



LevelOne
User Manual

WRE-6001
Wireless Range Extender,
300Mbps 802.11b/g/n

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1 Introduction

Congratulations on becoming the owner of the Wireless Gateway. You will now be able to access the Internet using your high-speed xDSL/Cable modem connection.

This User Guide will show you how to connect your Wireless Gateway, and how to customize its configuration to get the most out of your new product.

Features

The list below contains the main features of the device and may be useful to users with knowledge of networking protocols. If you are not an experienced user, the chapters throughout this guide will provide you with enough information to get the most out of your device.

Features include:

- 10/100Base-T Ethernet router to provide Internet connectivity to all computers on your LAN
- Network address translation (NAT) functions to provide security for your LAN
- Network configuration through DHCP Server and DHCP Client
- Services including IP route and DNS configuration, RIP, and IP
- Supports remote software upgrades
- User-friendly configuration program accessed via a web browser

The Wireless Gateway has the internal Ethernet switch allows for a direct connection to a 10/100BASE-T Ethernet network via an RJ-45 interface, with LAN connectivity for both the Wireless Gateway and a co-located PC or other Ethernet-based device.

Device Requirements

In order to use the Wireless Gateway, you must have the following:

- One RJ-45 Broadband Internet connection via cable modem or xDSL modem
- Instructions from your ISP on what type of Internet access you will be using, and the addresses needed to set up access
- One or more computers each containing an Ethernet card (10Base-T/100Base-T network interface card (NIC))
- TCP/IP protocol for each PC
- For system configuration using the supplied
 - a. web-based program: a web browser such as Internet Explorer v4 or later, or Netscape v4 or later. Note that version 4 of each browser is the minimum version requirement – for optimum display quality, use Internet Explorer v7, or Netscape v6.1



You do not need to use a hub or switch in order to connect more than one Ethernet PC to your device. Instead, you can connect up to four Ethernet PCs directly to your device using the ports labeled Ethernet on the rear panel.

Using this Document

Notational conventions

- Acronyms are defined the first time they appear in the text and also in the glossary.
- For brevity, the Wireless Gateway is referred to as “the device”.
- The term *LAN* refers to a group of Ethernet-connected computers at one site.

Typographical conventions

- *Italic* text is used for items you select from menus and drop-down lists and the names of displayed web pages.
- **Bold** text is used for text strings that you type when prompted by the program, and to emphasize important points.

Special messages

This document uses the following icons to draw your attention to specific instructions or explanations.



Note

Provides clarifying or non-essential information on the current topic.



Definition

Explains terms or acronyms that may be unfamiliar to many readers. These terms are also included in the Glossary.



WARNING

Provides messages of high importance, including messages relating to personal safety or system integrity.

Getting Support

Supplied by:
Helpdesk Number:
Website:

2 Getting to know the device

Computer / System requirements

- 1. Pentium 200MHZ processor or above
- 2. Windows 98SE, Windows Me, Windows 2000, Windows XP, Windows Vista, Windows 7 and Windows 8

Package Contents

1. 11n Repeater
2. Quick Installation Guide
3. Ethernet Cable (RJ-45)

LED meanings & activations

Top Side

The Top Side contains lights called Light Emitting Diodes (LEDs) that indicate the status of the unit.

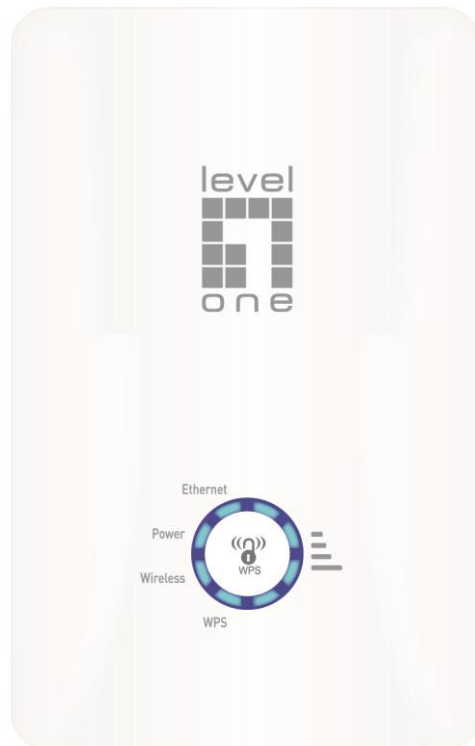



Figure 1: Top Side and LEDs

Label	Color	Function
Wifi Signal 	blue	On: Wireless Signal Strength Off: No WLAN link
Wireless	blue	On: WLAN link established and active Blink: Valid Wireless packet being transferred
WPS	blue	Off: WPS link isn't established and active Blink: Valid WPS packet being transferred
Ethernet	blue	On: LAN link established and active Off: No LAN link Blink: Valid Ethernet packet being transferred

Rear and Left Panel and bottom Side

The rear and right panel and bottom side contains a *Restore Defaults* button, the ports for the unit's data and power connections.



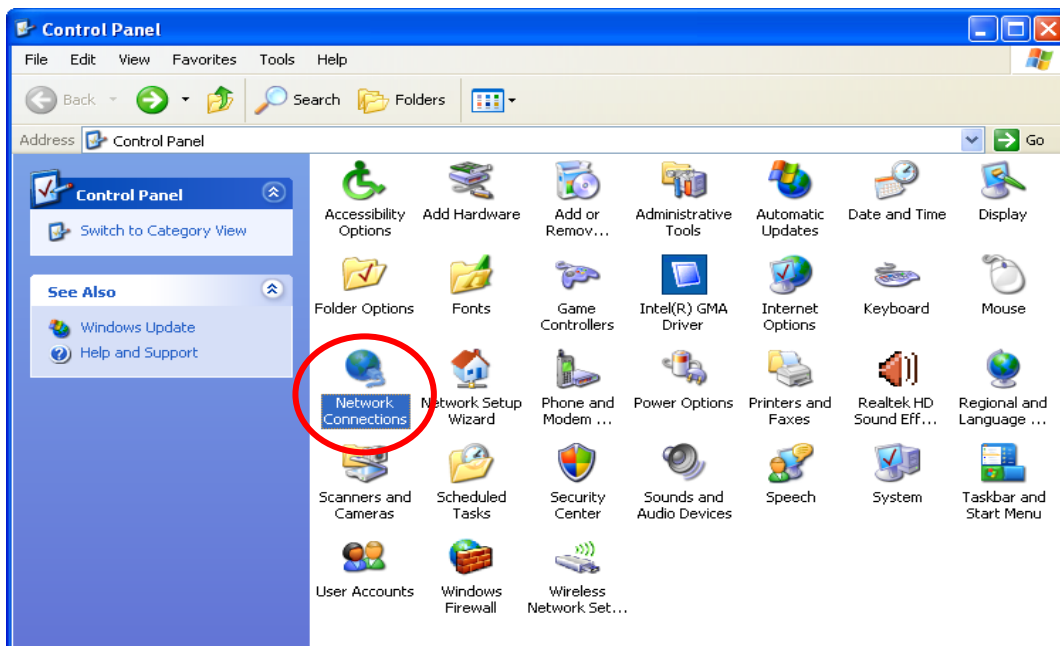
Label	Function
Ethernet	Connects the device via LAN Ethernet to a PC
WPS / RESET	<p>WPS Press this button for 3 full seconds and the WPS LED will flash to start WPS. Now go to the wireless adapter or device and press its WPS button. Make sure to press the button within 120 seconds (2 minutes) after pressing the router's WPS button.</p> <p>RESET Reset button. RESET the 11n Repeater to its default settings. Press this button for at least 3 full seconds to RESET device to its default settings.</p>

3 Computer configurations under different OS, to obtain IP address automatically

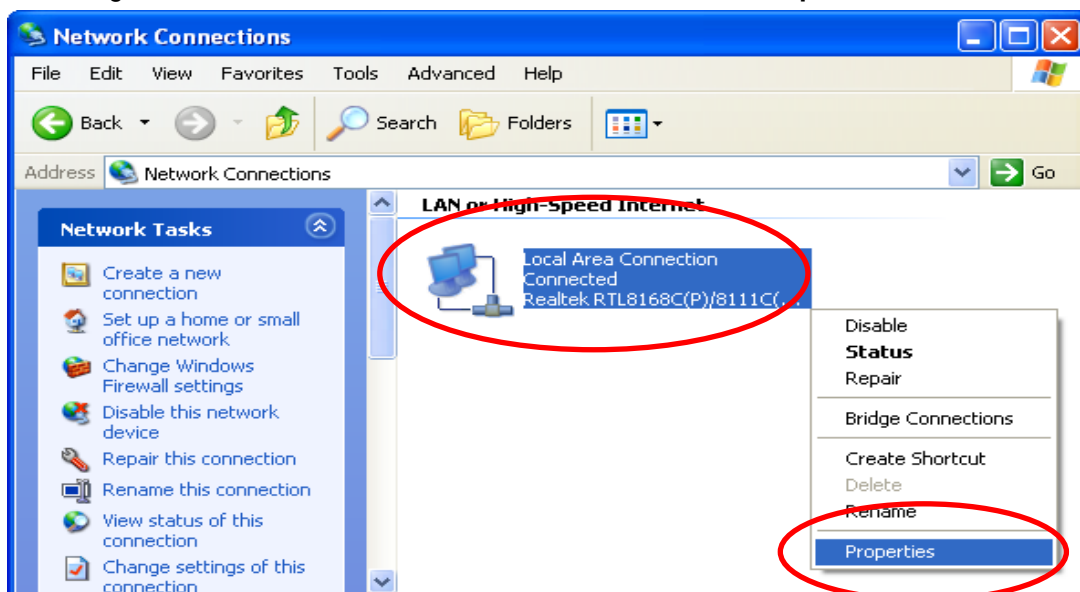
Before starting the WER-6001 configuration, please kindly configure the PC computer as below, to have automatic IP address / DNS Server.

For Windows 98SE / ME / 2000 / XP

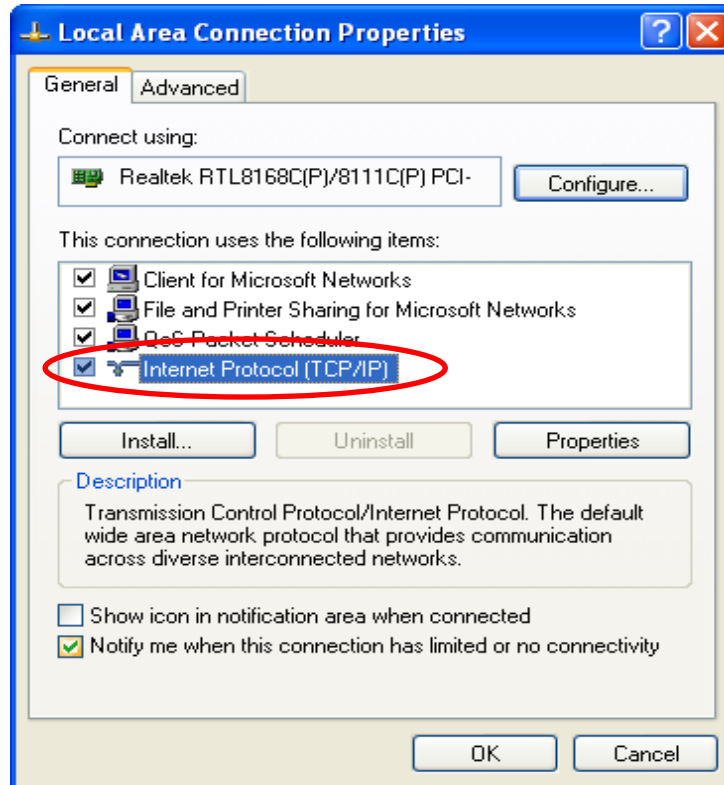
1. Click on "Start" -> "Control Panel" (in Classic View). In the Control Panel, double click on "Network Connections" to continue.



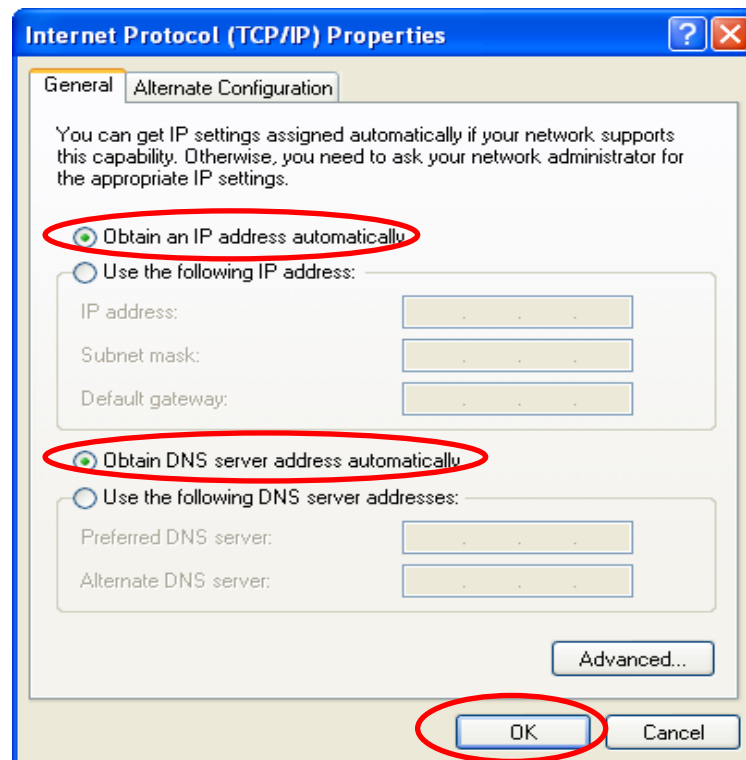
2. Single RIGHT click on "Local Area connection", then click "Properties".



3. Double click on "Internet Protocol (TCP/IP)".



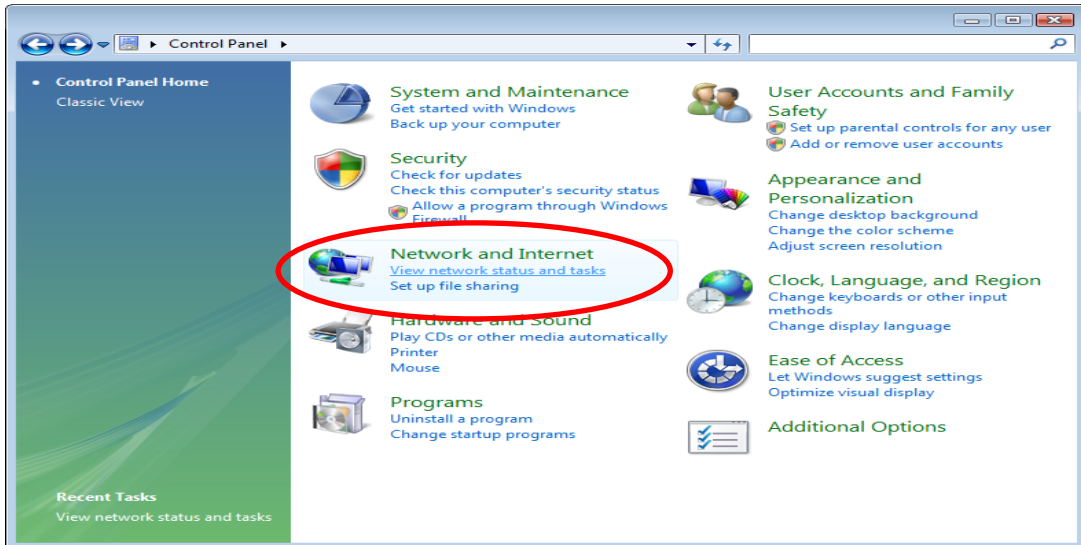
4. Check "Obtain an IP address automatically" and "Obtain DNS server address automatically" then click on "OK" to continue.



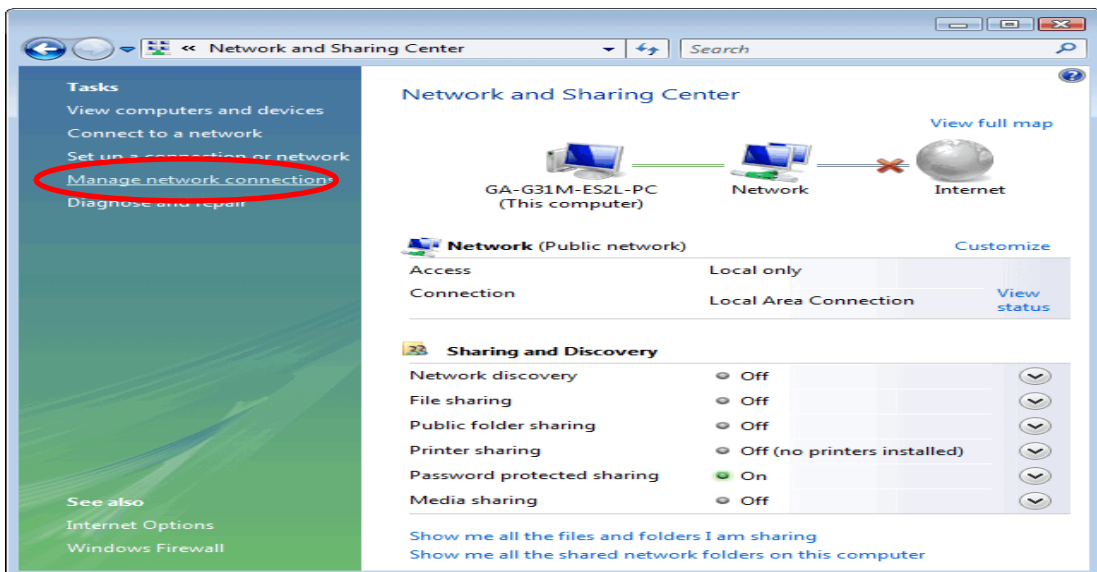
5. Click "Show icon in notification area when connected" (see screen image in 3. above) then Click on "OK" to complete the setup procedures.

For Windows Vista-32/64

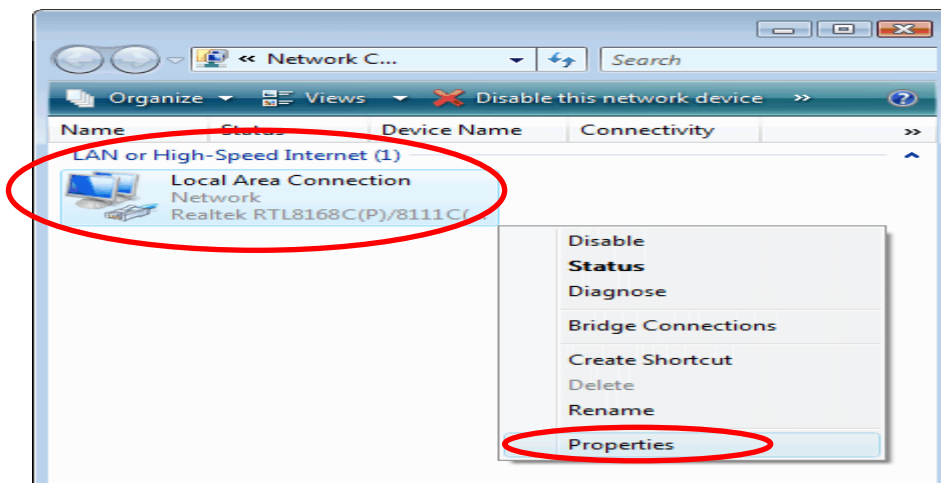
1. Click on "Start" -> "Control Panel" -> "View network status and tasks".



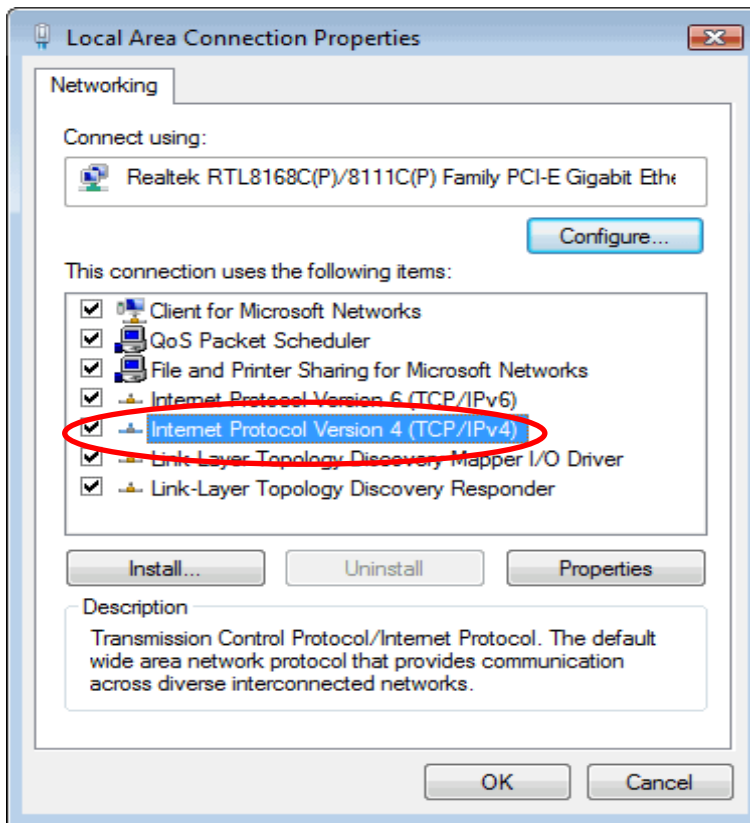
2. In the Manage network connections, click on "Manage network connections" to continue.



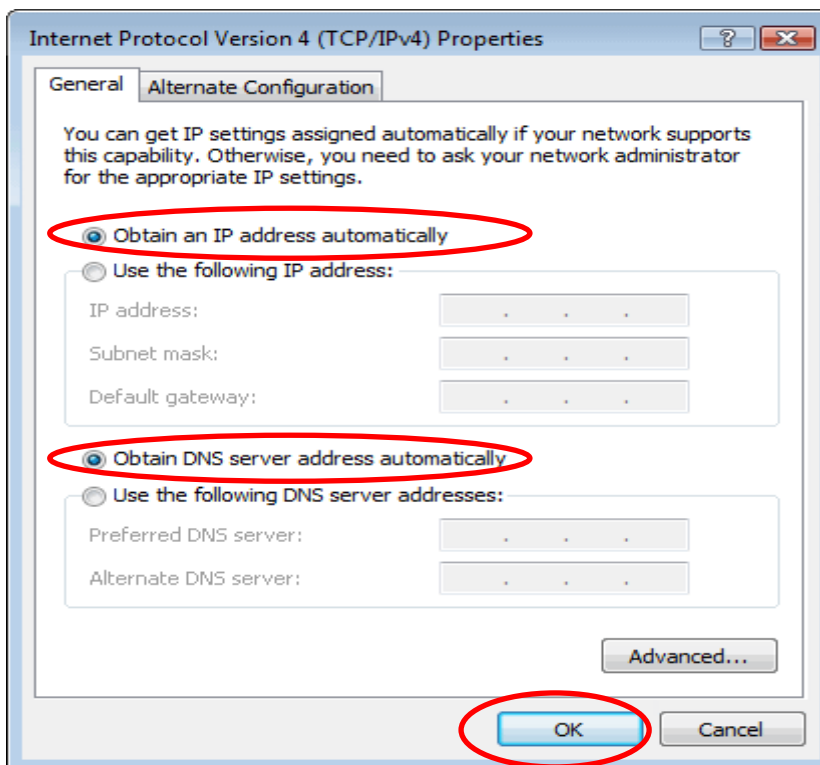
3. Single RIGHT click on "Local Area connection", then click "Properties".



- The screen will display the information "User Account Control" and click "Continue" to continue.
- Double click on "Internet Protocol Version 4 (TCP/IPv4)".

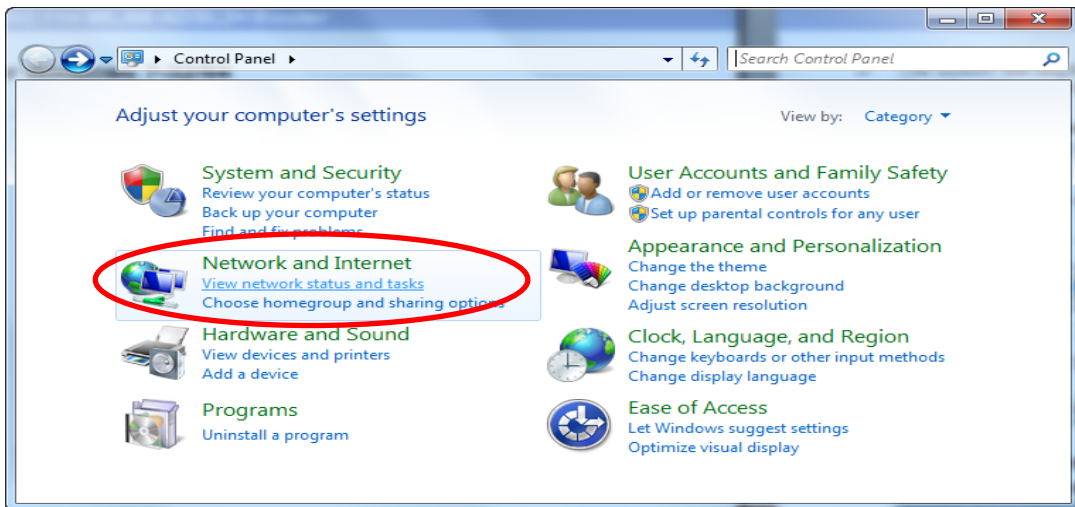


- Check "Obtain an IP address automatically" and "Obtain DNS server address automatically" then click on "OK" to continue.

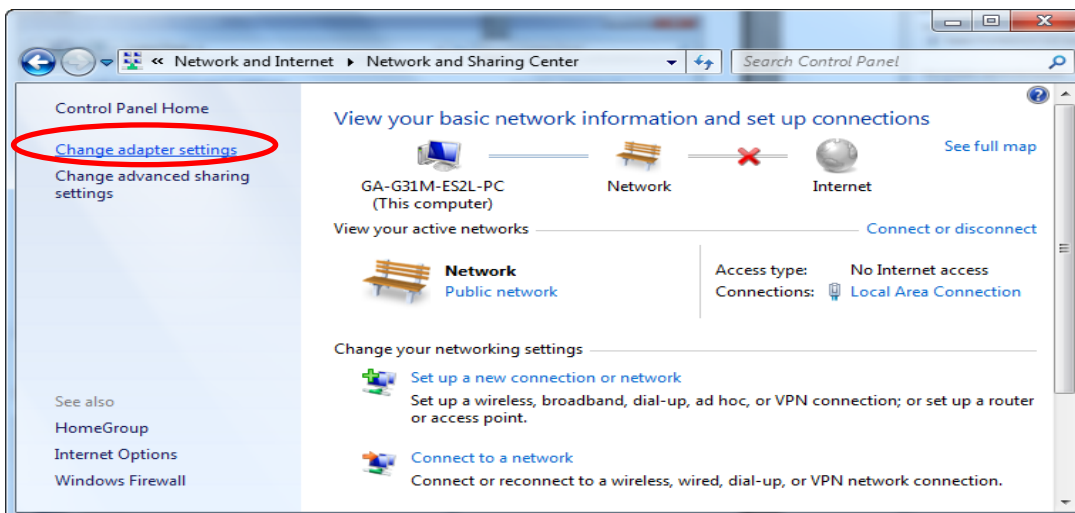


For Windows 7-32/64

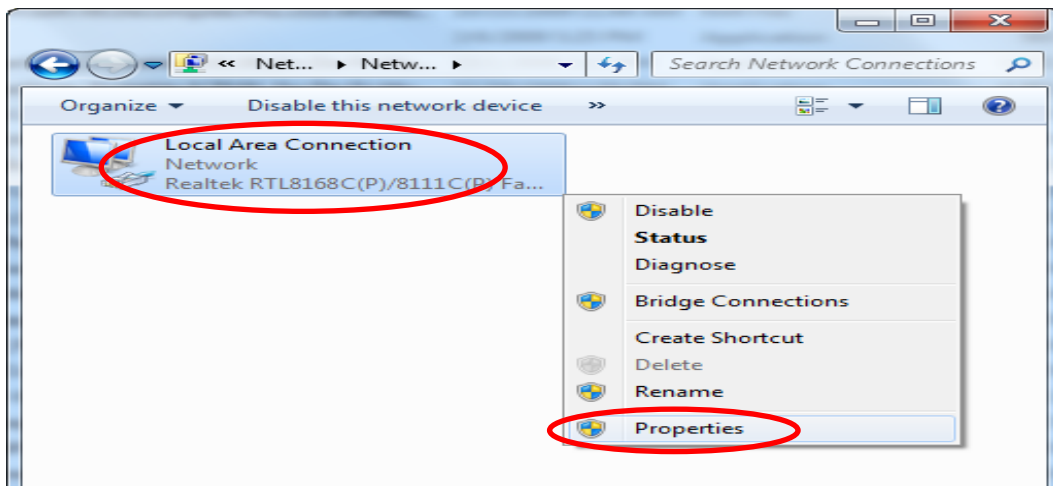
7. Click on “Start” -> “Control Panel” (in Category View) -> “View network status and tasks”.



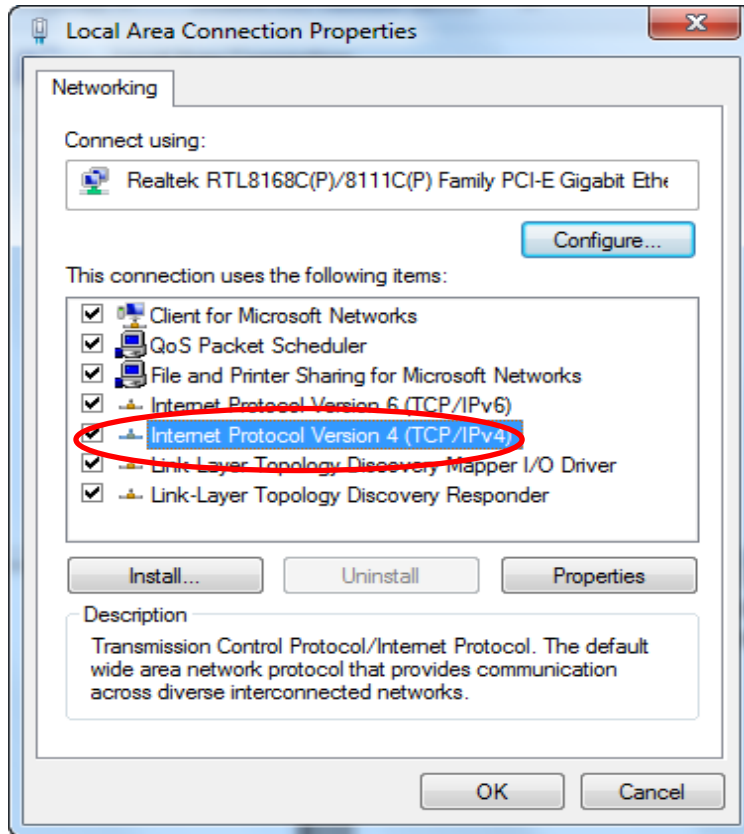
8. In the Control Panel Home, click on “Change adapter settings” to continue.



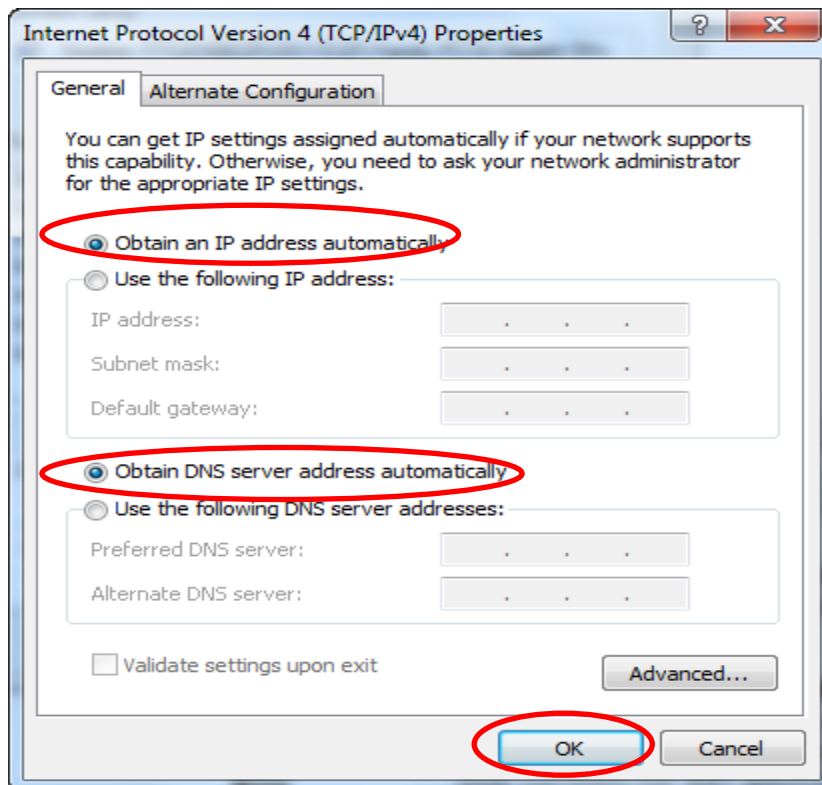
9. Single RIGHT click on “Local Area Connection”, then click “Properties”.



10. Double click on "Internet Protocol Version 4 (TCP/IPv4)".



11. Check "Obtain an IP address automatically" and "Obtain DNS server address automatically" then click on "OK" to continue.

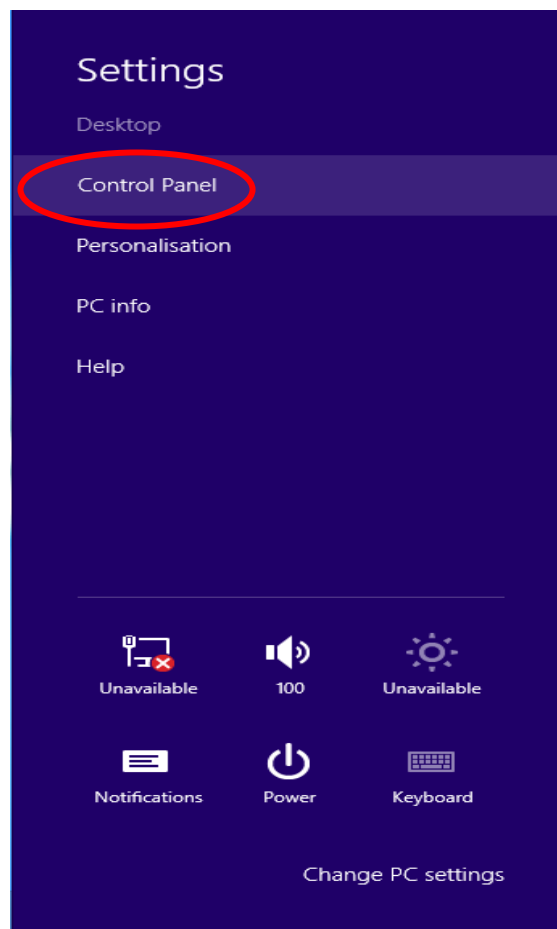


For Windows 8-32/64

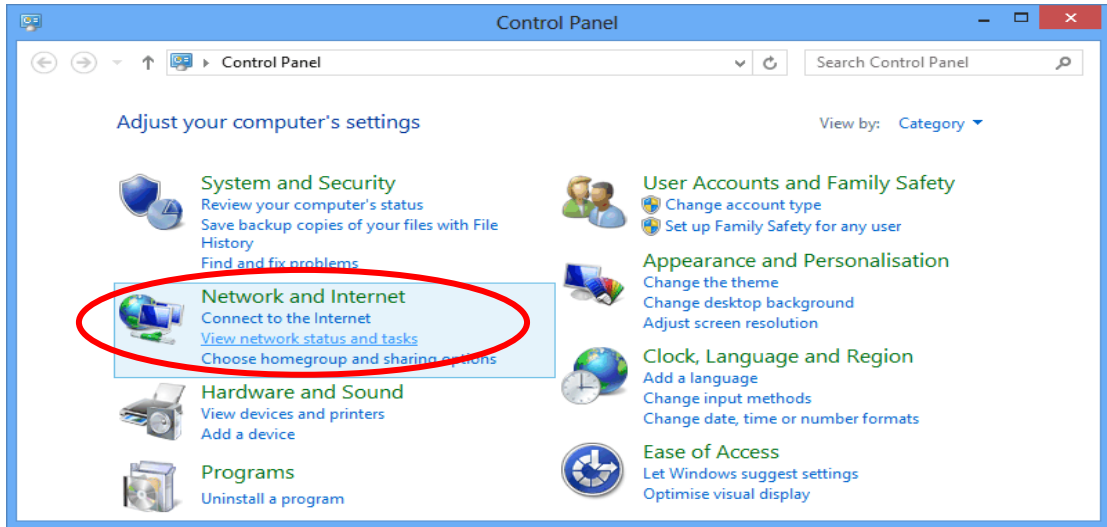
1. Move the mouse or tap to the upper right corner and click on “**Settings**”.



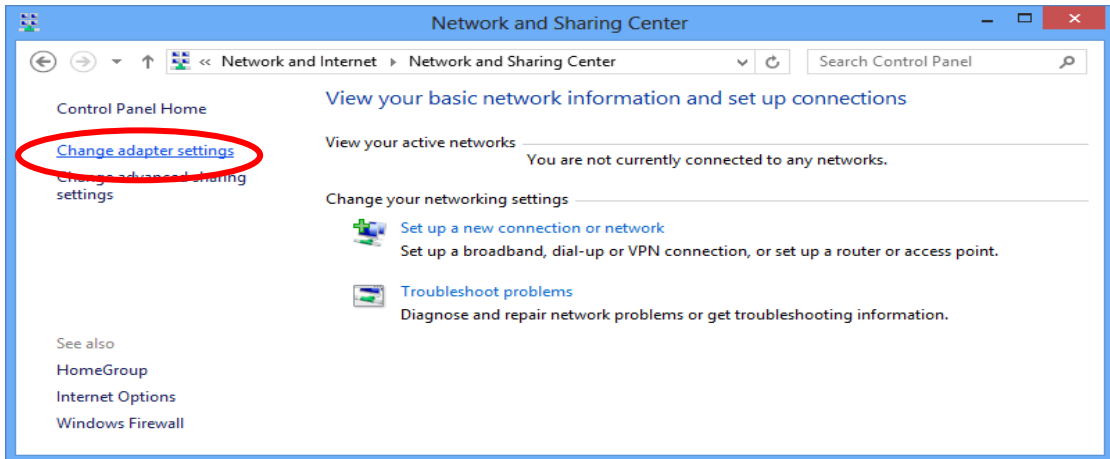
2. Click on “**Control Panel**”.



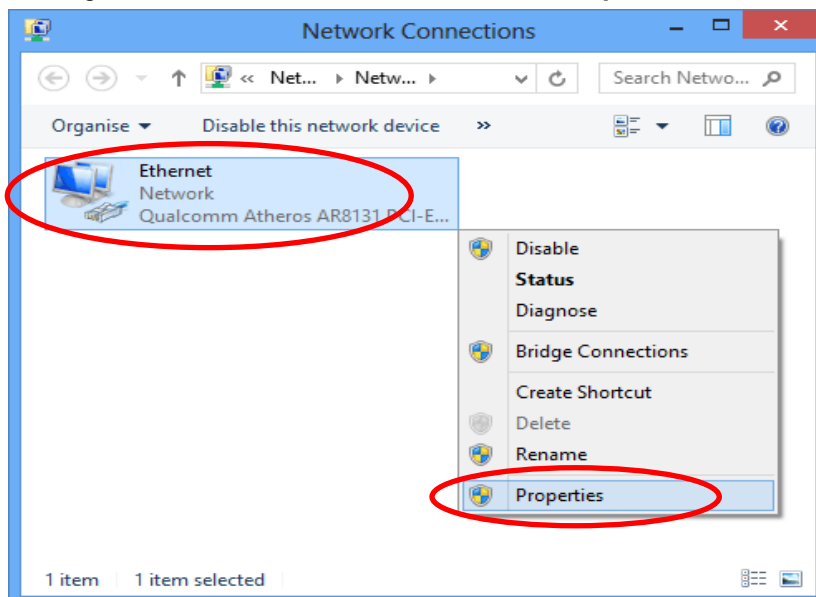
3. Click on "View network status and tasks".



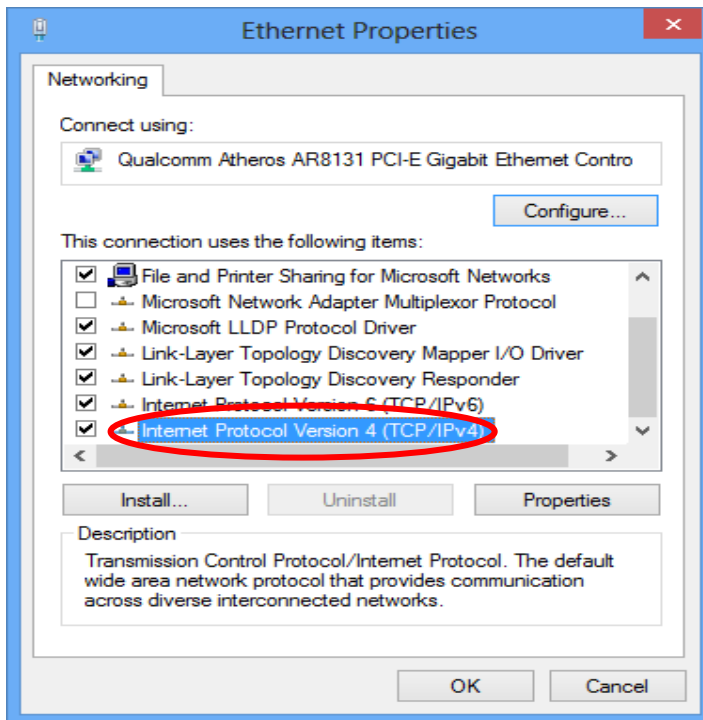
4. In the Control Panel Home, click on "Change adapter settings" to continue.



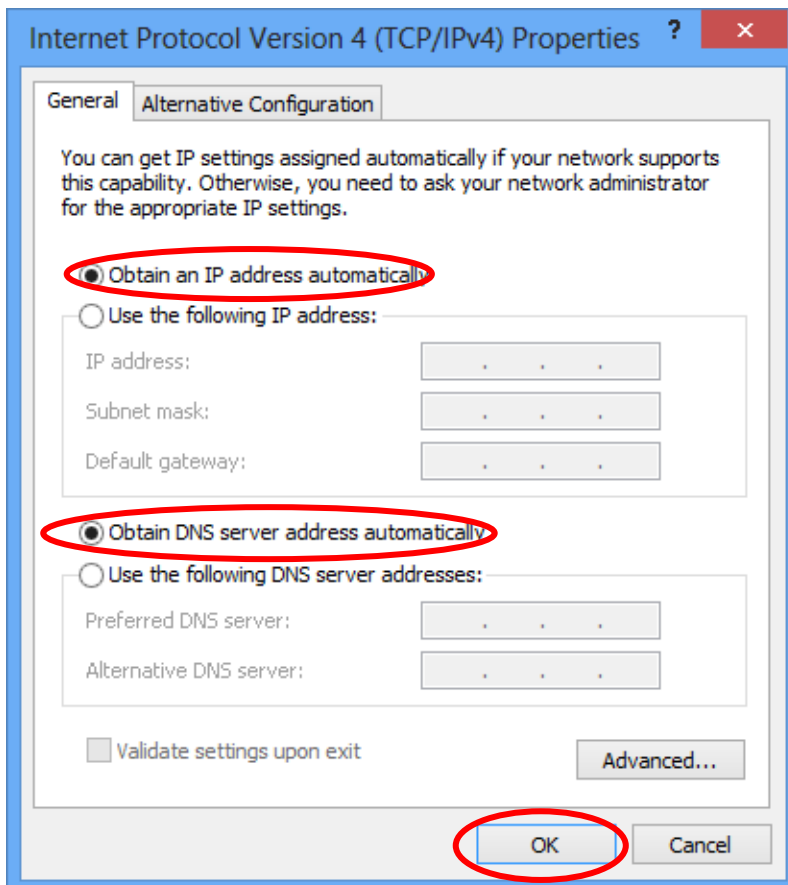
5. Single RIGHT click on "Ethernet", then click "Properties".



6. Double click on "Internet Protocol Version 4 (TCP/IPv4)".



7. Check "Obtain an IP address automatically" and "Obtain DNS server address automatically" then click on "OK" to continue.



4 Connecting your device

This chapter provides basic instructions for connecting the Wireless Gateway to a computer or LAN and to the Internet.

In addition to configuring the device, you need to configure the Internet properties of your computer(s). For more details, see the following sections:

- *Configuring Ethernet PCs*

This chapter assumes that you have already established a DSL/Cable service with your Internet service provider (ISP). These instructions provide a basic configuration that should be compatible with your home or small office network setup. Refer to the subsequent chapters for additional configuration instructions.

Connecting the Hardware

This section describes how to connect the device to the wall phone port, the power outlet and your computer(s) or network.



Before you begin, turn the power off for all devices. These include your computer(s), your LAN hub/switch (if applicable), and the Wireless Gateway.

The diagram below illustrates the hardware connections. The layout of the ports on your device may vary from the layout shown. Refer to the steps that follow for specific instructions.



Step 1. Connect the Ethernet cable to LAN Port Connect the supplied RJ45 Ethernet cable from your PC's Ethernet port to any of the 11n Repeater's LAN Port.

Step 2. Connect the 11n Repeater to your wall-mounted power outlet

WPS Pairing between 11n Repeater and Wireless xDSL/Cable Modem

This section describes how to do WPS Pairing between 11n Repeater and Wireless xDSL/Cable.

The diagram below illustrates the hardware connections. The layout of the ports on your device may vary from the layout shown. Refer to the steps that follow for specific instructions.



Step 1. Press WPS button on Wireless xDSL/Cable Modem.

Step 2. Press WPS button on 11n Repeater for 3 seconds and release WPS button. Now the WPS LED is blinking and the 11n Repeater is doing WPS Pairing with Wireless xDSL/Cable Modem.

Make sure to press the button within 120 seconds (2 minutes) after pressing the Wireless xDSL/Cable Modem's WPS button.

Step 3. Once the 11n Repeater finished doing WPS Pairing with Wireless xDSL/Cable Modem, the Wifi Signal Strength LED is ON. The status of Wifi signal strength LED varies depending on the Wifi signal strength between 11n Repeater and Wireless xDSL/Cable Modem.

Step 4. Check if the Wifi Signal Strength LED of 11n Repeater is ON, the 11n Repeater is connected and suitable for Internet Connections.

Step 5. Check if the Wifi Signal Strength is OFF, the 11n Repeater isn't connected and suitable for Internet Connections. Please repeat steps of WPS Pairing or follow next step to have it connected and suitable for Internet Connections.

5 Advanced Configuration


Advanced Configuration


1. From any of the LAN computers connected to , launch your web browser, type the following URL in the web address (or location) box, and press [Enter] on your keyboard:
http://192.168.1.1
2. Please enter the Login User Name: admin and Login Password: administrator and then click on Login button.

Login

Username:
Password:

3. Check on “**Auto**” checkbox.
4. Click on “**Site Survey**” button and wait for 5 seconds for site surveying.

Advanced: 


 Repeater

Auto:

Name(SSID):


Key:


Name (SSID):

Encryption Options:

SSID	BSSID	Channel	Type	Security	Signal	Select
------	-------	---------	------	----------	--------	--------

5. Check on **“Select”** radio of SSID of the front AP and configure related parameters.
6. Click on **“Apply&Save”** button.

Advanced: 


Repeater

Auto:

Name(SSID):

Key:


Name (SSID):

Encryption Options:

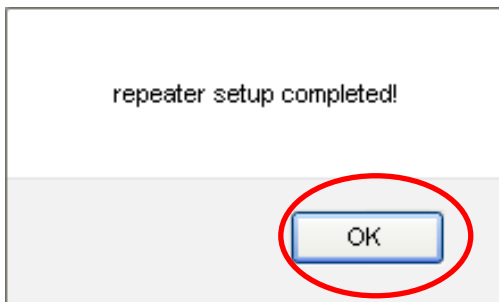
WPA Encryption: TKIP AES

Pre-Shared Key Format:

Pre-Shared Key:

SSID	BSSID	Channel	Type	Security	Signal	Select
WRT120N	68:7f:74:fb:fc:16	9	AP	WPA2-PSK(AES)		<input checked="" type="radio"/>

7. Click on **“OK”** button.

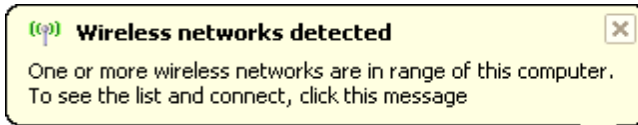


8. Now, the 11n Repeater has been configured completed, and suitable for Wireless and Internet Connections.

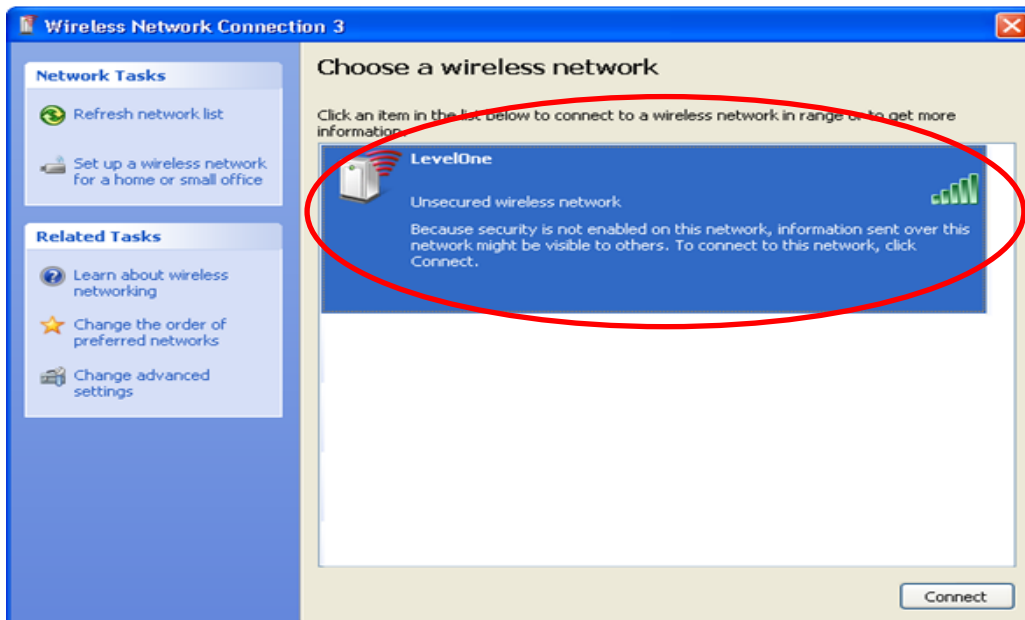
Wireless Connection

For easy installation it is saved to keep the settings. You can later change the wireless settings via the wireless configuration menu.

9. Double click on the wireless icon on your computer and search for the wireless network that you enter **SSID** name.



10. Click on the wireless network that you enter SSID name (the default settings SSID = **LevelOne** which could be found on the bottom side of the device) to connect.



11. If the wireless network is encrypted, enter your own wireless password at least 8 characters for example 12345678 in the **key** field / **Network key** field / **Confirm Network key** field (the default settings **Security Mode = WPA/WPA2 Mixed, Pre-Shared Key = XXXXXXXX** which could be found on the bottom side of the device). You can later change this network key via the wireless configuration menu.



12. Click on "Connect" or "Apply".



13. Now you are ready to use the Wireless Network to Internet or intranet.

6 What the Internet/WAN access of your own Network now is

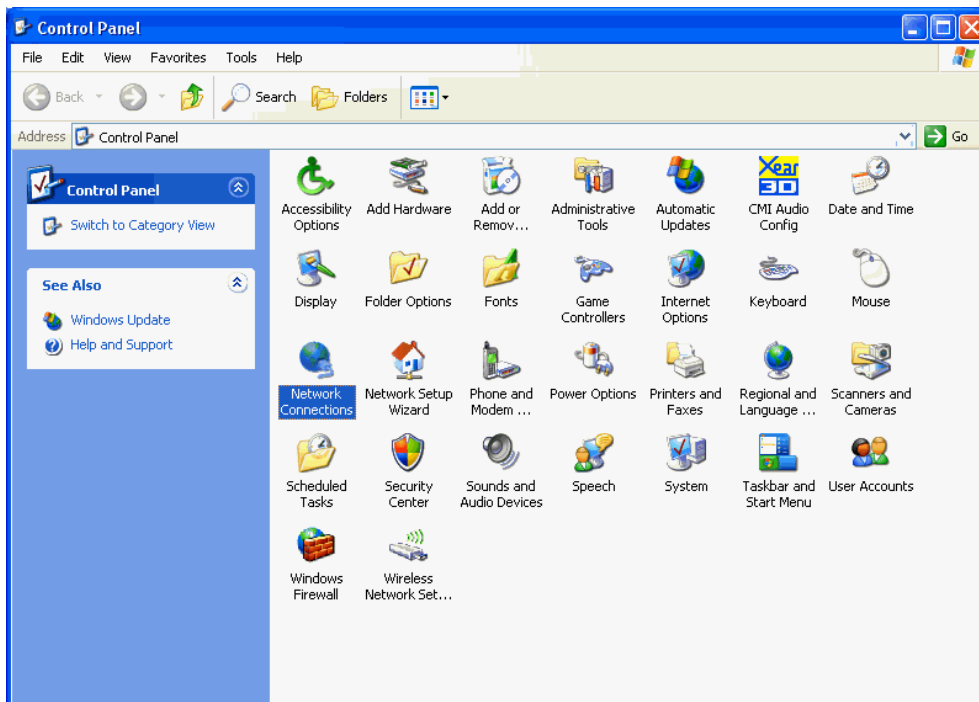
Now you could check what the Internet/WAN access of your network is to know how to configure the WAN port of Wireless Gateway.

Please follow steps below to check what the Internet/WAN access if your own Network is DHCP Client, Static IP or PPPoE Client.

1. Click Start -> Control Panel



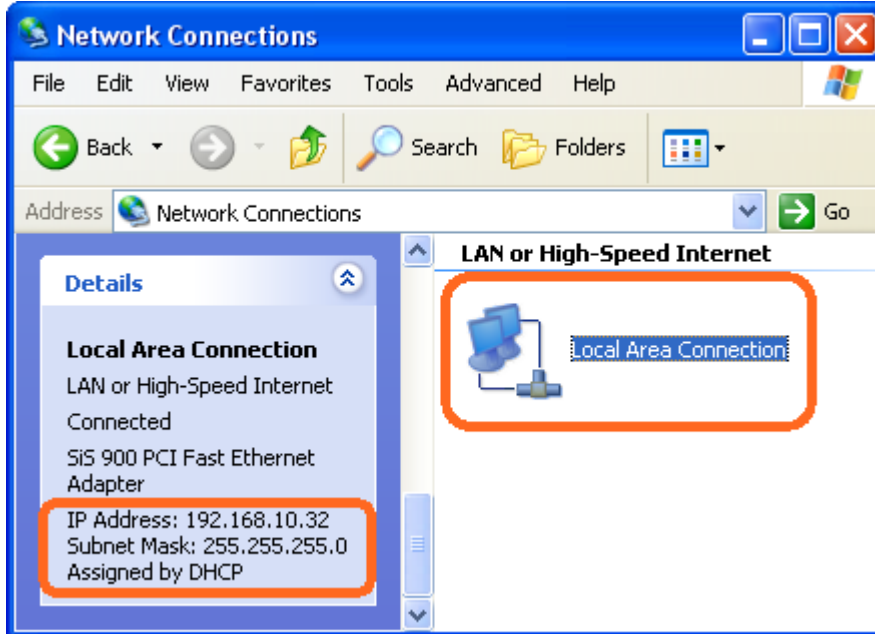
2. Double click *Network Connections*



Internet/WAN access is the DHCP client

If you cannot see any **Broadband Adapter** in the **Network Connections**, your Internet/WAN access is **DHCP Client** or **Static IP**.

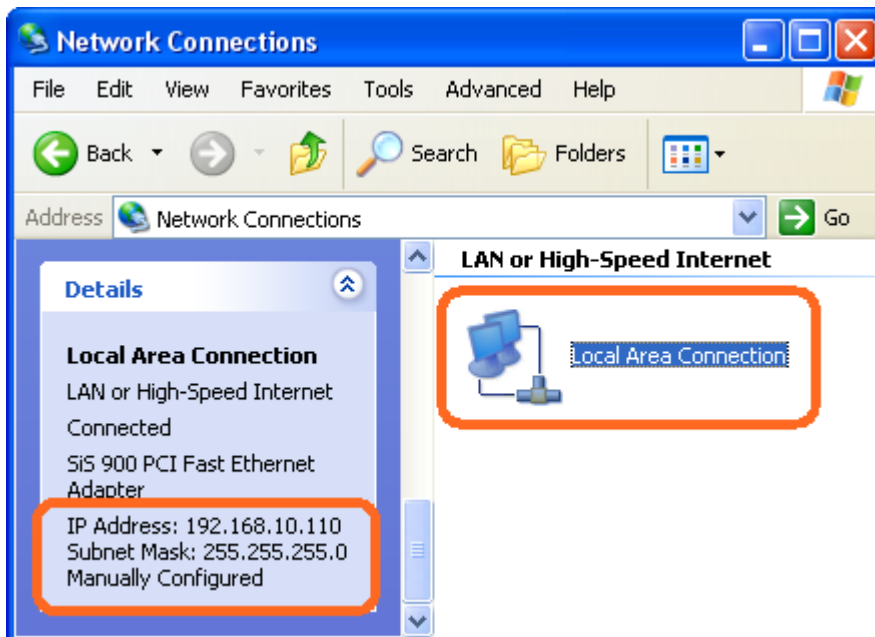
3. Click **Local Area Connection** in **LAN or High-Speed Internet** and you could see string **Assigned by DHCP** in Details.



Internet/WAN access is the Static IP

If you cannot see any **Broadband Adapter** in the **Network Connections**, your Internet/WAN access is **DHCP Client** or **Static IP**.

4. Click **Local Area Connection** in **LAN or High-Speed Internet** and you could see string **Manually Configured** in Details.



5. Right click **Local Area Connection** and click **Properties** and then you could get the IP settings in detail and write down the IP settings as follow:

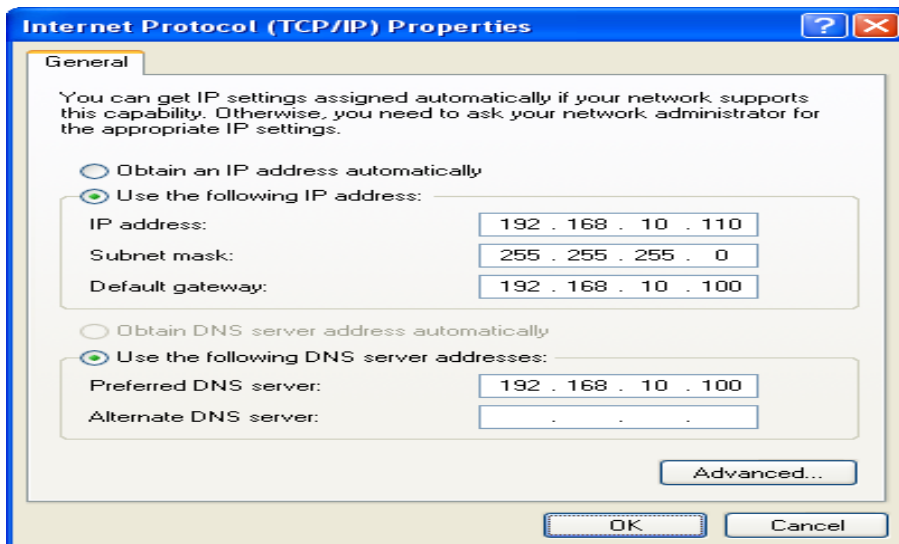
IP Address: 192.168.10.110

Subnet mask: 255.255.255.0

Default gateway: 192.168.10.100

Preferred DNS server: 192.168.10.100

Alternate DNS Server: If you have it, please also write it down.



Internet/WAN access is the PPPoE client

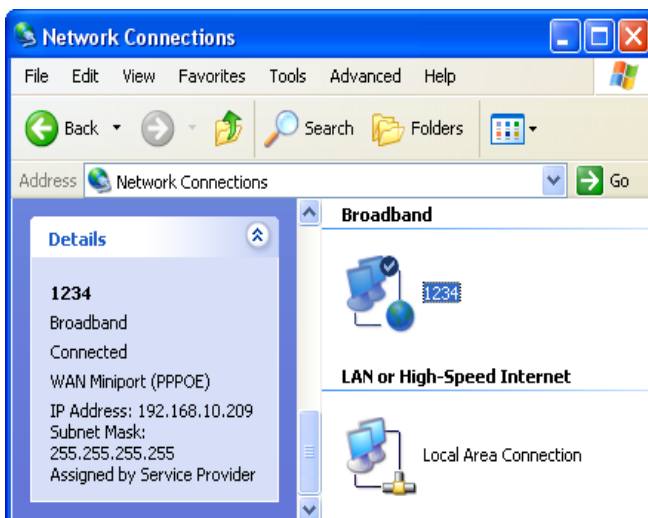
If you can see any **Broadband Adapter** in the **Network Connections**, your Internet/WAN access is **PPPoE Client**.

6. Click **Broadband Adapter** in **Broadband** and you could see string **Assigned by Service Provider** in Details.

For PPPoE configuration on Wireless Gateway, you'll need following information that you could get from your Telecom, or by your Internet Service Provider.

Username of PPPoE: 1234 for example

Password of PPPoE: 1234 for example



7 Getting Started with the Web pages

The Wireless Gateway includes a series of Web pages that provide an interface to the software installed on the device. It enables you to configure the device settings to meet the needs of your network. You can access it through your web browser from any PC connected to the device via the LAN ports.

Accessing the Web pages

To access the Web pages, you need the following:

- A PC or laptop connected to the LAN port on the device.
- A web browser installed on the PC.

The minimum browser version requirement is Internet Explorer v4 or Netscape v4. For the best display quality, use latest version of Internet Explorer, Netscape or Mozilla Fire fox. From any of the LAN computers, launch your web browser, type the following URL in the web address (or location) box, and press [Enter] on your keyboard:

http://192.168.1.1

The Status homepage for the web pages is displayed:

The screenshot shows the 'Status' page of the Wireless Gateway. The page has a navigation bar with tabs for Setup, Wireless, Maintenance, Status, and Help. The main content area is divided into sections: Status (with a description), System (with a table of device info), LAN Configuration (with a table of network settings), and WLAN Configuration (with a table of wireless settings). A Refresh button is at the bottom.

Product Name	WRE-6001
Uptime	7 days, 23:35:15
Date/Time	Thu Jan 8 23:35:15 1970
Product Version	1.00.00
Firmware Version	RBR1-2T-1x8_v61199_STD_02_140730
Serial Number	001333EF0790

IP Address	192.168.1.1
Subnet Mask	255.255.255.0
DHCP Server	Enable
MAC Address	00:13:33:EF:07:90

Wireless	Enabled
Mode	AP
SSID	LevelOne
Encryption	WPA/WPA2 Mixed
Channel	10
Broadcast SSID	Enabled
WPS	Enabled
Repeater Status	Disconnected

Figure 1: Homepage

The first time that you click on an entry from the left-hand menu, a login box is displayed. You must enter your username and password to access the pages.

A login screen is displayed:

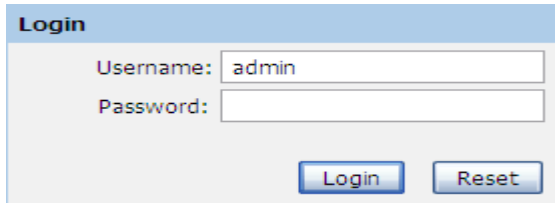


Figure 2: Login screen

1. Enter your user name and password. The first time you log into the program, use these defaults:

User Name: **admin**
Password: **administrator**



Note

You can change the password at any time or you can configure your device so that you do not need to enter a password. See Password.

2. Click on OK. You are now ready to configure your device.

This is the first page displayed each time you log in to the Web pages.



Note

If you receive an error message or the Welcome page is not displayed, see Troubleshooting Suggestions.

Testing your Setup

Once you have connected your hardware and configured your PCs, any computer on your LAN should be able to use the DSL /Cable connection to access the Internet.

To test the connection, turn on the device, wait for 30 seconds and then verify that the LEDs are illuminated as follows:

Table 1. LED Indicators

Label	Color	Function
POWER	green	On: device is powered on Off: device is powered off
WLAN	green	On: WLAN link established and active Blink: Valid Wireless packet being transferred
LAN	green	On: LAN link established and active Off: No LAN link Blink: Valid Ethernet packet being transferred

If the LEDs illuminate as expected, test your Internet connection from a LAN computer. To do this, open your web browser, and type the URL of any external website (such as <http://www.yahoo.com>). The LED labeled WAN should blink rapidly and then appear solid as the device connects to the site.

If the LEDs do not illuminate as expected, you may need to configure your Internet access settings using the information provided by your ISP. For details, see *Internet Access*.

If the LEDs still do not illuminate as expected or the web page is not displayed, see *Troubleshooting Suggestions* or contact your ISP for assistance.

Default device settings

In addition to handling the xDSL / Cable modem connection to your ISP, the Wireless Gateway can provide a variety of services to your network. The device is preconfigured with default settings for use with a typical home or small office network.

The table below lists some of the most important default settings; these and other features are described fully in the subsequent chapters. If you are familiar with network configuration, review these settings to verify that they meet the needs of your network. Follow the instructions to change them if necessary. If you are unfamiliar with these settings, try using the device without modification, or contact your ISP for assistance.



WARNING

We strongly recommend that you contact your ISP prior to changing the default configuration.

Option	Default Setting	Explanation/Instructions
<i>WAN Port IP Address</i>	DHCP Client	This is the temporary public IP address of the WAN port on the device. It is an unnumbered interface that is replaced as soon as your ISP assigns a 'real' IP address. See <i>Network Settings -> WAN Interface</i> .
<i>LAN Port IP Address</i>	Assigned static IP address: 10.0.0.2 Subnet mask: 255.255.255.0	This is the IP address of the LAN port on the device. The LAN port connects the device to your Ethernet network. Typically, you will not need to change this address. See <i>Network Settings -> LAN Interface</i> .
<i>DHCP (Dynamic Host Configuration Protocol)</i>	DHCP server enabled with the following pool of addresses: 10.0.0.3 through 10.0.0.250	The Wireless Gateway maintains a pool of private IP addresses for dynamic assignment to your LAN computers. To use this service, you must have set up your computers to accept IP information dynamically, as described in <i>Configuring Ethernet PCs</i> .

8 Quick Setup

The *Quick Setup* page displays useful information about the setup of your device, including:

- details of the device's Internet access settings
- details of the device's VoIP settings
- details of the device's Wireless settings

To display this page:

From the head menu, click on *Setup*. The following page is displayed:

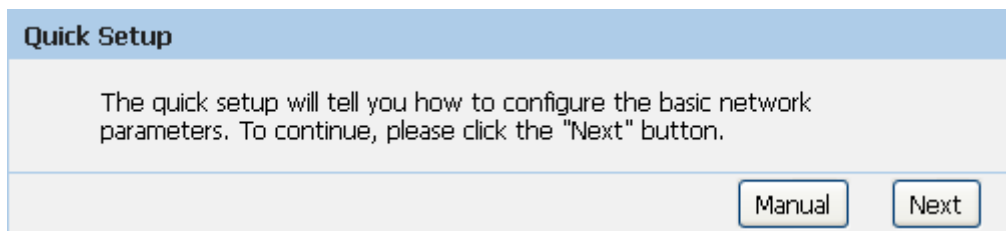


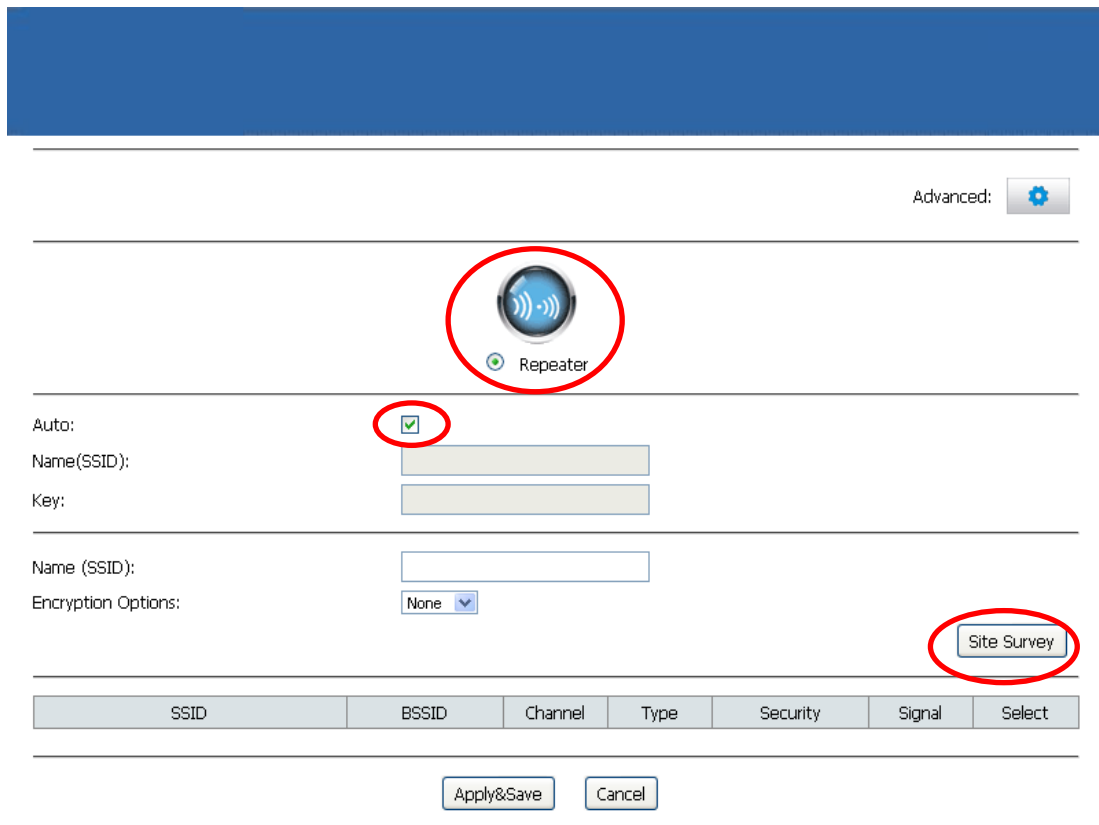
Figure 2: Quick Setup page

Repeater Mode


Check on **Repeater** radio


Check on **Auto** checkbox.

Click on **Site Survey** button and wait for 5 seconds for site surveying.



Check on Select ratio of SSID of the front AP and configure related parameters.
Click on **Apply&Save** button

Advanced: 


 Repeater

Auto:

Name(SSID):

Key:









Name (SSID):

Encryption Options:

WPA Encryption: TKIP AES

Pre-Shared Key Format:

Pre-Shared Key:

SSID	BSSID	Channel	Type	Security	Signal	Select
LevelOne	00:50:18:21:de:4a	11	AP	WPA2-PSK(AES)		<input type="radio"/>
Tech_lab	00:50:18:64:bf:ae	1	AP	WPA2-PSK(AES)		<input type="radio"/>
CAM2280	78:a5:dd:09:22:80	1	AP	WPA2-PSK(AES)		<input type="radio"/>
LevelOne_WGR-6012	00:50:18:61:13:62	1	AP	WPA-PSK (AES/TKIP)/WPA2-PSK(AES/TKIP)		<input checked="" type="radio"/>
6001-cam	00:50:18:21:c4:4d	6	AP	WPA2-PSK(AES)		<input type="radio"/>
Cameralab	00:18:e7:1b:ee:1e	6	AP	WPA-PSK (AES/TKIP)/WPA2-PSK(AES/TKIP)		<input type="radio"/>
WGR-6013TSD	00:11:6b:56:64:c6	7	AP	WPA2-PSK(AES)		<input type="radio"/>
Level1_9F	00:11:6b:ea:6d:84	4	AP	WPA-PSK(TKIP)		<input type="radio"/>

3. WLAN mode modified! System is rebooting now
4. Please wait 35 seconds

System Reboot!

WLAN mode modified! System is rebooting now ...

Please wait seconds

9 LAN Interface

This chapter is to configure the parameters for local area network which connects to the LAN port of your Access Point. Here you may change the setting for IP address, subnet mask, DHCP, etc...



Note

You should only change the addressing details if your ISP asks you to, or if you are familiar with network configuration. In most cases, you will not need to make any changes to this configuration.

LAN Interface Setup

To check the configuration of LAN Interface:

1. From the *Setup* menu, click on *Local Network*. The following page is displayed:

LAN Interface Setup

This page is used to configure the LAN interface of your Wireless Router. Here you may change the setting for IP address, subnet mask, etc..

This page can be used to config the DHCP mode:None or DHCP Server.

(1)Enable the DHCP Server if you are using this device as a DHCP server. This page lists the IP address pools available to hosts on your LAN. The device distributes numbers in the pool to hosts on your network as they request Internet access.

If you choose "None", then the router will do nothing when the hosts request a IP address.

(2)This page lists the fixed IP/MAC address on your LAN. The device distributes the number configured to hosts on your network as they request Internet access.

LAN Interface Setup

IP Address:

Subnet Mask:

DHCP Server Settings

DHCP Mode:

IP Pool Range: -

Max Lease Time: **minutes**

Domain Name:

DNS Server 1:

DNS Server 2:

DNS Server 3:

DHCP Static IP Configuration

IP Address:

Mac Address: (ex. 00E086710502)

DHCP Static IP Table

Select	IP Address	MAC Address
--------	------------	-------------

Field	Description
IP Address	The IP address of your router on the local area network. Your local area network settings are based on the address assigned here.
Subnet Mask	The subnet mask of your router on the local area network.
DHCP Mode	<p>Once your router is properly configured and DHCP Server is enabled, the DHCP Server will manage the IP addresses and other network configuration information for computers and other devices connected to your Local Area Network. There is no need for you to do this yourself.</p> <p>The computers (and other devices) connected to your LAN also need to have their TCP/IP configuration set to "DHCP" or "Obtain an IP address automatically".</p>
IP Pool Range	<p>These two IP values (from and to) define a range of IP addresses that the DHCP Server uses when assigning addresses to computers and devices on your Local Area Network. Any addresses that are outside of this range are not managed by the DHCP Server; these could, therefore, be used for manually configured devices or devices that cannot use DHCP to obtain network address details automatically.</p> <p>Your router, by default, has a static IP address of 192.168.0.1. This means that addresses 192.168.0.2 to 192.168.0.254 can be made available for allocation by the DHCP Server.</p>
Max Lease Time	The amount of time that a computer may have an IP address before it is required to renew the lease. The lease functions just as a lease on an apartment would. The initial lease designates the amount of time before the lease expires. If the tenant wishes to retain the address when the lease is expired then a new lease is established. If the lease expires and the address is no longer needed then another tenant may use the address.
Domain Name	Domain name for the dhcp server scope.
DNS Servers	DNS Server address for the dhcp server scope.
IP Address	The IP address to be configured for your computer or device on the local area network. For example, 192.168.0.2.
Mac Address	The mac address of your computer or device on the local area network.

Changing the LAN IP address and subnet mask

To Change the configuration of LAN Interface:

1. From the *Setup* menu, click on *Local Network*. The following page is displayed:

LAN Interface Setup

This page is used to configure the LAN interface of your Wireless Router. Here you may change the setting for IP address, subnet mask, etc..
This page can be used to config the DHCP mode:None or DHCP Server.
(1)Enable the DHCP Server if you are using this device as a DHCP server. This page lists the IP address pools available to hosts on your LAN. The device distributes numbers in the pool to hosts on your network as they request Internet access.
If you choose "None", then the router will do nothing when the hosts request a IP address.
(2)This page lists the fixed IP/MAC address on your LAN. The device distributes the number configured to hosts on your network as they request Internet access.

LAN Interface Setup

IP Address:

Subnet Mask:

DHCP Server Settings

DHCP Mode:

IP Pool Range: -

Max Lease Time: **minutes**

Domain Name:

DNS Server 1:

DNS Server 2:

DNS Server 3:

DHCP Static IP Configuration

IP Address:

Mac Address: (ex. 00E086710502)

DHCP Static IP Table

Select	IP Address	MAC Address
--------	------------	-------------

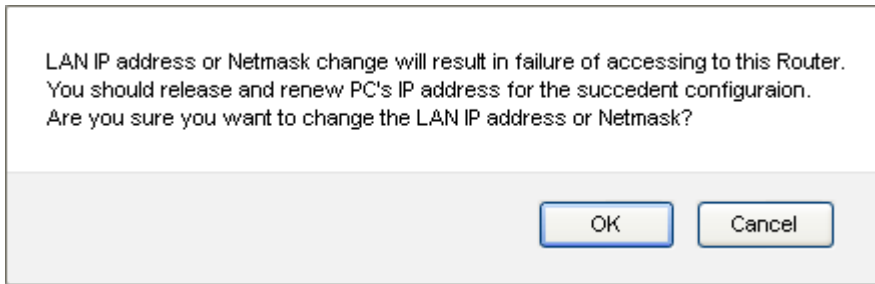
2. Change the *IP Address and Subnet Mask*.
3. Click *Apply Changes*.

LAN Interface Setup

IP Address:

Subnet Mask:

4. Click *OK*.



5. Type IP Address and *Change default LAN port IP address*.
6. Click in the *IP Address and Subnet Mask* box and type a new IP Address and Subnet Mask.
7. Change the *default DHCP Client Range*.
8. Click *Apply Changes*.

Please click [192.168.2.2](#) to continue configuration.

You may also need to renew your DHCP lease:

Windows 95/98

- a. Select **Run...** from the **Start** menu.
- b. Enter **winipcfg** and click **OK**.
- c. Select your ethernet adaptor from the pull-down menu
- d. Click **Release All** and then **Renew All**.
- e. **Exit** the winipcfg dialog.

Windows NT/Windows 2000/Windows XP

- a. Bring up a command window.
- b. Type **ipconfig /release** in the command window.
- c. Type **ipconfig /renew**.
- d. Type **exit** to close the command window.

Linux

- a. Bring up a shell.
- b. Type **pump -r** to release the lease.
- c. Type **pump** to renew the lease.



Note

If you change the LAN IP address of the device while connected through your Web browser, you will be disconnected. You must open a new connection by entering your new LAN IP address as the URL.

DHCP Static IP Configuration

If you need to assign static ip for your computer or device on the local area network, configure static ip with the mac address.:

1. From the *Setup* menu, click on *Local Network*. The following page is displayed:

LAN Interface Setup

This page is used to configure the LAN interface of your Wireless Router. Here you may change the setting for IP address, subnet mask, etc..
This page can be used to config the DHCP mode:None or DHCP Server.
(1)Enable the DHCP Server if you are using this device as a DHCP server. This page lists the IP address pools available to hosts on your LAN. The device distributes numbers in the pool to hosts on your network as they request Internet access.
If you choose "None", then the router will do nothing when the hosts request a IP address.
(2)This page lists the fixed IP/MAC address on your LAN. The device distributes the number configured to hosts on your network as they request Internet access.

LAN Interface Setup

IP Address:

Subnet Mask:

DHCP Server Settings

DHCP Mode:

IP Pool Range: -

Max Lease Time: **minutes**

Domain Name:

DNS Server 1:

DNS Server 2:

DNS Server 3:

DHCP Static IP Configuration

IP Address:

Mac Address: (ex. 00E086710502)

DHCP Static IP Table

Select	IP Address	MAC Address
<input type="checkbox"/>		

2. Enter the *IP Address*.
3. Enter the *Mac Address*.
4. Click *Add*.

DHCP Static IP Configuration

IP Address:

Mac Address: (ex. 00E086710502)

5. The DHCP Static IP Configuration that you created has been added in the *DHCP Static IP Table*.

DHCP Static IP Table

Select	IP Address	MAC Address
<input type="checkbox"/>	192.168.1.30	00:11:68:00:00:01

10 Wireless Network

This chapter assumes that you have already set up your Wireless PCs and installed a compatible Wireless card on your device. See *Configuring Wireless PCs*.

Wireless Basics

The *Wireless Network* page allows you to configure the Wireless features of your device. To access the *Wireless Basics* page:

From the *Wireless* menu, click on *Wireless Basics*. The following page is displayed:

Wireless Basics

This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters.

Wireless Settings

Mode: AP ▼

Wireless Network

Enable SSID Broadcast:

Enable Wireless Isolation:

Name(SSID): LevelOne

Mode: 802.11b/g/n ▼

Channel: Auto ▼ Current Channel: 10

Band Width: Auto 20/40M ▼

Security Options

Security Options: WPA2 Mixed ▼

Security Options(WPA-PSK+WPA2-PSK [AES])

Pre-Shared Key: QNJXPCYL (8-63 characters or 64 hex digits)

Apply Cancel

Figure 3: Wireless Network page

Field	Description
Enable SSID Broadcast	Broadcast or Hide SSID to your Network. Default: Enabled
Enable Wireless Isolation	Isolate your Network. Default: Disabled
SSID	Specify the network name. Each Wireless LAN network uses a unique Network Name to identify the network. This name is called the Service Set Identifier (SSID). When you set up your wireless adapter, you specify the SSID. If you want to connect to an existing network, you must use the name for that network. If you are setting up your own network you can make up your own name and use it on each computer. The name can be up to 20 characters long and contain letters and numbers.
Mode	Specify the WLAN Mode to 802.11b mode, 802.11g mode, 802.11b/g mode, 802.11n mode, 802.11n/g mode or 802.11b/g/n mode
Channel	Choose a Channel from the pull-down menu.
Band Width	Choose a Band Width from the pull-down menu.
Max Transmission Rate	Select the Max Transmission Rate from the drop-down list
Security Options	Configure the Encryption to None, WEP, WPA-PSK[TKIP] , WPA2-PSK[AES] or WPA-PSK/WPA2-PSK AES
Security Encryption(WEP)	Authentication Type: Automatic or Shared Keys Encryption Strength: 64 bits or 128 bits
Security Encryption(WEP) Key	Select and configure Key 1, Key 2, Key 3 or Key 4
Security Options(WPA-PSK)	Enter the Pre-Shared Key
Security Options(WPA2-PSK)	Enter the Pre-Shared Key
Security Options(WPA-PSK+WPA2-PSK)	Enter the Pre-Shared Key

Wireless Advanced Settings

This page helps you to setup advanced wireless features, include Fragment Threshold etc.

From the *Wireless* menu, click on *Wireless Advanced*. The following page is displayed:

Wireless Advanced Settings

This page helps you to setup advanced wireless features, include Fragment Threshold etc.

Advanced Wireless Settings

Enable Wireless :

Fragment Threshold(256-2346) :

RTS Threshold(1-2347) :

Preamble Type :

Radio Power (Percent) :

HT20/40 Coexistence : Enabled Disabled

Access Control List

ACL Setup

Apply Changes

Field	Description
Fragment Threshold	<p>When transmitting a packet over a network medium, sometimes the packet is broken into several segments, if the size of packet exceeds that allowed by the network medium.</p> <p>The Fragmentation Threshold defines the number of bytes used for the fragmentation boundary for directed messages.</p>
RTS Threshold	<p>RTS stands for "Request to Send". This parameter controls what size data packet the low level RF protocol issues to an RTS packet. The default is 2347.</p>
Preamble Type	<p>This is the length of the CRC (Cyclic Redundancy Check) block for communication between the router and wireless clients. High network traffic areas should select Short preamble type.</p>
Radio Power (Percent)	<p>TX Power measurement.</p>
HT20/40 Coexistence	<p>Disable or Enable 20/40MHz Coexist</p>
Enable WPS	<p>Disable or Enable WPS</p>
Disable PIN	<p>Disable or Enable PIN</p>
Keep current configuration	<p>Disable or Enable current configuration</p>

Wireless Access Control Mode

For security reason, using MAC ACL's (MAC Address Access List) creates another level of difficulty to hacking a network. A MAC ACL is created and distributed to AP so that only authorized NIC's can connect to the network. While MAC address spoofing is a proven means to hacking a network this can be used in conjunction with additional security measures to increase the level of complexity of the network security decreasing the chance of a breach.

MAC addresses can be add/delete/edit from the ACL list depending on the MAC Access Policy.

If you choose 'Allowed Listed', only those clients whose wireless MAC addresses are in the access control list will be able to connect to your Access Point. When 'Deny Listed' is selected, these wireless clients on the list will not be able to connect the Access Point. To access the *Wireless Network Access Control* page:

From the *Wireless* menu, click on *Wireless Advanced* and then click on *ACL Setup* button. The following page is displayed:

The screenshot shows the 'Wireless Access Control Mode' configuration page. At the top, there is a checkbox labeled 'Enable Wireless Access Control Mode' which is currently unchecked. Below this is a table with two columns: 'MAC Address' and 'Select'. Underneath the table are three buttons: 'Apply', 'Delete Selected', and 'Delete All'. At the bottom, there is a 'MAC Address:' label followed by an empty text input field and an example '(ex. 00e086710502)'. Below the input field are two buttons: 'Add' and 'Cancel'.

Allow Listed

If you Enable Wireless Access Control Mode, only those clients whose wireless MAC addresses are in the access control list will be able to connect to your Access Point.

1. Enable Wireless Access Control Mode.
2. Click *Apply* button.

The screenshot shows the 'Wireless Access Control Mode' configuration page. At the top, there is a checkbox labeled 'Enable Wireless Access Control Mode' which is now checked. The rest of the page, including the table, buttons, and input fields, remains the same as in the previous screenshot.

3. Click *OK* button.

A warning dialog box is displayed with the following text: 'WPS will be disabled automatically if you enable the ACL feature and ACL list is empty. Are you sure to modify?'. At the bottom of the dialog box are two buttons: 'OK' and 'Cancel'.

4. Enter the *MAC Address*.
5. Click *Add* button.

Wireless Access Control Mode

Enable Wireless Access Control Mode

MAC Address	Select

Apply Delete Selected Delete All

MAC Address: (ex. 00e086710502)

Add Cancel

6. The MAC Address that you created has been added in the *Access Control List*.

Wireless Access Control Mode

Enable Wireless Access Control Mode

MAC Address	Select
00e086710502	<input type="radio"/>

Apply Delete Selected Delete All

MAC Address: (ex. 00e086710502)

Add Cancel

11 Reboot/Reset

Restarts the device with current setting or default setting.

Reboot/Reset

1. From the *Maintenance* -> *Reboot* menu. The following page is displayed:

Reboot/Reset

This page is used to reboot your system with current setting or reset configuration to default setting.

Reboot/Reset System

Fields on the first setting block	Description
Reboot	Restarts the router for the settings to take effect.
Reset	Restarts the router with factory default setting.

12 Firmware Upgrade

About firmware versions

Firmware is a software program. It is stored as read-only memory on your device.

Your device can check whether there are later firmware versions available. If there is a later version, you can download it via the Internet and install it on your device.



Note

If there is a firmware update available you are strongly advised to install it on your device to ensure that you take full advantage of any new feature developments.

Manually updating firmware

You can manually download the latest firmware version from provider's website to your PC's file directory.

Once you have downloaded the latest firmware version to your PC, you can manually select and install it as follows:

1. From the *Maintenance -> Firmware Upgrade* menu. The following page is displayed:
2. Click on the *Browse...* button.
3. Once you have selected the file to be installed, click *Open*. The file's directory path is displayed in the *New Firmware Image:* text box.
4. Click *Automatically reset default after firmware upgraded*.
5. Click *Upload*.

Upgrade Firmware

This page allows you upgrade the Wireless Router firmware to new version. Please note, do not power off the device during the upload because it may crash the system.
Note: System will reboot after file is uploaded.

Select File

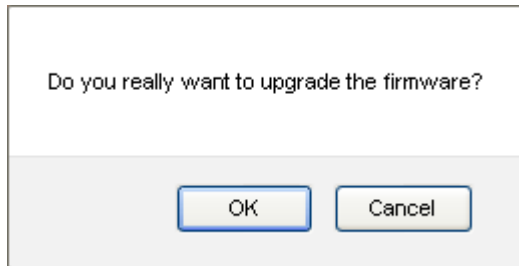
Automatically reset default after firmware upgraded

Figure 4: Manual Update Installation section

(Note that if you are using certain browsers (such as *Opera 7*) the *Browse* button is labeled *Choose*.)

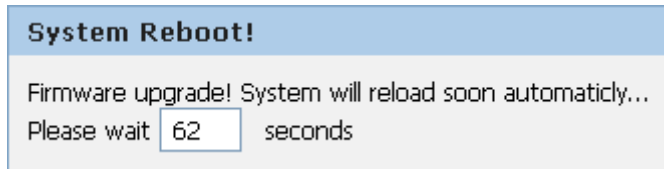
Use the *Choose file* box to navigate to the relevant directory where the firmware version is saved.

6. Click *OK*.



7. The device checks that the selected file contains an updated version of firmware. A status screen pops up, please wait for a while.....

8. The device checks that the selected file contains an updated version of firmware. A status screen pops up, please wait for a while.....



13 Backup/Restore Settings

This page allows you save current settings to a file or reload the settings from the file which was saved previously.

Besides, you could reset the current configuration to factory default.

If you do make changes to the default configuration but then wish to revert back to the original factory configuration, you can do so by resetting the device to factory defaults.

Save Settings to File

It allows you save current settings to a file.

1. From the *Maintenance* -> *Backup/Restore* menu. The following page is displayed:

Backup/Restore Settings

This page allows you backup and restore Settings.

Save Settings To File

Save...

Load Settings From

Browse... Upload

Figure 5: Reset to Defaults page

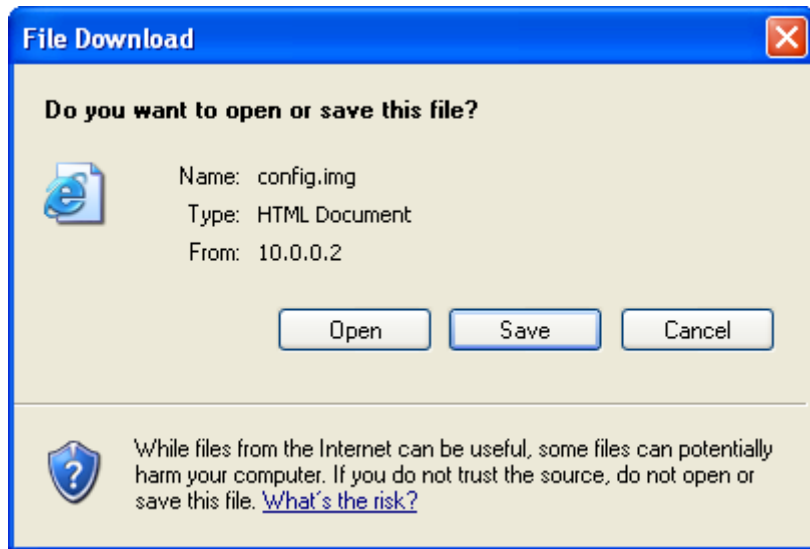
Option	Description
Save Settings to File	Save the Settings to a File
Load Settings from File	Load Settings from a File

2. Click on *Save...*

Save Settings To File

Save...

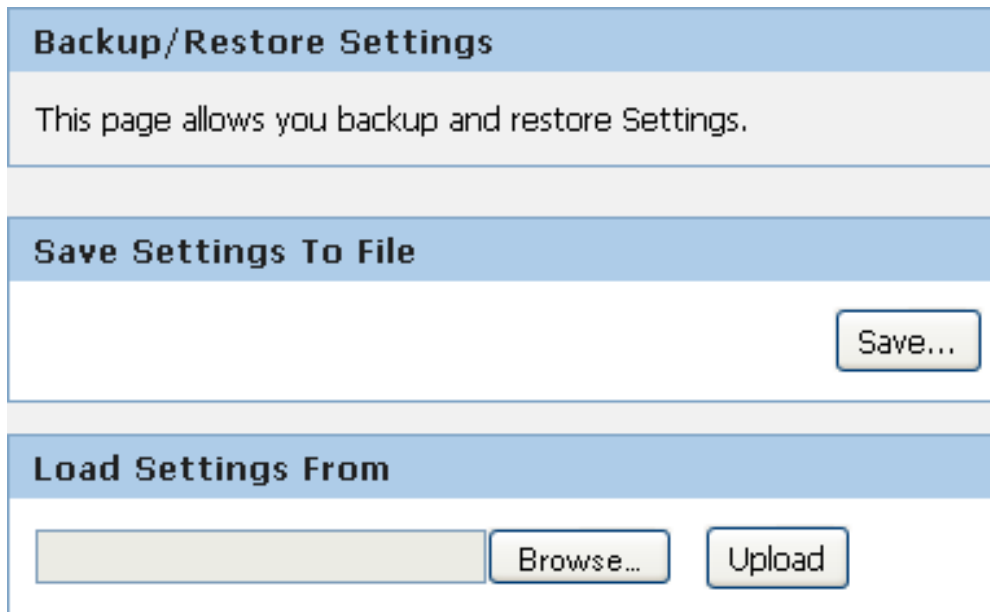
3. If you are happy with this, click *Save* and then browse to where the file to be saved. Or click *Cancel* to cancel it.



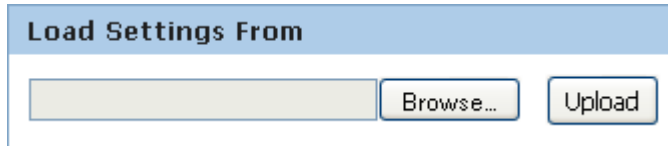
Load Settings from File

It allows you to reload the settings from the file which was saved previously.

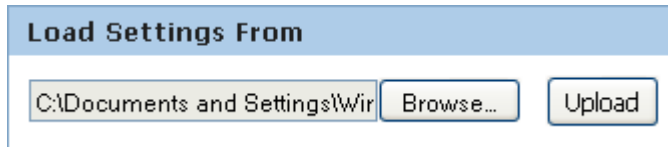
4. From the *Maintenance* -> *Backup/Restore* menu. The following page is displayed:



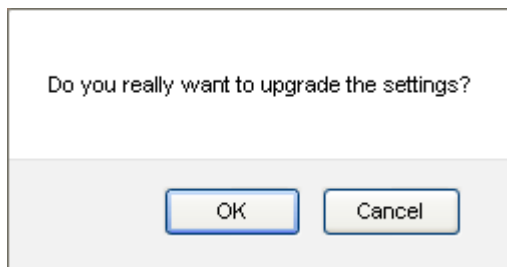
5. Click on *Browse...* to browse to where the config.img is.



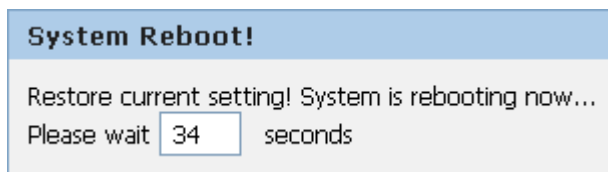
6. If you are happy with this, click *Upload* to start to load settings from file.



7. If you are happy with this, click *Upload* to start to load settings from file.



8. please wait for a while.....



14 Password

You can restrict access to your device's web pages using password protection. With password protection enabled, users must enter a username and password before gaining access to the web pages.

By default, password protection is enabled on your device, and the username and password set are as follows:

Username: **admin**

Password: **administrator**

Setting your username and password



Note

Non-authorized users may try to access your system by guessing your username and password. We recommend that you change the default username and password to your own unique settings.

To change the default password:

1. From the *Maintenance* -> *Password* menu. The following page is displayed:

User Account Configuration

This page is used to add user account to access the web server of Wireless Router. Empty user name or password is not allowed.

Configuration

User Name:

Privilege:

Old Password:

New Password:

Confirm Password:

User Account Table

Select	User Name	Privilege
<input type="radio"/>	admin	root
<input type="radio"/>	user	user

2. This page displays the current username and password settings. Change your own unique password in the relevant boxes. They can be any combination of letters or numbers with a maximum of 30 characters. The default setting uses **admin** for the username and **administrator** for password.
3. If you are happy with these settings, click **Modify**. You will see following page that the new user has been displayed on the Currently Defined Users. You need to login to the web pages using your new username and new password.
4. Click on the ratio of admin from User Account Table.

User Account Table		
Select	User Name	Privilege
<input type="radio"/>	admin	root

5. Enter the Old Password.
6. Enter the New Password.
7. Enter the Confirm Password.
8. Click on *Modify*.

Configuration	
User Name:	<input type="text" value="admin"/>
Privilege:	<input type="text" value="Root"/>
Old Password:	<input type="password" value="....."/>
New Password:	<input type="password" value="....."/>
Confirm Password:	<input type="password" value="....."/>

15 Time and Date

Certain systems may not have a date or time mechanism or may be using inaccurate time/day information. The Simple Network Time Protocol feature provides a way to synchronize the device's own time of day setting with a remote time server as described in RFC 2030 (SNTP) and RFC 1305 (NTP).

Time and Date Configuration settings

1. From the *Maintenance* -> *Time and Date* menu. The following page is displayed:

System Time Configuration

This page is used to configure the system time and Network Time Protocol(NTP) server. Here you can change the settings or view some information on the system time and NTP parameters.

System Time

System Time: 1970 Year Jan Month 1 Day 0 Hour 3 min 15 sec
Daylight Saving Offset: 0:00

Apply Changes Reset

NTP Configuration:

State: Disable Enable
Server: ntp1.dlink.com
Server2:
Interval: Every 1 hours
Time Zone: (GMT+08:00) China, Hong Kong, Australia Western, Singapore, Taiwan, Russia
GMT time: Thu Jan 1 0:3:15 1970

Apply Changes Reset

Start NTP:

NTP Start: Get GMT Time

2. Check the option *State*.
3. Configure the *Server*.
4. From the *Time Zone* drop-down list, select *Your Own Time Zone*.
5. Click *Apply Changes*.

NTP Configuration:

State: Disable Enable
Server: ntp1.dlink.com
Server2:
Interval: Every 1 hours
Time Zone: (GMT+08:00) China, Hong Kong, Australia Western, Singapore, Taiwan, Russia
GMT time: Thu Jan 1 0:3:15 1970

Apply Changes Reset

16 Status

This page displays the current information for the device. It will display the LAN, WAN, and system firmware information. This page will display different information, according to WAN setting (Static IP, DHCP, or PPPoE).

1. From the *Status -> Device Info* menu. The following page is displayed:

The screenshot shows a web interface with a navigation bar at the top containing 'Setup', 'Wireless', 'Maintenance', 'Status', and 'Help'. On the left, there is a sidebar with 'Device Info', 'Active Client Table', and 'Statistics'. The main content area is titled 'Status' and contains the following sections:

Status
This page shows the current status and some basic settings of the device.

System

Product Name	WRE-6001
Uptime	7 days, 23:35:15
Date/Time	Thu Jan 8 23:35:15 1970
Product Version	1.00.00
Firmware Version	RBR1-2T-1x8_v61199_STD_02_140730
Serial Number	001333EF0790

LAN Configuration

IP Address	192.168.1.1
Subnet Mask	255.255.255.0
DHCP Server	Enable
MAC Address	00:13:33:EF:07:90

WLAN Configuration

Wireless	Enabled
Mode	AP
SSID	LevelOne
Encryption	WPA/WPA2 Mixed
Channel	10
Broadcast SSID	Enabled
WPS	Enabled
Repeater Status	Disconnected

At the bottom of the main content area, there is a 'Refresh' button.

Helpful Hints...
This page displays a summary overview of your router status, including device firmware version, summary of your Internet configuration including ethernet status.
[More...](#)

17 Active Client Table

This page shows the computers, identified by the name and MAC address that have acquired IP addresses by the DHCP server with the time that the lease for the IP address is up

1. From the *Status* -> *Active Client Table* menu. The following page is displayed:

Active Client Table		
This table shows IP address, MAC address for each client.		
Active Wired Client Table		
Name	IP Address	MAC Address
Unknown	192.168.1.30	00:14:78:26:a4:d2
Active Wireless Client Table		
Name	IP Address	MAC Address

18 Statistics

This page shows the packet statistics for transmission and reception regarding to network interface.

1. From the *Status* -> *Statistics* menu. The following page is displayed:

Statistics

This page shows the packet statistics for transmission and reception regarding to network interface.

Statistics

Interface	Rx pkt	Rx err	Rx drop	Tx pkt	Tx err	Tx drop
LAN1	787	0	0	1367	0	0
LAN2						
LAN3						
LAN4						
WAN	195	0	0	50	0	0
WLAN	11262	24	0	557	0	182

A Configuring your Computers

This appendix provides instructions for configuring the Internet settings on your computers to work with the Wireless Gateway.

Configuring Ethernet PCs

Before you begin

By default, the Wireless Gateway automatically assigns the required Internet settings to your PCs. You need to configure the PCs to accept this information when it is assigned.



Note

In some cases, you may want to assign Internet information manually to some or all of your computers rather than allow the Wireless Gateway to do so. See *Assigning static Internet information to your PCs* for instructions.

- If you have connected your LAN PCs via Ethernet to the Wireless Gateway, follow the instructions that correspond to the operating system installed on your PC:
 - Windows® XP PCs
 - Windows 2000 PCs
 - Windows Me PCs
 - Windows 95, 98 PCs
 - Windows NT 4.0 workstations

Windows® XP PCs

1. In the Windows task bar, click the *Start* button, and then click *Control Panel*.
2. Double-click the Network Connections icon.
3. In the *LAN or High-Speed Internet* window, right-click on the icon corresponding to your network interface card (NIC) and select *Properties*. (Often, this icon is labeled *Local Area Connection*).
The *Local Area Connection* dialog box is displayed with a list of currently installed network items.
4. Ensure that the check box to the left of the item labeled *Internet Protocol TCP/IP* is checked and click *Properties*.
5. In the *Internet Protocol (TCP/IP) Properties* dialog box, click the radio button labeled *Obtain an IP address automatically*. Also click the radio button labeled *Obtain DNS server address automatically*.
6. Click *OK* twice to confirm your changes, and then close the Control Panel.

Windows 2000 PCs

First, check for the IP protocol and, if necessary, install it:

1. In the Windows task bar, click the *Start* button, point to *Settings*, and then click *Control Panel*.
2. Double-click the Network and Dial-up Connections icon.
3. In the *Network and Dial-up Connections* window, right-click the Local Area Connection icon, and then select *Properties*.
The *Local Area Connection Properties* dialog box is displayed with a list of currently installed network components. If the list includes Internet Protocol (TCP/IP), then the protocol has already been enabled. Skip to step 10.
4. If Internet Protocol (TCP/IP) does not display as an installed component, click *Install...*

5. In the *Select Network Component Type* dialog box, select *Protocol*, and then click *Add...*
6. Select *Internet Protocol (TCP/IP)* in the Network Protocols list, and then click *OK*.
You may be prompted to install files from your Windows 2000 installation CD or other media. Follow the instructions to install the files.
7. If prompted, click *OK* to restart your computer with the new settings.
Next, configure the PCs to accept IP information assigned by the Wireless Gateway:
8. In the *Control Panel*, double-click the Network and Dial-up Connections icon.
9. In the *Network and Dial-up Connections* window, right-click the Local Area Connection icon, and then select *Properties*.
10. In the Local Area Connection Properties dialog box, select *Internet Protocol (TCP/IP)*, and then click *Properties*.
11. In the *Internet Protocol (TCP/IP) Properties* dialog box, click the radio button labeled *Obtain an IP address automatically*. Also click the radio button labeled *Obtain DNS server address automatically*.
12. Click *OK* twice to confirm and save your changes, and then close the Control Panel.

Windows Me PCs

1. In the Windows task bar, click the *Start* button, point to *Settings*, and then click *Control Panel*.
2. Double-click the Network and Dial-up Connections icon.
3. In the *Network and Dial-up Connections* window, right-click the Network icon, and then select *Properties*.
The *Network Properties* dialog box displays with a list of currently installed network components. If the list includes Internet Protocol (TCP/IP), then the protocol has already been enabled. Skip to step 11.
4. If Internet Protocol (TCP/IP) does not display as an installed component, click *Add...*
5. In the *Select Network Component Type* dialog box, select *Protocol*, and then click *Add...*
6. Select *Microsoft* in the Manufacturers box.
7. Select *Internet Protocol (TCP/IP)* in the Network Protocols list, and then click *OK*.
You may be prompted to install files from your Windows Me installation CD or other media. Follow the instructions to install the files.
8. If prompted, click *OK* to restart your computer with the new settings.
Next, configure the PCs to accept IP information assigned by the Wireless Gateway:
9. In the *Control Panel*, double-click the Network and Dial-up Connections icon.
10. In *Network and Dial-up Connections window*, right-click the Network icon, and then select *Properties*.
11. In the *Network Properties* dialog box, select *TCP/IP*, and then click *Properties*.
12. In the TCP/IP Settings dialog box, click the radio button labeled **Server assigned IP address**. Also click the radio button labeled *Server assigned name server address*.
13. Click *OK* twice to confirm and save your changes, and then close the *Control Panel*.

Windows 95, 98 PCs

First, check for the IP protocol and, if necessary, install it:

1. In the Windows task bar, click the *Start* button, point to *Settings*, and then click *Control Panel*.
2. Double-click the Network icon.
The *Network* dialog box displays with a list of currently installed network components. If the list includes TCP/IP, and then the protocol has already been enabled. Skip to step 9.
3. If TCP/IP does not display as an installed component, click *Add...*
The *Select Network Component Type* dialog box displays.
4. Select *Protocol*, and then click *Add...*

The Select Network Protocol dialog box displays.

5. Click on *Microsoft* in the Manufacturers list box, and then click *TCP/IP* in the Network Protocols list box.
6. Click *OK* to return to the Network dialog box, and then click *OK* again.
You may be prompted to install files from your Windows 95/98 installation CD. Follow the instructions to install the files.
7. Click *OK* to restart the PC and complete the TCP/IP installation.
Next, configure the PCs to accept IP information assigned by the Wireless Gateway:
8. Open the Control Panel window, and then click the Network icon.
9. Select the network component labeled TCP/IP, and then click *Properties*.
If you have multiple TCP/IP listings, select the listing associated with your network card or adapter.
10. In the TCP/IP Properties dialog box, click the IP Address tab.
11. Click the radio button labeled *Obtain an IP address automatically*.
12. Click the DNS Configuration tab, and then click the radio button labeled *Obtain an IP address automatically*.
13. Click *OK* twice to confirm and save your changes.
You will be prompted to restart Windows.
14. Click *Yes*.

Windows NT 4.0 workstations

First, check for the IP protocol and, if necessary, install it:

1. In the Windows NT task bar, click the *Start* button, point to *Settings*, and then click *Control Panel*.
2. In the Control Panel window, double click the Network icon.
3. In the *Network dialog* box, click the *Protocols* tab.
The *Protocols* tab displays a list of currently installed network protocols. If the list includes TCP/IP, then the protocol has already been enabled. Skip to step 9.
4. If TCP/IP does not display as an installed component, click *Add...*
5. In the *Select Network Protocol* dialog box, select *TCP/IP*, and then click *OK*.
You may be prompted to install files from your Windows NT installation CD or other media. Follow the instructions to install the files.

After all files are installed, a window displays to inform you that a TCP/IP service called DHCP can be set up to dynamically assign IP information.
6. Click *Yes* to continue, and then click *OK* if prompted to restart your computer.
Next, configure the PCs to accept IP information assigned by the Wireless Gateway:
7. Open the Control Panel window, and then double-click the Network icon.
8. In the *Network* dialog box, click the *Protocols* tab.
9. In the *Protocols* tab, select *TCP/IP*, and then click *Properties*.
10. In the *Microsoft TCP/IP Properties* dialog box, click the radio button labeled *Obtain an IP address from a DHCP server*.
11. Click *OK* twice to confirm and save your changes, and then close the Control Panel.

Assigning static Internet information to your PCs

If you are a typical user, you will not need to assign static Internet information to your LAN PCs because your ISP automatically assigns this information for you.

In some cases however, you may want to assign Internet information to some or all of your PCs directly (often called “statically”), rather than allowing the Wireless Gateway to assign it. This option may be desirable (but not required) if:

- You have obtained one or more public IP addresses that you want to always associate with specific computers (for example, if you are using a computer as a public web server).
- You maintain different subnets on your LAN (subnets are described in Appendix B).

Before you begin, you must have the following information available:

- The IP address and subnet mask of each PC
- The IP address of the default gateway for your LAN. In most cases, this is the address assigned to the LAN port on the Wireless Gateway. By default, the LAN port is assigned the IP address *10.0.0.2*. (You can change this number or another number can be assigned by your ISP. See *Addressing* for more information.)
- The IP address of your ISP’s Domain Name System (DNS) server.

On each PC to which you want to assign static information, follow the instructions relating only to checking for and/or installing the IP protocol. Once it is installed, continue to follow the instructions for displaying each of the Internet Protocol (TCP/IP) properties. Instead of enabling dynamic assignment of the IP addresses for the computer, DNS server and default gateway, click the radio buttons that enable you to enter the information manually.



Note

*Your PCs must have IP addresses that place them in the same subnet as the Wireless Gateway’s LAN port. If you manually assign IP information to all your LAN PCs, you can follow the instructions in *Addressing* to change the LAN port IP address accordingly.*

B Troubleshooting

This appendix suggests solutions for problems you may encounter in installing or using the Wireless Gateway, and provides instructions for using several IP utilities to diagnose problems.

Contact Customer Support if these suggestions do not resolve the problem.

Troubleshooting Suggestions

Problem	Troubleshooting Suggestion
LEDs	
<i>Power LED does not illuminate after product is turned on.</i>	Verify that you are using the power cable provided with the device and that it is securely connected to the Wireless Gateway and a wall socket/power strip.
<i>LINK LAN LED does not illuminate after Ethernet cable is attached.</i>	Verify that the Ethernet cable is securely connected to your LAN hub or PC and to the Wireless Gateway. Make sure the PC and/or hub is turned on. Verify that your cable is sufficient for your network requirements. A 100 Mbit/sec network (10BaseTx) should use cables labeled CAT 5. A 10Mbit/sec network may tolerate lower quality cables.
Internet Access	
My PC cannot access the Internet	Use the ping utility (discussed in the following section) to check whether your PC can communicate with the device's LAN IP address (by default 10.0.0.2). If it cannot, check the Ethernet cabling. If you statically assigned a private IP address to the computer, (not a registered public address), verify the following: <ul style="list-style-type: none">• Check that the gateway IP address on the computer is your public IP address (see Current Status for instructions on viewing the IP information.) If it is not, correct the address or configure the PC to receive IP information automatically.• Verify with your ISP that the DNS server specified for the PC is valid. Correct the address or configure the PC to receive this information automatically.
<i>My LAN PCs cannot display web pages on the Internet.</i>	Verify that the DNS server IP address specified on the PCs is correct for your ISP, as discussed in the item above. If you specified that the DNS server be assigned dynamically from a server, then verify with your ISP that the address configured on the Wireless Gateway is correct, then You can use the ping utility, to test connectivity with your ISP's DNS server.
Web pages	

Problem	Troubleshooting Suggestion
<i>I forgot/lost my user ID or password.</i>	If you have not changed the password from the default, try using "admin" the user ID and "administrator" as password. Otherwise, you can reset the device to the default configuration by pressing the Reset Default button on the Rare panel of the device (see <i>Rare Panel</i>). Then, type the default User ID and password shown above. WARNING: Resetting the device removes any custom settings and returns all settings to their default values.
<i>I cannot access the web pages from my browser.</i>	Use the ping utility, discussed in the following section, to check whether your PC can communicate with the device's LAN IP address (by default 10.0.0.2). If it cannot, check the Ethernet cabling. Verify that you are using Internet Explorer or Netscape Navigator v4.0 or later. Verify that the PC's IP address is defined as being on the same subnet as the IP address assigned to the LAN port on the Wireless Gateway.
<i>My changes to the web pages are not being retained.</i>	Be sure to use the <i>Confirm Changes/Apply</i> function after any changes.

Diagnosing Problem using IP Utilities

ping

Ping is a command you can use to check whether your PC can recognize other computers on your network and the Internet. A ping command sends a message to the computer you specify. If the computer receives the message, it sends messages in reply. To use it, you must know the IP address of the computer with which you are trying to communicate.

On Windows-based computers, you can execute a ping command from the Start menu. Click the Start button, and then click Run. In the Open text box, type a statement such as the following:

```
ping 192.168.1.1
```

Click OK. You can substitute any private IP address on your LAN or a public IP address for an Internet site, if known.

If the target computer receives the message, a Command Prompt window is displayed:

```
Pinging 192.168.1.254 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
```

Figure 6: Using the ping Utility

If the target computer cannot be located, you will receive the message *Request timed out*.

Using the ping command, you can test whether the path to the Wireless Gateway is working (using the preconfigured default LAN IP address 192.168.1.1) or another address you assigned.

You can also test whether access to the Internet is working by typing an external address, such as that for *www.yahoo.com* (216.115.108.243). If you do not know the IP address of a particular Internet location, you can use the *nslookup* command, as explained in the following section.

From most other IP-enabled operating systems, you can execute the same command at a command prompt or through a system administration utility.

nslookup

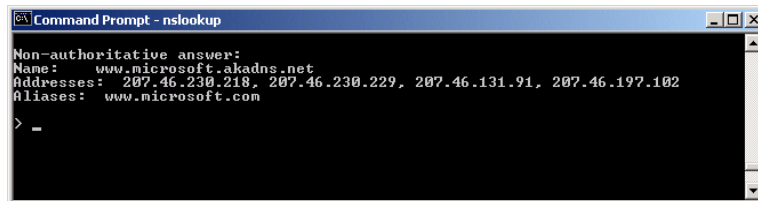
You can use the *nslookup* command to determine the IP address associated with an Internet site name. You specify the common name, and the *nslookup* command looks up the name in on your DNS server (usually located with your ISP). If that name is not an entry in your ISP's DNS table, the request is then referred to another higher-level server, and so on, until the entry is found. The server then returns the associated IP address.

On Windows-based computers, you can execute the *nslookup* command from the Start menu. Click the Start button, and then click Run. In the Open text box, type the following:

Nslookup

Click OK. A Command Prompt window displays with a bracket prompt (>). At the prompt, type the name of the Internet address that you are interested in, such as *www.microsoft.com*.

The window will display the associate IP address, if known, as shown below:



```
Command Prompt - nslookup
Non-authoritative answer:
Name:    www.microsoft.akadns.net
Addresses: 207.46.230.218, 207.46.230.229, 207.46.131.91, 207.46.197.102
Aliases: www.microsoft.com
> -
```

Figure 7: Using the *nslookup* Utility

There may be several addresses associated with an Internet name. This is common for web sites that receive heavy traffic; they use multiple, redundant servers to carry the same information.

To exit from the *nslookup* utility, type **exit** and press **[Enter]** at the command prompt.

C Notification of compliance

Europe - EU Declaration of Conformity



For complete DoC please visit

<http://global.level1.com/downloads.php?action=init>