# N300 Wireless LAN 11n Ceiling-Mount Access Point

# **User's Manual**

Version: 1.0

(October, 2014)

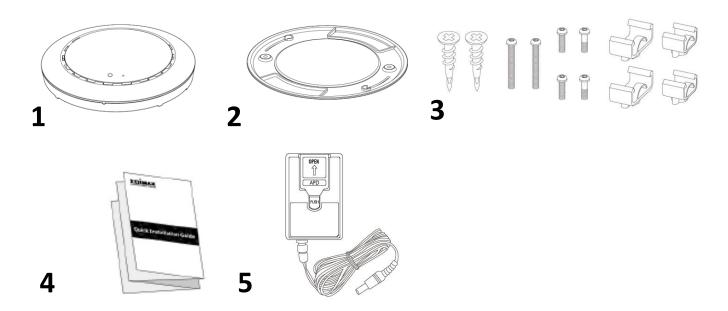
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# I. Product Information

# I-1. Package Contents



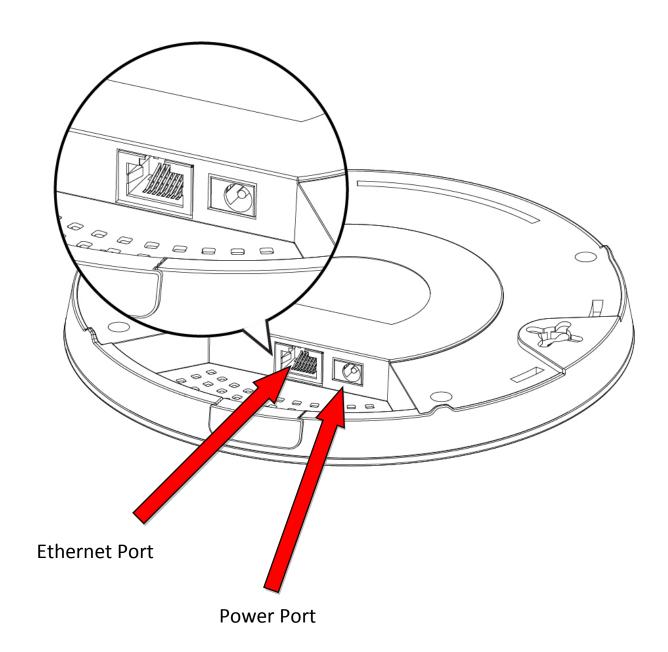
- **1.** Access Point
- 2. Ceiling Mount Bracket
- **3.** T-Rail Mounting Kit & Screws
- 4. Quick Installation Guide
- **5.** Power Adapter (see I-6.

**Multi-Region Power Adapter**)

## I-2. System Requirements

- Existing cable/DSL modem & router
- Computer with web browser for access point configuration

## I-3. Hardware Overview



# I-4. LED Status

Blue	Amber	Status
Off	Off	AP is off
On	On	Booting up, Going to Reboot
On	Off	AP is up and every function working properly
Long Flashing	OFF	Firmware upgrading
Short Flashing	Off	Ready to reset to factory default
Off	Flashing	Error

## I-5. Reset

If you experience problems with your access point, you can reset the device back to its factory settings. This resets all settings back to default.

**1.** Press and hold the reset button on the access point for at least 10 seconds then release the button.

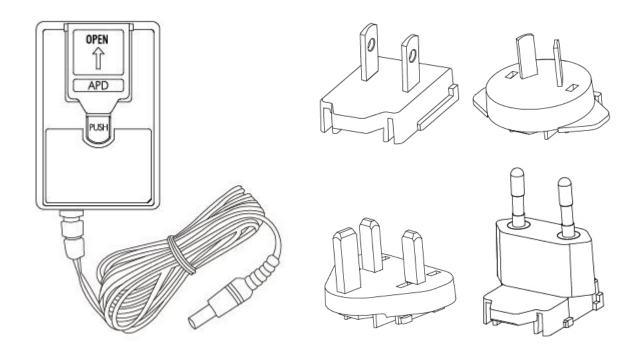


You may need to use a pencil or similar sharp object to push the teset button.

2. Wait for the access point to restart. The access point is ready for setup when the LED is blue.

# I-6. Multi-Region Power Adapter

The included power adapter has four changeable heads for different AC sockets according to your region.



## I-7. Safety Information

In order to ensure the safe operation of the device and its users, please read and act in accordance with the following safety instructions.

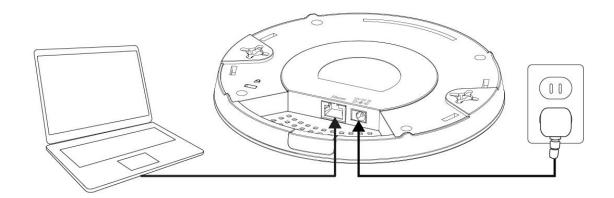
- 1. The access point is designed for indoor use only; do not place the access point outdoors.
- 2. Do not place the access point in or near hot/humid places, such as a kitchen or bathroom.
- 3. Do not pull any connected cable with force; carefully disconnect it from the access point.
- 4. Handle the access point with care. Accidental damage will void the warranty of the access point.
- 5. The device contains small parts which are a danger to small children under 3 years old. Please keep the access point out of reach of children.
- 6. Do not place the access point on paper, cloth, or other flammable materials. The access point may become hot during use.
- 7. There are no user-serviceable parts inside the access point. If you experience problems with the access point, please contact your dealer of purchase and ask for help.
- 8. The access point is an electrical device and as such, if it becomes wet for any reason, do not attempt to touch it without switching the power supply off. Contact an experienced electrical technician for further help.
- 9. If you smell burning or see smoke coming from the access point or power adapter, then disconnect the access point and power adapter immediately, as far as it is safely possible to do so. Call your dealer of purchase for help.

# I. Quick Setup

Please follow the instructions in the chapters below to setup your access point and then configure its basic settings.

#### II-1. Initial Setup

- **1.** Connect the access point to a computer via Ethernet cable.
- **2.** Connect the power adapter to the access point's 12V DC port and plug the power adapter into a power supply.



- **3.** Please wait a moment for the access point to start up. The access point is ready when the LED is **blue**.
- **4.** Set your computer's IP address to **192.168.2.x** where **x** is a number in the range **3 100**. If you are unsure how to do this, please refer to **IV-1**. **Configuring your IP address** for more information.



Please ensure there are no other active network connections on your computer (disconnect Wi-Fi connections and Ethernet cables).

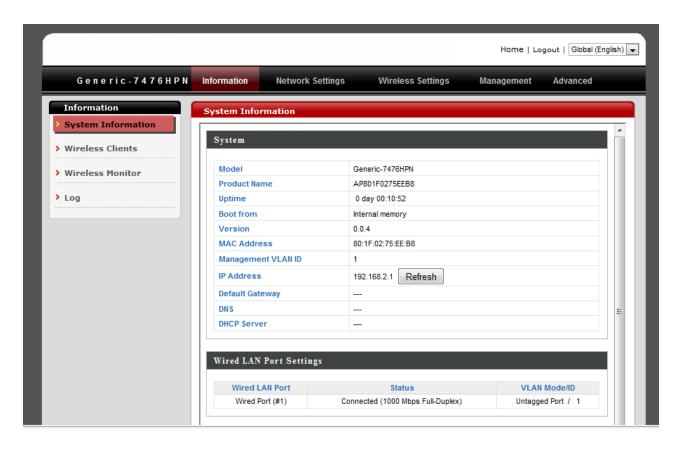
**5.** Enter the access point's default IP address **192.168.2.1** into the URL bar of a web browser.



**6.** You will be prompted for a username and password. Enter the default username "admin" and the default password "admin".



**7.** You will arrive the "System Information" screen shown below.



**8.** Next, please follow the instructions below in II-1. Basic Settings to configure the access point's basic settings.



For more advanced configurations, please refer to IV. Browser Based Configuration Interface.

#### II-2. **Basic Settings**

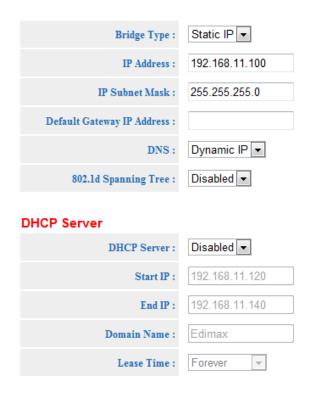
The instructions below will help you to configure the following basic settings of the access point:



It is recommended you configure these settings before using the 📤 access point.

- LAN IP Address
- 2.4GHz SSID & Security
- Login Password
- Time & Date
- To change the access point's LAN IP address, go to "Network Settings" > "LAN-side IP Address" and you will see the screen below.

You can enable the Broadband routers DHCP server to dynamically allocate IP Addresses to your LAN client PCs. The broadband router must have an IP Address for the Local Area Network.



2. Enter the IP address settings you wish to use for your access point. Click "Apply" to save the changes the wait a few moments for the access point to reload.



When you change your access point's IP address, you need to use the new IP address to access the browser based configuration interface instead of the default IP 192.168.2.1.

**3.** To change the SSID and password of your access point's wireless network(s), go to "Wireless Setting" > "2.4GHz" > "Basic". Enter the new SSID for your 2.4GHz wireless network in the "SSID1" field and click "Apply".

> This page allows you to define SSID, and Channel for the wireless connection. These parameters are used for the wireless stations to connect to the Access Point.

Mode:	AP Router 🔻
Power Saving Mode :	Enable Disable
Band:	2.4 GHz (802.11b/g/n) 🔻
Enable SSID#	1 🔻
SSID1	Edimax-168802_G
Channel:	•

4. Go to "Wireless Setting" > "2.4GHz" > "Security". Enter a new password for your 2.4GHz wireless network in the "SSID1" field and click "Apply".

> 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.

SSID Selection :	Edimax-168802_G ▼
Broadcast ESSID :	Enable •
WMM:	Enable •
Encryption :	WPA Pre-shared Key ▼
WPA Type :	○ WPA(TKIP) ○ WPA2(AES) ○ WPA2 Mixed
Pre-shared Key Type :	Passphrase
Pre-shared Key :	abcd1234

**5.** To change the login password for the browser based configuration interface, go to "Toolbox" > "Admin".

You can change the password which is required to log on to the router. By default, the password is admin. Passwords can contain 0 to 30 alphanumeric characters, and are case sensitive.

Current Password :	
New Password :	
Confirm Password:	

- **6.** Complete the "Current Password", "New Password" and "Confirm Password" fields and click "Apply".
- To set the correct time for your access point, go to "Toolbox" > "Time Setting".

Set the time zone of the Broadband router. This information is used for log entries and firewall settings.

Set Time Zone :	(GMT+01:00)Amsterdam, Berlin, Bern, Rol ▼
Time Server Address :	

- **8.** Select the correct time zone for your access point from the drop down list. The access point also supports NTP (Network Time Protocol) so alternatively you can enter the host name or IP address of a time server. Click "Apply" when you are finished.
- **9.** The basic settings of your access point are now configured. Please refer to **III. Hardware Installation** for guidance on connecting your access point to a router or PoE switch and/or fixing your access point to a ceiling. Or refer to **IV. Browser Based Configuration Interface** for help with advanced configurations.

#### II-3. Wi-Fi Protected Setup (WPS)

Wi-Fi Protected Setup is a simple way to establish connections between WPS compatible devices.

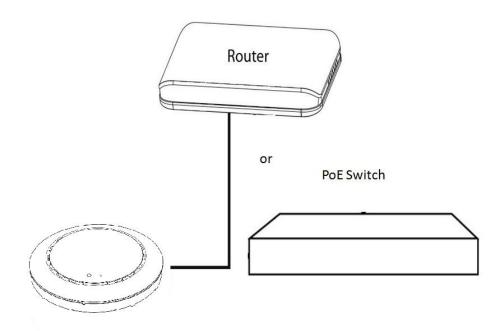
After you have set up the access point as explained in II. Installation you can use the WPS button to establish a connection between the access point and a WPS-compatible wireless device/client.

- 1. Press and hold the WPS/Reset button on the front of the access point for 2 seconds.
- **2.** Within two minutes, activate WPS on your WPS-compatible wireless device. Please check the documentation for your wireless device for information regarding its WPS function.
- **3.** The devices will establish a connection.

# II. Hardware Installation

## III-1. Connecting the access point to a router or PoE switch

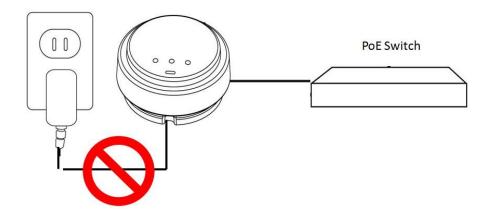
**1.** Connect the access point to a router or PoE switch via Ethernet cable.



- **2.** If you are using a router, then connect the power adapter to the access point's 12V DC port and plug the power adapter into a power supply.
- **3.** If you are using a PoE (Power over Ethernet) switch then it is not necessary to use the included power adapter, the access point will be powered by the PoE switch.



Do not use the power adapter if you are using a PoE switch.



### III-2. Mounting the access point to a ceiling

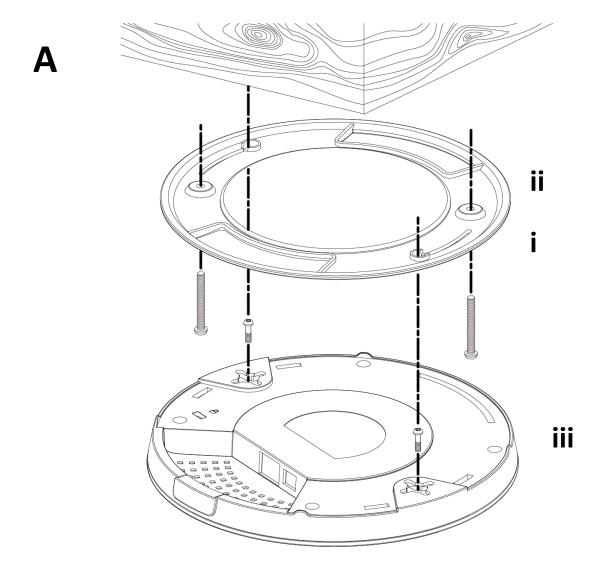
To mount the access point to a ceiling, please follow the instructions below and refer to diagram **A** & **B**.

#### For Wooden Ceilings (refer to diagram A):

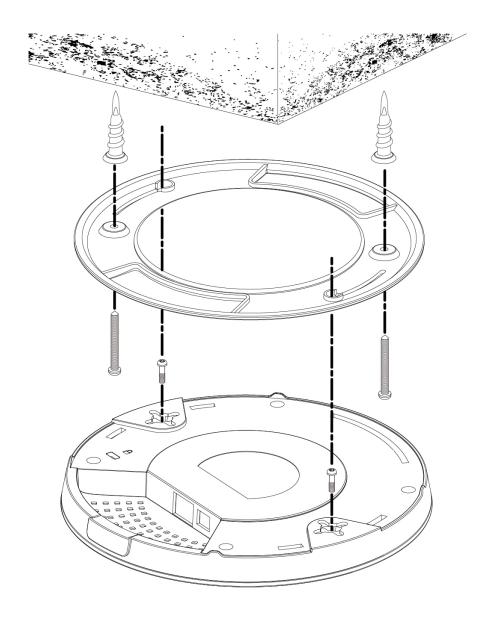
- **1.** Place the ceiling mount bracket to a ceiling in your desired location and insert screw **iii** through hole **i** (x 2)and tighten to fix the bracket in place.
- **2.** When the ceiling bracket is in place, inset screw iv into hole v (x 2) on the access point.
- **3.** Fix the access point to the ceiling bracket by inserting the attached screws **iv** into hole **vi** and twisting the access point.
- **4.** Lock the access point firmly into place when by twisting it to align screws **iv** with the grooves in the ceiling mount.

## For Other Ceilings (refer to diagram B):

- **1.** Place the ceiling mount bracket to a ceiling in your desired location and Insert screw **ii** through hole **i** (x 2) and tighten to fix the bracket in place, as shown in **A**.
- **2.** Insert screw **iii** through hole **i** and into the rear of screw ii and tighten to provide additional strength.
- **3.** When the ceiling bracket is in place, insert screw **iv** into hole  $\mathbf{v}$  (x 2) on the access point.
- **5.** Fix the access point to the ceiling bracket by inserting the attached screws **iv** into hole **vi** and twisting the access point.
- **6.** Lock the access point firmly into place by twisting it to align screws **iv** with the grooves in the ceiling mount.



B



#### III-3. T-Rail Mount

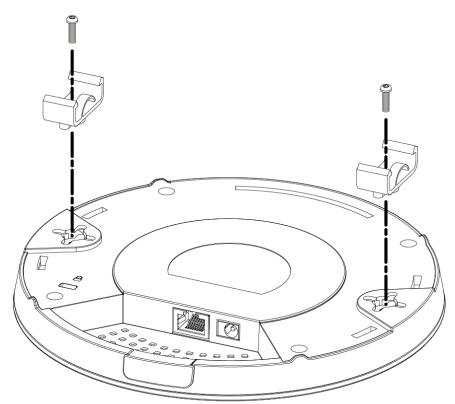
To mount the access point to a T-Rail, please follow the instructions below and refer to diagram **C**, **D** & **E**.

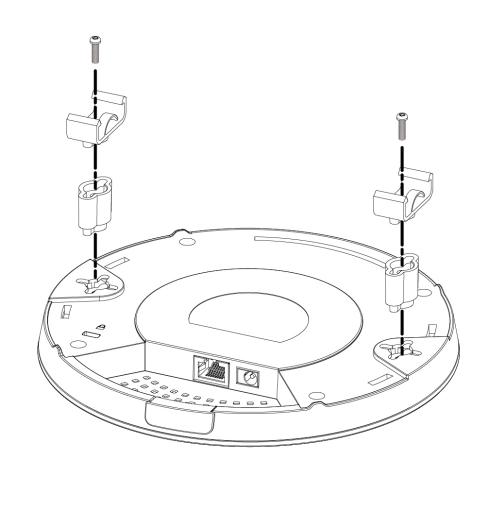
- **1.** Select the correct size T-Rail bracket from the two sizes which are included in the package contents.
- 2. Attach the T-Rail bracket i to hole ii using screw iii (x 2) as shown in C.

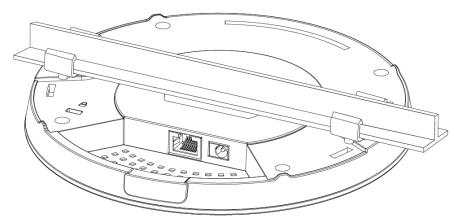


If you need more space between the access point and the T-Rail, then additionally use bracket iv between bracket i and hole ii (x 2), and use the longer screws (x 2) included in the package contents.

**3.** Clip the access point onto your T-Rail using the now attached T-Rail bracket.







#### IV. **Browser Based Configuration Interface**

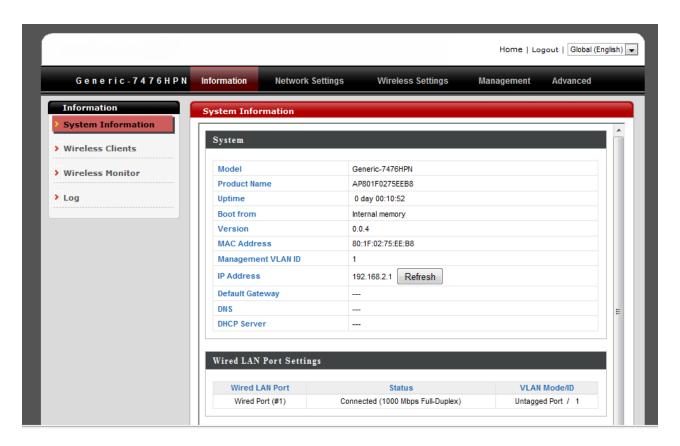
You can use the browser-based configuration interface to configure advanced settings.

- 1. Connect a computer to your access point using an Ethernet cable.
- 2. Enter your access point's IP address in the URL bar of a web browser. The access point's default IP address is 192.169.2.2.
- 3. You will be prompted for a username and password. The default username is "admin" and the default password is "admin", though it was recommended that you change the password during setup (see II-2. Basic Settings).

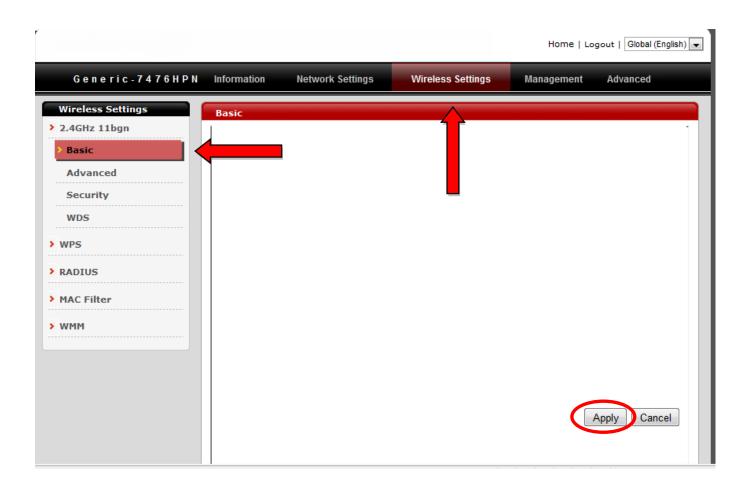


If you cannot remember your password, reset the access point back to its factory default settings. Refer to I-5. Reset

**4.** You will arrive at the "System Setup" screen shown below.



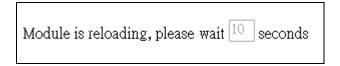
**5.** Use the menu across the top and down the left side to navigate.



6. Click "Apply" to save changes and reload the access point, or "Cancel" to cancel changes.



Please wait a few seconds for the access point to reload after you 📤 "Apply" changes, as shown below.



7. Please refer to the following chapters for full descriptions of the browser based configuration interface features.

#### IV-1. System Setup

System Setup Wireless Setting Toolbox



Screenshots displayed are examples. The information shown on your screen will vary depending on your configuration.

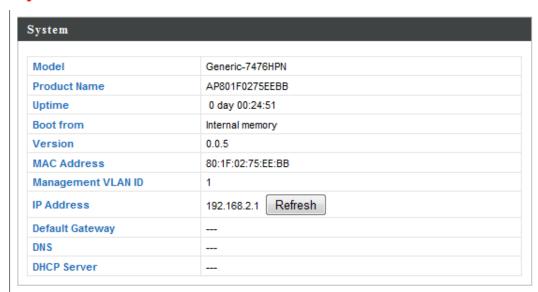
#### IV-1-1. Status

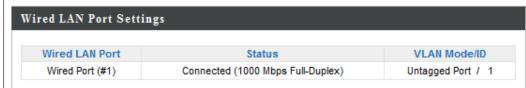


The "Status" page displays basic system information about the access point.

You can use the Status page to monitor the system uptime and firmware and hardware version numbers.

#### System





Model	Displays the model number of the access point.
Uptime	Displays the total time since the device was turned on.
Firmware Version	Displays the firmware version.
<b>Hardware Version</b>	Displays the hardware version.
Serial Number	Displays the operating mode.
<b>Boot Code Version</b>	Displays the access point's ESSID, also known
	as SSID. The ESSID/SSID is the name used to
	identify a wireless network.
Runtime Code	Displays the current wireless channel number.
Version	
LAN IP Address	Displays the IP address of this device.
LAN Subnet Mask	Displays the subnet mask of the IP address.
LAN Default	Displays the IP address of the default
Gateway	gateway.
LAN MAC address	Displays the device's MAC address. The MAC
	address is a unique, fixed ID for this device, it
	cannot be modified.
DNS #1	IP address of DNS (Domain Name Server) #1.
DNS #2	IP address of DNS (Domain Name Server) #2.

#### IV-1-2. LAN Settings

# The "LAN Settings" page allows you to configure your Local Area Network (LAN). You can enable the access point to dynamically allocate IP addresses to your LAN clients, and you can modify the IP address of the access point.

You can enable the Broadband routers DHCP server to dynamically allocate IP Addresses to your LAN client PCs. The broadband router must have an IP Address for the Local Area Network.

Bridge Type:	Static IP ▼
IP Address:	192.168.11.100
IP Subnet Mask:	255.255.255.0
Default Gateway IP Address :	
DNS:	Dynamic IP ▼
802.1d Spanning Tree :	Disabled 🔻
DHCP Server	
DHCP Server :	Disabled •
	Disabled • 192.168.11.120
DHCP Server :	
DHCP Server : Start IP :	192.168.11.120

<b>Bridge Type</b>	
IP Address	Specify the IP address here. This IP address will be assigned to your access point and will
	replace the default IP address.
IP Subnet Mask	Specify a subnet mask. The default value is 255.255.255.0
Default Gateway IP Address	Enter the default gateway assigned by your ISP here. Some ISPs may call this "Default Route".
DNS	
802.1d Spanning	Select "Enable" or "Disable" to enable/disable
Tree	802.1d Spanning Tree. This creates a tree of connected layer-2 bridges (typically Ethernet

switches) within a mesh network, and disables those links that are not part tree, leaving a single active path between	
	two network nodes.
<b>DHCP Server</b>	Enable or disable the DHCP server.
Start IP	Enter the start IP address for the DHCP
	server's IP address leases.
End IP	Enter the end IP address for the DHCP
	server's IP address leases.
<b>Domain Name</b>	Enter a domain name for your network.
Lease Time	Select a lease time for the DHCP leases here.
	The DHCP client will obtain a new IP address
	after the period expires. If there are less than
	30 computers connected to the router, you
	can select "Forever".

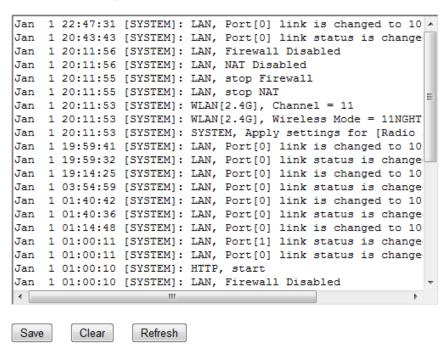
#### IV-1-3. System Log

## System Log

The system log displays system operation information such as up time and connection

processes.

View the system operation information. You can see the system start up time, connection process...etc. here.



Save	Click "Save" and you will be prompted (example shown below) to save the log on your computer as .txt file.
Clear	Click "Clear" to clear/erase the existing log.
Refresh	Click "Refresh" to refresh the log and update any activity.



# IV-2. Wireless Setting

System Setup Wireless Setting Toolbox



Screenshots displayed are examples. The information shown on your screen will vary depending on your configuration.

#### IV-2-1. Status

The "Status" page displays a summary of key information about your access point's 2.4GHz wireless networks.

View the current setting status of this device.

#### 2.4GHz

Mode: AP Channel: 1

SSID\_1

ESSID: Edimax-168802\_G

Security: WPA2(AES)

BSSID: 02:88:88:16:88:02

Mode	
Channel	Displays the wireless channel number used
	for the specified frequency (2.4GHz).
SSID1	Displays which SSID number the following
	"ESSID", "Security" and "BSSID" fields refer to.

ESSID	Displays the ESSID (also referred to as SSID) for the access point's specified wireless network. The ESSID/SSID is the name used to identify a wireless network
Security	Displays the wireless security/encryption type for the specified wireless network.
BSSID	Displays the device's BSSID. The BSSID

identifies this access point in the network,
and is the same as the device's MAC address.

#### IV-2-2. 2.4GHz



The "2.4GHz" menu allows you to access basic, advanced and security settings for your access point's 2.4GHz wireless networks. You can also enable or disable the access point's 2.4GHz wireless networks.

You can trun On/Off wireless radio in this page, default is disabled.

Enable or Disable Wireless: 

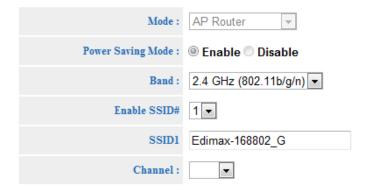
Enable Disable

Enable/Disable	Enable or disable the access point's 2.4GHz
	wireless network.

#### IV-2-2-1. Basic

The "Basic" screen displays settings for your access point's 2.4GHz Wi-Fi network (s).

This page allows you to define SSID, and Channel for the wireless connection. These parameters are used for the wireless stations to connect to the Access Point.



Mode	
<b>Power Saving Mode</b>	Enable or disable power saving mode on the
	access point.
Band	Select the wireless standard used for the
	access point. Combinations of 802.11b,
	802.11g & 802.11n can be selected.
Enable SSID#	Select how many SSIDs to enable for the
	2.4GHz frequency from the drop down menu.
	A maximum of four can be enabled.
SSID1,2,3,4	Enter the SSID name for the specified SSID (1,
	2, 3 or 4 depending on how many you have
	enabled). The SSID can consist of any
	combination of up to 32 alphanumeric
	characters.
Channel	Select a wireless radio channel or use the
	default "Auto" setting from the drop-down
	menu.

#### IV-2-2-2. Advanced

These settings are for experienced users only. Please do not change any of the values on this page unless you are already familiar with these functions.



Changing these settings can adversely affect the performance of your access point.

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 Broadband router.

Fragment Threshold :	2346 (256-2346)
RTS Threshold:	2347 (1-2347)
Beacon Interval :	100 (20-1000 ms)
DTIM Period :	1 (1-255)
Data Rate :	Auto 💌
N Data Rate :	Auto ▼
Channel Bandwidth :	
Preamble Type:	■ Long
CTS Protection :	Enable
Tx Power:	100 % 🔻

Fragment	Set the fragment threshold of the wireless
Threshold	radio. The default value is 2346.
RTS Threshold	Set the RTS threshold of the wireless radio. The
	default value is 2347.
Beacon Interval	Set the beacon interval of the wireless radio.
	The default value is 100.
DTIM Period	Set the DTIM (delivery traffic indication
	message) period value of the wireless radio.
	The default value is 1.
Data Rate	Set the wireless data rate. The default is set to
	auto.
N Data Rate	Set the 802.11n wireless data rate. The default
	is set to auto.

<b>Channel Bandwidth</b>	Select wireless channel width (analogue signal bandwidth used by wireless signals from the
	device) from "Auto 20/40Mhz" or "20Mhz" – the recommended value is Auto 20/40MHz.
Preamble Type	Set the wireless radio preamble type. The
	default value is "Short Preamble".
CTS Protection	Enabling this setting will reduce the chance of radio signal collisions between 802.11b and 802.11g wireless access points. It's recommended to set this option to "Auto".
Tx Power	Set the power output of the wireless radio. You may not require 100% output power. Setting a lower power output can enhance security since potentially malicious/unknown users in distant areas will not be able to access your signal.

## IV-2-2-3. Security

The access point provides various security options (wireless data encryption). When data is encrypted, information transmitted wirelessly cannot be read by anyone who does not know the correct encryption key.



It's essential to configure wireless security in order to prevent unauthorised access to your network. "WPA Pre-shared Key" is the recommended security type.



Select hard-to-guess passwords which include combinations of numbers, letters and symbols, and change your password regularly.

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.



SSID Selection	Select which SSID to configure security settings for.
Broadcast ESSID	Enable or disable ESSID broadcast. When enabled, the ESSID will be visible to clients as an available Wi-Fi network. When disabled, the ESSID will not be visible as an available Wi-Fi network to clients — clients must manually enter the ESSID in order to connect. A hidden (disabled) ESSID is typically more secure than a visible (enabled) SSID.
WMM	Enable or disable WMM. WMM (Wi-Fi Multimedia) technology can improve the performance of certain network applications, such as audio/video streaming, network telephony (VoIP) and others. When WMM is enabled, the device will prioritize different kinds of data and give higher priority to applications which require instant responses for better performance.
Encryption	Select an encryption type from the drop-down menu and refer to the following chapters for more information. The recommended encryption type is "WPA Pre-shared Key".

#### IV-2-2-3-1. Disable

Encryption is disabled and no password/key is required to connect to the BR-6428nS V2/nC.



Disabling wireless encryption is not recommended. When disabled, anybody within range can connect to your device's SSID.

#### IV-2-2-3-2. WEP

WEP (Wired Equivalent Privacy) is a basic encryption type. For a higher level of security consider using WPA encryption.

Authentication Type	Select "Open System", "Shared Key" or "Auto" authentication type.
Key Length	Select 64-bit or 128-bit. 128-bit is more secure than 64-bit and is recommended.
Key Type	Choose from "ASCII" (any alphanumerical character 0-9, a-z and A-Z) or "Hex" (any characters from 0-9, a-f and A-F).
Default Key	Select which encryption key (1 – 4 below) is the default key. For security purposes, you can set up to four keys (below) and change which is the default key.
Encryption Key 1 – 4	Enter your encryption key/password according to the format you selected above.

#### IV-2-2-3-3. WPA Pre-shared Key

WPA Pre-shared key is the recommended and most secure encryption type.

WPA Type	Select from WPA (TKIP), WPA2 (AES) or WPA2 Mixed. WPA2 (AES) is safer than WPA (TKIP), but not supported by all wireless clients. Please make sure your wireless client supports your selection. WPA2 (AES) is recommended followed by WPA2 Mixed if your client does not support WPA2 (AES).
Pre-shared Key Format	Choose from "Passphrase" (8 – 63 alphanumeric characters) or "Hex" (up to 64 characters from 0-9, a-f and A-F).
Pre-shared Key	Please enter a security key/password according to the format you selected above.

#### IV-2-2-3-4. WPA RADIUS

WPA RADIUS is a combination of WPA encryption and RADIUS user authentication. If you have a RADIUS authentication server, you can authenticate the identity of every wireless client against a user database.

WPA Type	Select from WPA (TKIP), WPA2 (AES) or WPA2 Mixed. WPA2 (AES) is safer than WPA (TKIP), but not supported by all wireless clients. Please make sure your wireless client supports your selection. WPA2 (AES) is recommended followed by WPA2 Mixed if your client does not support WPA2 (AES).
RADIUS Server IP address	Enter the IP address of the RADIUS authentication server here.
RADIUS Server Port	Enter the port number of the RADIUS authentication server here. The default value is 1812.
RADIUS Server Password	Enter the password of the RADIUS authentication server here.

## IV-2-2-3-5. 802.1x (WEP)

Enable 802.1x	Enable or disable the use of 802.1x user
Authentication	authentication.
RADIUS Server IP	Enter the IP address of the RADIUS
Address	authentication server here.
<b>RADIUS Server</b>	Enter the port number of the RADIUS
Port	authentication server here. Default value is
	1812.
<b>RADIUS Server</b>	Enter the password of the RADIUS
Password	authentication server here.

#### IV-2-3. MAC Filter

## MAC Filter

Mac filtering is a security feature that can help to prevent unauthorized users from connecting

to your access point.

This function allows you to define a list of network devices permitted to connect to the BR-6428nS V2/nC. Devices are each identified by their unique MAC address. If a device which is not on the list of permitted MAC addresses attempts to connect to the BR-6428nS V2/nC, it will be denied.

To enable this function, check the box labeled "Enable Wireless Access Control".



MAC address	Enter a MAC address of computer or network device manually without dashes or colons e.g. for MAC address 'aa-bb-cc-dd-ee-ff' enter 'aabbccddeeff'.
Comment	Enter a comment for reference/identification consisting of up to 16 alphanumerical characters.
Add	Click "Add" to add the MAC address to the MAC address filtering table.
Reset	Clear all fields.

MAC address entries will be listed in the "MAC Address Filtering Table". Select an entry using the "Select" checkbox.

Delete Selected/	Delete selected or all entries from the table.
Delete All	

#### IV-2-4. WPS

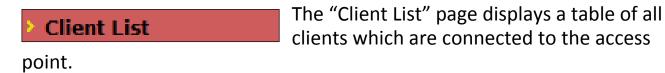
## Wi-Fi Protected Setup is a simple way to establish connections between WPS

compatible devices. WPS can be activated on compatible devices by pushing a WPS button on the device or from within the device's firmware/configuration interface. When WPS is activated in the correct manner and at the correct time for two compatible devices, they will automatically connect. PIN code WPS includes the use of a PIN code between the two devices for verification.



Enable WPS	Check/uncheck this box to enable/disable WPS.
WPS Current Status	Displays "Configured" or "unConfigured" depending on whether WPS and security/encryption settings for the device have been configured or not, either manually or using the WPS button.
Self PIN Code	Displays the WPS PIN code of the device.
2.4 GHz SSID	Displays the SSID (ESSID) of the device.
2.4GHz Authentication Mode	Displays the wireless security authentication mode of the device.
2.4GHz Passphrase Key	Displays the wireless security authentication key type.
Configure via Push Button	Click "Start to Process" to activate WPS on the access point. WPS will be active for 2 minutes.
WPS via PIN	Enter the wireless client's PIN code here and click "Start to Process" to activate PIN code WPS. Refer to your wireless client's documentation if you are unsure of its PIN code.

#### IV-2-5. Client List





Interface	Interface of each client (2.4GHz) is displayed here.
MAC Address	The MAC address each client connected to the access point is displayed here.
Refresh	Click to refresh the list of connected clients.

#### IV-3. Toolbox

System Setup Wireless	Setting Toolbox
-----------------------	-----------------



Screenshots displayed are examples. The information shown on your screen will vary depending on your configuration.

#### IV-3-1. Admin

V A A STATE OF THE	You can change the password used to login to
Admin	the browser-based configuration interface here.
It is advised to do so for secu	rity purposes.



If you change the administrator password, please make a note of the new password. In the event that you forget this password and are unable to login to the browser based configuration interface, see <a href="II-2">II-2</a>. Reset for how to reset the access point.

You can change the password which is required to log on to the router. By default, the password is admin. Passwords can contain 0 to 30 alphanumeric characters, and are case sensitive.

Current Password :	
New Password :	
Confirm Password:	

<b>Current Password</b>	Enter your current password. The default password is <b>1234</b> .
New Password	Enter your desired new password here. You can use any combination of letters, numbers and symbols up to 20 characters.
Re-Enter Password	Confirm your new password.

## IV-3-2. Time Setting

You can configure the time zone settings of your access point here. The date and time of the device can be configured manually or can be synchronized with a time server.

Set the time zone of the Broadband router. This information is used for log entries and firewall settings.

Set Time Zone :	(GMT+01:00)Amsterdam, Berlin, Bern, Rol ▼
Time Server Address:	

Time Zone	Select the time zone of your country/ region. If your country/region is not listed, please select another country/region whose time zone is the same as yours.	
Time Server	The access point also supports NTP (Network	
Address	Time Protocol) for automatic time and date setup. Enter the host name or IP address of the time server if you wish.	

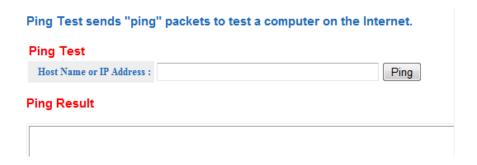
#### IV-3-3. Diagnosis

## Diagnosis

The diagnosis tool can ping a specific IP address and display the result in the box below.



A "ping" is a test packet of information sent to determine the reachability of a host on an IP network, and to measure the round-trip time for messages sent from the originating host to a destination computer.



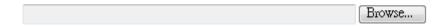
Ping Address	Specify the host name or IP address to ping.	
Ping	Click "Ping" to begin.	

#### IV-3-4. Firmware

The "Firmware" page allows you to update the system firmware to a more recent version.

Updated firmware versions often offer increased performance and security, as well as bug fixes. You can download the latest firmware from the Edimax website.

This tool allows you to upgrade the Routers firmware. Browse to and select the upgrade file and click APPLY. You will be prompted to confirm the upgrade.





Do not switch off or disconnect the access point during a firmware upgrade, as this could damage the device.

Browse	Open a new window to locate and select the	
	firmware file in your computer.	

#### IV-3-5. System Setting

The access point's "System Setting" page enables you to restore the device back to

factory default settings, back up the current settings, or restore the device to previously saved settings.

Use BACKUP to save the routers current configuration to a file named config.dlf. You can use RESTORE to restore the saved configuration. Alternatively, you can use RESTORE TO FACTORY DEFAULT to force the router to restore the factory default settings.



Restore to Factory Defaults	Click "Reset" to restore settings to the factory default. A pop-up window will appear and ask you to confirm and enter your log in details. Enter your username and password and click "Ok". See below for more information		
Backup Settings	information.  Click "Save" to save the current settings on		
васкир эстиндэ	your computer as config.bin file.		
Restore Settings	Click the browse button to find a previously saved config.bin file and then click "Upload" to replace your current settings.		

#### IV-3-6. Reboot

# If the access point malfunctions or is not responding, then it is recommended that you reboot the device. You can reboot the access point remotely using this feature if the location of the access point is not convenient.

In the event the system stops responding correctly or stops functioning, you can perform a reset. Your settings will not be changed. To perform the reset, click on the APPLY button. You will be asked to confirm your decision. The reset will be completed when the LED Power light stops blinking.

Apply

Apply	Click "Apply" to reboot the device. A
	countdown will indicate the progress of the
	reboot.

## III. Appendix

### IV-1. Configuring your IP address

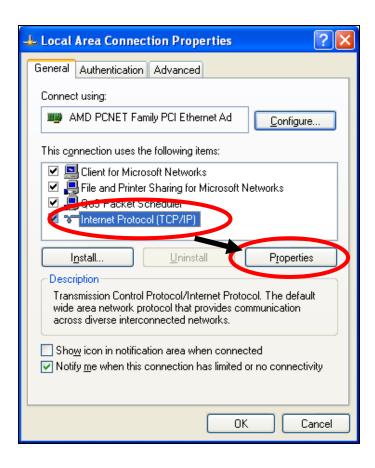
The access point uses the default IP address **192.168.2.2**. In order to access the browser based configuration interface, you need to modify the IP address of your computer to be in the same IP address subnet e.g. **192.168.2.x** (x = 3 - 254).

The procedure for modifying your IP address varies across different operating systems; please follow the guide appropriate for your operating system.

In the following examples we use the IP address **192.168.2.10** though you can use any IP address in the range **192.168.2.x** (x = 3 - 254).

#### IV-1-2-1. Windows XP

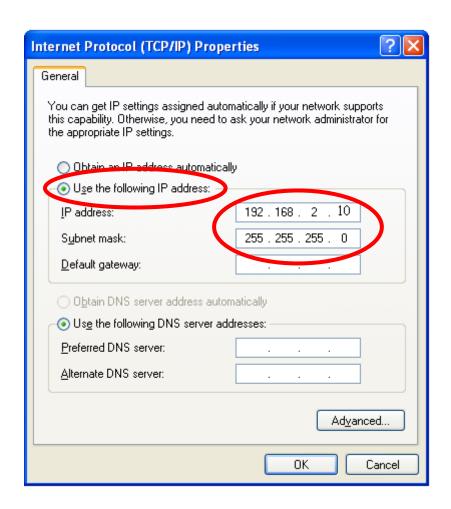
1. Click the "Start" button (it should be located in the lower-left corner of your computer), then click "Control Panel". Double-click the "Network and Internet Connections" icon, click "Network Connections", and then double-click "Local Area Connection". The "Local Area Connection Status" window will then appear, click "Properties".



**2.** Select "Use the following IP address", then input the following values:

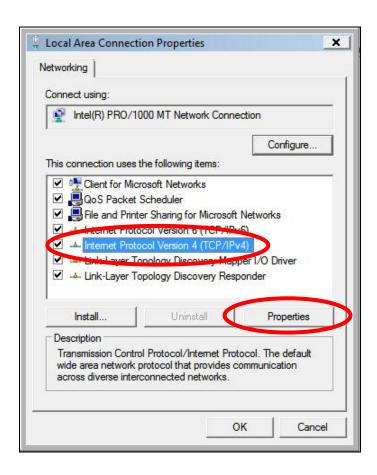
IP address: 192.168.2.10 Subnet Mask: 255.255.255.0

Click 'OK' when finished.



#### IV-1-2-2. Windows Vista

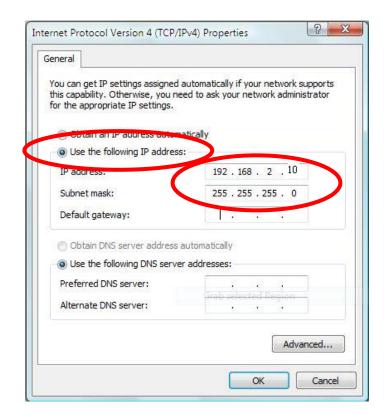
1. Click the "Start" button (it should be located in the lower-left corner of your computer), then click "Control Panel". Click "View Network Status and Tasks", then click "Manage Network Connections". Right-click "Local Area Network", then select "Properties". The "Local Area Connection Properties" window will then appear, select "Internet Protocol Version 4 (TCP / IPv4)", and then click "Properties".



2. Select "Use the following IP address", then input the following values:

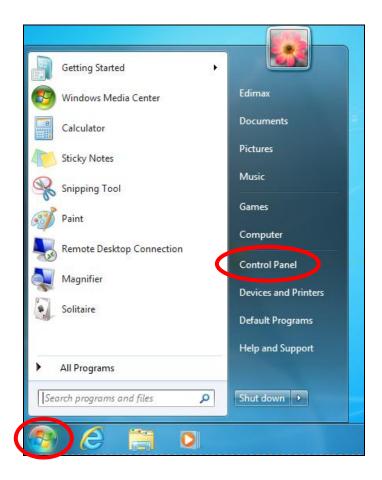
IP address: 192.168.2.10 Subnet Mask: 255.255.255.0

Click 'OK' when finished.



#### IV-1-2-3. Windows 7

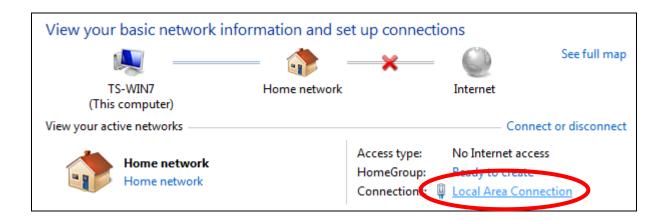
1. Click the "Start" button (it should be located in the lower-left corner of your computer), then click "Control Panel".



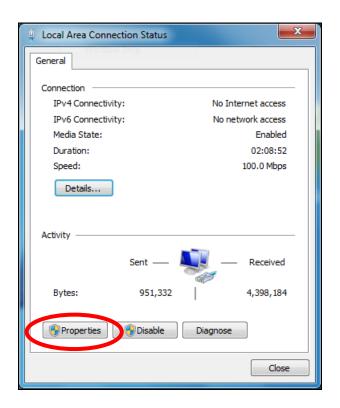
2. Under "Network and Internet" click "View network status and tasks".



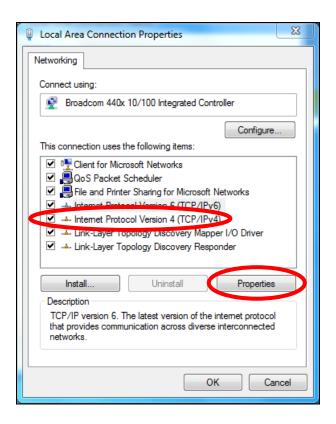
**3.** Click "Local Area Connection".



## **4.** Click "Properties".



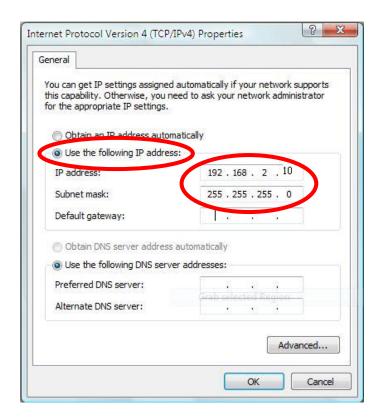
**5.**Select "Internet Protocol Version 4 (TCP/IPv4) and then click "Properties".



**6.** Select "Use the following IP address", then input the following values:

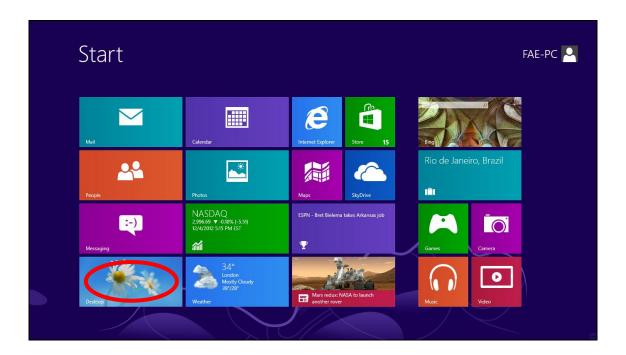
IP address: 192.168.2.10 Subnet Mask: 255.255.255.0

Click 'OK' when finished.

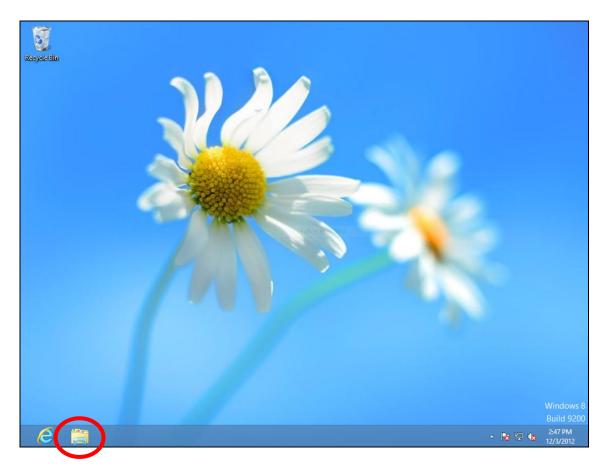


#### IV-1-2-4. Windows 8

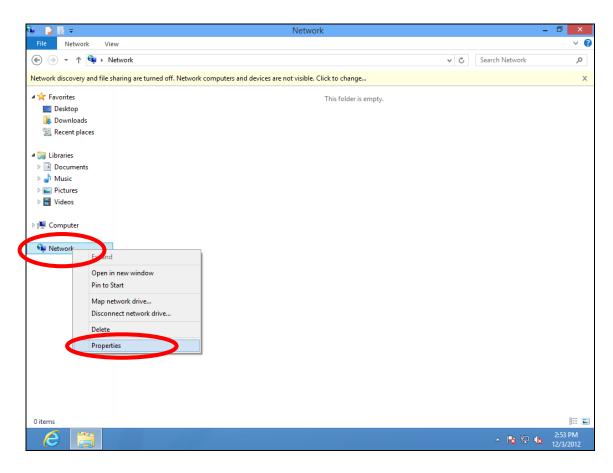
**1.** From the Windows 8 Start screen, you need to switch to desktop mode. Move your curser to the bottom left of the screen and click.



**2.** In desktop mode, click the File Explorer icon in the bottom left of the screen, as shown below.

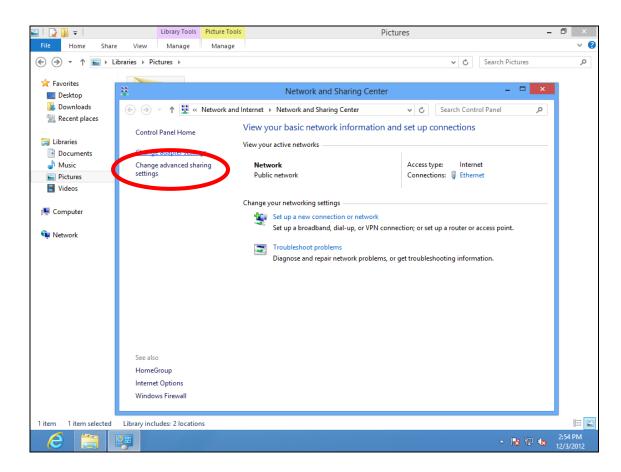


**3.** Right click "Network" and then select "Properties".

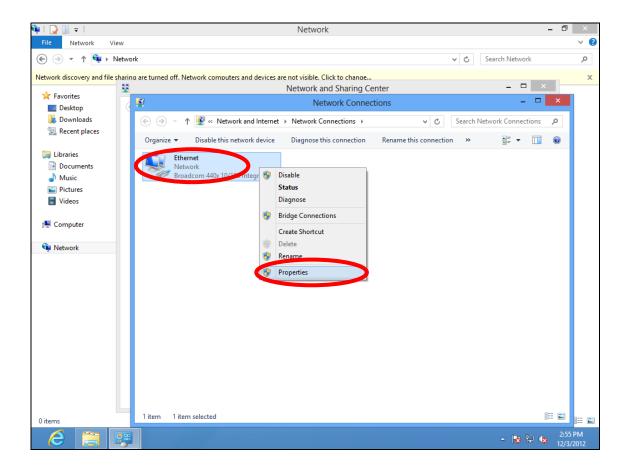


**4.** In the window that opens, select "Change adapter settings" from the left

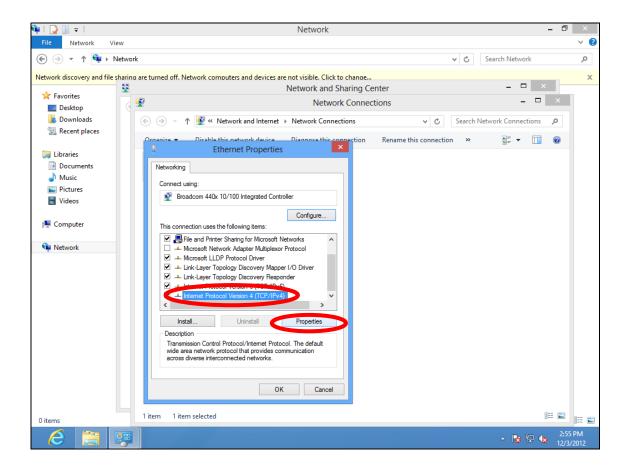
side.



**5.** Choose your connection and right click, then select "Properties".



**6.** Select "Internet Protocol Version 4 (TCP/IPv4) and then click "Properties".



**7.** Select "Use the following IP address", then input the following values:

**IP address**: 192.168.2.10

**Subnet Mask**: 255.255.255.0

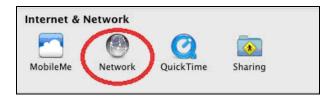
Click 'OK' when finished.

#### IV-1-2-5. Mac

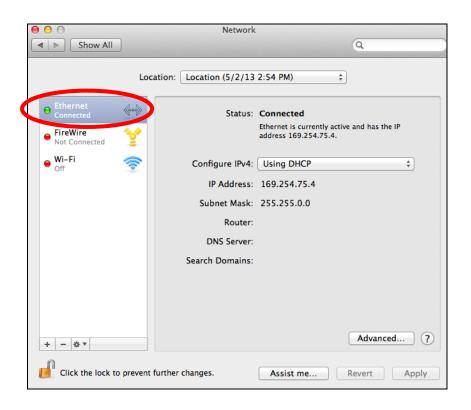
**1.** Have your Macintosh computer operate as usual, and click on "System Preferences"



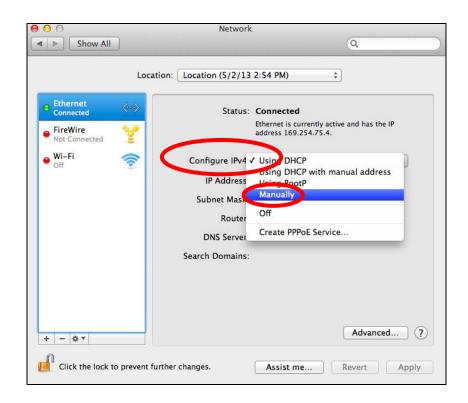
2. In System Preferences, click on "Network".



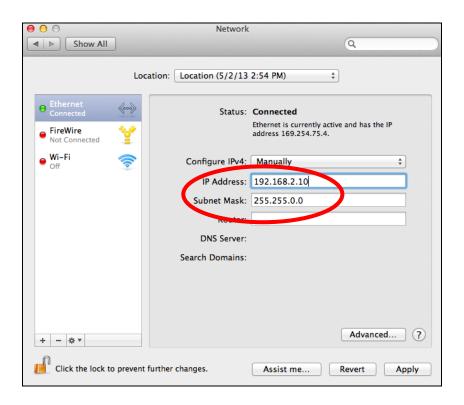
**3.** Click on "Ethernet" in the left panel.



**4.** Open the drop-down menu labeled "Configure IPv4" and select "Manually".



**5.** Enter the IP address 192.168.2.10 and subnet mask 255.255.255.0. Click on "Apply" to save the changes.



#### IV-1-5. Glossary

**Default Gateway (Access point):** Every non-access point IP device needs to configure a default gateway's IP address. When the device sends out an IP packet, if the destination is not on the same network, the device has to send the packet to its default gateway, which will then send it out towards the destination.

**DHCP:** Dynamic Host Configuration Protocol. This protocol automatically gives every computer on your home network an IP address.

DNS Server IP Address: DNS stands for Domain Name System, which allows Internet servers to have a domain name (such as www.Broadbandaccess point.com) and one or more IP addresses (such as 192.34.45.8). A DNS server keeps a database of Internet servers and their respective domain names and IP addresses, so that when a domain name is requested (as in typing "Broadbandaccess point.com" into your Internet browser), the user is sent to the proper IP address. The DNS server IP address used by the computers on your home network is the location of the DNS server your ISP has assigned to you.

**DSL Modem:** DSL stands for Digital Subscriber Line. A DSL modem uses your existing phone lines to transmit data at high speeds.

**Ethernet:** A standard for computer networks. Ethernet networks are connected by special cables and hubs, and move data around at up to 10/100 million bits per second (Mbps).

**IP Address and Network (Subnet) Mask:** IP stands for Internet Protocol. An IP address consists of a series of four numbers separated by periods, that identifies a single, unique Internet computer host in an IP network. Example: 192.168.2.1. It consists of 2 portions: the IP network address, and the host identifier.

**ISP Gateway Address:** (see ISP for definition). The ISP Gateway Address is an IP address for the Internet access point located at the ISP's office.

**ISP:** Internet Service Provider. An ISP is a business that provides connectivity to the Internet for individuals and other businesses or organizations.

**LAN:** Local Area Network. A LAN is a group of computers and devices connected together in a relatively small area (such as a house or an office). Your home network is considered a LAN.

**MAC Address:** MAC stands for Media Access Control. A MAC address is the hardware address of a device connected to a network. The MAC address is a unique identifier for a device with an Ethernet interface. It is comprised of two parts: 3 bytes of data that corresponds to the Manufacturer ID (unique for each manufacturer), plus 3 bytes that are often used as the product's serial number.

**NAT:** Network Address Translation. This process allows all of the computers on your home network to use one IP address. Using the broadband access point's NAT capability, you can access the Internet from any computer on your home network without having to purchase more IP addresses from your ISP.

**Port:** Network Clients (LAN PC) uses port numbers to distinguish one network application/protocol over another. Below is a list of common applications and protocol/port numbers:

Application	Protocol	Port Number
Telnet	ТСР	23
FTP	TCP	21
SMTP	TCP	25
POP3	TCP	110
H.323	TCP	1720
SNMP	UCP	161
SNMP Trap	UDP	162
HTTP	TCP	80
PPTP	TCP	1723
PC Anywhere	TCP	5631
PC Anywhere	UDP	5632

**Access point:** A access point is an intelligent network device that forwards packets between different networks based on network layer address information such as IP addresses.

**Subnet Mask:** A subnet mask, which may be a part of the TCP/IP information provided by your ISP, is a set of four numbers (e.g. 255.255.255.0) configured like an IP address. It is used to create IP address numbers used only within a particular network (as opposed to valid IP address numbers recognized by the Internet, which must be assigned by InterNIC).

**TCP/IP, UDP:** Transmission Control Protocol/Internet Protocol (TCP/IP) and Unreliable Datagram Protocol (UDP). TCP/IP is the standard protocol for data transmission over the Internet. Both TCP and UDP are transport layer protocol. TCP performs proper error detection and error recovery, and thus is reliable. UDP on the other hand is not reliable. They both run on top of the IP (Internet Protocol), a network layer protocol.

**WAN:** Wide Area Network. A network that connects computers located in geographically separate areas (e.g. different buildings, cities, countries). The Internet is a wide area network.

Web-based management Graphical User Interface (GUI): Many devices support a graphical user interface that is based on the web browser. This means the user can use the familiar Netscape or Microsoft Internet Explorer to Control/configure or monitor the device being managed.



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#### **Federal Communication Commission Interference Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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:

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

#### **FCC Caution**

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

F	C	С	Radiation	<b>Exposure</b>	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.	

#### **R&TTE Compliance Statement**

This equipment complies with all the requirements of DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of March 9, 1999 on radio equipment and telecommunication terminal equipment and the mutual recognition of their conformity (R&TTE). The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8, 2000.

#### Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

#### **EU Countries Intended for Use**

The ETSI version of this device is intended for home and office use in Austria, Belgium, Bulgaria, Cyprus, Czech, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey, and United Kingdom. The ETSI version of this device is also authorized for use in EFTA member states: Iceland, Liechtenstein, Norway, and Switzerland.

#### **EU Countries Not Intended for Use**

None

#### **EU Declaration of Conformity**

**English:** This equipment is in compliance with the essential requirements and other relevant

provisions of Directive 1999/5/EC, 2009/125/EC, 2006/95/EC, 2011/65/EC.

Français: Cet équipement est conforme aux exigences essentielles et autres dispositions de la

directive 1999/5/CE, 2009/125/CE, 2006/95/CE, 2011/65/CE.

Čeština: Toto zařízení je v souladu se základními požadavky a ostatními příslušnými ustanoveními

směrnic 1999/5/ES, 2009/125/ES, 2006/95/ES, 2011/65/ES.

**Polski:** Urządzenie jest zgodne z ogólnymi wymaganiami oraz szczególnymi warunkami

określonymi Dyrektywa UE 1999/5/EC, 2009/125/EC, 2006/95/EC, 2011/65/EC..

Română: Acest echipament este în conformitate cu cerințele esențiale și alte prevederi relevante ale

Directivei 1999/5/CE, 2009/125/CE, 2006/95/CE, 2011/65/CE.

Русский: Это оборудование соответствует основным требованиям и положениям Директивы

1999/5/EC, 2009/125/EC, 2006/95/EC, 2011/65/EC.

Magyar: Ez a berendezés megfelel az alapvető követelményeknek és más vonatkozó irányelveknek

(1999/5/EK, 2009/125/EK, 2006/95/EK, 2011/65/EK).

**Türkçe:** Bu cihaz 1999/5/EC, 2009/125/EC, 2006/95/EC, 2011/65/EC direktifleri zorunlu istekler ve

diğer hükümlerle ile uyumludur.

Українська: Обладнання відповідає вимогам і умовам директиви 1999/5/ЕС, 2009/125/ЕС,

2006/95/EC, 2011/65/EC..

Slovenčina: Toto zariadenie spĺňa základné požiadavky a ďalšie príslušné ustanovenia smerníc

1999/5/ES, 2009/125/ES, 2006/95/ES, 2011/65/ES.

**Deutsch:** Dieses Gerät erfüllt die Voraussetzungen gemäß den Richtlinien 1999/5/EC, 2009/125/EC,

2006/95/EC, 2011/65/EC.

**Español:** El presente equipo cumple los requisitos esenciales de la Directiva 1999/5/EC,

2009/125/EC, 2006/95/EC, 2011/65/EC.

Italiano: Questo apparecchio è conforme ai requisiti essenziali e alle altre disposizioni applicabili

della Direttiva 1999/5/CE, 2009/125/CE, 2006/95/CE, 2011/65/CE.

Nederlands: Dit apparaat voldoet aan de essentiële eisen en andere van toepassing zijnde bepalingen

van richtlijn 1999/5/EC, 2009/125/EC, 2006/95/EC, 2011/65/EC...

Português: Este equipamento cumpre os requesitos essênciais da Directiva 1999/5/EC, 2009/125/EC,

2006/95/EC, 2011/65/EC.

Norsk: Dette utstyret er i samsvar med de viktigste kravene og andre relevante regler i Direktiv

1999/5/EC, 2009/125/EC, 2006/95/EC, 2011/65/EC.

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bestämmelser i direktiv 1999/5/EG, 2009/125/EG, 2006/95/EG, 2011/65/EG.

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forordninger i direktiv 1999/5/EC, 2009/125/EC, 2006/95/EC, 2011/65/EC.

suomen kieli: Tämä laite täyttää direktiivien 1999/5/EY, 2009/125/EY, 2006/95/EY, 2011/65/EY

oleelliset vaatimukset ja muut asiaankuuluvat määräykset.





#### **WEEE Directive & Product Disposal**



At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.

## **Declaration of Conformity**

We, Edimax Technology Co., Ltd., declare under our sole responsibility, that the equipment described below complies with the requirements of the European R&TTE directive 1999/5/EC, and 2009/125/EC, 2006/95/EC, 2011/65/EC.

**Equipment: N300 Wall-plug Access Point** 

Model No.: EW-7438APn

The following European standards for essential requirements have been followed:

Spectrum: ETSI EN 300 328 V1.7.1 (2006-10)

EMC: EN 301 489-1 V1.9.2 (2011-09);

EN 301 489-17 V2.1.1 (2009-05)

EMF: EN 50385:2002

Safety (LVD): IEC 60950-1:2005 (2nd Edition);

EN-60950-1:2006+A11:2009+A1:2010+A12:2011

Edimax Technology Co., Ltd. No. 3, Wu Chuan 3<sup>rd</sup> Road, Wu-Ku Industrial Park, New Taipei City, Taiwan

CE

Date of Signature: November 15, 2011

Signature:

Printed Name: Albert Chang

Title: Director

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