Wireless Access Point

User's Manual

Federal Communications Commission (FCC) Requirements, Part 15

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.

Regulatory information / Disclaimers

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

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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE (CO-LOCATION)

FCC RF Radiation Exposure Statement: This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons.

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Chapter 1 Introduction

1.1 Welcome

Congratulations on purchasing this Wireless Access Point. This Wireless Access Point is a cost-effective IP Sharing AP that enables multiple users to share a wireless Internet or Intranet. Simply configure your Internet connection settings in the Wireless Access Point and plug your PC to the LAN port and you're ready to share files and access the Internet. As your network grows, you can connect another hub or switch using the wireless, allowing you to easily expand your network. The Wireless Access Point is embedded with an IEEE 802.11g/b access point that allows you to build up a wireless LAN. With the support of new emerged 802.11g standard, the access point provides data transfer of up to 54Mbps, up to 5 times faster than 802.11b, it is backwards compatible with existing 802.11b infrastructure while migrating to the new screaming fast 802.11g.The Wireless Access Point provides a total solution for the Small and Medium-sized Business (SMB) and the Small Office/Home Office (SOHO) markets, giving you an instant network today, and the flexibility to handle tomorrow's expansion and speed.

1.2 About This Guide

This User Manual contains information on how to install and configure your Wireless Access Point to get your network started accessing the Internet. It will guide you through the correct configuration steps to get your device up and running.

Note and Caution in this manual are highlighted with graphics as below to indicate important information.

Contains related information corresponds to a topic.

Necessary steps, actions or messages should not be ignored.

1.3 Copyright statement

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, whether electronic, mechanical, photocopying, recording, or otherwise without the prior writing of the publisher.

Chapter 2 System Requirements

- Computer with 10/100Base-T Ethernet card and TCP/IP protocol installed for initial setup
- Internet Explorer 5.0 or higher for Web configuration
- 802.11g or 802.11b compliant wireless adapters (for wireless connection)

Chapter 3 Getting to Know the Wireless Access Point

The following sections describe the physical characteristics of your AP.

3.1 Back Panel

The following illustration shows the Wireless Access Point back panel:

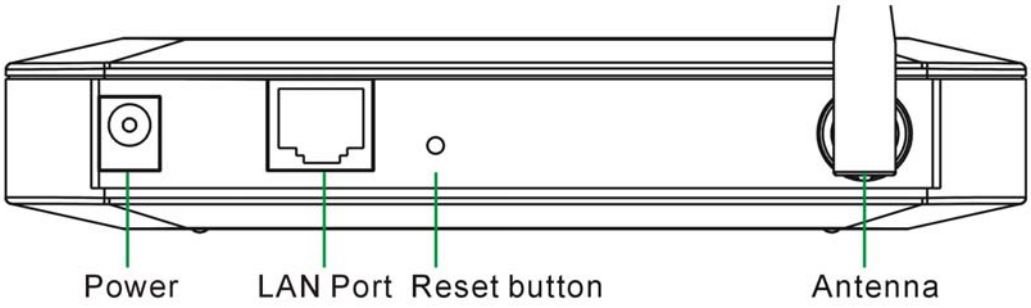

Figure 1 back panel

Power: The receptacle where you plug in the power adapter.
LAN Port: The port connects the AP to your PC. You can config your AP through the connection.
Reset button: Resets your AP or resets the AP to the default login settings.
Antenna: The antenna used for wireless connections. You are able to rotate the antenna to gain the best signal reception.

To reset the AP to the factory defaults, press and hold the Reset button for more than five seconds. This clears the AP's user settings, including User ID, Password, IP Address, and Subnet mask. (Warning: your original configurations will be replaced with the factory default settings)

3.2 LED Description

The following illustration shows the Wireless Access Point front panel:

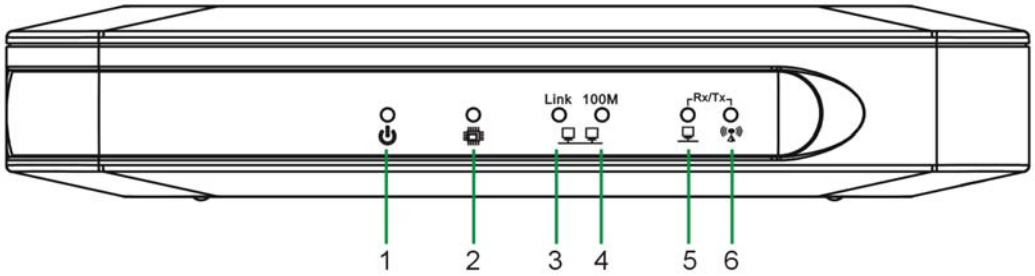

Figure 2 front panel

Number	LED	Light Status	Description
1	PWR	ON	This indicator lights green when the Wireless AP is receiving power; otherwise, it is off.
2	CPU	ON	The LED will be dark for a few seconds when the system is started. After that, the LED will stays green to show the Wireless AP is working normally. If the LED stays blink/dark that means the system failed, you need to contact your agent or try to reboot the system.
3	LAN Link	Flashing	LAN is connected.
4	LAN Speed	Flashing	LAN has Activity (ACT) data being sent or Received
5	LAN RX/TX	Flashing	LAN has Activity (ACT) data being sent or Received.
6	Wireless RX/TX	Flashing	Wireless has Activity (ACT) data being sent or Received.

Chapter 4 hardware connection

Begin by finding a good place to set up your wireless broadband. Some things to consider:

- Keep the access point as central in your work area as possible. Signal strength and speed fall off with distance.
- Higher is often better. For instance, set it up on the top shelf of a bookcase rather than the bottom one, if possible.

Prior to connecting the hardware, make sure to power off your Ethernet device and Wireless Access Point (AP). Then follow the steps below to connect the related devices.

Step 1: Connect your computer to the LAN port.

Attach one end of the Ethernet cable with RJ-45 connector to your hub, switch or a computer's Ethernet port, and the other end to one of the LAN ports of your AP.

Step 2: Connect the power adapter.

Connect the single DC output connector of the power adapter to the power jack on the side of the AP. Then plug the Power Adapter into an AC outlet.

Step 3: Power on the following devices in this order:

HUB or Switch, AP, and PCs

Chapter 5 Configuring Local PC to Access the Wireless AP

You can manage the Wireless Access Point through the Web browser-based configuration utility. To configure the device via Web browser, at least one properly configured computer must be connected to the device via Ethernet or wireless network. The Wireless Access Point is configured with the default IP address of 192.168.1.1 and subnet mask of 255.255.255.0 and its DHCP server is enabled by default. Before setting up the AP, make sure your PCs are configured to obtain an IP (or TCP/IP) address automatically from the AP by the steps below.

5.1 Setting up TCP/IP

5.1.1 Windows 2000

Please follow the steps below to setup your computer:

Step 1: Go to Start → Settings → Control Panel

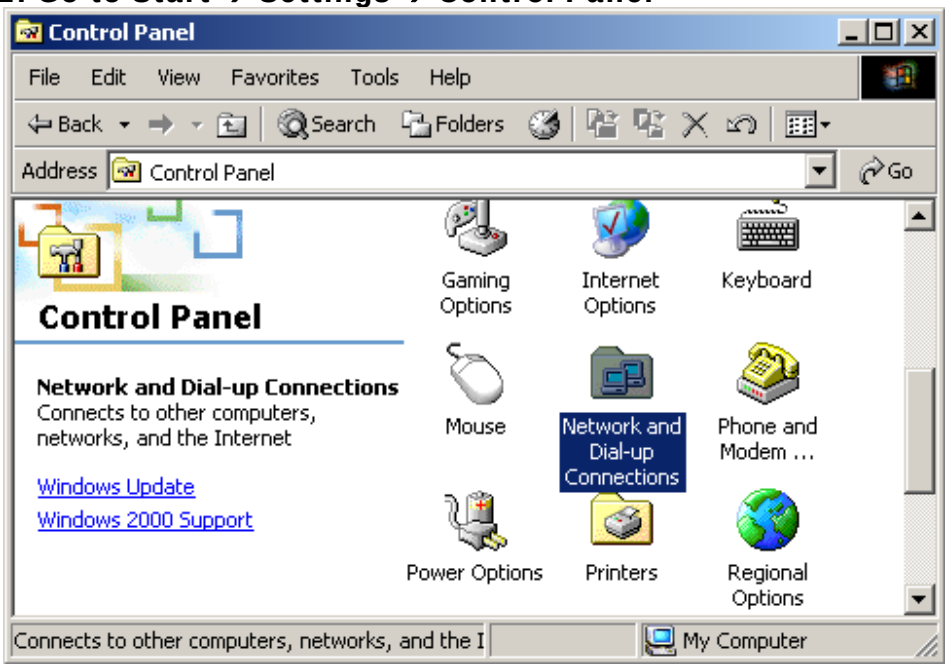

Figure 3

Step 2: Double click the icon Network and Dial-up Connections

Step 3: Highlight the icon Local Area Connection, right click your mouse, Click Properties

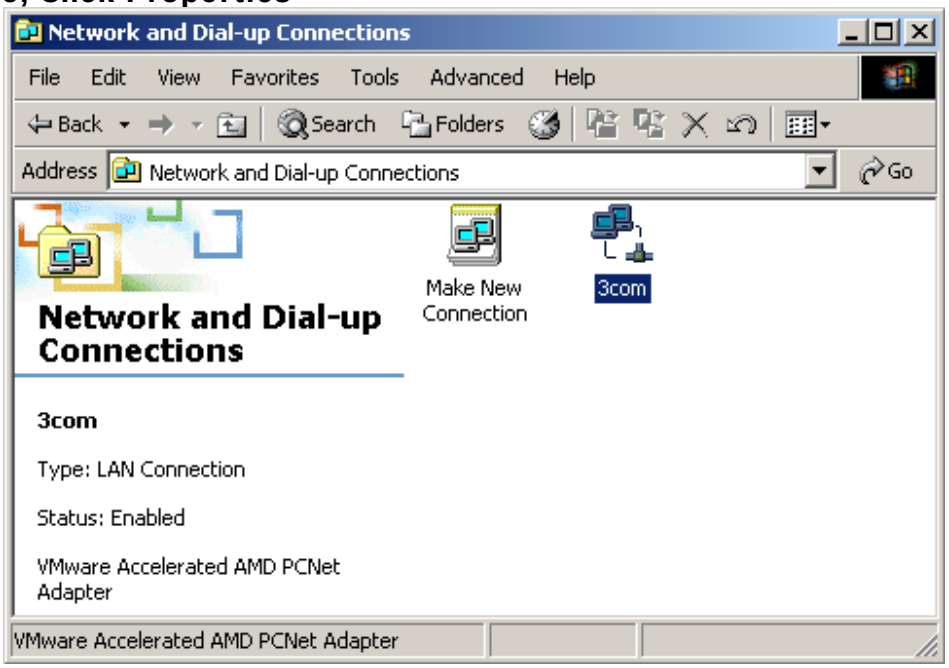

Figure 4

Step 4: Highlight Internet Protocol (TCP/IP), then press Properties button

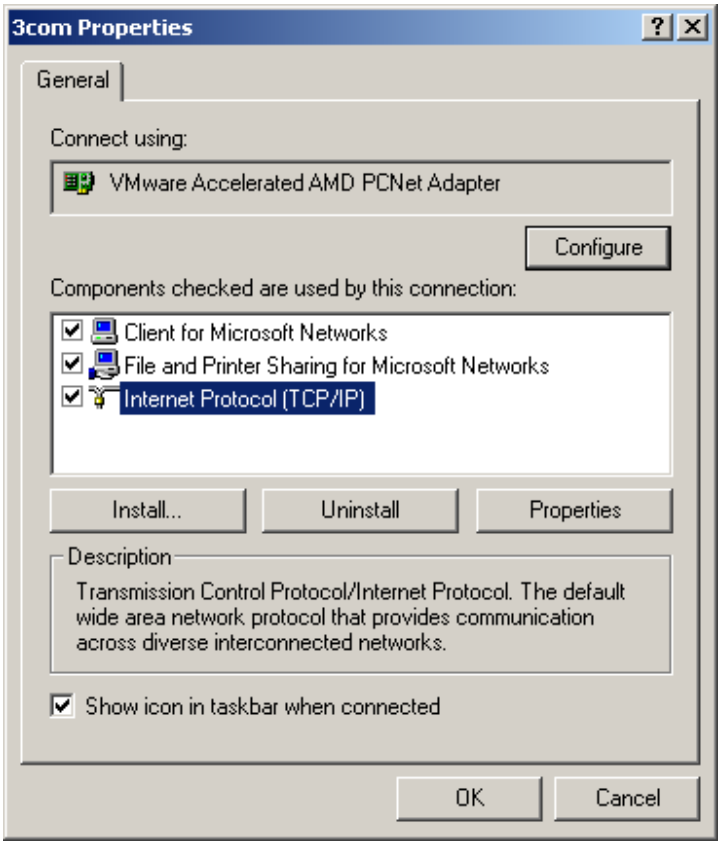

Figure 5

Step 5: Choose Obtain an IP address automatically and Obtain DNS Server Address automatically, and then press OK to close the Internet Protocol (TCP/IP) Properties window.

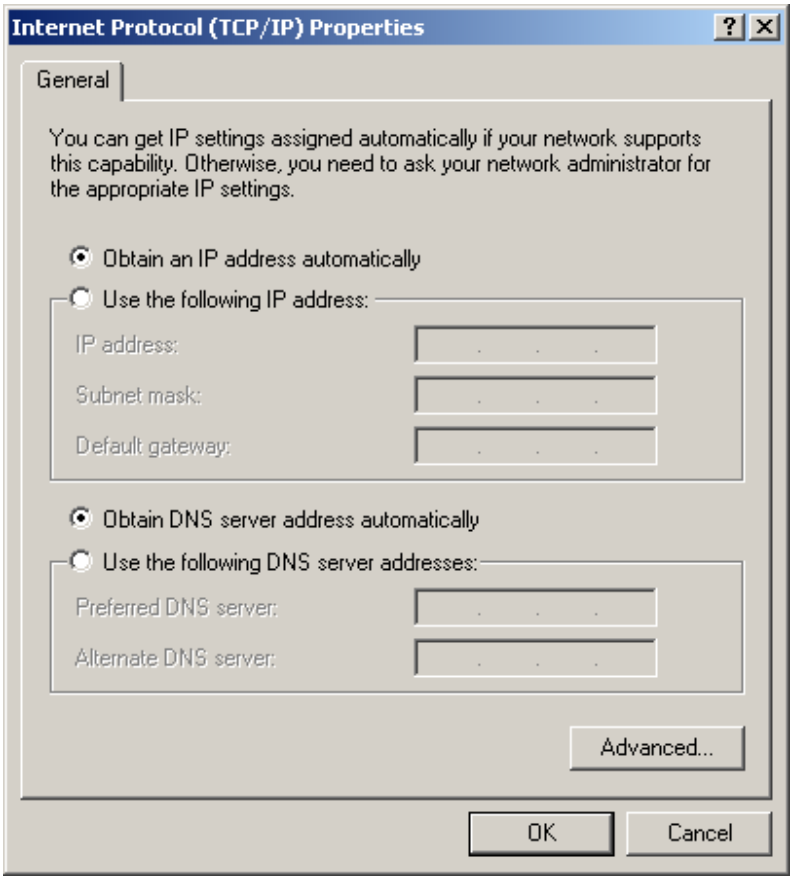

Figure 6

Step 6: Press OK to close the Local Area Connection Properties window

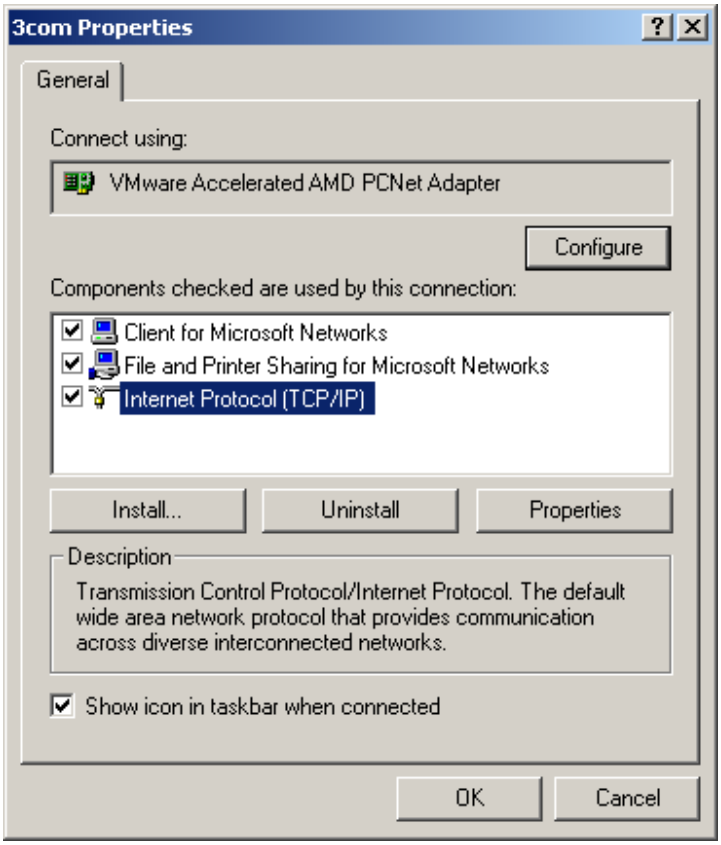

Figure 7

5.1.2 Windows XP/2003

Please follow the steps below to setup your computer:
Step 1: Go to Start → Settings → Control Panel
Step 2: Click Network and Internet Connections

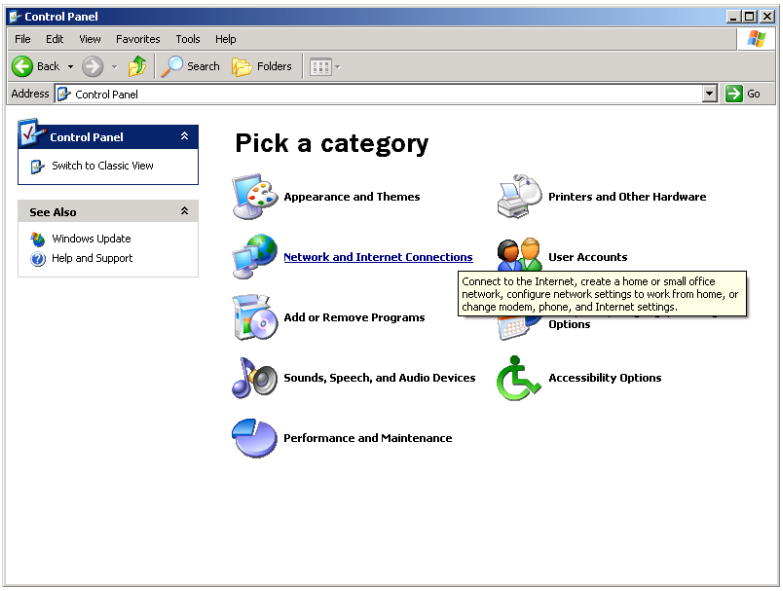

Figure 8

Step 3: Click Network Connections

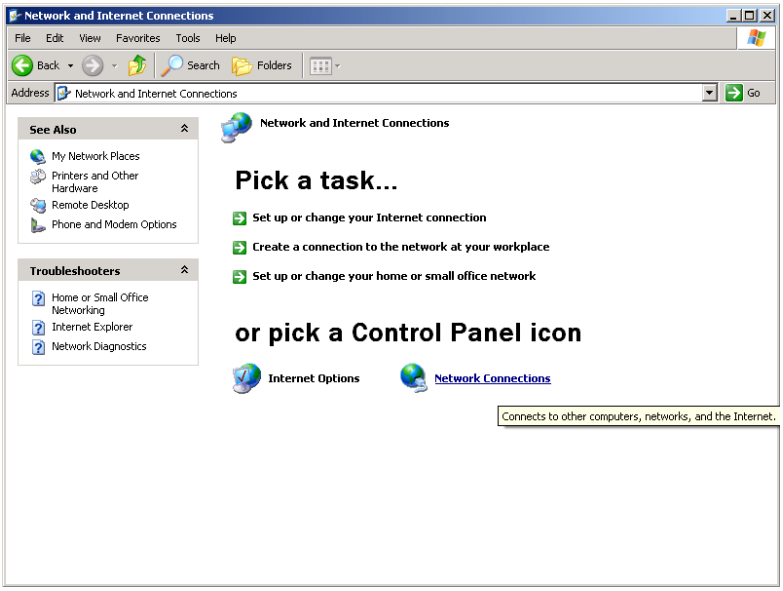

Figure 9

Step 4: Highlight the icon Local Area Connection, right click your mouse, Click Properties

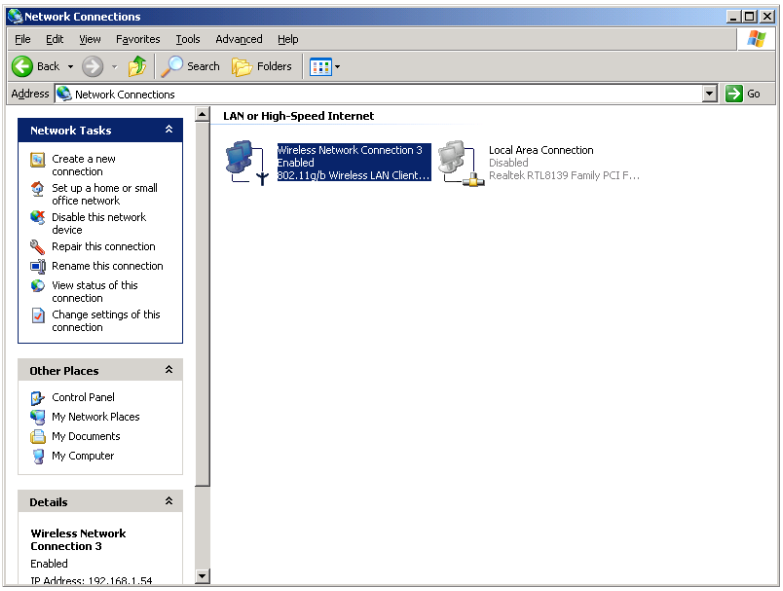

Figure 10

Step 5: Highlight Internet Protocol (TCP/IP), then press Properties button

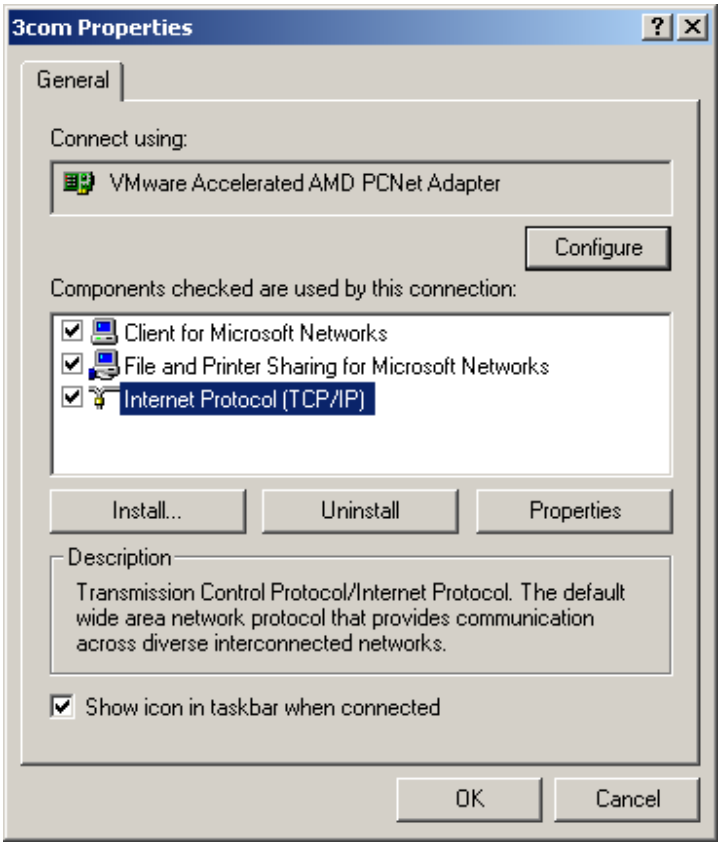

Figure 11

Step 6: Choose Obtain an IP address automatically and Obtain DNS Server Address automatically, and then press OK to close the Internet Protocol (TCP/IP) Properties window

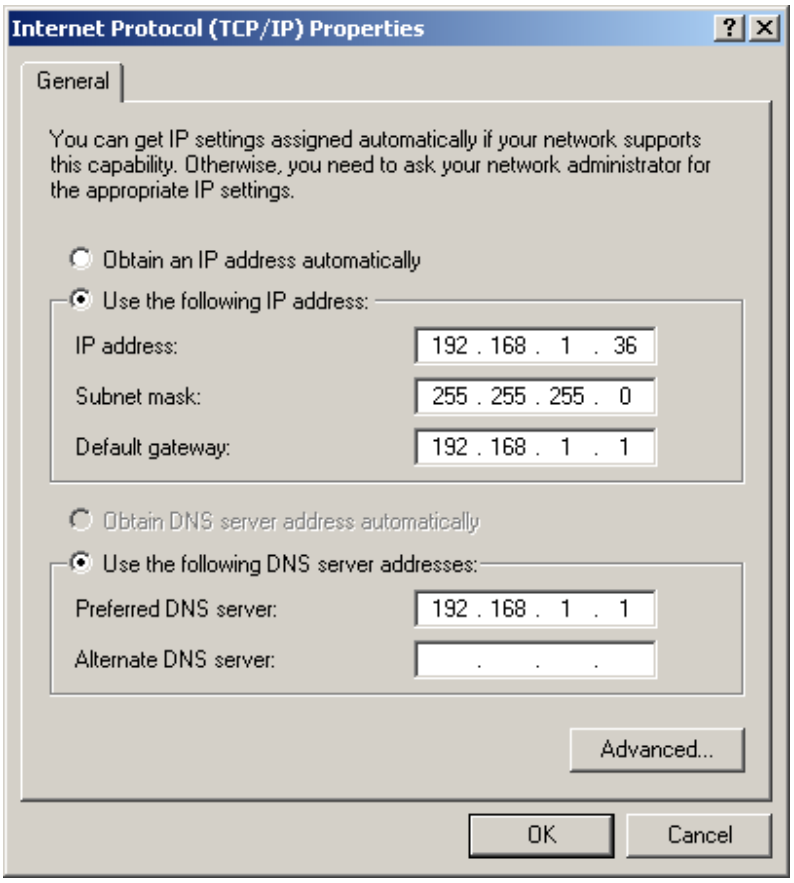

Figure 12

Step 7: Press OK to close the Local Area Connection Properties window

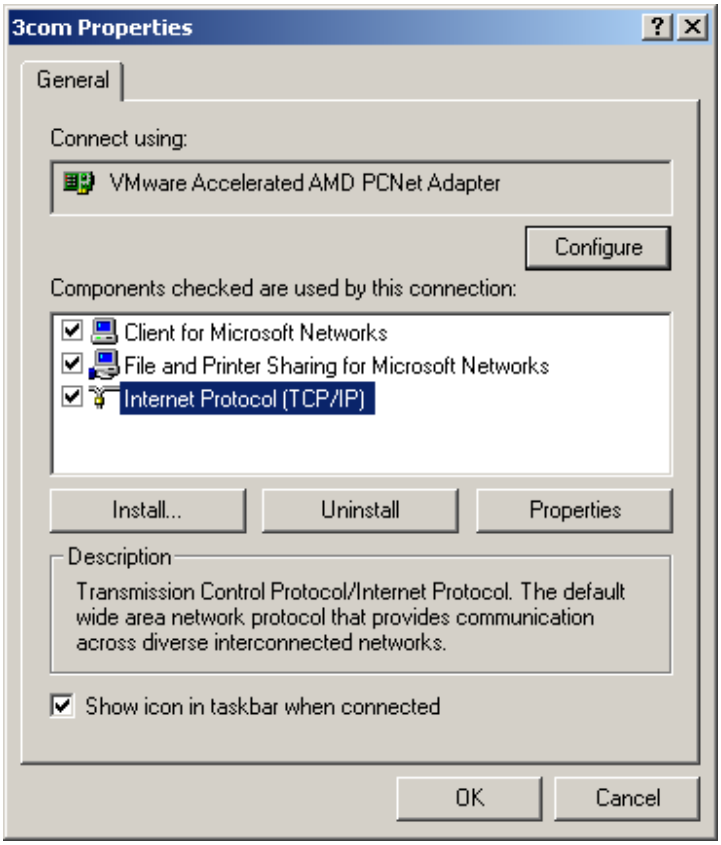

Figure 13

5.2 Additional Settings for Wireless Client

If you chose to access the AP via a wireless client, also verify the following:
Step 1: Make sure your PC is equipped with 802.11g or 802.11b wireless adapter and has appropriate WLAN card driver/utility and TCP/IP installed.
Step 2: Set the wireless adapter to use appropriate TCP/IP settings as described in previous section.
Step 3: Launch the wireless adapter's provided utility and verify that your wireless client is configured with these settings:

- Operation Mode: Infrastructure
- SSID: default
- Authentication: Disabled
- Encryption: Off
- Radio Band: 802.11B/G

If you only finished the wireless settings and didn't configure the wireless adapter's TCP/IP settings, even your link status indicates a successful connection with the AP. This connection applies to the "physical" network layer

only. Your wireless adapter cannot communicate with the AP. Make sure to set the TCP/IP properties as described in this previous section.

5.3 Checking PC's IP and Connection with the AP

After configuring the TCP/IP protocol, use the ping command to verify if the computer can communicate with the AP. To execute the ping command, open the DOS window and PING the IP address of the Wireless Access Point at the DOS prompt:

- For Windows 98/Me: Start -> Run. Type **"command"** and click OK.
- For Windows 2000/XP: Start -> Run. Type **"cmd"** and click OK.

At the DOS prompt, type the following command:
If the Command window returns something similar to the following:

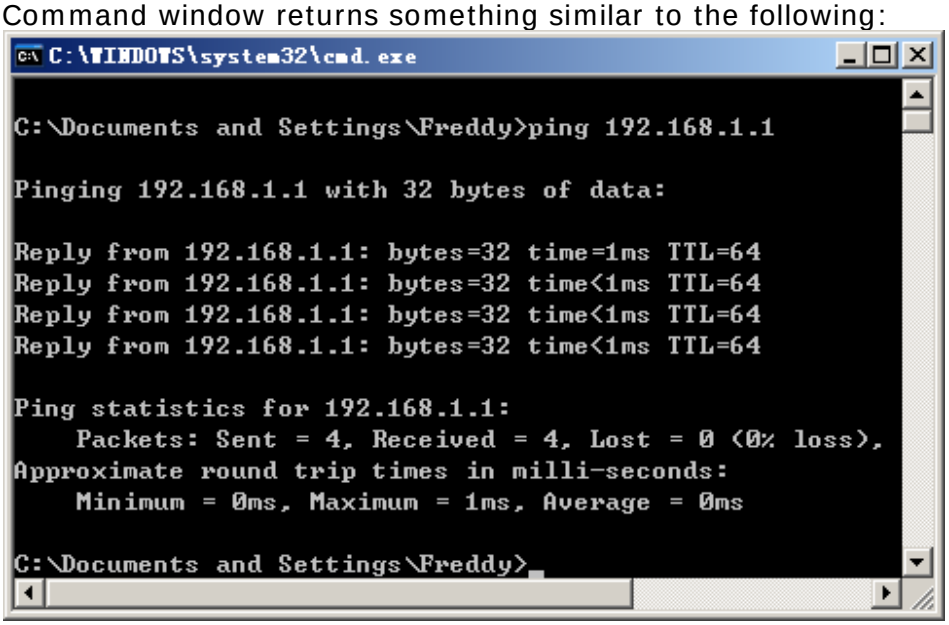

Figure 14

Then the connection between the AP and your computer has been successfully established.
If the computer fails to connect to the AP, the Command window will return the following:

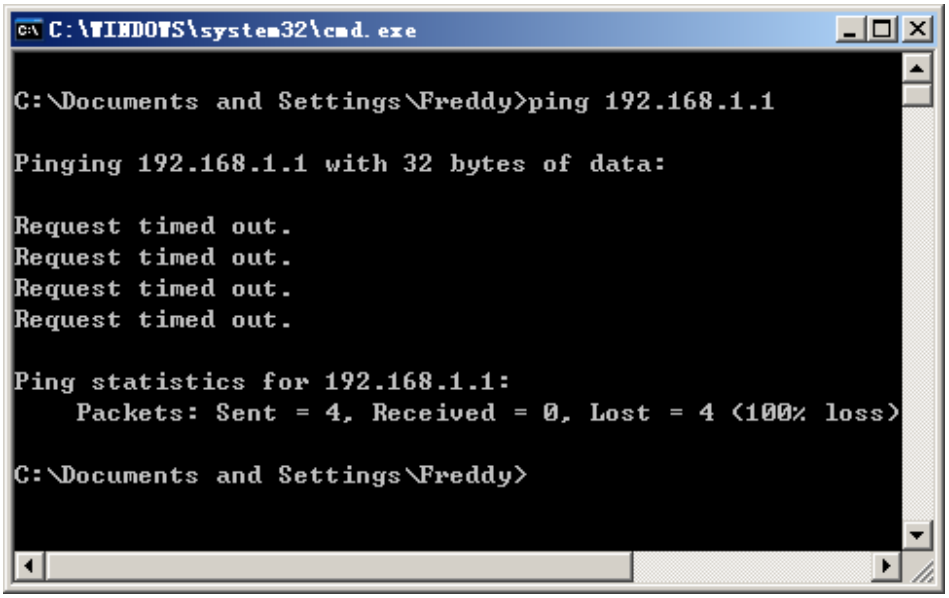

Figure 15

Verify your computer's network settings are correct and check the cable connection between the AP and the computer.

Chapter 6 Web Configuration

6.1 Logging In

In order to make the whole network operate successfully, it is necessary to configure the Wireless AP through your computer has a WEB browser installed. Please follow up the steps listed below.
Step 1: Start your Web browser and type **http://192.168.1.1** in the Address field. This address is the default private IP of your AP.

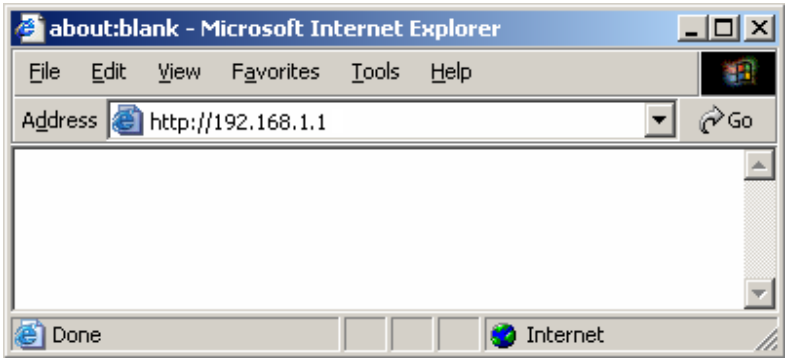

Figure 16

If the AP's LAN port has been changed with new IP address, enter the new IP address instead.

Step 2: After Pressing Enter, you will be able to see the Wireless Access Point's web-based configuration utility. From now on the Wireless Access Point acts as a Web server sending HTML pages/forms at your request. You can click the menu options at the left to start the configuration task.

Don't forget to change the Password in configuration's Authentication to ensure the security. When first configuring your AP, it is recommended that you have an Ethernet cable connected to the AP. Performing the INITIAL configuration using a wireless connection is not secure and is not recommended. After you have finished the initial configuration of the AP, your connection will be secure and you can safely use either a wired or wireless connection.

In the home page of the Wireless AP, the left navigation bar shows the main

options to configure the system. In the right navigation screen is the summary of system status for viewing the configurations. You can usually get context sensitive help by clicking on the Help link at the top right of the page.

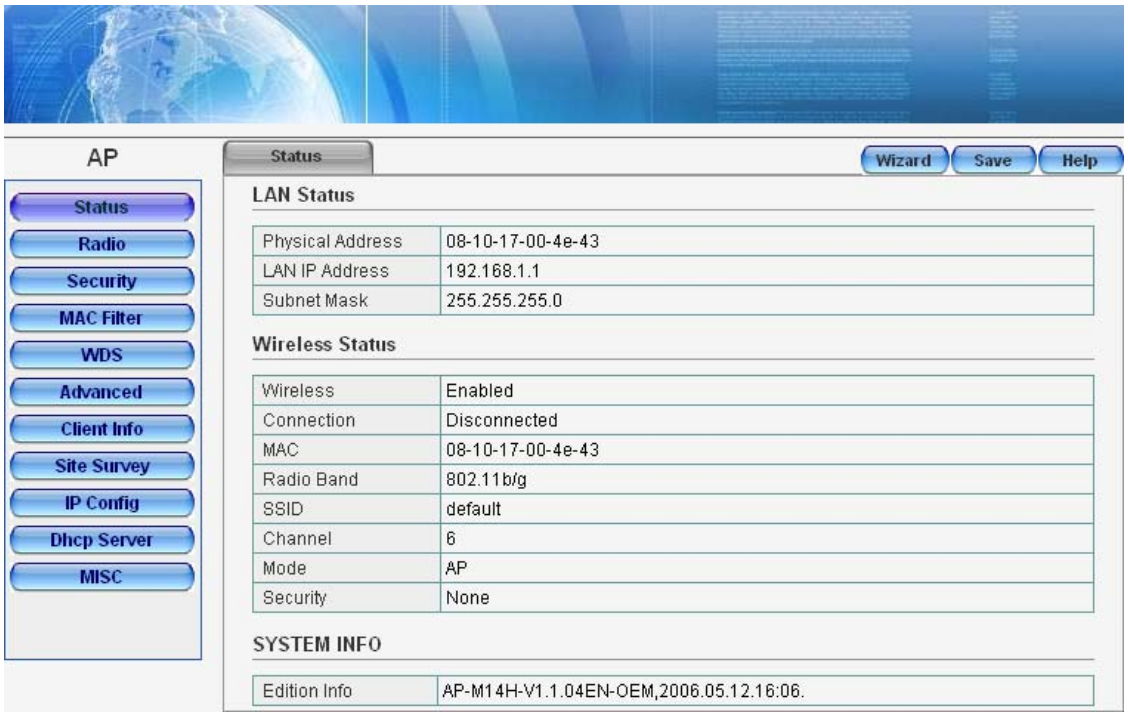

Figure 17

To apply any settings you've altered on any page, click the Save button. Otherwise you change settings would be lost after the AP reboot.

6.2 Status

This page shows most of the basic configuration parameters of the AP. It is the first page shown after login.

LAN Status

Physical Address	08-10-17-00-4e-43
LAN IP Address	192.168.1.1
Subnet Mask	255.255.255.0

Wireless Status

Wireless	Enabled
Connection	Disconnected
MAC	08-10-17-00-4e-43
Radio Band	802.11b/g
SSID	default
Channel	6
Mode	AP
Security	None

SYSTEM INFO

Edition Info	AP-M14H-V1.1.04EN-OEM,2006.05.12.16:06.

Figure 18

- LAN Status: This section shows the LAN interface parameters of the wireless AP. This includes information such as: The MAC address of LAN interface, IP/Subnet Mask, DHCP Server (whether the DHCP Server is Enables or disables, and display address pool).

LAN Status

Physical Address	00-00-00-00-00-03
LAN IP Address	192.168.1.1
Subnet Mask	255.255.255.0

Figure 19

- Wireless Status: This section shows the WLAN interface parameters of the wireless AP. This includes information such as: Wireless (whether Wireless interface status is active), Connection (whether have active wireless stations that are connecting to the AP and display number of them), The MAC address of WAN interface, Radio Band (The type of transmission protocol your wireless network uses), SSID, channel number, security.

Wireless Status

Wireless	Enabled
Connection	Disconnected
MAC	00-00-00-00-00-03
Radio Band	802.11b/g
SSID	default
Channel	6
Mode	AP
Security	None

Figure 20

- System Information: This section shows the installed version of the firmware of the Wireless AP. And company information.

SYSTEM INFO

Edition Info	AP-M14H-V1.1.04EN-OEM,2006.05.12.16:06.

Figure 21

6.3 LAN Setup

The Wireless Access Point communicates with the wired/wireless clients through its LAN port. The LAN configuration page allows you to define the private IP address settings over the LAN interface.

LAN Setup

IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	0.0.0.0
	Apply

Figure 22

- I**P Address/Subnet Mask/Gateway**: Enter the IP address, Subnet mask and Gateway for the Wireless Access Point LAN port. All local wired/wireless devices communicate with the device through this port. It is also the IP address of the Web-based Configuration Utility. By default, the IP address, Subnet mask and Gateway of the LAN port is 192.168.1.1, 255.255.255.0 and 0.0.0.0 respectively.
- Click “Apply” when you have finished the configuration above. And the wireless AP will be automatically restarted if you change the LAN IP

address.

If you change the private IP address and apply the changes, the PC from which you configure the AP will lose the communication to the AP. To reconnect, you will need to renew the IP address of the PC or change to an IP address compatible with the new LAN port IP address.

6.4 Wireless Settings

The Wireless Access Point implements Access Point capability, which connects wireless clients to a wired LAN. It allows wireless stations to access network resources and share the broadband Internet connection.

6.4.1 Basic Wireless Settings

The basic settings for wireless networking are set on this screen.

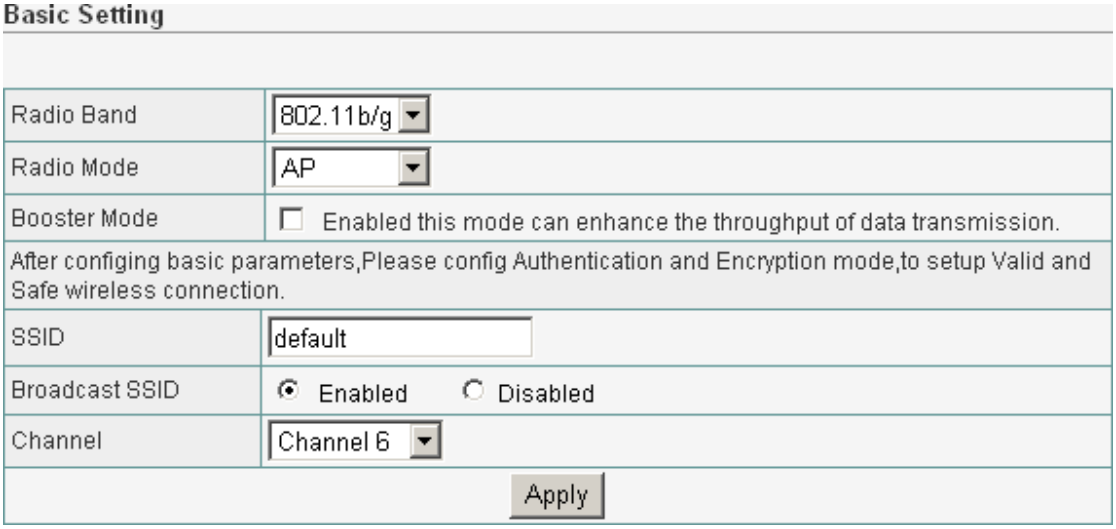

Figure 23

- **Radio Band**: The default setting is mixed mode [802.11B/G]. If you do not know or have both 11g and 11b devices in your network, then keep the default in mixed mode. From the drop-down manual, you can select 802.11G if you have only 11G card. If you have only 802.11 B card, then select 802.11B.
- **Radio Mode**: The Route has 4 modes: AP, Client, WDS, AP+WDS
- **Booster Mode**: Enabled this mode can enhance the throughput of data transmission.
- **SSID**: The SSID is the network name shared among all points in a wireless network. The SSID must be identical for all devices in the wireless network.

It is case-sensitive and must not exceed 32 characters (use any of the characters on the keyboard). Make sure this setting is the same for all points in your wireless network. For added security, you should change the default SSID (default) to a unique name.

- **Channel**: Select the channel used for wireless communication. There are 11 overlapping channels. Channels 1, 6 and 11are non-overlapping. The default is channel 6.
- Click “Apply” when you have finished the configuration above.
- Please setup authentication and Encryption mode to setup Valid and Safe wireless connection after setting Basic Wireless parameters.

6.4.2 Wireless Security

This wireless AP provides complete wireless LAN security functions; include WEP, WPA with pre-shared key and WPA2 with pre-shared key. With these security functions, you can prevent your wireless LAN from illegal access. Please make sure your wireless stations use the same security function.

6.4.2.1 None

Transmit data without encryption and authentication. This is the default option.

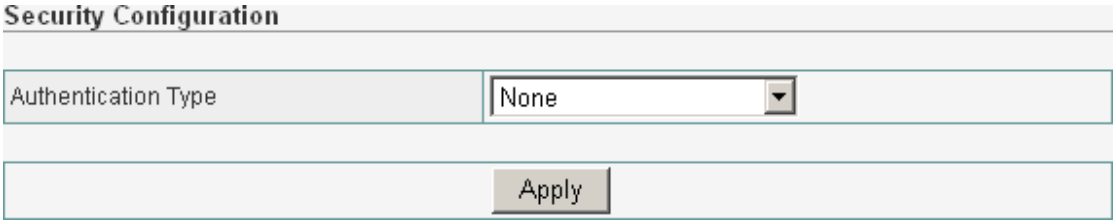

Figure 24

- Click “Apply” when you have selected the “None”.

If you select none, any data will be transmitted without Encryption and any station can access the wireless AP.

6.4.2.2 WEP

WEP (Wired Equivalent Privacy) is an encryption method used to protect your wireless data communications. WEP uses a combination of 64-bit or 128-bit keys to provide access control to your network and encryption security for every data transmission.

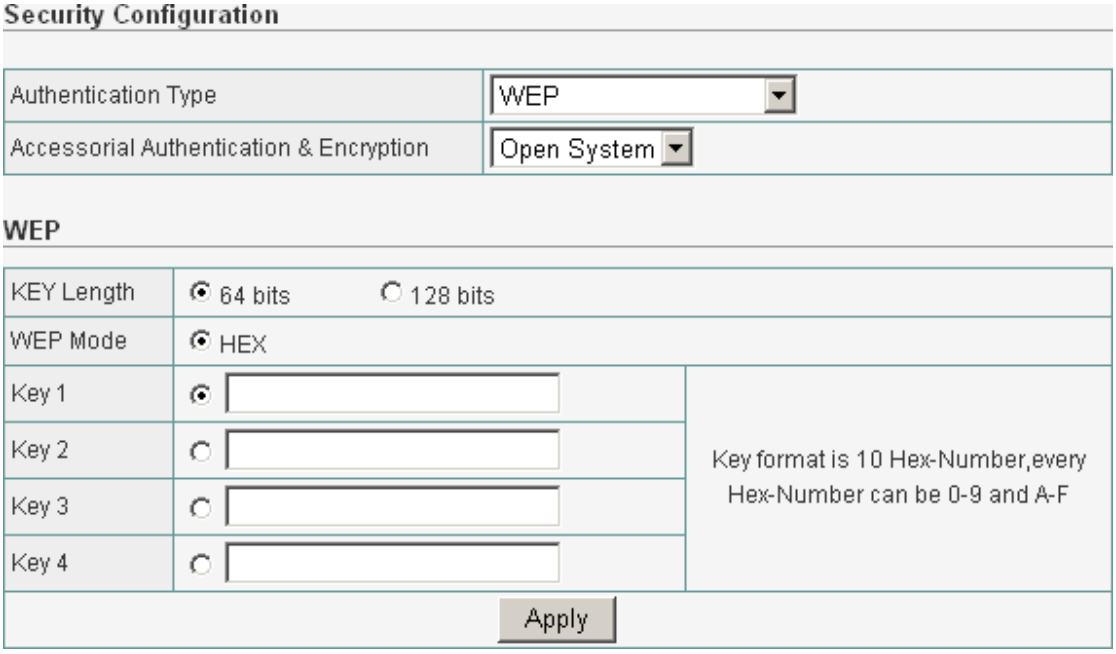

Figure 25

- **Open-System**: No authentication is used. But uses WEP encrypt data packets.
- **Share-keys**: Authentication is a process in which the AP validates whether the wireless client is qualified to access the AP's service. You must enable WEP function and define your WEP keys. The keys are used both to authenticate wireless clients and encrypt outgoing data.
- **Auto-Select**: It can detect Wireless Client authentication information, and automatically choose Open-System or Share-Keys mode to communicate with client. When use Auto-Select mode, you must setup WEP keys which are used by authentication system.
- **WEP Length**: Selects 64-bit or 128-bit WEP encryption. Be sure that the key length setting in the AP shall be the same as in wireless clients, or the communication will not work.
- **WEP Mode**: You may select to select ASCII Characters or Hexadecimal Digits (in the "A-F", "a-f" and "0-9" range) to be the WEP Key.
- **Default Key**: The Key selected here must match the key selected in the client. For example, if you select Key 1 here you have to select Key 1 for the client. The default is 1.
- **Key 1~4**: Enter one to four WEP keys in either ASCII or Hexadecimal format. You can use 64 bits or 128 bits as the encryption algorithm.

Enter one to four WEP keys in either ASCII or Hexadecimal format. You can use 64 bits or 128 bits as the encryption algorithm.
Note that when using Hexadecimal format, only digits 0-9 and letters A-F, a-f are allowed. Valid key length for each encryption type is as below:

Key Length	HEX Format	ASCII Format
64 Bit	10 hexadecimal digits	5 ASCII characters
128 Bit	26 hexadecimal digits	13 ASCII characters

- Click “Apply” at the bottom of the screen to save the above configurations.

6.4.2.3 WPA Personal

Wi-Fi Protected Access (WPA) is an advanced security standard. You can use a pre-shared key to authenticate wireless stations and encrypt data during communication. It uses TKIP and AES to change the encryption key frequently. This can improve security very much.

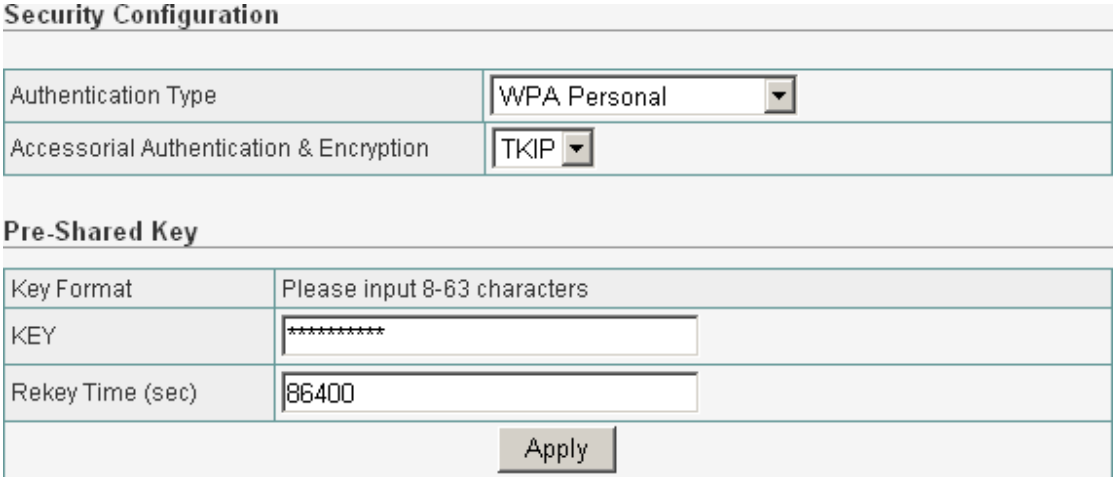

Figure 26

- **TKIP**: Temporal Key Integrity Protocol (TKIP) utilizes a stronger encryption algorithm and includes Message Integrity Code (MIC) to provide protection against hackers.
- **AES**: Advanced Encryption System (AES) utilizes a symmetric 128-Bit block data encryption. It’s the strongest encryption currently available.
- **WPA Pass Phrase**: The WPA Pass Phrase is used to authenticate and encrypt data transmitted in the wireless network. The input format is in character style and key size should be in the range between 8 and 63 characters.
- **Clear**: If you want to retype again. Just click "Clear" and "WPA Pass Phrase" fields will be cleared.
- **Rekey Time (sec)**: Specifies the timer the WPA key must changes. The change is done automatically between the server and the client. The default value is 86400.
- Click “Apply” at the bottom of the screen to save the above configurations.

6.4.2.4 WPA2 Personal

The WPA2 is a stronger version of WPA. You can use a pre-shared key to authenticate wireless stations and encrypt data during communication. It uses AES to change the encryption key frequently. This can improve security very much.

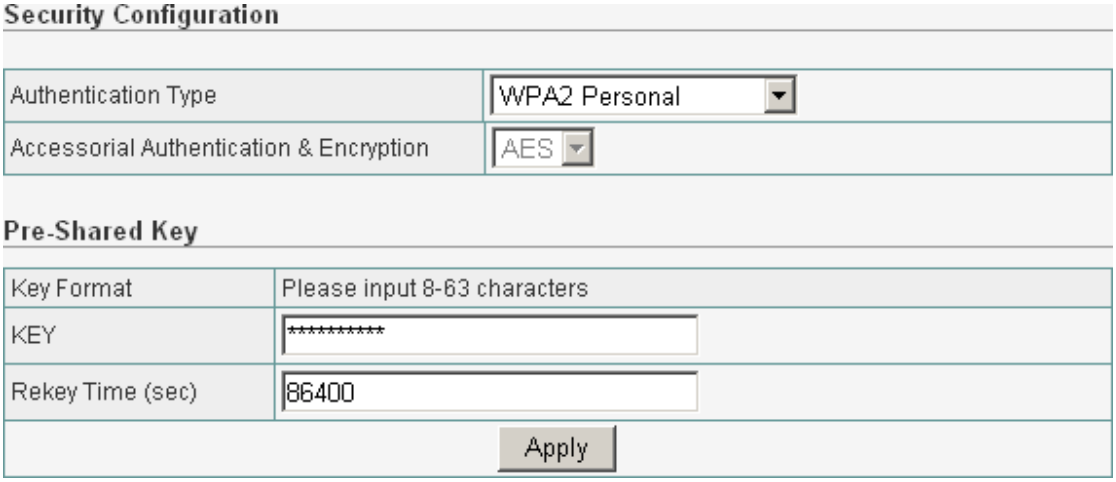

Figure 27

- **AES**: Advanced Encryption System (AES) utilizes a symmetric 128-Bit block data encryption. It's the strongest encryption currently available.
- **WPA Pass Phrase**: The WPA Pass Phrase is used to authenticate and encrypt data transmitted in the wireless network. The input format is in character style and key size should be in the range between 8 and 63 characters.
- **Clear**: If you want to retype again. Just click "Clear" and "WPA Pass Phrase" fields will be cleared.
- **Rekey Time (sec)**: Specifies the timer the WPA key must changes. The change is done automatically between the server and the client. The default value is 86400.
- Click "Apply" at the bottom of the screen to save the above configurations.

6.4.2.5 WPA&WPA2 Personal

Auto-Select WPA/WPA2 can detect Wireless Client authentication information, and automatically choose WPA or WPA2 mode to communicate with client. Operation is the same as WPA or WPA2.

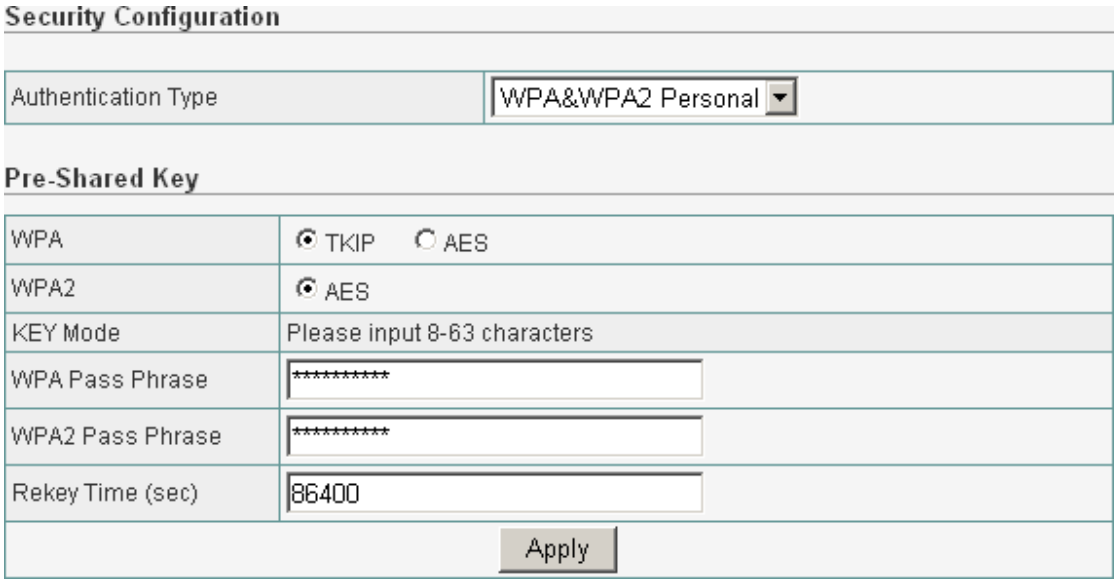

Figure 28

- Click “Apply” at the bottom of the screen to save the above configurations.

6.4.3 Wireless MAC Filter

This Wireless AP has the capability to control the wireless client access based on the MAC address of the wireless client. The user has the flexibility to customize your own control policy based on these options:

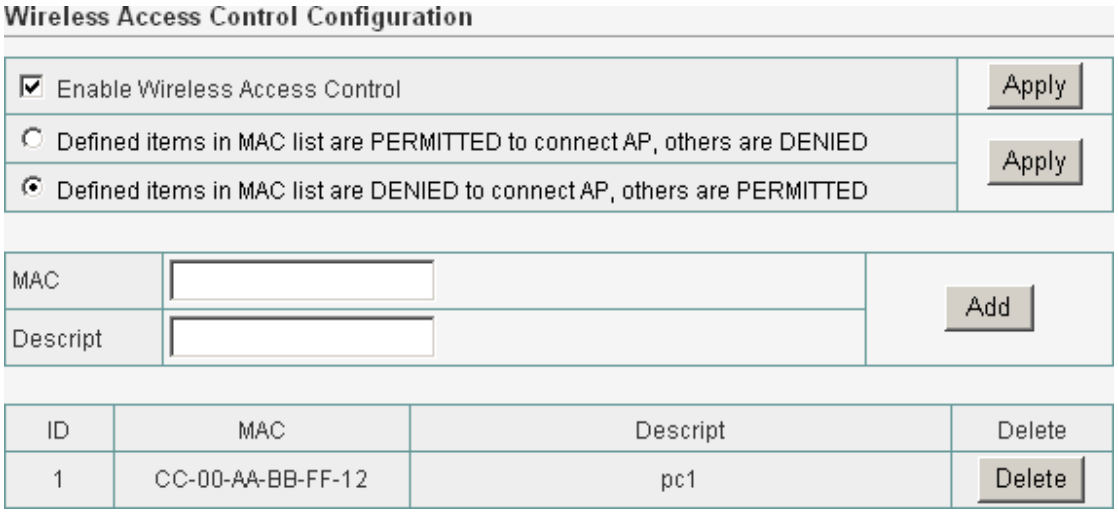

Figure 29

- **Enable Wireless Access Control**: To enable Wireless MAC Filter, click the check box. The default is “disable”.

- You can choose a default operation for your factual security or management consideration:
  Defined items in MAC list are PERMIT to connect AP, others are DENIED.
  Defined items in MAC list are DENIED to connect AP, others are PERMIT.
  Click “Apply” when you have selected,
- **MAC**: Enter the MAC Address of a station.
- **Description**: Enter the Comment of station.
- Click "Add”. Then this wireless station will be added into the” Current Access Control List" below.
- If you want to remove some MAC address from the "Current Access Control List ", select the MAC addresses you want to remove in the list and then click "Delete ".

6.4.4 WDS Set

You can set the wireless Bridge MAC here. The bridge uses to connect between more than 2 APs.

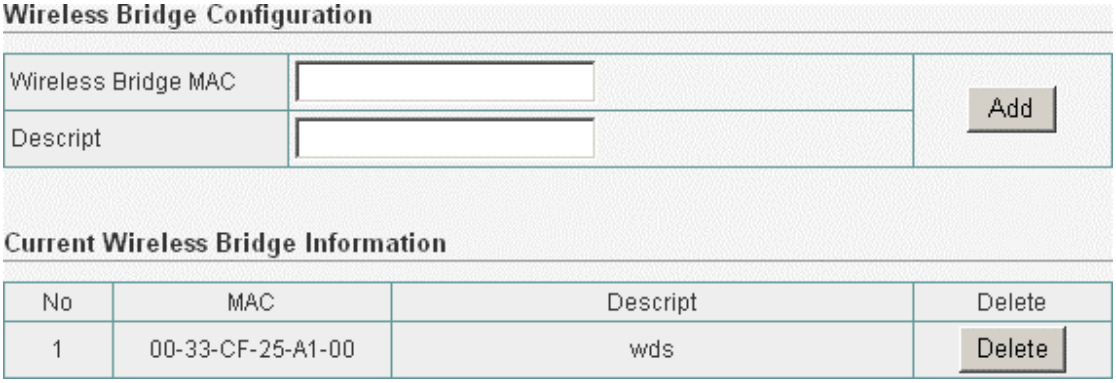

Figure 30

6.4.5 Advanced Wireless Settings

This tab is used to set up the AP’s advanced wireless functions. These settings should only be adjusted by an expert administrator as incorrect settings can reduce wireless performance.

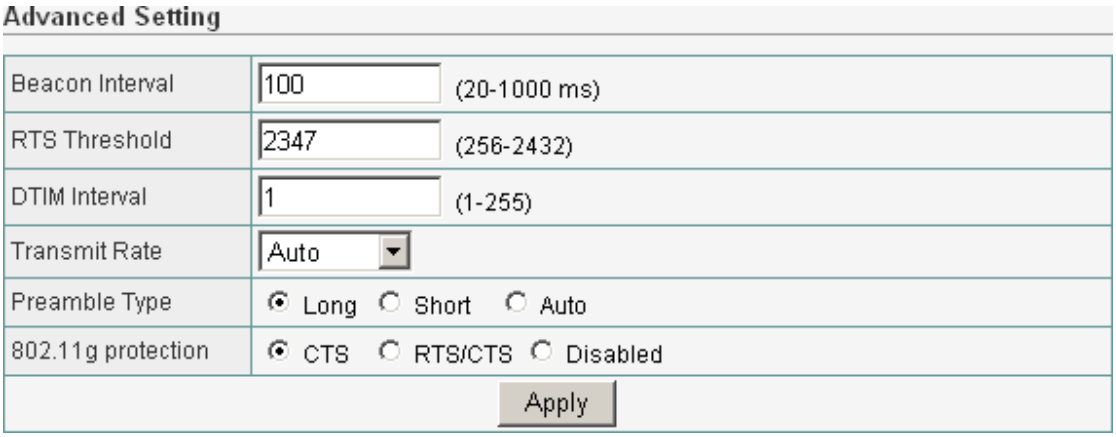

Figure 31

- **Beacon Interval**: This value indicates the frequency interval of the beacon. A beacon is a packet broadcast by the wireless AP to keep the network synchronized. A beacon includes the wireless LAN service area, a time stamp, Delivery Traffic Indicator Maps, and the Traffic Indicator Message (TIM). The default value is 100.
- **RTS Threshold**: This value should remain at its default setting of 2,347. Should you encounter inconsistent data flow, only minor modifications are recommended.
- **DTIM Interval**: This value indicates how often the Access Point sends out a Delivery Traffic Indication Message (DTIM). Lower settings result in more efficient networking, while preventing your PC from dropping into power saving sleep mode. Higher settings allow your PC to enter sleep mode, thus saving power, but interferes with wireless transmissions.
- **Transmit Rate**: The “Transmit Rate “is the data packets limitation this wireless AP can transmit. The wireless AP will use the highest possible selected transmission rate to transmit the data packets. The default value is “Auto”.
- **Preamble Type**: It defines the length of CRC block in the frames during the wireless Communication. "Short Preamble" is suitable for heavy traffic wireless network. "Long Preamble" provides much communication reliability

6.4.6 Client Info

You can see the status of all active wireless stations that are connecting to the wireless AP.

Association Table

No	MAC Address	Status	Band	Rate	Signal Quality	RSSI	Power Save
1	00-50-43-00-01-1E	Associated	b/g	1M	0	0	No

Refresh

Figure 32

- To see the latest information, click Refresh button.

6.4.7 DHCP Server

The DHCP server can be ON or OFF in this screen. If you choose to set this device as a DHCP server, then it will assign IP addresses to its clients. The DHCP pool range is also changeable.

DHCP Setup

☐ DHCP Server on	
IP Pool	192.168.1. 2 192.168.1. 102
Lease Time	0 minutes (0 means 1 day)
Gateway	192.168.1.1
Static DNS1	
Static DNS2	

Apply

Figure 33

Set the ip address you want to reserve here.

IP Address Reservation

Descript	MAC1
MAC Address	aa-cc-bb-dd-ee-aa
IP Address	192.168.1. 34

Add

ID	Descript	IP Address	MAC Address	Delete
1	MAC1	192.168.1.34	aa-cc-bb-dd-ee-aa	delete

Figure 33

You can View all the pc which connect to the Wireless Router by DHCP here.

DHCP Client Info

ID	IP Address	MAC Address	Status
1	192.168.1.34	aa-cc-bb-dd-ee-aa	Static

Figure 34

6.4.8 Site Survey

You can see the status of all active wireless stations that are connecting to the wireless AP.

Current Wireless Network

	SSID	BSSID	Channel	Type	Band	Encryption	Signal
	My	00-e0-4c-81-86-86	11	AP	802.11g	NONE	2
	2	08-10-17-7e-28-ca	11	AP	802.11g	NONE	1
	1	08-10-17-dc-b6-c3	11	AP	802.11g	NONE	0

Refresh Scan Join

Figure 35

- To see the latest information, click Refresh button.

6.5 MISC

6.5.1 Login ID & Password Setup

In factory setting, the default password is “guest”, and that for user is also password. You can change the default password to ensure that someone cannot adjust your settings without your permission. Every time you change your password, please record the password and keep it at a safe place.

Login ID & Password Setup

Login name is "guest"		
New Password		Apply
Confirm New Password		

Figure 36

- New Password. Enter your new password.
- Confirmed New Password: Enter your new password again for verification purposes.

- Click “Apply” at the bottom of the screen to change the password.

If you forget your password, you’ll have to reset the AP to the factory default (Password is “guest”) with the reset button (see AP’s front panel).

6.5.2 Restore Default / Restart System

Figure 37

Restore Default / Restart System

Restore the AP’s configuration to its factory default settings. Restore Factory Defaults. To clear all of the AP’s settings and reset them to its factory defaults.

- Click the Restore Default button. AP will restart automatically.

Restart System

Click "Restart System" button to reboot AP.

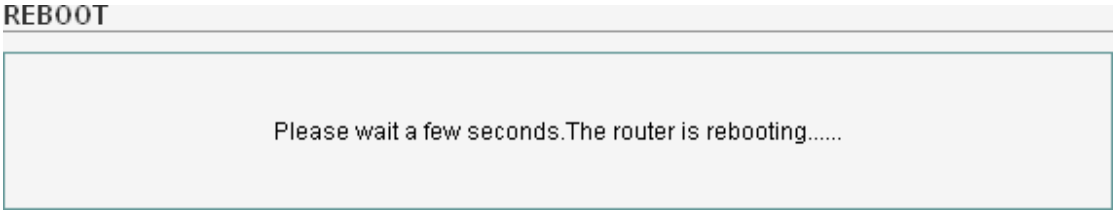

Figure 38

6.5.3 Firmware Upgrade

Upgrade the Broadband AP’s system firmware. To upgrade the firmware of your Broadband AP, you need to download the firmware file to your local hard disk, and enter that file name and path in the appropriate field on this page. You can also use the Browse button to find the firmware file on your PC.

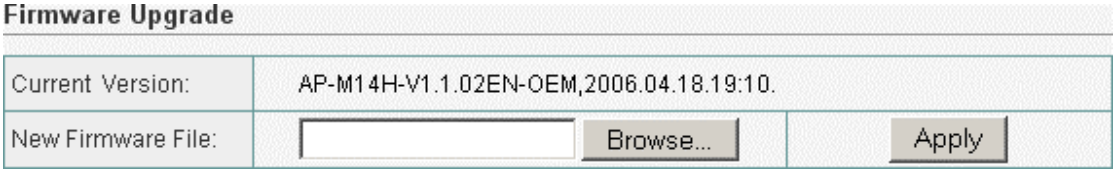

Figure 39

Appendix Ⅰ: Troubleshooting

1. I cannot access the Web-based Configuration Utility from the Ethernet computer used to configure the AP.

- Check that the LAN LED is on. If the LED is not on, verify that the cable for the LAN connection is firmly connected.
- Check whether the computer resides on the same subnet with the AP's LAN IP address.
- If the computer acts as a DHCP client, check whether the computer has been assigned an IP address from the DHCP server. If not, you will need to renew the IP address.
- Use the ping command to ping the AP's LAN IP address to verify the connection.
- Make sure your browser is not configured to use a proxy server.
- Check that the IP address you entered is correct. If the AP's LAN IP address has been changed, you should enter the reassigned IP address instead.

2. I forget Password (Reset the AP without Login)

- Reboot the AP.
- Press and hold the default button wait for a few seconds until the CPU LED indicator stays green.
- After the above those steps, the manufacture's parameters will be restored in the AP. The default password is "guest".

3. My wireless client cannot communicate with another Ethernet computer.

- Ensure the wireless adapter functions properly. You may open the Device Manager in Windows to see if the adapter is properly installed.
- Make sure the wireless client uses the same SSID and security settings (if enabled) as the Wireless Access Point.
- Ensure that the wireless adapter's TCP/IP settings are correct as required by your network administrator.
- If you are using a 802.11b wireless adapter, and check that the 802.11G Mode item in Wireless Basic Setting page, is not configured to use 802.11G Performance.
- Use the ping command to verify that the wireless client is able to communicate with the AP's LAN port and with the remote computer. If the wireless client can successfully ping the AP' s LAN port but fails to ping the

remote computer, then verify the TCP/IP settings of the remote computer.

Appendix Ⅱ: Features

Standards:

- IEEE 802.11g
- IEEE 802.11b
- IEEE 802.3
- IEEE 802.3u

Data Rates:

- 54Mbps
- 48Mbps
- 36Mbps
- 24Mbps
- 18Mbps
- 12Mbps
- 11Mbps
- 9Mbps
- 6Mbps
- 5.5Mbps
- 2Mbps
- 1Mbps

Security:

- 64/128bit WEP
- WPA
- WPA2
- Wireless MAC Filter

Modulation Technology:

Orthogonal Frequency Division Multiplexing (OFDM)

Receiver Sensitivity:

- 54Mbps OFDM, 10% PER, -68dBm
- 48Mbps OFDM, 10% PER, -69dBm
- 36Mbps OFDM, 10% PER, -75dBm
- 24Mbps OFDM, 10% PER, -79dBm
- 18Mbps OFDM, 10% PER, -82dBm
- 12Mbps OFDM, 10% PER, -84dBm
- 11Mbps CCK, 8% PER, -82dBm
- 9Mbps OFDM, 10% PER, -87dBm
- 6Mbps OFDM, 10% PER, -88dBm
- 5.5Mbps CCK, 8% PER, -85dBm
- 2Mbps QPSK, 8% PER, -86dBm

- 1Mbps BPSK, 8% PER, -89dBm

Device Management:
- Web-based Internet Explorer V6 or later; Netscape Navigator V6 or later.
- DHCP Server and Client

Wireless Frequency Range
2.4GHz to 2.462GHz

Wireless Operating Range
- Indoors- up to 328ft (100M)
- Outdoors- up to 1312ft. (400M)

- *Environmental factors may affect actual range*

Wireless Transmit Power
15dBm±2dBm

External Antenna Type

SMA

Operating Temperature
0℃~55℃

Humidity:

95% maximum (non-condensing)

LEDs
- Power
- CPU
- LAN link
- LAN 100M
- LAN Rx/Tx
- WLAN Rx/Tx

Dimensions
155(L)*99(W)*29(H)

Weight
200g