

Click Multiple APs to set up 4 different SSIDs to deploy a shared WLAN. Users can add or limit the properties for each SSID, increasing the flexibility and efficiency of the network.

Multiple APs

This page shows and updates the wireless setting for multiple APs.

No.	Enable	Band	SSID	Data Rate	Broadcast SSID	WMM	Access	Active Client List
AP1	<input type="checkbox"/>	2.4 GHz (B+G+N) ▼	MultipleAP_1	Auto ▼	Enabled ▼	Enabled ▼	LAN+WAN ▼	Show
AP2	<input type="checkbox"/>	2.4 GHz (B+G+N) ▼	MultipleAP_2	Auto ▼	Enabled ▼	Enabled ▼	LAN+WAN ▼	Show
AP3	<input type="checkbox"/>	2.4 GHz (B+G+N) ▼	MultipleAP_3	Auto ▼	Enabled ▼	Enabled ▼	LAN+WAN ▼	Show
AP4	<input type="checkbox"/>	2.4 GHz (B+G+N) ▼	MultipleAP_4	Auto ▼	Enabled ▼	Enabled ▼	LAN+WAN ▼	Show

- (1.) **Enable:** check it for enable or not.
- (2.) **Band:** select the frequency from the drop down list.
- (3.) **SSID:** please enter different SSID in each class.
- (4.) **Data Rate:** please select the data transmission rate.
- (5.) **Access:** defined the access type.
 - a. **LAN+WAN:** the client can access to the Internet and connect to 11N Mobile Router's GUI to setup.
 - b. **WAN:** the client can only access to the Internet.
- (6.) **Active Client List:** display the properties of the client which is connecting successfully.
- (7.) **Apply Changes:** Please click **Apply Changes** to initiate or click **Reset** to cancel.

4. Network Type :

Please select "**Infrastructure**" or "**Ad hoc**." The default is "**Infrastructure**." The selection is disabled when wireless mode is selected to AP.

5. SSID :

Please input your wireless network name. Default is "11N_Mini_Router".

6. Channel Width

Please select "**20MHZ**" or "**40MHZ**" channel width to change the transmission channels.

7. ControlSideband

Setting the Sideband "**Upper**" or "**Lower**."

8. Channel Number

Please select your wireless network channel. There are Auto, 2~11.

9. Broadcast SSID

Enable or disable the SSID broadcast function. Disable this feature can provide more security of your WLAN.

10. Data Rate

Rate at which data can be communicated (bps); auto, 1M, 2M, 5.5M, 11M, 6M, 9M, 12M, 18M, 24M, 36M, 48M or 54M to be selected from the drop-down list.

11. Associated Clients

Check the WiFi ISP connectors and the connecting status.

12. Enable Mac Clone (Single Ethernet Client)

Copy the MAC Address for identity of some ISPs.

13. Enable Universal Repeater Mode (Acting as AP and Client simultaneously)

Enable **Universal Repeater Mode**, 11N Mini Router will act as a wireless AP and AP client at the same time, and able to link to another AP.. It uses AP client function to connect to a Root AP (any AP) and uses AP function to service all wireless stations within its coverage. All the stations within the coverage of 11N Mini Router can be bridged to the Root AP. It can help user to extend the coverage of wireless network.

► How to Enable URM (Universal Repeater Mode)

User could enable URM in wireless basic setting page as shown in following figures.

Step 1. Get back to menu "**Network Config**" and write down the SSID, channel and security.

AP

- One Button Setup
- IP Config
- Wireless
- System Management
- Log and Status
- Network Config
- Event Log
- Logout

Network Config

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

System	
Uptime	0day:0h:8m:7s
Firmware Version	Ver0.0.2
WirelessConfiguration	
Mode	AP
Band	2.4 GHz (B+G+N)
SSID	11N_Broadband_Router
Channel Number	11
Encryption	Disabled
MAC Address	00:ab:ab:c4:56:78
Associated Clients	0
WirelessRepeater Interface Configuration	
Mode	Infrastructure Client
ESSID	ESSID_11N_Broadband_Router
Encryption	Disabled
MAC Address	00:00:00:00:00:00
State	Scanning

Step 2. Setting the same SSID, channel and security you got from “Network Config” and Click on **Apply Changes** to save the setting

Channel Number: 9

Broadcast SSID: Disabled

WMM: Disabled

Data Rate: Auto

Associated Clients: Show Active Clients

☐ Enable Mac Clone (Single Ethernet Client)

☒ Enable Universal Repeater Mode (Acting as AP and client simultaneously)

SSID of Extended Interface: ESSID_11N_Broadband_Router

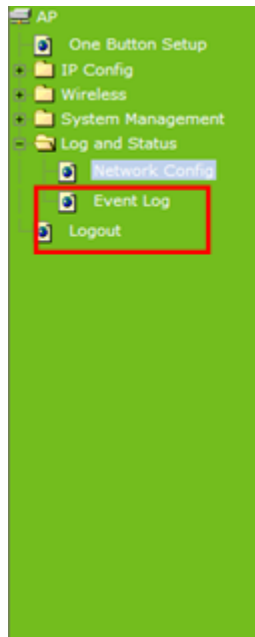
Note: If you want to change the setting for Mode and SSID, you must go to EasyConfig page to disable EasyConfig first.

Apply Changes

Reset

Note: The DHCP server should be disabled under menu “**LAN Interface Setup**” and then the URM could be enabled.

Step 3. Check the AP connectors and the Wireless connecting status.



Network Config

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

System	
Uptime	0day:0h:8m:7s
Firmware Version	Ver0.0.2
WirelessConfiguration	
Mode	AP
Band	2.4 GHz (B+G+N)
SSID	11N_Broadband_Router
Channel Number	11
Encryption	Disabled
MAC Address	00:ab:ab:c4:56:78
Associated Clients	0
WirelessRepeater Interface Configuration	
Mode	Infrastructure Client
ESSID	ESSID_11N_Broadband_Router
Encryption	Disabled
MAC Address	00:00:00:00:00:00
State	Scanning

14. SSID of Extended Interface

When mode is set to “AP” and Universal Repeater Mode is enabled, user should input SSID of another AP (the upper level device) in the field of **SSID of Extended Interface**.

15. Apply Changes & Reset

Click on “**Apply Changes**” to save the setting data. Or you may click on “**Reset**” to clear all the input data.

6.2.2 Wireless Advanced Settings

Please follow the instructions to configure the **Wireless** settings.

Wireless Advanced Settings

These settings are only for more technically advanced users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your Access Point.

Fragment Threshold:	<input type="text" value="2346"/>	(256-2346)
RTS Threshold:	<input type="text" value="2347"/>	(0-2347)
Beacon Interval:	<input type="text" value="100"/>	(20-1024 ms)
Preamble Type:	<input checked="" type="radio"/> Long Preamble <input type="radio"/> Short Preamble	
IAPP:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
Protection:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
Aggregation:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
Short GI:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
RF Output Power:	<input checked="" type="radio"/> 100% <input type="radio"/> 70% <input type="radio"/> 50% <input type="radio"/> 35% <input type="radio"/> 15%	

1. Fragment Threshold

To identify the maximum length of packet, the overflow packet length will be fragmentized. The allowed range is 256-2364, and default length is 2346 bytes.

2. RTS Threshold

This value should remain at its default setting of 2347. The range is 0~2347. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the present RTS threshold size, the RTS/CTS mechanism will not be enabled. The router sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission. Fill the range from 0 to 2347 into this blank.

3. Beacon Interval

Beacons are packets sent by an access point to synchronize a wireless network. Specify a beacon interval value. The allowed setting range is 20-1024 ms.

4. Preamble Type

The preamble (also called "a header") is a section of data at the head of a packet that contains information that wireless devices need when they send and receive packets. Short preambles improve throughput performance, but some wireless devices require long preambles. Select the suitable preamble as short or long preamble.

5. IAPP

Inter Access Point Protocol. Allow seamless roaming between Access Points in your wireless network. Coupled with superior RF performance

6. Protection

Select to enable the wireless protection or not.

7. Aggregation

Data aggregation can reduce the amount of data routed through the network, and increasing throughput.

8. Short GI

Enabling the Short Guard Interval increases the wireless transmission.

9. RF Output Power

User can adjust the RF output power to get the best wireless connection. There are 5 power types available: 100%, 70%, 50%, 35%, and 15%.

10. Apply Changes & Reset


Click on “Apply Changes” to save the setting data. Or you may click on “Reset” to clear all the input data.

6.2.3 Wireless Security Setup

4 encryption types can be selected here, please follow the instructions below for each.

Wireless Security Setup

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

Select SSID: 

Encryption: 

802.1x Authentication: ☐

1. Encryption – WEP

Enabling WEP can protect your data from eavesdroppers. If you do not need this feature, select “**None**” to skip the following setting. 11N Mini Router supports both 64-bit and 128-bit encryption using the Wired Equivalent Privacy (WEP) algorithm. Select the type of encryption you want to use (64 or 128 bit) and configure one to four WEP Keys. The “1280bit” method is more secure than the “64-bit”.

Wireless Security Setup

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

Select SSID: Root AP - 11N_Broadband_Router ▼

Apply Change Reset

Encryption: WEP ▼

802.1x Authentication: ☐

Authentication: ☐ Open System ☐ Shared Key ☒ Auto

Key Length: 64-bit ▼

Key Format: Hex (10 characters) ▼

Encryption Key: *****

► Use 802.1x Authentication

Enable 802.1x Authentication so that a wireless node must be authenticated before it can gain access to other LAN resources.

Key Length: For 64bits WEP key, either 5 ASCII characters or 10 hexadecimal digitals leading by 0x can be entered. For 128bits WEP key, either 13 ASCII characters or 26 hexadecimal digits leading by 0x can be entered.

Note: 128 bits WEP is most secure, but has more encryption/decryption overhead. Note that all wireless devices must support the same WEP encryption bit size and have the same key. Four keys can be entered here, but only one key can be selected at a time. The keys can be entered in ASCII or Hexadecimal. Select the item from drop-down list you wish to use.

Encryption Key: At most four keys can be set. A WEP key is either 10 or 26 hexadecimal digits (0~9, a~f, and A~F) based on whether you select 64 bit or 128 bit in the WEP drop-down list.

2. Encryption – WPA (WPA, WPA2 & WPA2 Mixed)

The WPA, WPA2 & WPA2 Mixed encrypt each frame transmitted from the radio using the


pre-shared key (PSK) which entered from this panel or a key got dynamically through 802.1x.


► **WPA Authentication Mode**

Enterprise (RADIUS): Please input the port, IP address, and password of authentication RADIUS Server.

Wireless Security Setup

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

Select SSID: 

Encryption: 

Authentication Mode: ☒ Enterprise (RADIUS) ☐ Personal (Pre-Shared Key)

WPA Cipher Suite: ☐ TKIP ☐ AES

RADIUS Server IP Address:


RADIUS Server Port:


RADIUS Server Password:

Personal (Pre-Shared Key): Pre-Shared Key type is coding in ASCII, and the length is between 8 to 63 characters. If the coding is in Hex, the key length is 64 characters.

Wireless Security Setup


This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

Select SSID: 

Encryption: 

Authentication Mode: ☐ Enterprise (RADIUS) ☒ Personal (Pre-Shared Key)

WPA Cipher Suite: ☐ TKIP ☐ AES

Pre-Shared key Format: 

Pre-Shared Key:

3. Apply Changes & Reset

Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

6.2.4 Wireless Access Control

With the MAC address, you may allow or disallow the access to your AP.

Wireless Access Control

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.

Wireless Access Control Mode:

MAC Address: Comment:

Current Access Control List:

MAC Address	Comment	Select
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1. Wireless Access Control Mode

“**Allowed Listed**” means only the MAC address listed on the allowed list can access to your wireless network.

“**Deny Listed**” means the listed MAC Address are not allowed to link to your wireless network.

“**Disable**” for function disuse.

2. MAC Address

Please input the allowed or denied MAC address, for example, 001122334455.

3. Comment

You may input the comments for the set MAC Address.

4. Apply Changes & Reset

Click on “Apply Change” to save the setting data. Or you may click on “Reset” to clear all the input data.

5. Current Access Control List

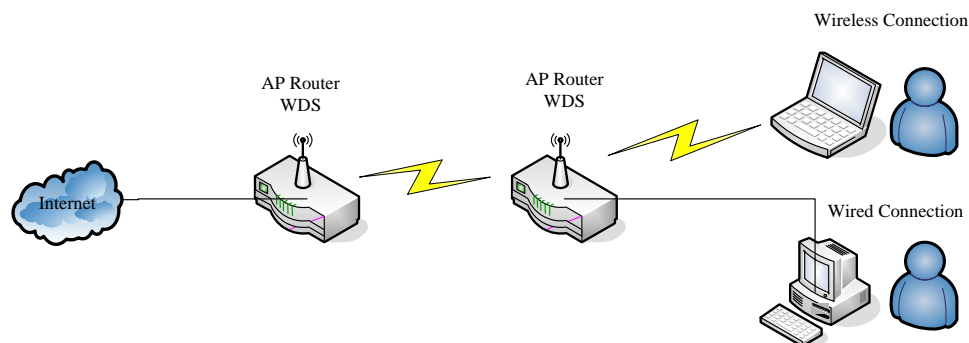
In this list, all the MAC info you input will be displayed.

6. Delete Selected and Delete All

Click on “**Delete Selected**” to erase the selected MAC address. Click on “**Delete All**” to erase all the entered MAC Address.

6.2.5 WDS Settings

WDS (Wireless Distribution System) is a Wireless Access Point mode that enables wireless bridging in which only WDS APs communicate with each other (without allowing for wireless clients or stations to access them), and/or wireless repeating in which APs communicate both with each other and with wireless stations (at the expense of half the throughput).



Please follow the instructions to setup WDS connections.

WDS Settings

Wireless Distribution System uses wireless media to communicate with other APs, like the Ethernet does. To do this, you must set these APs in the same channel and set MAC address of other APs which you want to communicate with in the table and then enable the WDS.

☐ **Enable WDS**

MAC Address:

Data Rate:

Comment:

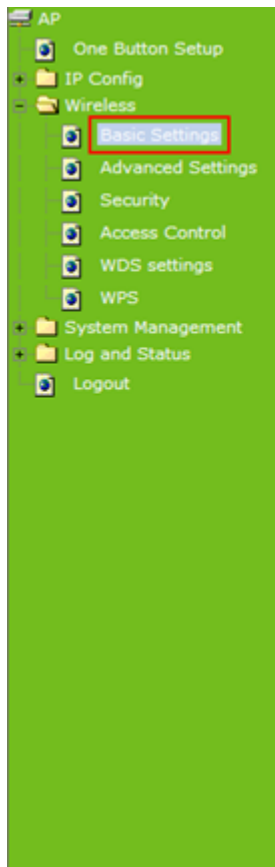
Current WDS AP List:

MAC Address	Tx Rate (Mbps)	Comment	Select
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Step 1. Check the MAC address and Channel number of the device you want to setup WDS with 11N Mini Router.

WirelessConfiguration	
Mode	AP
Band	2.4 GHz (B+G+N)
SSID	11N_Broadband_Router
Channel Number	11
Encryption	Disabled
MAC Address	00:ab:ab:c4:56:78
Associated Clients	0
LAN Configuration	
Attain IP Protocol	DHCP
IP Address	192.168.1.254
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DHCP Server	Client
MAC Address	00:ab:ab:c4:56:78

Step 2. Get back to the menu “**Wireless Basic Settings**” of 11N Mini Router. Select **AP+WDS** mode, and then select the Channel Number. Click **Apply Changes** to save the setting data.



Wireless Basic Settings

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.

☐ Disable Wireless LAN Interface

Band: 2.4 GHz (B+G+N) ▼

Mode: AP+WDS ▼ Multiple AP

Network Type: Infrastructure ▼

SSID: 11N_Broadband_Router

Channel Width: 40MHz ▼

Control Sideband: Upper ▼

Channel Number: 11 ▼

Broadcast SSID: Enabled ▼

WMM: Enabled ▼

Data Rate: Auto ▼

Associated Clients: Show Active Clients

☐ Enable Mac Clone (Single Ethernet Client)

☐ Enable Universal Repeater Mode (Acting as AP and client simultaneously)

SSID of Extended Interface: ESSID_11N_Broadband_Router

Apply Change Reset

Step 3. Enter the WDS Settings page, select **Enable WDS**, and then input the **MAC address** of the paired device. Click **Apply Changes** to save the setting data.

WDS Settings

Wireless Distribution System uses wireless media to communicate with other APs, like the Ethernet does. To do this, you must set these APs in the same channel and set MAC address of other APs which you want to communicate with in the table and then enable the WDS.

☒ **Enable WDS**

MAC Address: 000e68ff05c8

Data Rate: Auto ▼

Comment:

Apply Changes Reset Set Security Show Statistics

Current WDS AP List:

MAC Address	Tx Rate (Mbps)	Comment	Select
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Delete Selected Delete All Reset

Step 4. When the time counts down to 0, you will see the MAC address of the paired device displaying on **Current WDS AP List**.

WDS Settings

Wireless Distribution System uses wireless media to communicate with other APs, like the Ethernet does. To do this, you must set these APs in the same channel and set MAC address of other APs which you want to communicate with in the table and then enable the WDS.

☒ **Enable WDS**

MAC Address:

Data Rate: ▼

Comment:

Current WDS AP List:

MAC Address	Tx Rate (Mbps)	Comment	Select
00:0e:68:ff:05:c8	Auto		<input type="checkbox"/>

Step 5. Head back to LAN Interface, disable DHCP option, and then click **Apply Changes** to save the setting data.

AP

- One Button Setup
- IP Config
 - LAN**
- Wireless
- System Management
- Log and Status
- Logout

LAN Interface Setup

This page is used 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..

Device Name:

IP Address:

Subnet Mask:

Default Gateway:

DHCP: ▼

DHCP Client Range: -

Static DHCP: ▼

802.1d Spanning Tree: ▼

Clone MAC Address:

Step 6. Doing the same way to setup the MAC address in the paired device. Launch the UT to the menu “**WDS settings**” of the paired device, and input router’s MAC address. Click **Apply Changes** to save the setting data.

WDS Settings

Wireless Distribution System uses wireless media to communicate with other APs, like the Ethernet does. To do this, you must set these APs in the same channel and set MAC address of other APs which you want to communicate with in the table and then enable the WDS.

☒ **Enable WDS**

MAC Address: → Input the MAC address here.

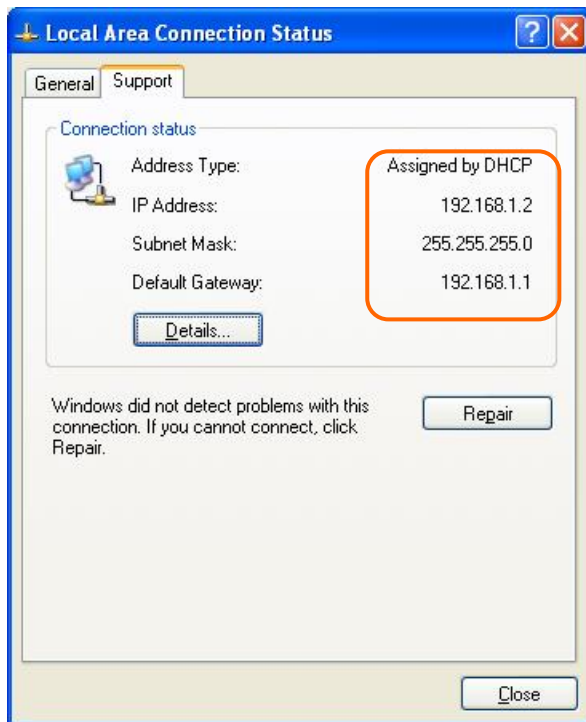
Data Rate:

Comment:

Current WDS AP List:

MAC Address	Tx Rate (Mbps)	Comment	Select
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Step 7. After initiating the paired device, please check Local Area Connections. Click Supports to check out the IP address which is assigned by the paired device.



Step 8. You can input <http://192.168.9.9> in IE browser to enter the GUI page of the paired device and make sure the connection.



6.2.6 WPS

Wi-Fi Protected Setup (WPS) is an easy way to establish a secured wireless network between 11N Mini Router and wireless card. Users do not need to manually entering a creative, yet predictable security key on both Wi-Fi devices to prevent unwanted access to their wireless network. With WPS, it can automatically configure a wireless network with a network name (SSID) and strong WPA data encryption and authentication.

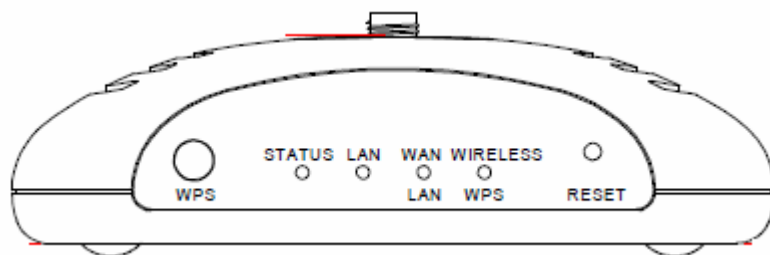
WPS can be enabled by 2 methods:

1. **PBC (Push button configuration) Method**, in which the user simply has to push a button, either an actual or a virtual one, on both WPS devices to connect.
2. **PIN (Personal Identification Number) Method**, in which a PIN has to be taken either from a sticker label or from the web interface of the WPS device. This PIN will then be entered in the AP or client WPS device to connect.

Please follow instructions below to enable the WPS function.

► Start PBC:

- (1.) Press the **WPS** button from 11N Mini Router or click **Start PBC** from menu “**Wi-Fi Protected Setup**”, and waiting for the WPS wireless card setting.



or

Wi-Fi Protected Setup

This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless client automatically synchronize its setting and connect to the Access Point in a minute without any hassle.

☐ Disable WPS

WPS Status: ☒ Configured ☐ UnConfigured

Self-PIN Number: 18864540

Push Button Configuration:

Start PBC

Apply Changes

Reset

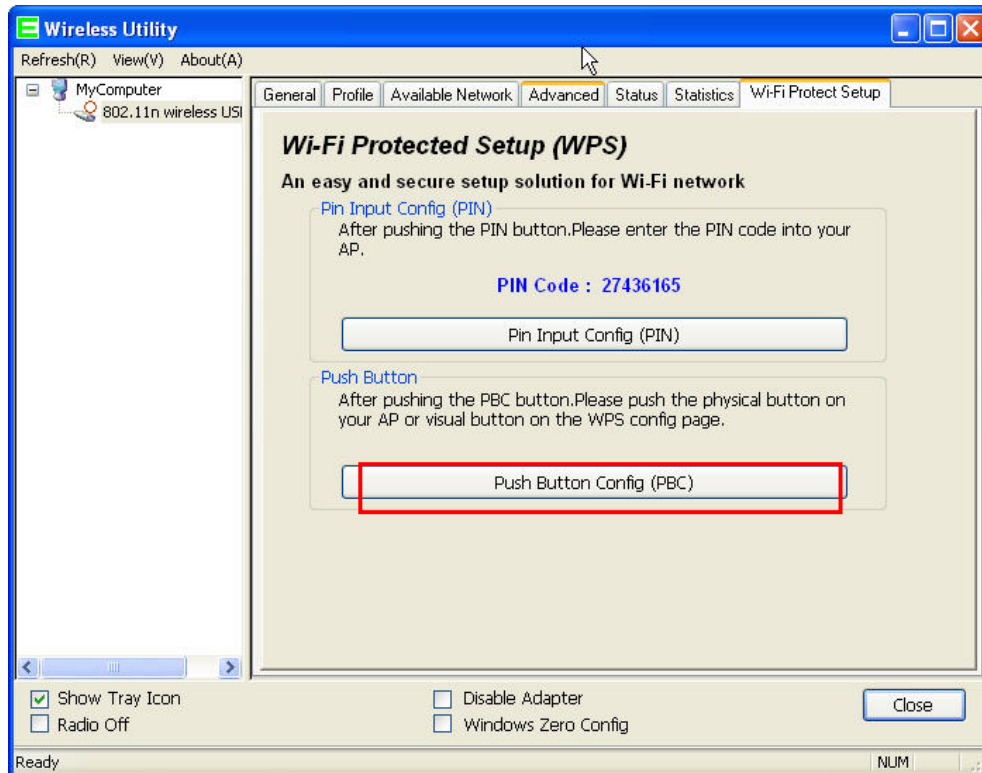
Current Key Info:

Authentication	Encryption	Key
Open	None	N/A

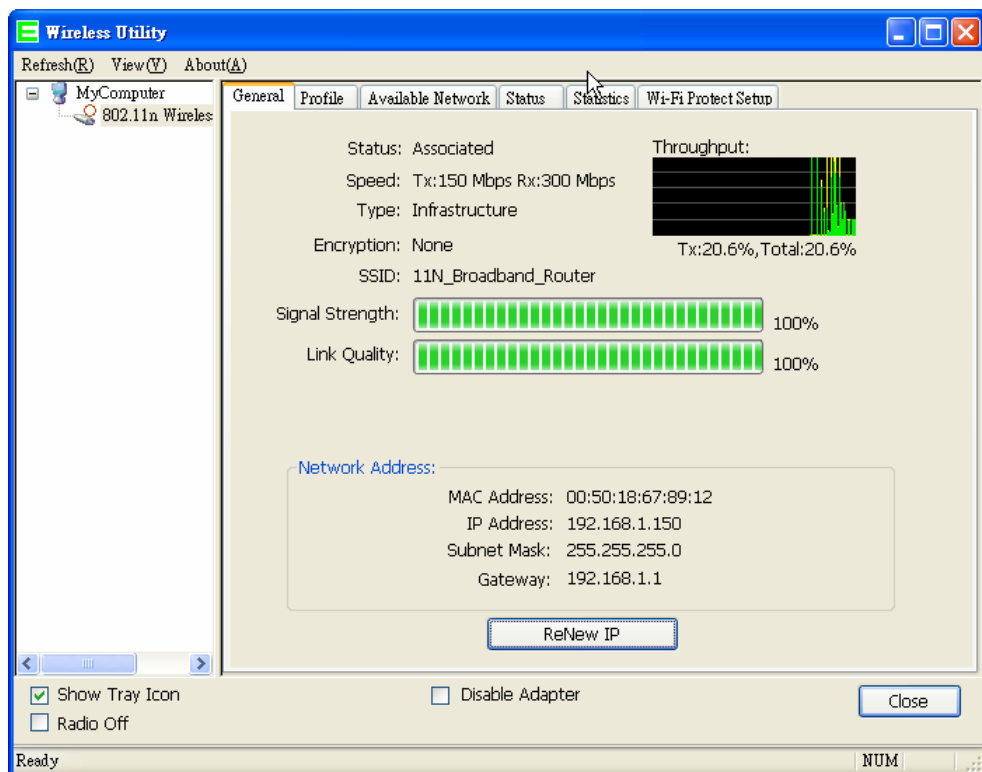
Client PIN Number:

Start PIN

- (2.) Open the “**Wireless Utility**” of your wireless card, and click its “**PBC**” button, to start auto pairing.

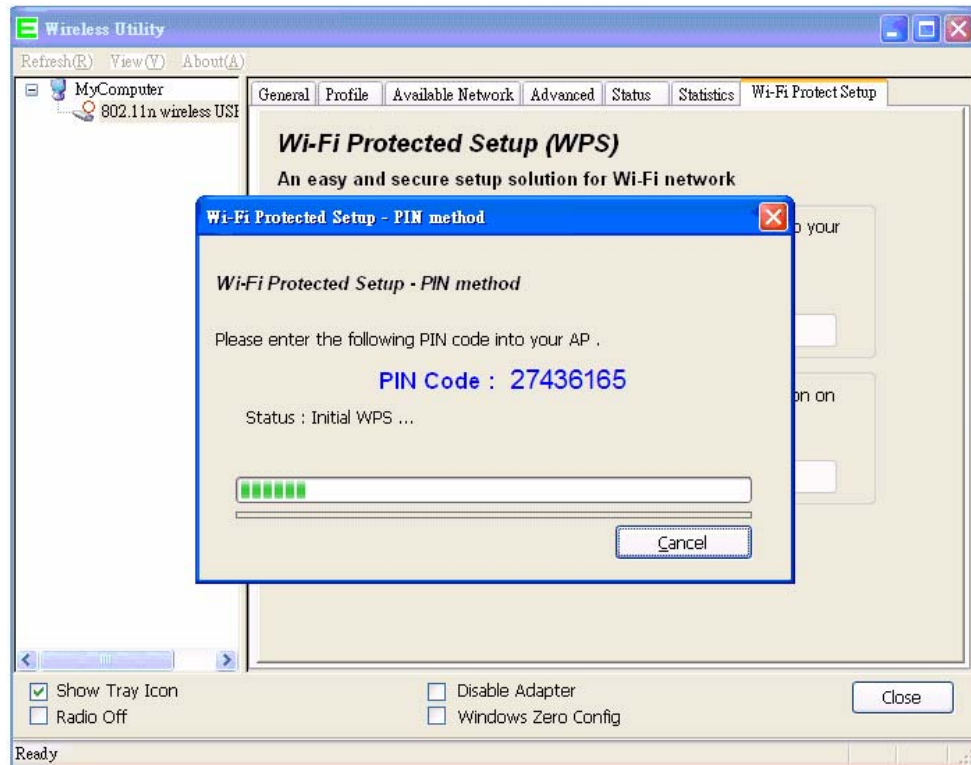


- (3.) While scanning is successful, the information of the wireless card appears in the windows below.



► **Start PIN:**

- (1.) Open the **“Wireless Utility”** of your wireless card. Follow its PIN instruction to get a new PIN number. Write it down.



- (2.) Open menu **“Wi-Fi Protected Setup”** of 11N Mini Router, input the PIN number from the wireless card then click **Start PIN**.

Wi-Fi Protected Setup

This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless client automatically synchronize its setting and connect to the Access Point in a minute without any hassle.

☐ Disable WPS

WPS Status: ☒ Configured ☐ Un-Configured

Self-PIN Number: 73220398

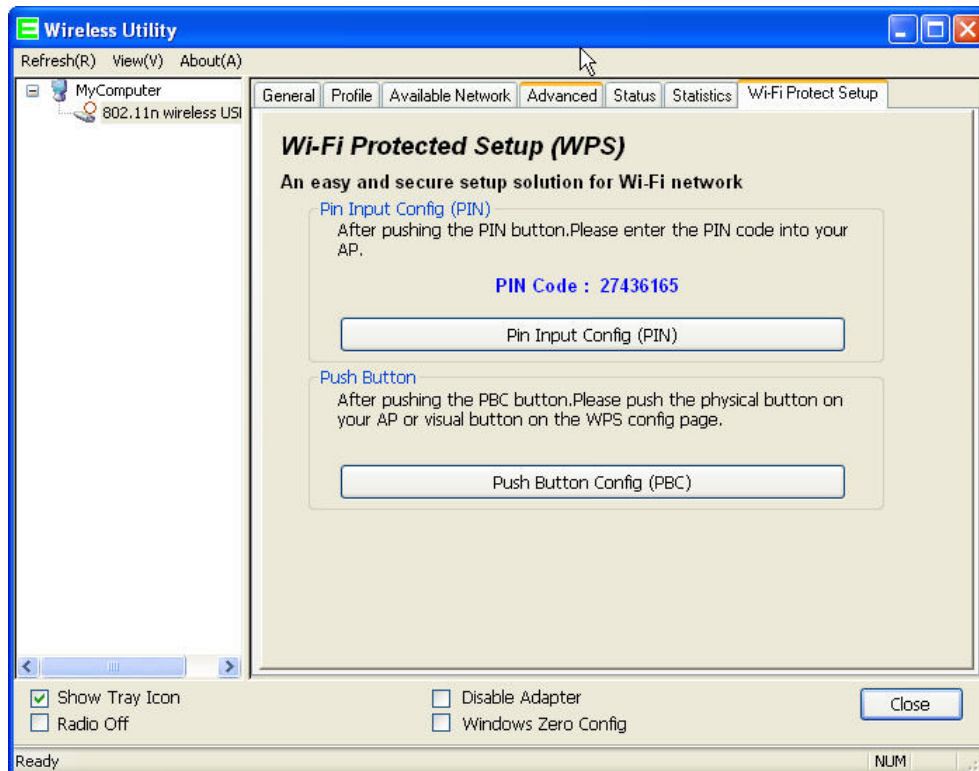
Push Button Configuration:

Current Key Info:

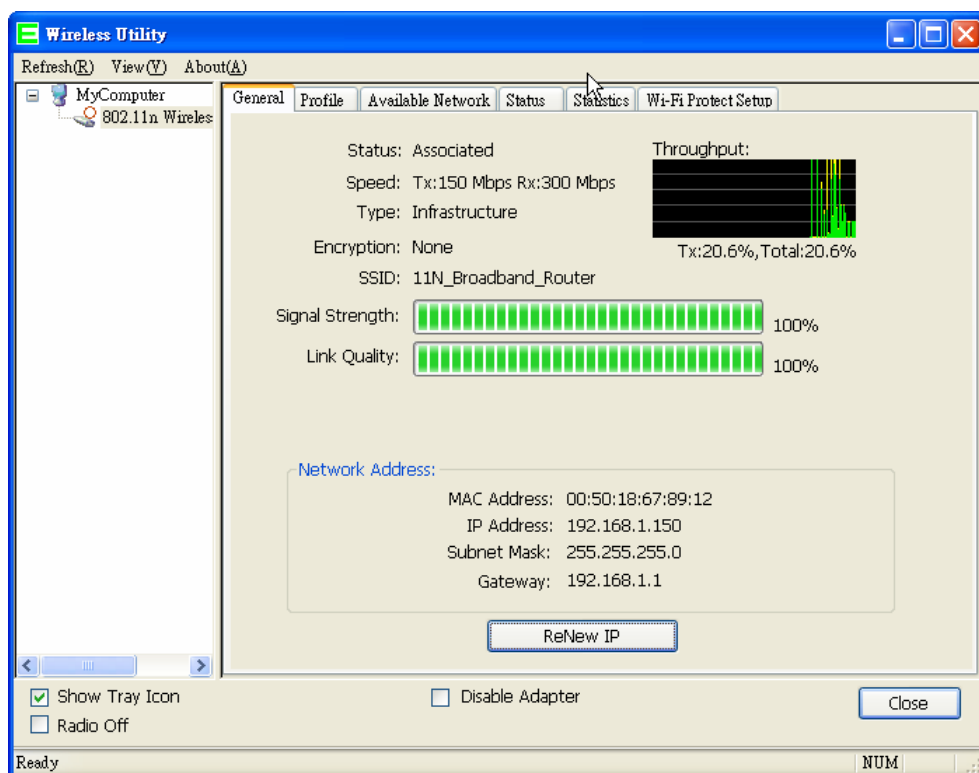
Authentication	Encryption	Key
WPA2 PSK	AES	65756575

Client PIN Number:

- (3.) Back to **“Wireless Utility”** and press the **“Start PIN”** button to complete the auto-pairing process.

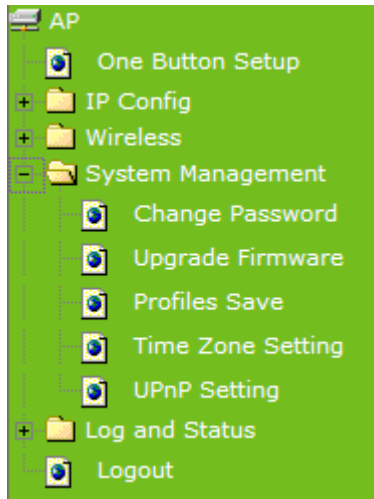


(4.) When you can see the IP information below, the connection is established



6.3 System Management

11N Mini Router provides system management including password changing, firmware upgrade, time setting, user's account setting and other detail settings. Following is detail explanation for each.



6.3.1 Change Password

Users can set or change their password in this section.

Password configuration

This page is used to set the account to access the web server of Access Point. Empty user name and password will disable the protection.

User Name:	admin
New Password:	<input type="text"/>
Confirmed Password:	<input type="text"/>

1. New Password

Enter the new password you want to change.

2. New Password (Confirm)

Enter the new password again for confirming.

3. Apply Changes & Reset

Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

Note: 1. Only the password can be changed, the user name for administrator is **admin** and not to be changed.
2. If you forget administrator's password, please reset 11N WLAN Mobile Server Router to default setting by pressing the "**Reset**" button on the rear panel over 5 seconds. And the password will return to **admin**.

6.3.2 Upgrade Firmware

There is certain risk while upgrading firmware. Upgrading firmware is not recommended unless the significant faulty is found. You can upgrade the firmware of 11N Mini Router on this page. Make sure the firmware you want to use is on the local hard drive of the computer. Click **Upgrade Firmware** to proceed.

Upgrade Firmware

This page allows you upgrade the Access Point firmware to new version. Please note, do not power off the device during the upload because it may crash the system.

Select File:

1. Update Firmware

Click on **Browse...** button to search your local hard drive and locate the firmware to be used for update.

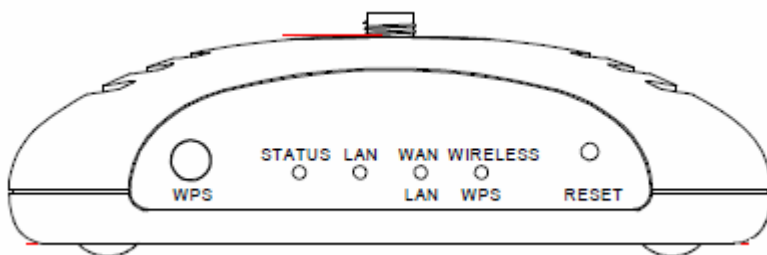
2. Upload & Reset:

Click **Upload** to upgrade the firmware or **Reset** to restore to factory default Settings

Note: 1. To prevent the firmware upgrading interrupted by other wireless signals and caused failure. We recommend using wired connection to do the upgrading.
2. Before upgrading the firmware, please remove any USB device which connected with this router.
3. The firmware upgrade will not remove your previous settings.

■ Reset button:

On the back of this router, there is a reset button. If you can not login the administrator page by forgetting your password; or the router has problem you can't solve. You can push the reset button for 5 seconds with a stick. The router will reboot and all settings will be restored to factory default settings. If the problem still exists, you can visit our web site to see if there is any firmware for download to solve the problem.



6.3.3 Save / Reload Settings

To back up the current configuration setting or load the backup data, also you can restore 11N Mini Router to default setting by this function.

Save/Reload 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.

Save Settings to File:	<input type="button" value="Save..."/>
Load Settings from File:	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Upload"/>
Reset Settings to Default:	<input type="button" value="Reset"/>

1. Save Settings To File

Step 1. Click on **Save** button for saving the configuration setting into assigned location.

Save/Reload Settings

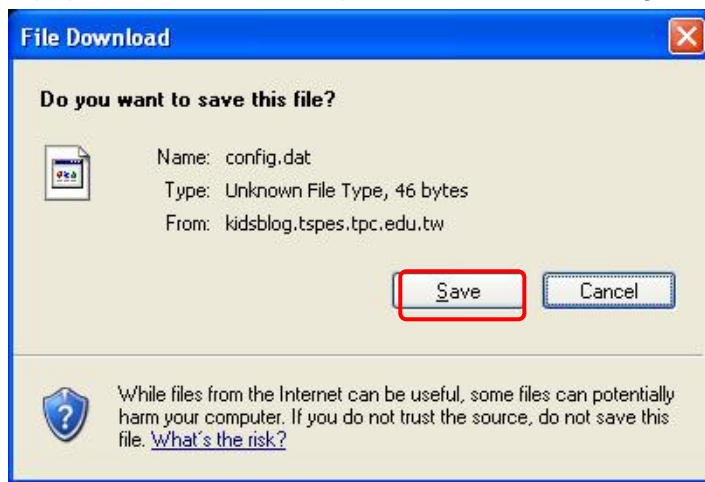
This page allows you save current settings to a file or reload the settings from the file which was saved previously. Besides, you could reset the current configuration to factory default.

Save Settings to File:

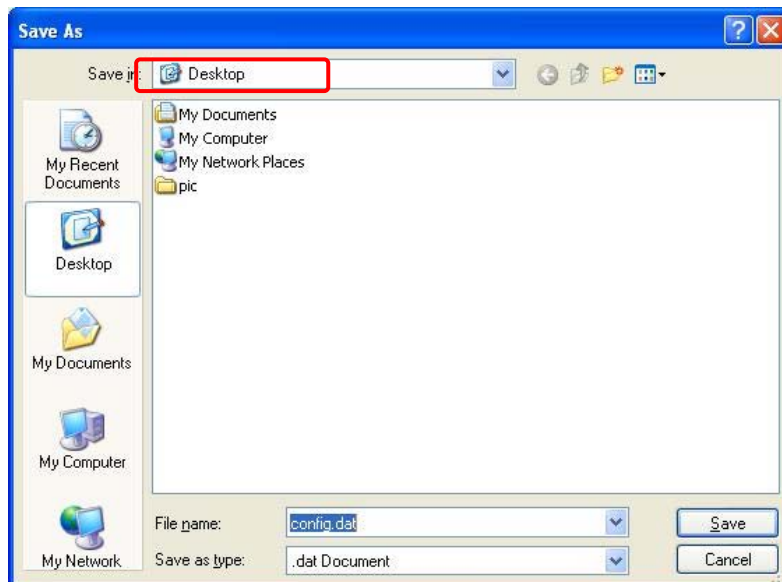
Load Settings from File:

Reset Settings to Default:

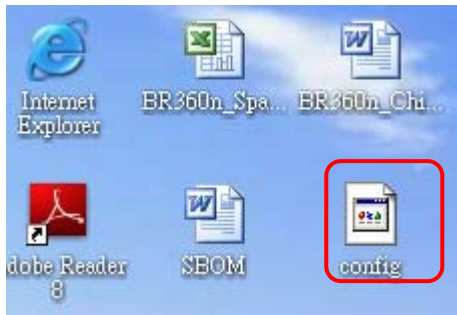
A pop window will show up and ask to save config.dat file.



Step 2. Please select the location, for example: the desktop.



Step 3. The file you just saved will appear on the desktop.



2. Load Settings From File

Step 1. Click on “**Browse...**” button for searching the saving configuration from hard drive, and then click on Upload button to load all the settings into the router.

Save/Reload 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.

Save Settings to File:

Load Settings from File:

Reset Settings to Default:

Step 2. Select the **config.dat** file.



Step 3. Click **Upload** to retrieve.

Save/Reload Settings

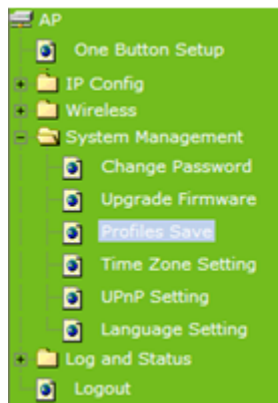
This page allows you save current settings to a file or reload the settings from the file which was saved previously. Besides, you could reset the current configuration to factory default.

Save Settings to File:

Load Settings from File:

Reset Settings to Default:

Step 4. When you see the screen below, the updating is completed. Please click **OK** to return to the main menu.



Change setting successfully!

System is configuring, after 47 seconds system will return to the previous page.

3. Reset Setting to Default

After you have tried other methods for troubleshooting your network, you may choose to restore 11N Mini Router to the factory default settings.

Save/Reload 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.

Save Settings to File:

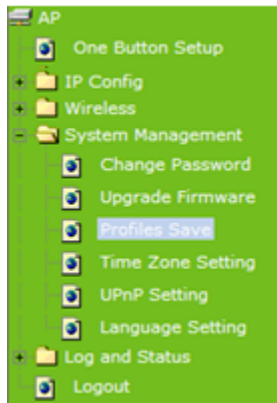
Load Settings from File:

Reset Settings to Default:

Windows Internet Explorer

Do you really want to reset the current settings to default?

When you see the screen below, the resetting is completed. Please click **OK** and return to the main menu.



Change setting successfully!

System is configuring, after 47 seconds system will return to the previous page.


6.3.4 Time Zone Setting

The System time is the time used by 11N Mini Router for scheduling services. You can manually set the time or connect to a NTP (Network Time Protocol) server. If a NTP server is set, you will only need to set the time zone. If you manually set the time, you may also set Daylight Saving dates and the system time will automatically adjust on those dates.

Time Zone Setting


You can maintain the system time by synchronizing with a public time server over the Internet.

Current Time : Yr Mon Day Hr Mn Sec

Time Zone Select : 

☒ Enable NTP client update

☐ Automatically Adjust Daylight Saving

NTP server : ☒ 

☐ (Manual IP Setting)

1. Current Time

Users can input the time manually.

2. Time Zone Select

Select your time zone location from the drop-down list.

3. Enable NTP client update

Check to enable NTP client update.

4. Automatically Adjust Daylight Saving

If you are in daylight saving time area, please enable this item.

5. NTP server

Please select the NTP server from the pull-down list, or you can enter the NTP server IP

address manually.

6. Apply Changes & Reset & Refresh

Please click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. Or you may click on **Refresh** to update the system time on the screen.

6.3.5 UPnP Setting

UPnP (Universal Plug and Play) allows users to connect their UPnP-enabled Mini Router, printer server and other devices right to the network with zero-configuration, meaning easier setup for installing the device on the network. The automatic discovery feature enables the device to obtain an IP address, present and describe itself to other devices and PCs on the network without having to install drivers, but to configure and use those devices.

UPnP Setting

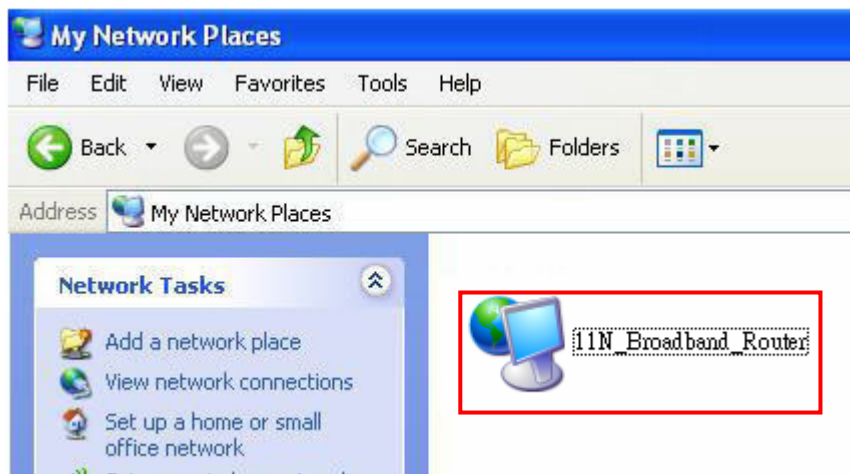
In this page, you can turn on or turn off the UPNP feature of your router.

Enable/Disable UPNP: ☒ Enabled ☐ Disabled

Apply Changes

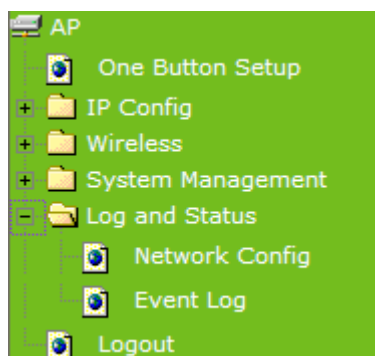
Reset

After enabling UPNP, click **My Network Places**, and user can open the web GUI by just clicking on the **Internet Gateway Device** icon.



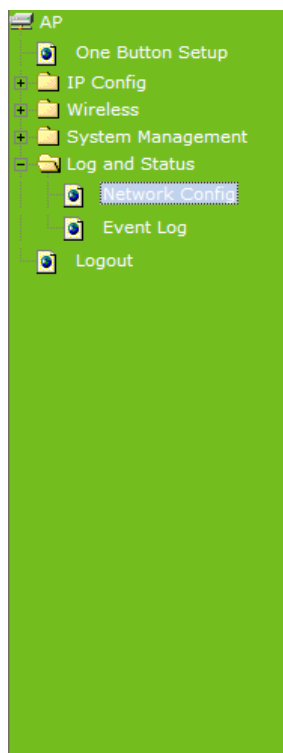
6.4 Log & Status

11N Mini Router provides the log list and connection status for user to check.



6.4.1 Network Config

Network Configuration shows the firmware version and the connection status of LAN, WAN and Wireless.



Network Config

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

System	
Uptime	0day:0h:15m:5s
Firmware Version	Ver0.0.2
WirelessConfiguration	
Mode	AP
Band	2.4 GHz (B+G+N)
SSID	11N_Mini_Router
Channel Number	6
Encryption	Disabled
MAC Address	00:e0:4c:81:86:c1
Associated Clients	3
LAN Configuration	
Attain IP Protocol	DHCP
IP Address	192.168.1.254
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DHCP Server	Client
MAC Address	00:e0:4c:81:86:c1

6.4.2 Event Log

11N Mini Router provides system logs for review.

System Log

This page can be used to set remote log server and show the system log.

☐ **Enable Log**

☐ system all ☐ wireless ☐ DoS

☐ **Enable Remote Log** Log Server IP Address:

1. Enable Log

Select Enable Log to record the system log

2. system all, wireless & DoS

Select **Wireless**, **DoS** or **system all** to record

3. Enable Remote Log

You may choose to enable the remote event log or not.

4. Log Server IP Address

Please input the log server IP Address.

5. Apply Changes & Refresh & Clear

Click on **Apply Changes** to save the setting data. Click on **Refresh** to renew the system time, or on **Clear** to clear all the record.

- After clicking **Apply Changes** to record the event log, it will be shown as the example below.

☒ **Enable Log**

☒ **system all** ☐ **wireless** ☐ **DoS**

☐ **Enable Remote Log** **Log Server IP Address:**

Apply Changes

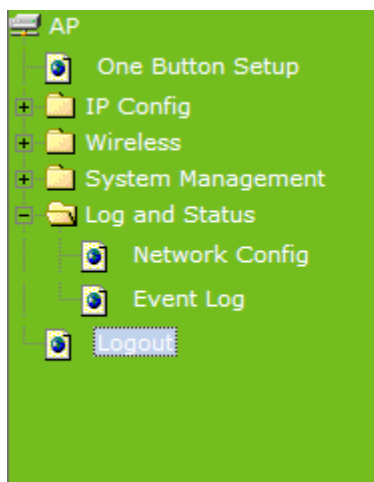
```
conntrack
0day 00:00:17 PPTP netfilter connection tracking: registered
0day 00:00:17 PPTP netfilter NAT helper: registered
0day 00:00:17 ip_tables: (C) 2000-2002 Netfilter core team
0day 00:00:17 NET4: Unix domain sockets 1.0/SMP for Linux NET4.0.
0day 00:00:17 NET4: Ethernet Bridge 008 for NET4.0
0day 00:00:17 VFS: Mounted root (squashfs filesystem) readonly.
0day 00:00:17 Freeing unused kernel memory: 64k freed
0day 00:00:17 mount /proc file system ok!
0day 00:00:17 mount /var file system ok!
0day 00:00:17 device eth0 entered promiscuous mode
0day 00:00:17 device wlan0 entered promiscuous mode
0day 00:00:17 TPT: unreasonable target TSSI 0
0day 00:00:17 br0: port 2(wlan0) entering listening state
0day 00:00:17 br0: port 1(eth0) entering listening state
0day 00:00:17 br0: port 2(wlan0) entering listening state
```

Refresh

Clear

6.5 Logout

Click **Logout** on the bottom menu to exit and go back to GUI login home page.



Logout

This page is used to logout.

Do you want to logout ?

Apply Change

Chapter 7 Advance Configuration for WiFi AP Mode

7.1 IP Configuration

This function allows you to add routing rules into 11N Mini Router, including LAN.

7.1.1 LAN Setup

Use this page to set up the local IP address and subnet mask for your router. Please select **LAN** under the **IP Config** menu and follow the instructions below to enter the LAN setting page to configure the settings you want.



7.1.2 LAN Interface Setup

LAN Interface Setup

This page is used 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..

IP Address:	<input type="text" value="192.168.1.254"/>
Subnet Mask:	<input type="text" value="255.255.255.0"/>
Default Gateway:	<input type="text" value="0.0.0.0"/>
DHCP:	<input type="button" value="Client"/> <input type="button" value="v"/>
DHCP Client Range:	<input type="text" value="192.168.1.100"/> - <input type="text" value="192.168.1.200"/> <input type="button" value="Show Client"/>
Static DHCP:	<input type="button" value="Set Static DHCP"/>
Device Name:	<input type="text" value="11N_Mini_Router"/>
802.1d Spanning Tree:	<input type="button" value="Disabled"/> <input type="button" value="v"/>
Clone MAC Address:	<input type="text" value="000000000000"/>

1. IP Address

The default value of LAN IP address is **192.168.1.254** for this router.

2. Subnet Mask

Input Subnet Mask, normally it is **255.255.255.0**.

3. Default Gateway

Input ISP Default Gateway Address. If you don't know, please check with your ISP.

4. DHCP

Enable or disable DHCP services. The DHCP server will automatically allocate an unused IP address from the IP address pool to the requesting computer if enabled.

5. DHCP Client Range

Define the DHCP client range and then the DHCP server will assign an IP to the requesting computer from this range. The **Show Client** will display every assigned IP address, MAC address, and expired time. The default range is 192.168.1.100 - 192.168.1.200.

6. 802.1d Spanning Tree

IEEE 802.1d Spanning Tree Protocol (STP) is a link layer network protocol that ensures a loop-free topology for any bridged LAN. The main purpose of STP is to ensure that you do not create loops when you have redundant paths in your network. Loops are deadly to a network.

7. Clone MAC Address

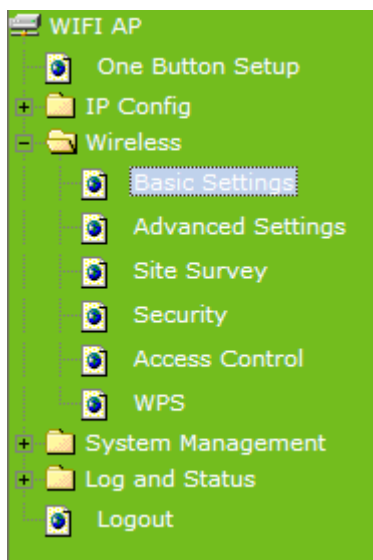
Copy the MAC address from the device you had registered to your ISP if your ISP asks for the specific MAC Address.

8. Apply Changes & Reset

Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

7.2 Wireless Setup

Please select **Wireless** under the main menu.



7.2.1 Wireless Basic Settings

Follow the instructions to configure the **Wireless** settings.

Wireless Basic Settings

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.

☐ **Disable Wireless LAN Interface**

Band: 2.4 GHz (B+G+N) ▼

Mode: Client ▼ Multiple AP

Network Type: Infrastructure ▼

SSID: 11N_Broadband_Router

Channel Width: 40MHz ▼

Control Sideband: Upper ▼

Channel Number: 11 ▼

Broadcast SSID: Enabled ▼

WMM: Enabled ▼

Data Rate: Auto ▼

Associated Clients: Show Active Clients

☐ **Enable Mac Clone (Single Ethernet Client)**

☒ **Enable Universal Repeater Mode (Acting as AP and client simultaneously)**

SSID of Extended Interface: ESSID_11N_Broadband_Router

Apply Change

Reset

Associated Clients: Show Active Clients

☐ **Enable Mac Clone (Single Ethernet Client)**

☒ **Enable Universal Repeater Mode (Acting as AP and client simultaneously)**

SSID of Extended Interface: ESSID_Mobile_Router

Apply Change

Reset

1. Disable Wireless LAN Interface

Select **Disable Wireless LAN Interface** to turn off the wireless function.

2. Band

This field indicates the 802.11x interface mode. For example, “**2.4GHz(G)**” prevents the 802.11b clients from accessing the router. “**2.4GHz(B+G)**” allows both 802.11b and 802.11g clients to access the router. There are 6 options, 2.4 GHz (B/G/N/B+G/G+N/B+G+N) from the drop down list.

3. Mode

Select **AP**, **WDS**, or **AP+WDS** to allow or disallow the wireless operation.

► Multiple APs

Click Multiple APs to set up 4 different SSIDs to deploy a shared WLAN. Users can add or limit the properties for each SSID, increasing the flexibility and efficiency of the network.

Multiple APs

This page shows and updates the wireless setting for multiple APs.

No.	Enable	Band	SSID	Data Rate	Broadcast SSID	WMM	Access	Active Client List
AP1	<input type="checkbox"/>	2.4 GHz (B+G+N) ▼	MultipeAP_1	Auto ▼	Enabled ▼	Enabled ▼	LAN+WAN ▼	Show
AP2	<input type="checkbox"/>	2.4 GHz (B+G+N) ▼	MultipeAP_2	Auto ▼	Enabled ▼	Enabled ▼	LAN+WAN ▼	Show
AP3	<input type="checkbox"/>	2.4 GHz (B+G+N) ▼	MultipeAP_3	Auto ▼	Enabled ▼	Enabled ▼	LAN+WAN ▼	Show
AP4	<input type="checkbox"/>	2.4 GHz (B+G+N) ▼	MultipeAP_4	Auto ▼	Enabled ▼	Enabled ▼	LAN+WAN ▼	Show

- (1.) **Enable:** check it for enable or not.
- (2.) **Band:** select the frequency from the drop down list.
- (3.) **SSID:** please enter different SSID in each class.
- (4.) **Data Rate:** please select the data transmission rate.
- (5.) **Access:** defined the access type.
 - a. **LAN+WAN:** the client can access to the Internet and connect to 11N Mobile router's GUI to setup.
 - b. **WAN:** the client can only access to the Internet.
- (6.) **Active Client List:** display the properties of the client which is connecting successfully.
- (7.) **Apply Changes:** Please click **Apply Changes** to initiate or click **Reset** to clear all the input data.

4. Network Type :

Please select “**Infrastructure**” or “**Ad hoc.**” The default is “**Infrastructure.**” The selection is disabled when wireless mode is selected to AP.

5. SSID :

Please input your wireless network name. Default is “11N_Mini_Router”.

6. Channel Width

Please select “**20MHZ**” or “**40MHZ**” channel width to change the transmission channels.

7. ControlSideband

Setting the Sideband “**Upper**” or “**lower.**”

8. Channel Number

Please select your wireless network channel. There are Auto, 2~11.

9. Broadcast SSID

Enable or disable the SSID broadcast function. Disable this feature can provide more security of your WLAN.

10. Data Rate

Rate at which data can be communicated (bps); auto, 1M, 2M, 5.5M, 11M, 6M, 9M, 12M, 18M, 24M, 36M, 48M or 54M to be selected from the drop-down list.

11. Associated Clients

Check the WiFi ISP connectors and the connecting status.

12. Enable Mac Clone (Single Ethernet Client)

Copy the MAC Address for identity of some ISPs.

13. Enable Universal Repeater Mode (Acting as AP and Client simultaneously)

Enable **Universal Repeater Mode**, 11N Mini Router will act as a wireless AP and AP client at the same time, and able to link to another AP.. It uses AP client function to connect to a Root AP (any AP) and uses AP function to service all wireless stations within its coverage. All the stations within the coverage of 11N Mini Router can be bridged to the Root AP. It can help user to extend the coverage of wireless network.

After checking **Enable Universal Repeater Mode**, please input the ESSID. The default is

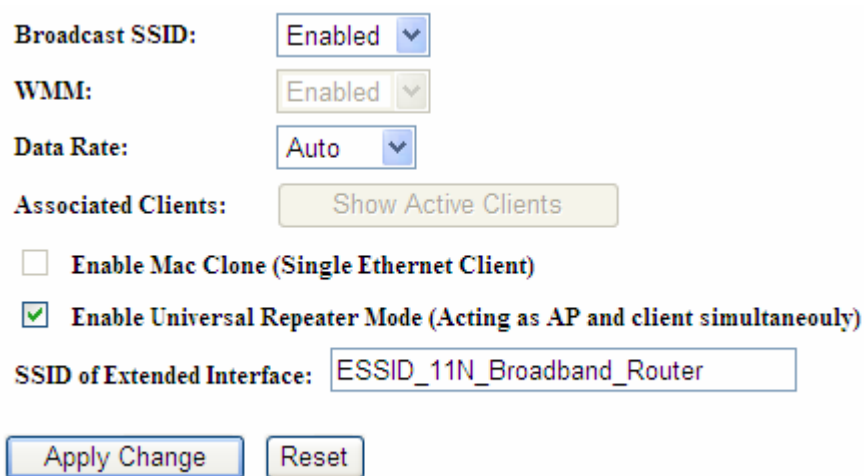
ESSID_Mobile_Router.

► How to Enable URM (Universal Repeater Mode)

User could enable URM in wireless basic setting page as shown in following figures.

Step 1. Get back to menu “**Network Config**” and write down the SSID, channel and security.

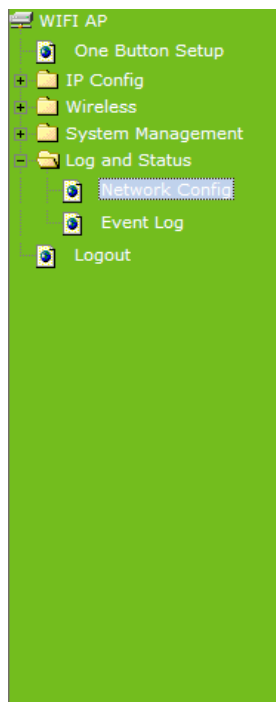
Step 2. Setting the same SSID, channel and security you got from “Network Config” and Click on **Apply Changes** to save the setting



The screenshot displays a configuration interface for a wireless router. It includes several settings: 'Broadcast SSID' is set to 'Enabled' in a dropdown menu; 'WMM' is also set to 'Enabled' in a dropdown menu; 'Data Rate' is set to 'Auto' in a dropdown menu. Below these, there is a button labeled 'Show Active Clients' next to the 'Associated Clients' label. Two checkboxes are present: 'Enable Mac Clone (Single Ethernet Client)' which is unchecked, and 'Enable Universal Repeater Mode (Acting as AP and client simultaneously)' which is checked. At the bottom, the 'SSID of Extended Interface' is set to 'ESSID_11N_Broadband_Router' in a text box. Finally, there are two buttons at the bottom: 'Apply Change' and 'Reset'.

Note: The DHCP server should be disabled under menu “**LAN Interface Setup**” and then the URM could be enabled.

Step 3. Check the AP connectors and the Wireless connecting status.



Network Config

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

System	
Uptime	0day:0h:2m:54s
Firmware Version	Ver0.0.2
WirelessConfiguration	
Mode	Infrastructure Client
Band	2.4 GHz (B+G+N)
SSID	11N_Mini_Router
Channel Number	7
Encryption	Disabled
MAC Address	00:00:00:00:00:00
State	Scanning
WirelessRepeater Interface Configuration	
Mode	AP
ESSID	ESSID_11N_Mini_Router
Encryption	Disabled
MAC Address	00:00:00:00:00:00
Associated Clients	0

14. SSID of Extended Interface

When mode is set to “AP” and Universal Repeater Mode is enabled, user should input SSID of another AP (the upper level device) in the field of **SSID of Extended Interface**.

15. Apply Changes & Reset

Click on “**Apply Changes**” to save the setting data. Or you may click on “**Reset**” to clear all the input data.

7.2.2 Wireless Advanced Settings

Please follow the instructions to configure the **Wireless** settings.

Wireless Advanced Settings

These settings are only for more technically advanced users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your Access Point.

Fragment Threshold:	<input type="text" value="2346"/>	(256-2346)
RTS Threshold:	<input type="text" value="2347"/>	(0-2347)
Beacon Interval:	<input type="text" value="100"/>	(20-1024 ms)
Preamble Type:	<input checked="" type="radio"/> Long Preamble <input type="radio"/> Short Preamble	
IAPP:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
Protection:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
Aggregation:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
Short GI:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
RF Output Power:	<input checked="" type="radio"/> 100% <input type="radio"/> 70% <input type="radio"/> 50% <input type="radio"/> 35% <input type="radio"/> 15%	

1. Fragment Threshold

To identify the maximum length of packet, the overflow packet length will be fragmented. The allowed range is 256-2364, and default length is 2346 bytes.

2. RTS Threshold

This value should remain at its default setting of 2347. The range is 0~2347. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the present RTS threshold size, the RTS/CTS mechanism will not be enabled. The router sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission. Fill the range from 0 to 2347 into this blank.

3. Beacon Interval

Beacons are packets sent by an access point to synchronize a wireless network. Specify a beacon interval value. The allowed setting range is 20-1024 ms.

4. Preamble Type

The preamble (also called "a header") is a section of data at the head of a packet that contains information that wireless devices need when they send and receive packets. Short preambles improve throughput performance, but some wireless devices require long preambles. Select the suitable preamble as short or long preamble.

5. IAPP

Inter Access Point Protocol. Allow seamless roaming between Access Points in your wireless network. Coupled with superior RF performance

6. Protection

Select to enable the wireless protection or not.

7. Aggregation

Data aggregation can reduce the amount of data routed through the network, and increasing throughput.

8. Short GI

Enabling the Short Guard Interval increases the wireless transmission.

9. RF Output Power

User can adjust the RF output power to get the best wireless connection. There are 5 power types available: 100%, 70%, 50%, 35%, and 15%.

10. Apply Changes & Reset

Click on “**Apply Changes**” to save the setting data. Or you may click on “**Reset**” to clear all the input data.

7.2.3 Wireless Site Survey

This function provides users to search existing wireless APs or wireless base stations from ISP. You can connect to a wireless AP manually in WiFi AP mode. The designed AP will appear on SSID column in Wireless Basic Setup page.

Please click on **Refresh** to refresh the list. Click **Connect** after select an existing AP to connect.

Wireless Site Survey

This page provides tool to scan the wireless network. If any Access Point or IBSS is found, you could choose to connect it manually when client mode is enabled.

SSID	BSSID	Channel	Type	Encrypt	Signal	Select
<div><input type="button" value="Refresh"/> <input type="button" value="Connect"/></div>						

7.2.4 Wireless Security Setup

4 encryption types can be selected here, please follow the instructions below for each.

Wireless Security Setup

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

Select SSID:	<input type="text" value="Root Client - 11N_Broadband_Router"/>	<input type="button" value="Apply Change"/>	<input type="button" value="Reset"/>
Encryption:	<input type="text" value="None"/>		

1. Encryption – WEP

Enabling WEP can protect your data from eavesdroppers. If you do not need this feature, select “**None**” to skip the following setting. 11N Mini Router supports both 64-bit and 128-bit encryption using the Wired Equivalent Privacy (WEP) algorithm. Select the type of encryption you want to use (64 or 128 bit) and configure one to four WEP Keys. The “1280bit” method is more secure than the “64-bit”.

Wireless Security Setup

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

Select SSID: Root Client - 11N_Broadband_Router Apply Change Reset

Encryption: WEP

Authentication: ☐ Open System ☐ Shared Key ☒ Auto

Key Length: 64-bit

Key Format: Hex (10 characters)

Encryption Key: *****

Key Length: For 64bits WEP key, either 5 ASCII characters or 10 hexadecimal digitals leading by 0x can be entered. For 128bits WEP key, either 13 ASCII characters or 26 hexadecimal digits leading by 0x can be entered.

Note: 128 bits WEP is most secure, but has more encryption/decryption overhead. Note that all wireless devices must support the same WEP encryption bit size and have the same key. Four keys can be entered here, but only one key can be selected at a time. The keys can be entered in ASCII or Hexadecimal. Select the item from drop-down list you wish to use.

Encryption Key: At most four keys can be set. A WEP key is either 10 or 26 hexadecimal digits (0~9, a~f, and A~F) based on whether you select 64 bit or 128 bit in the WEP drop-down list.

2. Encryption – WPA (WPA, WPA2 & WPA2 Mixed)

The WPA, WPA2 & WPA2 Mixed encrypt each frame transmitted from the radio using the pre-shared key (PSK) which entered from this panel or a key got dynamically through 802.1x.

► WPA Authentication Mode

Enterprise (RADIUS): Please input the port, IP address, and password of authentication RADIUS Server.

Wireless Security Setup

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

Select SSID:

Encryption:

Authentication Mode: ☒ Enterprise (RADIUS) ☐ Personal (Pre-Shared Key)

WPA Cipher Suite: ☐ TKIP ☐ AES

Personal (Pre-Shared Key): Pre-Shared Key type is coding in ASCII, and the length is between 8 to 63 characters. If the coding is in Hex, the key length is 64 characters.

Wireless Security Setup

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

Select SSID:

Encryption:

Authentication Mode: ☐ Enterprise (RADIUS) ☒ Personal (Pre-Shared Key)

WPA Cipher Suite: ☐ TKIP ☐ AES

Pre-Shared key Format:

Pre-Shared Key:

3. Apply Changes & Reset

Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

7.2.5 Wireless Access Control

With the MAC address, you may allow or disallow the access to your AP.

Wireless Access Control

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.

Wireless Access Control Mode:

MAC Address: Comment:

Current Access Control List:

MAC Address	Comment	Select
<div><input type="button" value="Delete Selected"/> <input type="button" value="Delete All"/> <input type="button" value="Reset"/></div>		

1. Wireless Access Control Mode

“**Allowed Listed**” means only the MAC address listed on the allowed list can access to your wireless network.

“**Deny Listed**” means the listed MAC Address are not allowed to linkto your wireless network.

“**Disable**” for function disuse.

2. MAC Address

Please input the allowed or denied MAC address, for example, 001122334455.

3. Comment

You may input the comments for the set MAC Address.

4. Apply Changes & Reset

Click on “**Apply Change**” to save the setting data. Or you may click on “**Reset**” to clear all the input data.

5. Current Access Control List

In this list, all the MAC info you input will be displayed.

6. Delete Selected and Delete All

Click on “**Delete Selected**” to erase the selected MAC address. Click on “**Delete All**” to erase all the entered MAC Address.

7.2.6 WPS

Wi-Fi Protected Setup (WPS) is an easy way to establish a secured wireless network between 11N Mini Router and wireless card. Users do not need to manually entering a creative, yet predictable security key on both Wi-Fi devices to prevent unwanted access to their wireless network. With WPS, it can automatically configure a wireless network with a network name (SSID) and strong WPA data encryption and authentication.

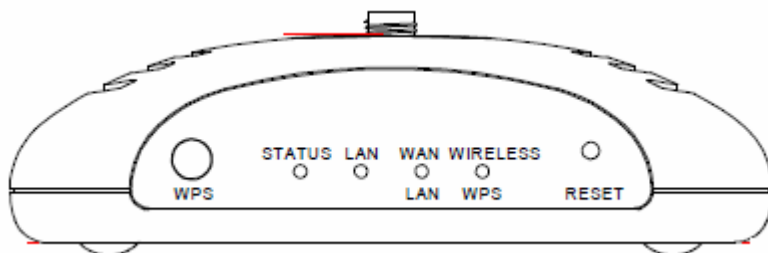
WPS can be enabled by 2 methods:

1. **PBC (Push button configuration) Method**, in which the user simply has to push a button, either an actual or a virtual one, on both WPS devices to connect.
2. **PIN (Personal Identification Number) Method**, in which a PIN has to be taken either from a sticker label or from the web interface of the WPS device. This PIN will then be entered in the AP or client WPS device to connect.

Please follow instructions below to enable the WPS function.

► Start PBC:

- (1.) Press the **WPS button** from 11N Mini Router or click **Start PBC** from menu “**Wi-Fi Protected Setup**”, and waiting for the WPS wireless card setting.



or

Wi-Fi Protected Setup

This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless client automatically synchronize its setting and connect to the Access Point in a minute without any hassle.

☐ Disable WPS

Self-PIN Number: 25932195

PIN Configuration:

Start PIN

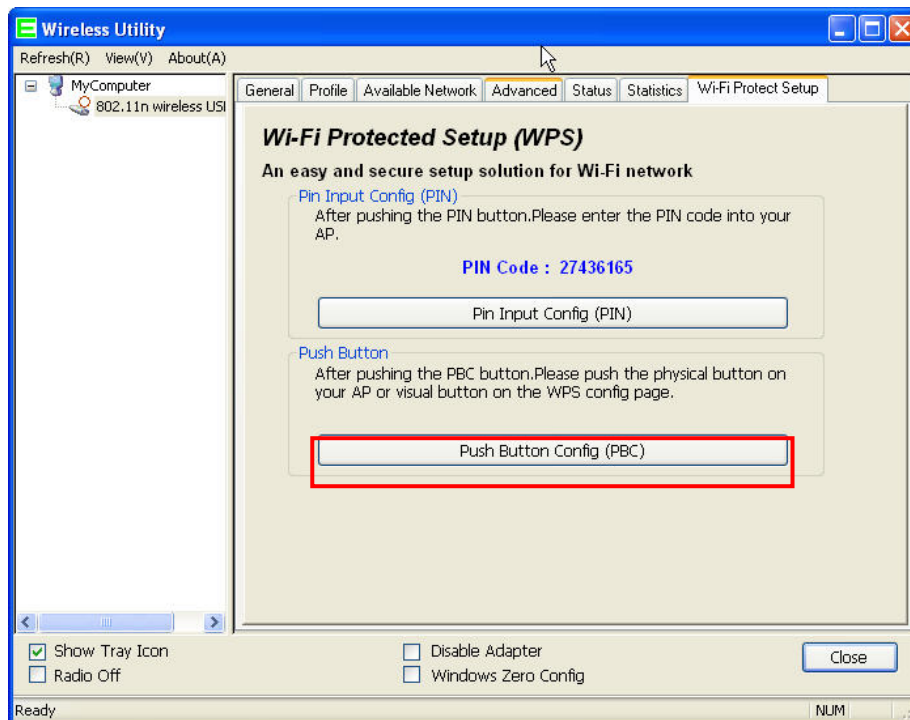
Push Button Configuration:

Start PBC

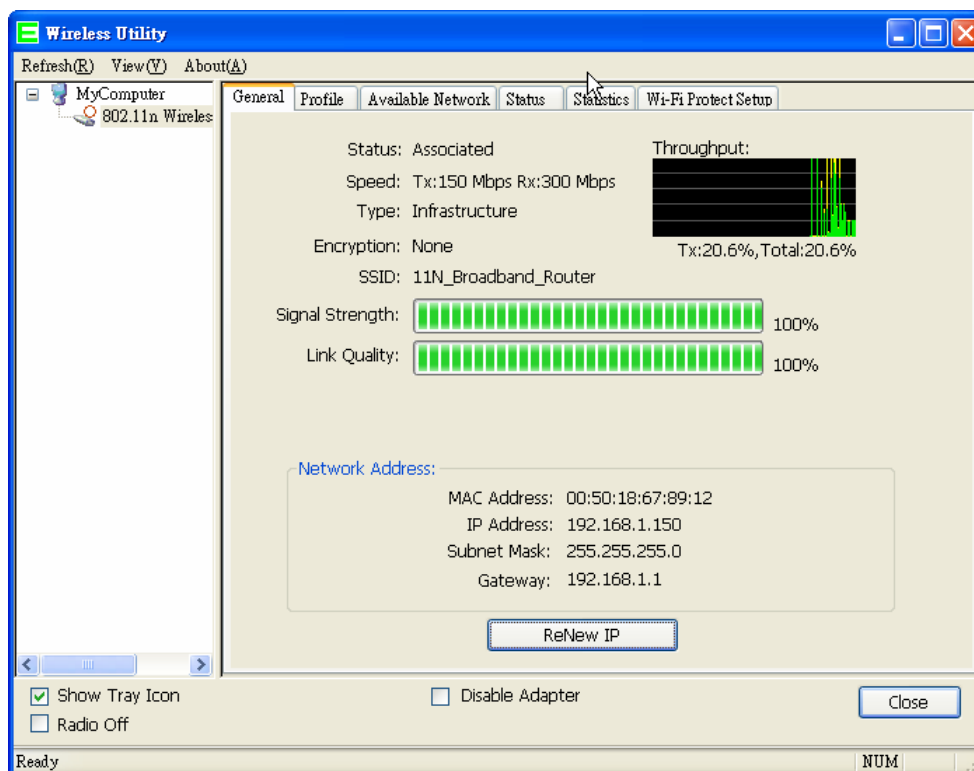
Apply Change

Reset

- (2.) Open the “**Wireless Utility**” of your wireless card, and click its “**PBC**” button, to start auto pairing.

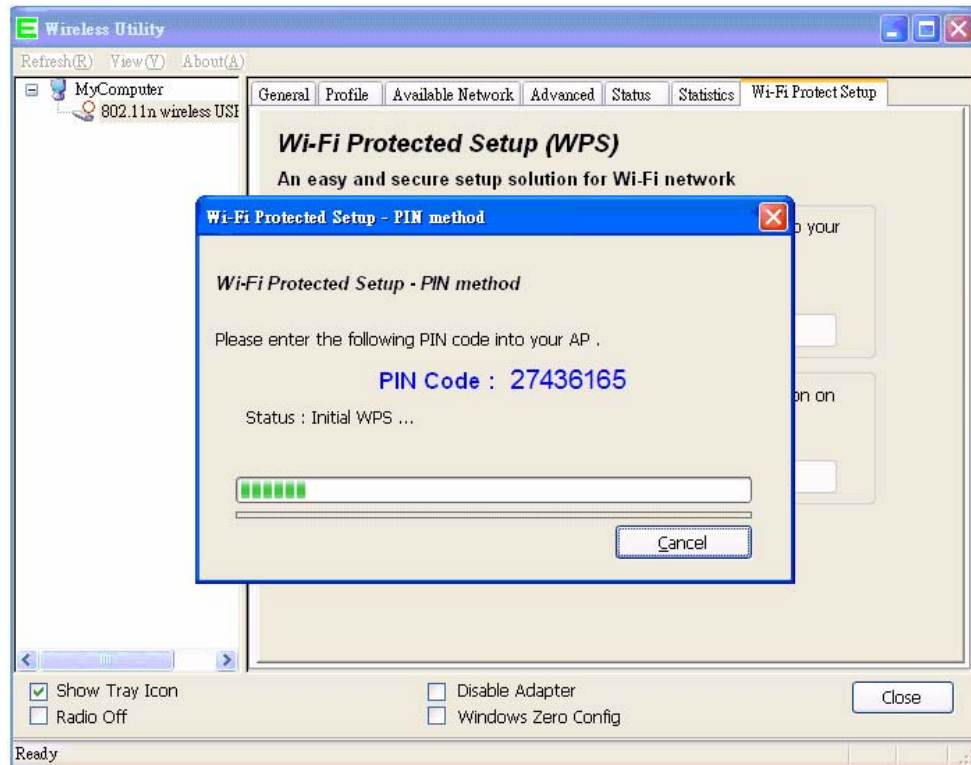


- (3.) While scanning is successful, the information of the wireless card appears in the windows below.



► **Start PIN:**

- (1.) Open the “Wireless Utility” of your wireless card. Follow its PIN instruction to get a new PIN number. Write it down.



- (2.) Open menu “**Wi-Fi Protected Setup**” of 11N Mini Router, input the PIN number from the wireless card then click **Start PIN**.

Wi-Fi Protected Setup

This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless client automatically synchronize its setting and connect to the Access Point in a minute without any hassle.

☐ Disable WPS

WPS Status: ☒ Configured ☐ Un-Configured

Self-PIN Number: 73220398

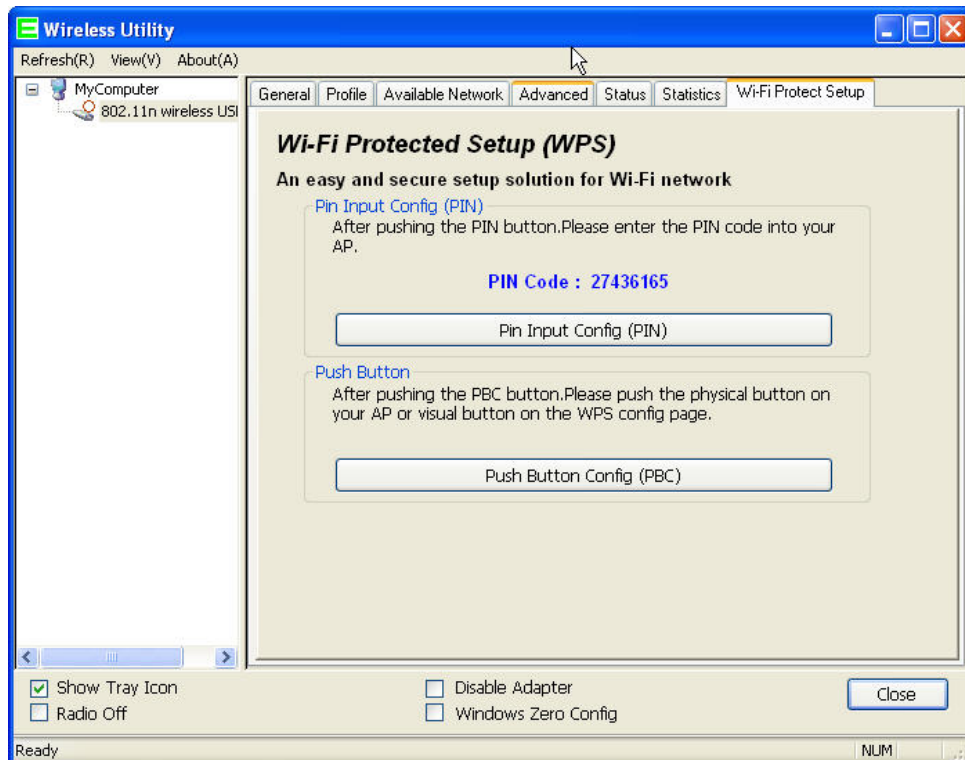
Push Button Configuration:

Current Key Info:

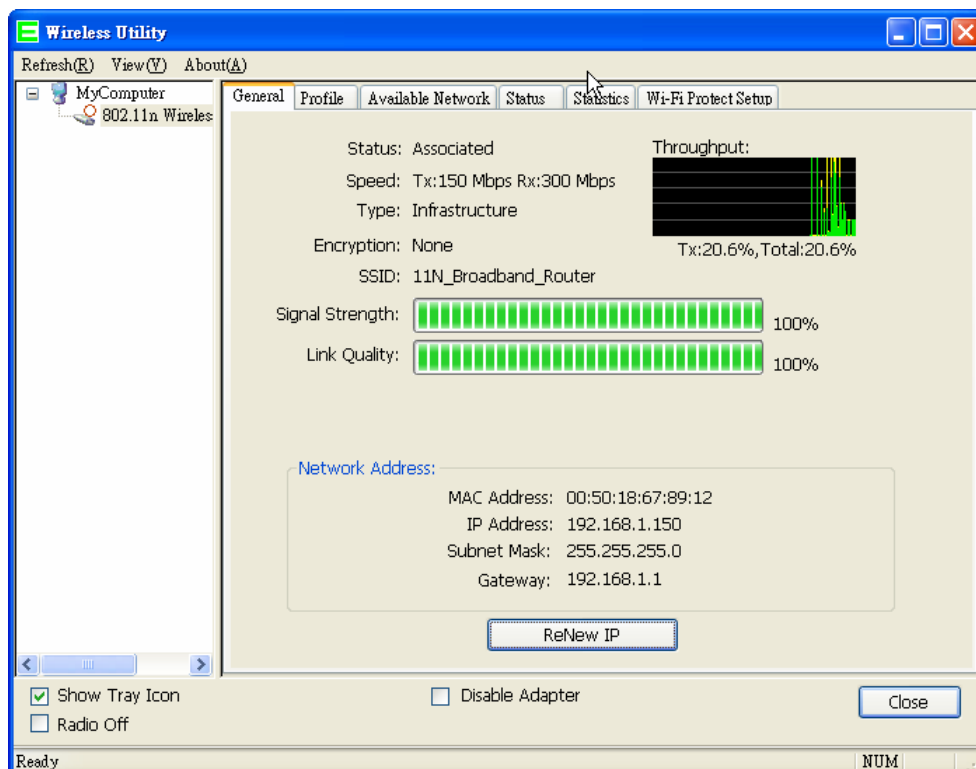
Authentication	Encryption	Key
WPA2 PSK	AES	65756575

Client PIN Number:

- (3.) Back to “Wireless Utility” and press the “**Start PIN**” button to complete the auto-pairing process.

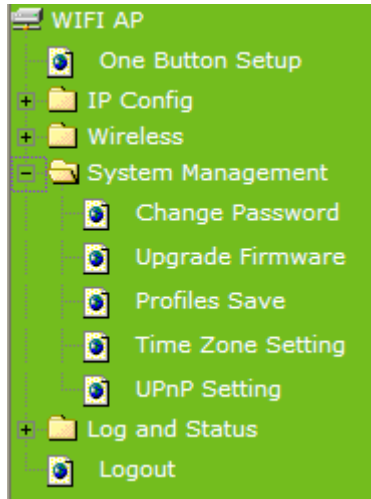


(4.) When you can see the IP information below, the connection is established



7.3 System Management

11N Mini Router provides system management including password changing, firmware upgrade, time setting, user's account setting and other detail settings. Following is detail explanation for each.



7.3.1 Change Password

Users can set or change their password in this section.

Password configuration

This page is used to set the account to access the web server of Access Point. Empty user name and password will disable the protection.

User Name:	admin
New Password:	<input type="password"/>
Confirmed Password:	<input type="password"/>
<input type="button" value="Apply Change"/> <input type="button" value="Reset"/>	

1. New Password

Enter the new password you want to change.

2. New Password (Confirm)

Enter the new password again for confirming.

3. Apply Change & Reset

Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

Note: 1. Only the password can be changed, the user name for administrator is **admin** and not to be changed.
2. If you forget administrator's password, please reset 11N WLAN Mobile Server Router to default setting by pressing the "**Reset**" button on the rear panel over 5 seconds. And the password will return to **admin**.

7.3.2 Upgrade Firmware

There is certain risk while upgrading firmware. Upgrading firmware is not recommended unless the significant faulty is found. You can upgrade the firmware of 11N Mini Router on this page. Make sure the firmware you want to use is on the local hard drive of the computer. Click **Upgrade Firmware** to proceed.

Upgrade Firmware

This page allows you upgrade the Access Point firmware to new version. Please note, do not power off the device during the upload because it may crash the system.

Select File:

1. Update Firmware

Click on **Browse...** button to search your local hard drive and locate the firmware to be used for update.

2. Upload & Reset:

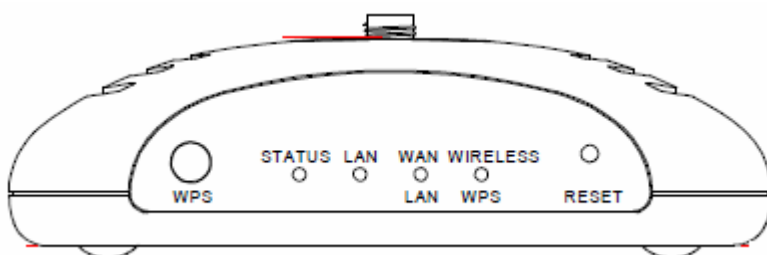
Click **Upload** to upgrade the firmware or **Reset** to restore to factory default Settings

Note: 1. To prevent the firmware upgrading interrupted by other wireless signals and caused failure. We recommend using wired connection to do the upgrading.
2. Before upgrading the firmware, please remove any USB device which connected with this router.
3. The firmware upgrade will not remove your previous settings.

■ Reset button:

On the back of this router, there is a reset button. If you can not login the administrator page by forgetting your password; or the router has problem you can't solve. You can push the reset button for 5 seconds with a stick. The router will reboot and all settings will be restored to factory default settings. If the problem still exists, you can visit our web site to see if there is

any firmware for download to solve the problem.



7.3.3 Save / Reload Settings

To back up the current configuration setting or load the backup data, also you can restore 11N Mini Router to default setting by this function.

Save/Reload 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.

Save Settings to File:

Save...

Load Settings from File:

Browse...

Upload

Reset Settings to Default:

Reset

1. Save Settings To File

Step 1. Click on **Save** button for saving the configuration setting into assigned location.

Save/Reload 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.

Save Settings to File:

Save...

Load Settings from File:

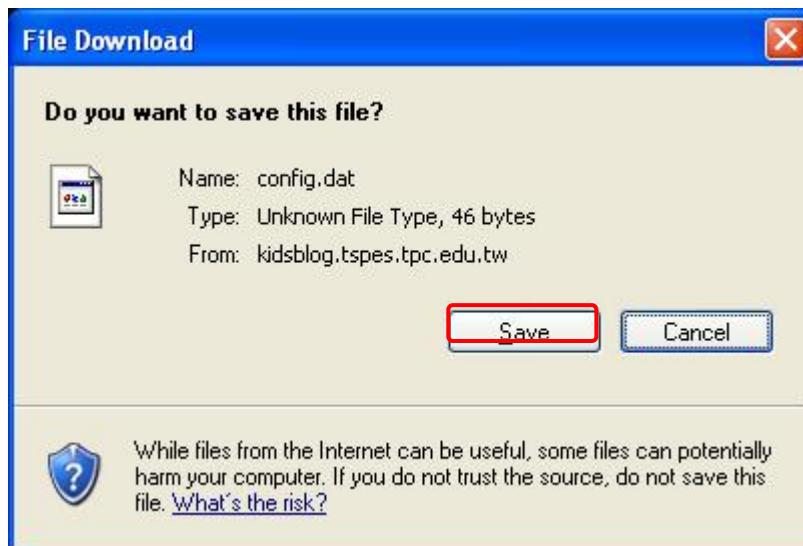
Browse...

Upload

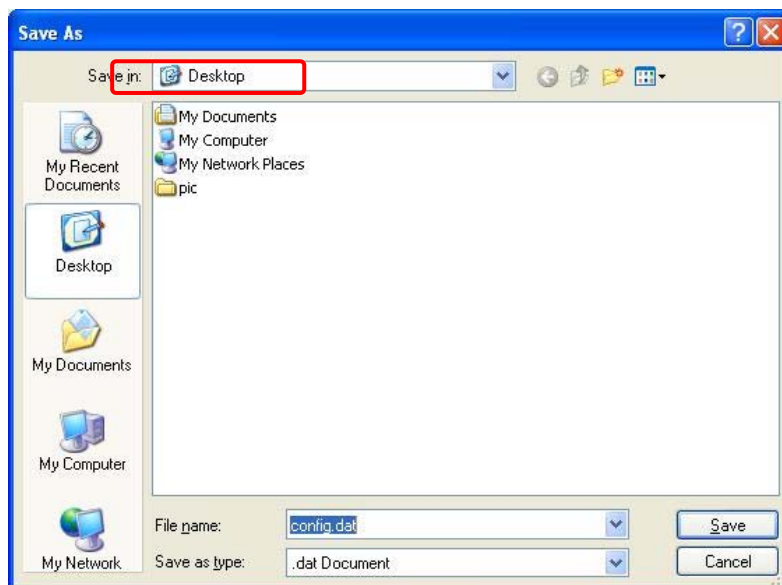
Reset Settings to Default:

Reset

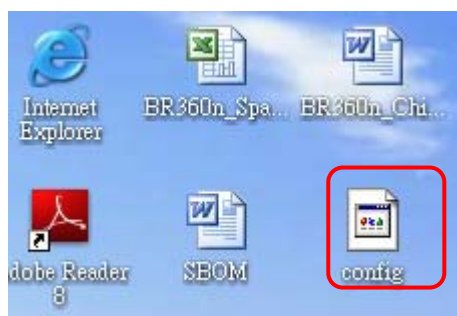
A pop window will show up and ask to save **config.dat** file.



Step 2. Please select the location, for example: the desktop.



Step 3. The file you just saved will appear on the desktop.



2. Load Settings From File

Step 1. Click on “**Browse...**” button for searching the saving configuration from hard drive, and then click on Upload button to load all the settings into the router.

Save/Reload Settings

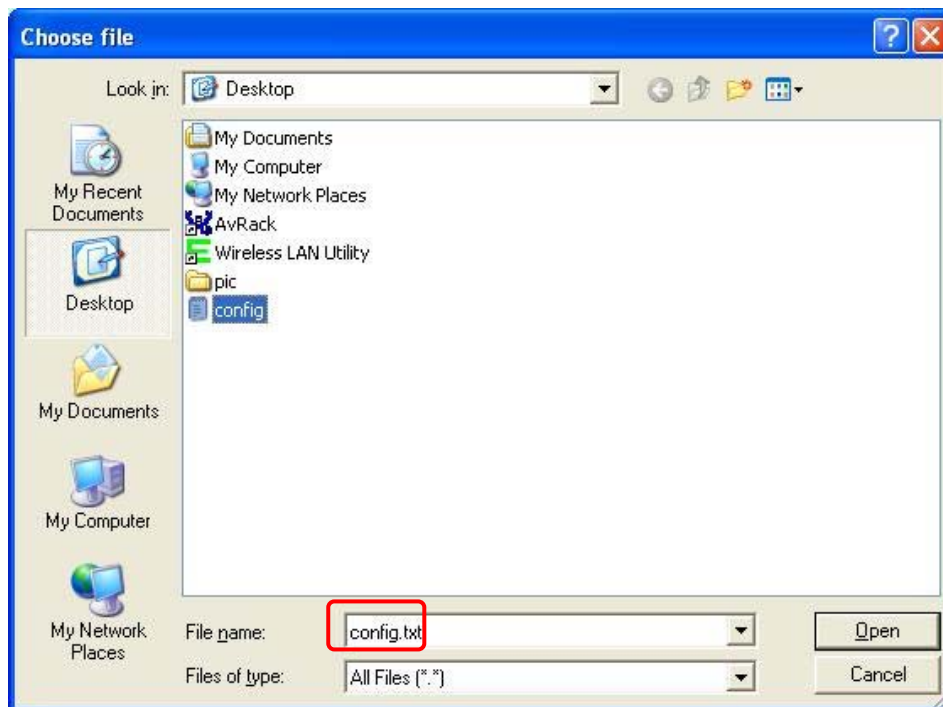
This page allows you save current settings to a file or reload the settings from the file which was saved previously. Besides, you could reset the current configuration to factory default.

Save Settings to File:

Load Settings from File:

Reset Settings to Default:

Step 2. Select the **config.dat** file.



Step 3. Click **Upload** to retrieve.

Save/Reload Settings

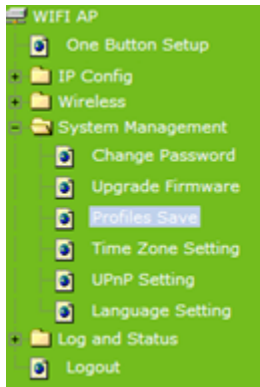
This page allows you save current settings to a file or reload the settings from the file which was saved previously. Besides, you could reset the current configuration to factory default.

Save Settings to File:

Load Settings from File:

Reset Settings to Default:

Step 4. When you see the screen below, the updating is completed. Please click **OK** to return to the main menu.



Change setting successfully!

System is configuring, after 2 seconds system will return to the previous page.

3. Reset Setting to Default

After you have tried other methods for troubleshooting your network, you may choose to restore 11N Mini Router to the factory default settings.

Save/Reload 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.

Save Settings to File:

Load Settings from File:

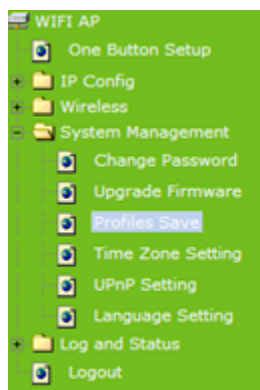
Reset Settings to Default:

Windows Internet Explorer

Do you really want to reset the current settings to default?

When you see the screen below, the resetting is completed. Please click **OK** and return to the

main menu.



Change setting successfully!

System is configuring, after 2 seconds system will return to the previous page.

7.3.4 Time Zone Setting

The System time is the time used by 11N Mini Router for scheduling services. You can manually set the time or connect to a NTP (Network Time Protocol) server. If a NTP server is set, you will only need to set the time zone. If you manually set the time, you may also set Daylight Saving dates and the system time will automatically adjust on those dates.

Time Zone Setting

You can maintain the system time by synchronizing with a public time server over the Internet.

Current Time : Yr Mon Day Hr Mn Sec

Time Zone Select :

☒ Enable NTP client update

☐ Automatically Adjust Daylight Saving

NTP server : ☒

☐ (Manual IP Setting)

1. Current Time

Users can input the time manually.

2. Time Zone Select

Select your time zone location from the drop-down list.

3. Enable NTP client update

Check to enable NTP client update.

4. Automatically Adjust Daylight Saving

If you are in daylight saving time area, please enable this item.

5. NTP server

Please select the NTP server from the pull-down list, or you can enter the NTP server IP address manually.

6. Apply Changes & Reset & Refresh

Please click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. Or you may click on **Refresh** to update the system time on the screen.

7.3.5 UPnP Setting

UPnP (Univsersal Plug and Play) allows users to connect their UPnP-enabled Mini Router, printer server and other devices right to the network with zero-configuration, meaning easier setup for installing the device on the network. The automatic discovery feature enables the device to obtain an IP address, present and describe itself to other devices and PCs on the network without having to install drivers, but to configure and use those devices.

UPnP Setting

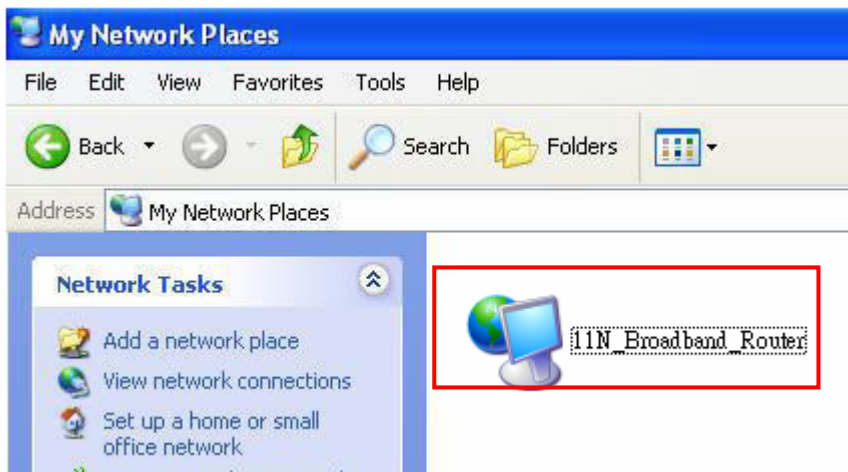
In this page, you can turn on or turn off the UPNP feature of your router.

Enable/Disable UPNP: ☒ Enabled ☐ Disabled

Apply Change

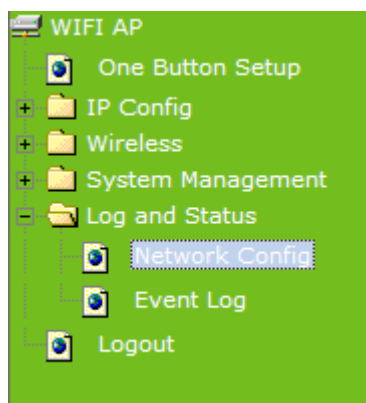
Reset

After enabling UPNP, click **My Network Places**, and user can open the web GUI by just clicking on the **Internet Gateway Device** icon.



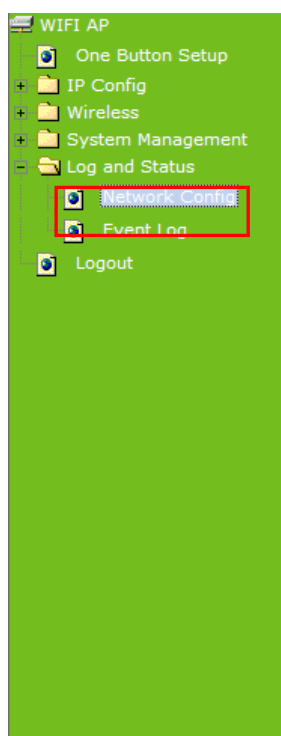
7.4 Log & Status

11N Mini Router provides the log list and connection status for user to check.



7.4.1 Network Config

Network Configuration shows the firmware version and the connection status of LAN, WAN and Wireless.



Network Config

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

System	
Uptime	0day:0h:4m:57s
Firmware Version	Ver0.0.2
WirelessConfiguration	
Mode	Infrastructure Client
Band	2.4 GHz (B+G+N)
SSID	11N_Mini_Router
Channel Number	11
Encryption	Disabled
MAC Address	00:e0:4c:81:96:c1
State	Connected
WirelessRepeater Interface Configuration	
Mode	AP
ESSID	ESSID_11N_Mini_Router
Encryption	Disabled
MAC Address	00:e0:4c:81:86:c1
Associated Clients	0
LAN Configuration	

7.4.2 Event Log

11N Mini Router provides system logs for review.

System Log

This page can be used to set remote log server and show the system log.

☐ **Enable Log**

☐ system all ☐ wireless ☐ DoS

☐ **Enable Remote Log** Log Server IP Address:

1. Enable Log

Select Enable Log to record the system log

2. system all, wireless & DoS

Select **Wireless**, **DoS** or **system all** to record

3. Enable Remote Log

You may choose to enable the remote event log or not.

4. Log Server IP Address

Please input the log server IP Address.

5. Apply Changes & Refresh & Clear

Click on **Apply Changes** to save the setting data. Click on **Refresh** to renew the system time, or on **Clear** to clear all the record.

- After clicking **Apply Changes** to record the event log, it will be shown as the example below.

☒ **Enable Log**

☒ **system all** ☐ **wireless** ☐ **DoS**

☐ **Enable Remote Log** Log Server IP Address:

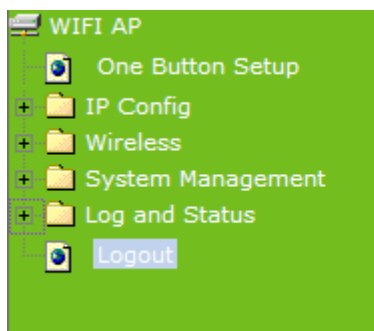
```

conntrack
Oday 00:00:17 PPTP netfilter connection tracking: registered
Oday 00:00:17 PPTP netfilter NAT helper: registered
Oday 00:00:17 ip_tables: (C) 2000-2002 Netfilter core team
Oday 00:00:17 NET4: Unix domain sockets 1.0/SMP for Linux NET4.0.
Oday 00:00:17 NET4: Ethernet Bridge 008 for NET4.0
Oday 00:00:17 VFS: Mounted root (squashfs filesystem) readonly.
Oday 00:00:17 Freeing unused kernel memory: 64k freed
Oday 00:00:17 mount /proc file system ok!
Oday 00:00:17 mount /var file system ok!
Oday 00:00:17 device eth0 entered promiscuous mode
Oday 00:00:17 device wlan0 entered promiscuous mode
Oday 00:00:17 TPT: unreasonable target TSSI 0
Oday 00:00:17 br0: port 2(wlan0) entering listening state
Oday 00:00:17 br0: port 1(eth0) entering listening state
Oday 00:00:17 br0: port 2(wlan0) entering listening state

```


7.5 Logout

Click **Logout** on the bottom menu to exit and go back to GUI login home page.



Logout

This page is used to logout.

Do you want to logout ?

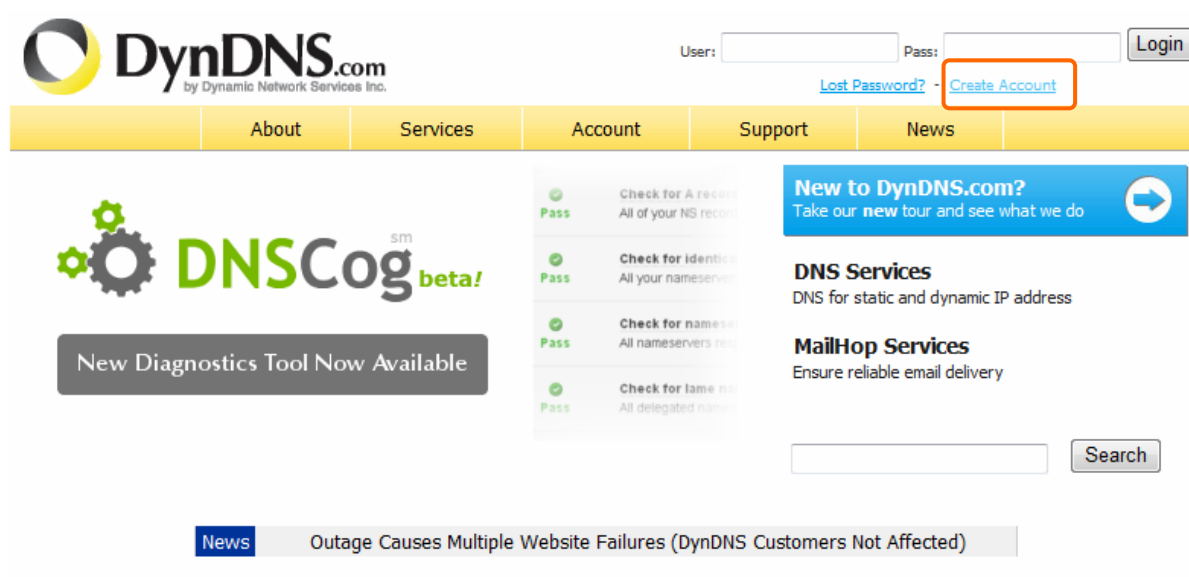
Chapter 8 DDNS Service Application

DDNS is a service changes the dynamic IP to the static IP. The settings of DDNS can solve the problem of being given the different IP by router every time. After setting the Router, your host name would correspond to your dynamic IP. Moreover, via the host name application, it could be easier for you to use FTP, Webcam and Printer remotely.

Dynamic DNS allows you to make an assumed name as a dynamic IP address to a static host name. Please configure the dynamic DNS below. Please select **Dynamic DNS** under the **IP Config** folder, and follow the instructions below to enter the **Dynamic DNS** page to configure the settings you want.

If you don't have a DDNS account, please follow the steps to complete your DDNS with Dynamic IP settings.

Step 1. First access the Internet and fill <http://www.dyndns.com/> into the address field of your web browser, then click **Create Account**.



Step 2. Fill in the form as required, and then click on **Create Account** button.

Create Your DynDNS Account

Please complete the form to create your free DynDNS Account.

User Information

Username:	<input type="text"/>	
E-mail Address:	<input type="text"/>	Instructions to activate your account will be sent to the e-mail address provided.
Confirm E-mail Address:	<input type="text"/>	
Password:	<input type="text"/>	Your password needs to be more than 5 characters and cannot be the same as your username. Do not choose a password that is a common word, or can otherwise be easily guessed.
Confirm Password:	<input type="text"/>	

About You (optional)

Providing this information will help us to better understand our customers, and tailor future offerings more accurately to your needs. Thanks for your help!

How did you hear about us:	<input type="text" value="---"/>	We do not sell your account information to anyone, including your e-mail address.
Details:	<input type="text"/>	

Terms of Service

Please read the acceptable use policy (AUP) and accept it prior to creating your account. Also acknowledge that you may only have one (1) free account, and that creation of multiple free accounts will result in the deletion of all of your accounts.

Policy Last Modified: February 6, 2006	
1. ACKNOWLEDGMENT AND ACCEPTANCE OF TERMS OF SERVICE	
All services provided by Dynamic Network Services, Inc. ("DynDNS") are provided to you (the "Member") under the Terms and Conditions set forth in this Acceptable Use Policy ("AUP") and any other operating rules and policies set forth by DynDNS. The AUP comprises the entire agreement between the Member and DynDNS and supersedes all prior agreements between the parties regarding the subject matter contained herein. BY COMPLETING THE REGISTRATION PROCESS AND CLICKING THE "Accept" BUTTON, YOU ARE INDICATING YOUR AGREEMENT TO BE BOUND BY ALL OF THE TERMS AND CONDITIONS OF THE AUP.	
2. DESCRIPTION OF SERVICE	
I agree to the AUP:	<input checked="" type="checkbox"/>
I will only create one (1) free account:	<input checked="" type="checkbox"/>

Mailing Lists (optional)

DynDNS maintains a number of mailing lists designed to keep our users informed about product announcements, client development, our company newsletter, and our system status. Please use the checkboxes below to alter your subscription preference. Your subscription preference may be changed at any time through the [account settings](#) page.

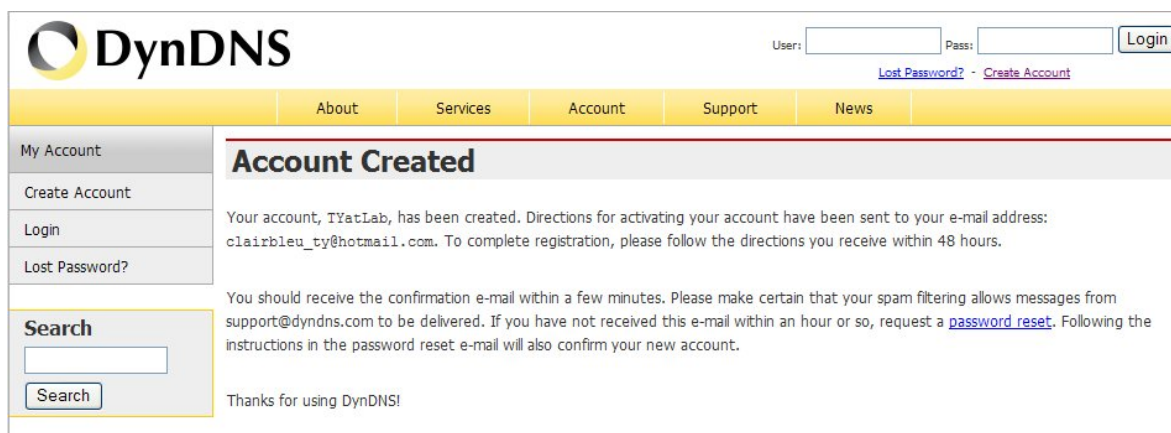
newsletters:	<input type="checkbox"/>
press-releases:	<input type="checkbox"/>
system-status:	<input type="checkbox"/>

Next Step

After you click "Create Account", we will create your account and send you an e-mail to the address you provided. Please follow the instructions in that e-mail to confirm your account. You will need to confirm your account within 48 hours or we will automatically delete your account. (This helps prevent unwanted robots on our systems)

Create Account

Step 3. When you got this account created message, close it, and check your mailbox. You would get a mail from DynDNS website.



Step 4. Click on the indicated address within your mail to confirm.

Your DynDNS Account 'TYatLab' has been created. You need to visit the confirmation address below within 48 hours to complete the account creation process:

https://www.dyndns.com/account/confirm/Z3OpStScjR_Ypn82CNMyZQ

Our basic service offerings are free, but they are supported by our paid services. See <http://www.dyndns.com/services/> for a full listing of all of our available services.

If you did not sign up for this account, this will be the only communication you will receive. All non-confirmed accounts are automatically deleted after 48 hours, and no addresses are kept on file. We apologize for any inconvenience this correspondence may have caused, and we assure you that it was only sent at the request of someone visiting our site requesting an account.

Sincerely,
The DynDNS Team




Step 5. Click on **login**.

Account Confirmed

The account TYatLab has been confirmed. You can now [login](#) and start using your account.

Be informed of new services, changes to services, and important system maintenance/status notifications by subscribing to our [mailing lists](#). Once there, you may subscribe to the Announce list by checking the appropriate box and clicking the "Save Settings" button.

Step 6. Click **My Services** after logging in.

Account Summary for TYatLab		
My Services  View, modify, purchase, and delete your services. My Zones Add Zone Services My Hosts Add Host Services Account Upgrades	Billing  Update your billing information, complete a purchase, and view invoices. View Shopping Cart Active Services Order History Billing Profile and Vouchers Renew Services	Account Settings  Update your e-mail address, set preferences, and delete your account. Change E-mail Address Change Password Change Username Contact Manager Mailing Lists

Step 7. Click **Add New Hostname**.

Account Level Services

Paid Account (?)	No	Technical Support
Account Upgrades (?)	No	View - Add
DNS Service Level Agreement (?)	None	Add DNS Service Level Agreement
Premier Support Option (?)	None Available	Add Premier Support Cases

Zone Level Services

[Add Zone Services](#)

No zone level service items registered: [Add Zone Services](#).

Hostnames

[Add New Hostname](#)

No Hostname services registered.

Step 8. Put in your favorite hostname and service type, and then click **Create Host** after finished.

Hostname: . webhop.net ▼
Wildcard: ☐ Yes, alias "*.hostname.domain" to same settings.
Service Type: ☒ Host with IP address
☐ WebHop Redirect
☐ Offline Hostname

IP Address:
[Use auto detected IP address](#)
 TTL value is 60 seconds. [Edit TTL](#).

Mail Routing: ☐ Yes, let me configure Email routing.

Create Host

Step 9. Your hostname has been created when you see the following page.

Host Services			
Add New Hostname - Host Update Logs			
Hostname amigo.webhop.net created.			
Hostname	Service	Details	Last Updated
amigo.webhop.net	Host	200.66.11.201.64	Nov. 19, 2007 4:08 AM

Chapter 9 Q & A

9.1 Installation

1. Q: Where is the XDSL Router installed on the network?

A: In a typical environment, the Router is installed between the XDSL line and the LAN. Plug the XDSL Router into the XDSL line on the wall and Ethernet port on the Hub (switch or computer).

2. Q: Why does the throughput seem slow?

A: To achieve maximum throughput, verify that your cable doesn't exceed 100 meter. If you have to do so, we advise you to purchase a bridge to place it in the middle of the route in order to keep the quality of transmitting signal. Out of this condition you would better test something else.

- Verify network traffic does not exceed 37% of bandwidth.
- Check to see that the network does not exceed 10 broadcast messages per second.
- Verify network topology and configuration.

9.2 LED

1. Why doesn't 11N Mini Router power up?

A: Check if the output voltage is suitable, or check if the power supply is out of order.

2. The Internet browser still cannot find or connect to 11N Mini Router after verifying the IP address and LAN cable, the changes cannot be made, or password is lost.

A: In case 11N Mini Router is inaccessible; you can try to restore its factory default settings. Please press the "Reset" button and keep it pressed for over 7 seconds and the light of STATUS will vanish. The LEDs will flash again when reset is successful.

3. Why does 11N Mini Router shut down unexpectedly?

A: Re-plug your power adapter. Then, check the STATUS indicator; if it is off, the internal flash memory is damaged. For more help, please contact with your provider.

9.3 IP Address

1. Q: What is the default IP address of the router for LAN port?

A: The default IP address is 192.168.1.1 with subnet mask 255.255.255.0

2. Q: I don't know my WAN IP.

A: There are two ways to know.

Way 1: Check with your Internet Service Provider.

Way 2: Check the setting screen of 11N Mini Router. Click on **Status & Log** item to select **Network Configuration** on the Main Menu. WAN IP is shown on the WAN interface.

3. How can I check whether I have static WAN IP Address?

A: Consult your ISP to confirm the information, or check Network Configuration in 11N Mini Router's Main Menu.

4. Will the Router allow me to use my own public IPs and Domain, or do I have to use the IPs provided by the Router?

A: Yes, the Router mode allows for customization of your public IPs and Domain.

9.4 OS Setting

1. Why can't my computer work online after connecting to 11N Mini Router?

A: It's possible that your Internet protocol (TCP/IP) was set to use the following IP address. Please do as the following steps. (Windows 2000 & XP) **Start > Settings > Network and Dial-up Connections >** double click on **Internet Protocol(TCP/IP) >** select **obtain IP address automatically >** Click on **OK** button. Then, open Internet browser for testing. If you still can't go online, please test something else below.

- Verify network configuration by ensuring that there are no duplicate IP addresses.
- Power down the device in question and ping the assigned IP address of the device. Ensure no other device responds to that address.
- Check that the cables and connectors or use another LAN cable.

2. Q: Why can't I connect to the router's configuration utility?

A: Possible Solution 1: Make sure that your Ethernet connect properly and securely. Make sure that you've plugged in the power cord.

Possible Solution 2: Make sure that your PC is using an IP address within the range of 192.168.1.2 to 192.168.1.254. Make sure that the address of the subnet mask is 255.255.255.0. If necessary, the Default Gateway data should be at 192.168.1.1. To verify these settings, perform the following steps:

Windows 95, 98, or My Users:

1. Click on Windows **Start** > click on **Run** > input **winipcfg** > click on **OK** button.
2. Check the IP Address, Subnet Mask, Default Gateway data. Is this data correct? If the data isn't correct, click on **Release All**. Then click on **Renew All**.

Windows NT, 2000, or XP Users:

1. Click on Windows **Start** > click on **Run** > input **cmd** > click on **OK** button.
2. At the DOS prompt, type ipconfig/all.
3. Check the IP Address, Subnet Mask, Default Gateway data. Is this data correct? If the data isn't correct. Please input **ipconfig/release** > press **Enter** > input **ipconfig/renew** > press **Enter**.

Possible Solution 3: Verify the connection setting of your Web browser and verify that the HTTP Proxy feature of your Web browser is disabled. Make these verifications so that your Web browser can read configuration pages inside your router. Launch your Web browser. **Internet Explorer Users:**

1. Click on **Tools** > **Internet Options** > **Connections tab**.
2. Select **never dial a connection**, click on **Apply** button, and then click on **OK** button.
3. Click on **Tools** and then click on **Internet Options**.
4. Click on **Connections** and then click on **LAN Settings**.
5. Make sure none of the check boxes are selected and click on **OK** button.
6. Click on OK button.

Netscape Navigator Users:

1. Click on **Edit** > **Preferences** > double-click **Advanced** in the Category window.
2. Click on **Proxies** > select **Direct connection to the Internet** > click on **OK** button.
3. Click on **Edit again** and then click on **Preferences**.
4. Under category, double-click on **Advanced** and then click on **Proxies**.
5. Select **Direct connection to the Internet** and click on **OK** button.

6. Click on **OK** button.

3. **Q: Web page hangs, corrupt downloads, or nothing but junk characters is being displayed on the screen. What do I need to do?**

A: Force your NIC to 10Mbps or half duplex mode, and turn off the "Auto-negotiate" feature of your NIC as a temporary measure. (Please look at the Network Control Panel, in your Ethernet Adapter's Advanced Properties tab.)

4. **Q: Why can't I connect to the Web Configuration?**

A: you can remove the proxy server settings in your web browser.

9.5 11N Mini Router Setup

1. **Q: Why does 11N Mini Router's setup page shut down unexpectedly?**

A: If one of the pages appears incompletely in 11N Mini Router's setup pages, please click on Logout item on the Main Menu before shutting it down. Don't keep it working. Then, close Internet browser and open it again for going back to the previous page.

2. **Q: Why can't my USB devices and LAN ports work properly after setting the DHCP?**

A: There are two rules over here.

Rule1: After connecting USB devices, please reboot your Router.

Rule2: Before finishing the DHCP setup, please don't connect any computer to LAN ports, because the conflict of having the same IP may occur and cause some computers a lot of trouble.

※Notice: Make sure that you always click on the Apply button after configuring each setting. And in order to let other LAN ports work properly, please reboot your PC.

3. **Q: I don't know how to configure DHCP.**

A: DHCP is commonly used in the large local network. It allows you to manage and distribute IP addresses from 2 to 254 throughout your local network via 11N Mini Router. Without DHCP, you would have to configure each computer separately. It's very troublesome. Please Open **Internet browser** > Input **192.168.1.1 in the website blank field** > Select **DHCP Server** under the **IP Config Menu**. For more information, please refer to 3.3.2 (Router Mode) or 4.3.1 (AP Mode).

4. Q: How do I upgrade the firmware of 11N Mini Router?

A: Periodically, a new Flash Code is available for 11N Mini Router on your product supplier's website. Ideally, you should update 11N Mini Router's Flash Code using **Firmware Upgrade** on the **System Management** menu of 11N Mini Router Settings.

5. Q: My 11n Mobile Server Router cannot connect to the ISP?

A: There are three possible solutions.

1. Check the Cable/XDSL modem is power on.
2. Check the Cable/XDSL link light is on to verify a good physical connection.
3. Check the WAN port LED to verify if the Cable/XDSL modem is connected to the router:

If your ISP Login method is following, please make sure the username and password are correct or not.

If your ISP is using dynamic IP addressing (DHCP) then the DHCP protocol does not have the authentication feature. Some Cable service providers often use the following to determine user's identification.

6. Q: Why is that I can ping to outside hosts, but cannot access Internet websites?

A: Check the DNS server settings on your PC. You should get the DNS servers settings from your ISP. If your PC is running a DHCP client, remove any DNS IP address setting. As the router assign the DNS settings to the DHCP-client-enabled PC.

7. Q: 11N Mini Router couldn't save the setting after click on Apply button?

A: 11N Mini Router will start to run after the setting finished applying, but the setting isn't written into memory. Here we suggest if you want to make sure the setting would be written into memory, please reboot the device via **Reboot** under **System Management** directory.

9.6 Wireless LAN

1. Q: Why couldn't my wireless notebook work on-line after checking?

A: Generally, Wireless networks can sometimes be very complicated to set up, particularly if you're dealing with encryption and products from different vendors. Any number of variables can keep your workstations from talking to each other. Let's go over some of more common ones.

For starters, verify that your router and your workstation are using the same SSID descriptions. SSID acts as a password when a mobile device tries to connect to the wireless network. The SSID also differentiates one WLAN from another, so all access points and all devices attempting to connect to a specific WLAN must use the same SSID. A workstation will not be permitted to connect to the network unless it can provide this unique identifier. This is similar to the function of your network's Workgroup or Domain name.

When you're experiencing conductivity problems, it is always best to keep things simple. So next you are going to do is that, please disable any WEP encryption you might have configured.

Successful implementation of encryption also includes the use of a shared key. A HEX key is the most common, but other formats are also used. This key identifies the workstation to the router as a trusted member of this network. Different manufacturers can implement this key technology in ways that might prevent them from working correctly with another vendor's products. So pay attention to detail is going to be the key to a successful installation.

Next make sure the router and the NIC are configured to use the same communications channel. There are normally 11 of them, and the default channel can also vary from vendor to vendor. You might also want to confirm that the router has DHCP services enabled and an address pool configured. If not, the NIC won't be able to pick up an IP address. I have run across a few access points that offer DHCP services but do not assign all of the needed IP information to the NIC. As a result, I was able to connect to the network, but could not browse the web. The point is, don't assume anything. Verify for yourself that all of the required settings are being received by the workstation.

Finally, you might want to keep the system you're trying to configure in the same room as the router, at least during the initial configuration, in order to minimize potential interference from concrete walls or steel beams.

2. Q: My PC can't locate the Wireless Access Point.

A: Check the following:

- Your PC is set to Infrastructure Mode. (Access Points are always in Infrastructure Mode.)
- The SSID on your PC and the Wireless Access Point are the same. Remember that the SSID is case-sensitive. So, for example "Workgroup" does NOT match "workgroup".
- Both your PC and the Wireless Access Point must have the same setting for WEP. The default setting for the Wireless Router is disabled, so your wireless station should also have WEP disabled.
- If WEP is enabled on the Wireless Router, your PC must have WEP enabled, and the key must match.
- If the Wireless Router's Wireless screen is set to Allow LAN access to selected Wireless Stations only, then each of your Wireless stations must have been selected, or access will be blocked.
- To see if radio interference is causing a problem, see if connection is possible when close to the Wireless Access Point. Remember that the connection range can be as little as 100 feet in poor environments.

3. Q: Wireless connection speed is very slow.

A: The wireless system will connect at highest possible speed, depending on the distance and the environment. To obtain the highest possible connection speed, you can experiment with following:

- Access Point location: Try adjusting the location and orientation of the Access Point.
- Wireless Channel: If interference is the problem, changing to another channel may show a marked improvement.
- Radio Interference: Other devices may be causing interference. You can experiment by switching other devices off, and see if this helps. Any "noisy" devices should be shielded or relocated.
- RF Shielding: Your environment may tend to block transmission between the wireless stations. This will mean high access speed is only possible when close to the Access Point.

4. Q: Some applications do not run properly when using the Wireless Router.

A: The Wireless Router processes the data passing through it, so it is not transparent. Use the Special Application feature to allow the use of Internet applications which do not function correctly. If this does solve the problem, you can use the DMZ function. This should work with almost every application, but:

- It is a security risk, since the firewall is disabled.
- Only one (1) PC can use this feature.

5. Q: I can't connect to the Wireless Router to configure it.

A: Check the following:

- The Wireless Router is properly installed, LAN connections are OK, and it is powered ON.
- Make sure that your PC and the Wireless Router are on the same network segment.
- If your PC is set to "Obtain an IP Address automatically" (DHCP client), restart it.
- If your PC uses a Fixed (Static) IP address, make sure that it is using an IP Address within the range 192.168.1.129 to 192.168.1.253 and thus compatible with the Wireless Router's default IP Address of 192.168.1.254. Also, the Network Mask should be set to 255.255.255.0 to match the Wireless Router. In Windows, you can check these settings by using Control Panel ~ Network to check the Properties for the TCP/IP protocol.

6. Q: The WinXP wireless interface couldn't communicate the WEP with 11N Mini Router's wireless interface.

A: The default WEP of WinXP is **Authentication Open System - WEP**, but the WEP of 11N Mini Router is only for **Shared Key - WEP**, it caused both sides couldn't communicate. Please select the WEP of WinXP from Authentication Open System to **Pre-shared Key - WEP**, and then the WEP wireless interface between WinXP and 11N Mini Router would be communicated.

9.7 Support

1. Q: Why can't the NTFS hard disk be used with 11N Mini Router?

A: 11N Mini Router doesn't support the NTFS hard disk. It only supports EXT3 and FAT32 file systems.

2. Q: Why can't my USB devices work on 11N Mini Router?

A: Maybe your USB devices and 11N Mini Router are not compatible. So if you want to know whether your inserted device such as USB Web Camera, USB Printer or USB HDD corresponds with 11N Mini Router, please check with your product supplier.

3. Q: What is the maximum number of IP addresses that the XDSL Router will support?

A: The Router will support to 253 IP addresses with NAT mode.

5. Q: Is the Router cross-platform compatible?

A: Any platform that supports Ethernet and TCP/IP is compatible with the Router.

9.8 Others

1. Q: Why can't I receive corrupted FTP downloads?

A: If you are experiencing corrupted files when you download a file with your FTP client, try using another FTP program.

2. Q: Why does the router dial out for PPPoE mode very often?

A: Normally some of game, music or anti-virus program will send out packets that trigger the router to dial out, you can close these programs. Or you can set the idle time to 0, then control to dial out manually.

3. Q: What can I do if there is already a DHCP server in LAN?

A: If there are two DHCP servers existing on the same network, it may cause conflict and generate trouble. In this situation, we suggest to disable DHCP server in router and configure your PC manually.

9.9 USB Device

1. Q: How many USB devices can be connected to the Product?

A: 11N Mini Router supports only 1 USB ports.

Chapter 10 Appendices

10.1 Operating Systems

1. Microsoft : Windows 2000, XP, Vista 32bit and the following related versions.
2. Apple : Mac OS X 10.4.7, Leopard and the following related versions.
3. Linux : Redhat 9, Fedora 6 & 7, Ubuntu 7.04 and the following related versions.

10.2 Browsers

1. Internet Explorer ver. 6 and 7 and the following related versions.
2. FireFox ver. 2.0.0.11 and the following related versions.3.
3. Safari ver. 3.04 and the following related versions.

10.3 Communications Regulation Information

Should any consumers need to learn more information, services and supports, please contact the supplier of your product directly.

FCC statement in User's Manual (for class B)

"Federal Communications Commission (FCC) Statement

This Equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:

1. The device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:
 - (1) This device may not cause harmful interference, and
 - (2) this device must accept any interference received, including interference that may cause undesired operation.
2. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.
3. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

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