list-style-type: none"> • Check the status indicators on the ADSL modem and the wireless router. • Check if the Internet LED on the wireless router is ON. If the LED is not ON, change the cable and try again.
When ADSL Modem “Link” light is ON (not blinking), this means Internet Access is possible.	<ul style="list-style-type: none"> • Restart your computer. • Refer to the Quick Start Guide of the wireless router and re-configure the settings. • Check if the Internet LED on the wireless router is ON. • Check the wireless encryption settings. • Check if the computer can get the IP address (via both wired network and wireless network). • Ensure that your web browser is configured to use the local LAN, and is not configured to use a proxy server.

Problem	Action
If the ADSL "LINK" light blinks continuously or stays off, Internet access is not possible - the Router is unable to establish a connection with the ADSL network.	<ul style="list-style-type: none"> • Ensure that all your cables are all properly connected . • Disconnect the power cord from the ADSL or cable modem, wait a few minutes, then reconnect the cord. • If the ADSL light continues to blink or stays OFF, contact your ADSL service provider.
Network name or encryption keys are forgotten.	<ul style="list-style-type: none"> • Try setting up the wired connection and configuring the wireless encryption again. • Press the Restore button at the bottom panel of the wireless router for more than five seconds.
How to restore the system to its default settings?	<ul style="list-style-type: none"> • Press the Restore button at the bottom panel of the wireless router for more than five seconds. • Refer to the section Restoring/Saving/Uploading settings in Chapter 4 of this user manual. <p>The following are the factory default settings:</p> <p>User Name: admin</p> <p>Password: admin</p> <p>Enable DHCP: Yes (if WAN cable is plugged in)</p> <p>IP address: 192.168.1.1</p> <p>Domain Name: (Blank)</p> <p>Subnet Mask: 255.255.255.0</p> <p>DNS Server 1: 192.168.1.1</p> <p>DNS Server 2: (Blank)</p> <p>SSID: ASUS</p>

ASUS DDNS Service

RT-N13U supports the ASUS DDNS service. When exchanging devices at the service center, if you have registered the ASUS DDNS service and want to keep the original domain name, data transfer is a must. Visit your local service center for more information.



Notes:

- If there is no activity in the domain - such as reconfiguring the router or accessing the registered domain name - within 90 days, the system automatically deletes the registered information.
 - If you encounter any problem or difficulty in using your device, contact the service center.
-

Frequently Asked Questions (FAQs)

1. Will the registered information be lost or registered by others?

If you have not updated the registered information in 90 days, the system automatically deletes the registered information and the domain name may be registered by others.

2. I did not register the ASUS DDNS for the router I bought six months ago. Can I still register it?

Yes, you can still register the ASUS DDNS service for your router. The DDNS service is embedded in your router, so you can register the ASUS DDNS service anytime. Before registering, click **Query** to check if the hostname has been registered or not. If not, the system registers the hostname automatically.

3. I have registered a domain name before and it has been working well until my friends told me that they could not access my domain name.

Check the following:

1. The internet is working well.
2. The DNS server is working well.
3. The last time you updated the domain name.

If there are still problems in accessing your domain name, contact the service center.

4. Can I register two domain names to separately access my http and ftp servers?

No, you cannot. You can only register one domain name for one router. Use port mapping to implement security in the network.

5. After restarting the router, why is it that I see different WAN IPs in MS DOS and in the router configuration page?

This is normal. The interval time between the ISP DNS server and ASUS DDNS results in different WAN IPs in MS DOS and in the router configuration page. Different ISPs may have different interval time for IP updating.

6. Is the ASUS DDNS service free, or is it just a trial version?

The ASUS DDNS service is a free and embedded service in some ASUS routers. Check your ASUS router if it supports the ASUS DDNS service.

Appendices

Notices

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.



Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

Safety Information

To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm between the radiator and your body. Use on the supplied antenna.

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- 2 has been conducted. These are considered relevant and sufficient.

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.

Operation Channels: Ch1~11 for N. America, Ch1~14 Japan, Ch1~13 Europe (ETSI)

IC Warning

The Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.

Cet appareil numérique de la class B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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Version 2, June 1991

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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://green.asus.com/english/REACH.htm>.

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