XG-580 PLUS

User's Manual

FW 4.1.8.0

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FCC Information

This equipment has been tested and found to comply with the limits for Class digital devices pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication.

Operation of this equipment in residential area is likely to cause harmful interference in which case the user will be required to correct the interference at this own expense.

The user should not modify or change this equipment without written approval from company name. Modification could void authority to use this equipment.

For the safety reason, people should not work in a situation which RF Exposure limits be exceeded. To prevent the situation happening, people who work with the antenna should be aware of the following rules:

Install the antenna in a location where a distance of 20cm from the antenna may be maintained.

While installing the antenna in the location, please do not turn on the power of wireless card.

While the device is working, please do not contact the antenna.

About the manual

The purpose to use this manual is for install the AP. This manual is including disposing course and method and helping the customer to solve the unpredictable problem.

XG-580PLUS
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1. XG-580PLUS Introduction

The XG-580PLUS is quite a handy device to have around, with dedicated one LAN/WAN port, it can be communicate with other mobile devices enabled for 802.11g standard-base Wireless LAN connectivity. Let you quickly network multiple PCs and notebooks without laying new cables, and gives users the freedom to roam throughout the workplace and stay connected to corporate resources, e-mail and Internet access.

Appearance of Product

Features and Benefits

➢ **High Speed & Backward Compatible**
The high-speed wireless device simultaneously supports both IEEE802.11b/802.11g 54 Mbps wireless networks.

➢ **AP operating mode**
Three different functions are integrated as well: Access Point, Station, AP with repeating.

➢ **Multiple Client Support**
Create a big wireless network to connect more hubs or switches.

➢ **WEB Interface**
It is easy to configure the device or upgrade the Firmware via WEB browser.

➢ **Enhanced Security**
Provides the highest available level of WEP /WAP-PSK as well as MAC Address Control to increase security.

Representative Application

The XG-580PLUS offers a fast, reliable, high-speed, and high security solution for wireless clients access to the network in applications like these:

1. Remote access to corporate network information
E-mail, file transfer and terminal emulation.

2. Difficult-to-wire environments
Historical or old buildings, asbestos installations, and open area where wiring is difficult to deploy.

3. Frequently changing environments
Retailers, manufacturers and those who frequently rearrange the workplace and change location.

4. Temporary LANs for special projects or peak time
♦ Trade shows, exhibitions and construction sites where a temporary network will be practical.
♦ Retailers, airline and shipping companies need additional workstations during peak period.
♦ Auditors requiring workgroups at customer sites.

5. Access to database for mobile workers
Doctors, nurses, retailers, accessing their database while being mobile in the hospital, retail store or office campus.

6. SOHO (Small Office and Home Office) users
SOHO users need easy and quick installation of a small computer network.

7. High security connection
The secure wireless network can be installed quickly and provide flexibility.

System Requirement

Installation of the AP requires:
◆ A PC of install the WEB browsers.
◆ One 5V, 2A power module, in order to power supply of the AP.
◆ A 10/100 Base-T (UTP) Ethernet cable drop.

2. Hardware Installation

➢ **Product Kit**
➢ **Hardware Installation**
➢ **Initialize**

Product Kit

Before installation, make sure that you the following items:

XG-580PLUS*1
Product CD*1
Power Adapter*1

Use Manual*1

If any of the above items are not included or damaged, please contact your local dealer for support.

Mechanical Description

Connect the adapter to your Ethernet-enabled device
A. Combine the antenna with the product to wirelessly connect to the 802.11g networks.
B. Connect one end of an Ethernet cable to the product and connect the other end to the Ethernet LAN port located on the device (e.g., a gaming console, laptop,desktop computer, or network printer).
C. Connect the power adapter to product.
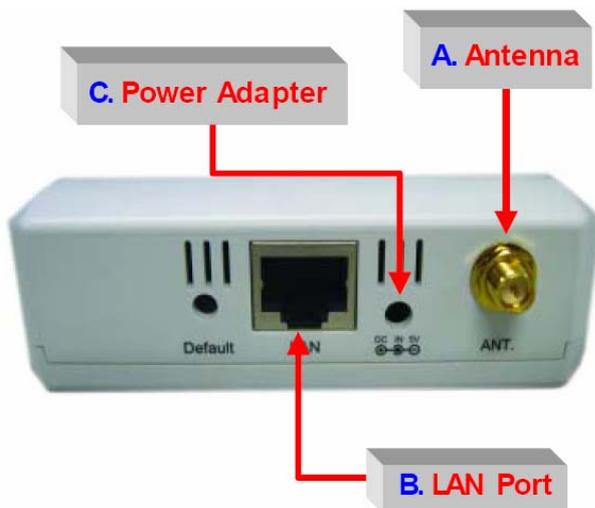
The following table provides an overview of each LED activity:

LED Definition	Activity	Description
PWR	Green	Power enabled
WLAN	Green	**Off:** No Wireless LAN traffic activity **On:** Wireless LAN traffic activity.
LAN	Green	**Off:** No Ethernet traffic activity **Flashing:** Wired LAN traffic activity **On:** Connect to the Ethernet.

Default
Press the **"default"** button for about 3 seconds until all LEDs go off. This action will restore to the factory default settings of the 3-in-1 and enable you to configure the product via web again.

Besides, this is also used when you forget the password.

Hardware Installation

Take the following steps to set up your Access Point.

▌ Site Selection

Before installation, determine the Access Point location. Proper placement of the Access Point is critical to ensure optimum radio range and performance. You may use the Site Survey and Access Points Browser utility (The utilities included with the wireless PC Card) to choose a proper placement for your Access Point. Typically, the best location to place your Access Point at your site is the center of your wireless coverage area. Try to place your mobile stations within the line of sight. Obstructions may impede performance of the Access Point.

▌ Access Point Placement

You can place the Access Point on a flat surface such as a table or cabinet, or mount the unit on a vertical surface like a wall. The integrated antenna of your Access Point performs best in an open environment with as few obstructions as possible. In most situations placing the Access Point as pictured below will provide satisfactory performance results.

▌ Connect the Ethernet Cable

The 54Mbps Wireless LAN Access Point supports 10/100M Ethernet connection.Attach your UTP Ethernet cable to the RJ-45 connector on the Access Point. Then connect the other end of the RJ-45 cable to a hub or a station.

▌ Power On

Connect the power adapter to the power socket. Your Access Point then will automatically enter the self-test phase. During the self-test, the LAN will flash. Finally,the PWR LED will light permanently as the Access Point enters normal operation.

Initialize

Have initial value , network of bridge whether which is short of province parameter set up , is it install after finishing is it can make working to it to supply powering in hardware to need only.

⛔	Warning：We cannot assume the responsibility for the damage from using with the other power adapter supplier.

3. Configuring XG-580PLUS

➢ **Using the Web Management**

Using the Web Management

The built-in Web Management provides you with a user-friendly graphical user interface to manage the AP. The AP with an assigned IP address (e.g. http://192.168.0.2) will allow you via web browser (e.g. Netscape Navigator 3.0 ~ 4.5 or MS Internet Explorer 4.0) to monitor and configure.

Run Web explorer.

Enter the IP address of the AP in the Address field. The default IP Address is 192.168.0.2. You will have access to Web Pages of the AP.
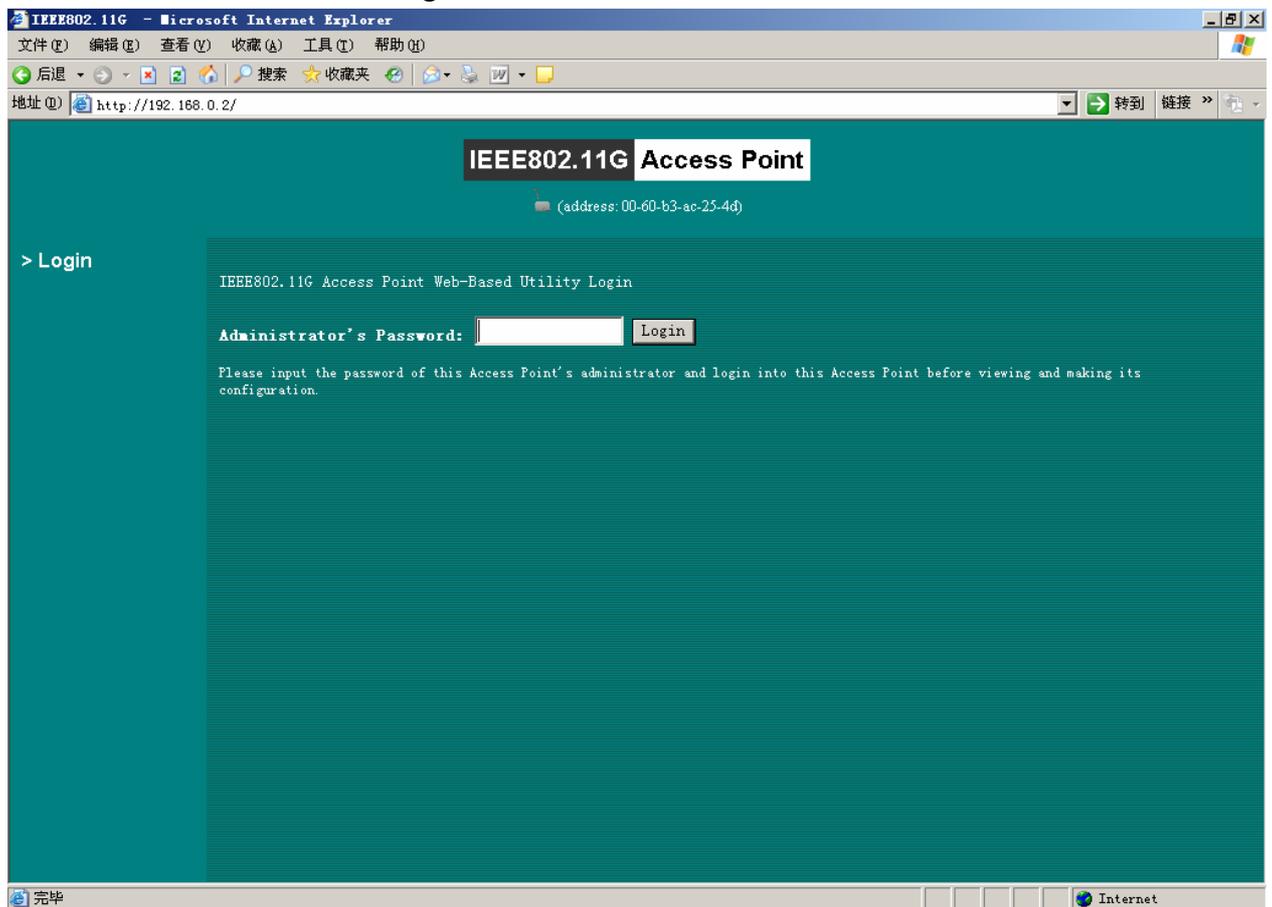
Enter the password to login to the AP. The default password is default. The main page will show up.
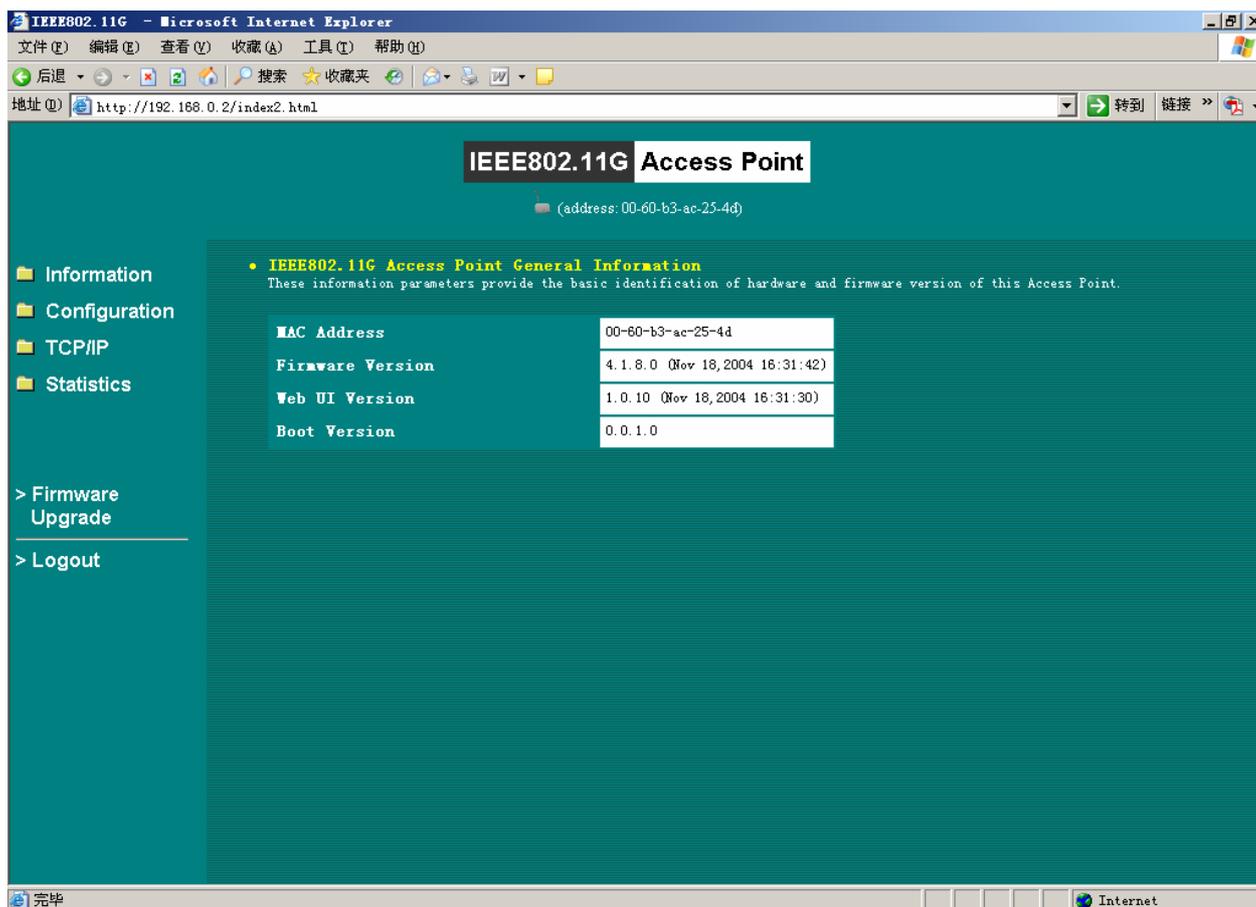
The AP main page contains four items.

➤ **Information:**

◇ **General:** This item displays the general information of the AP such as the MAC address and Firmware Version.
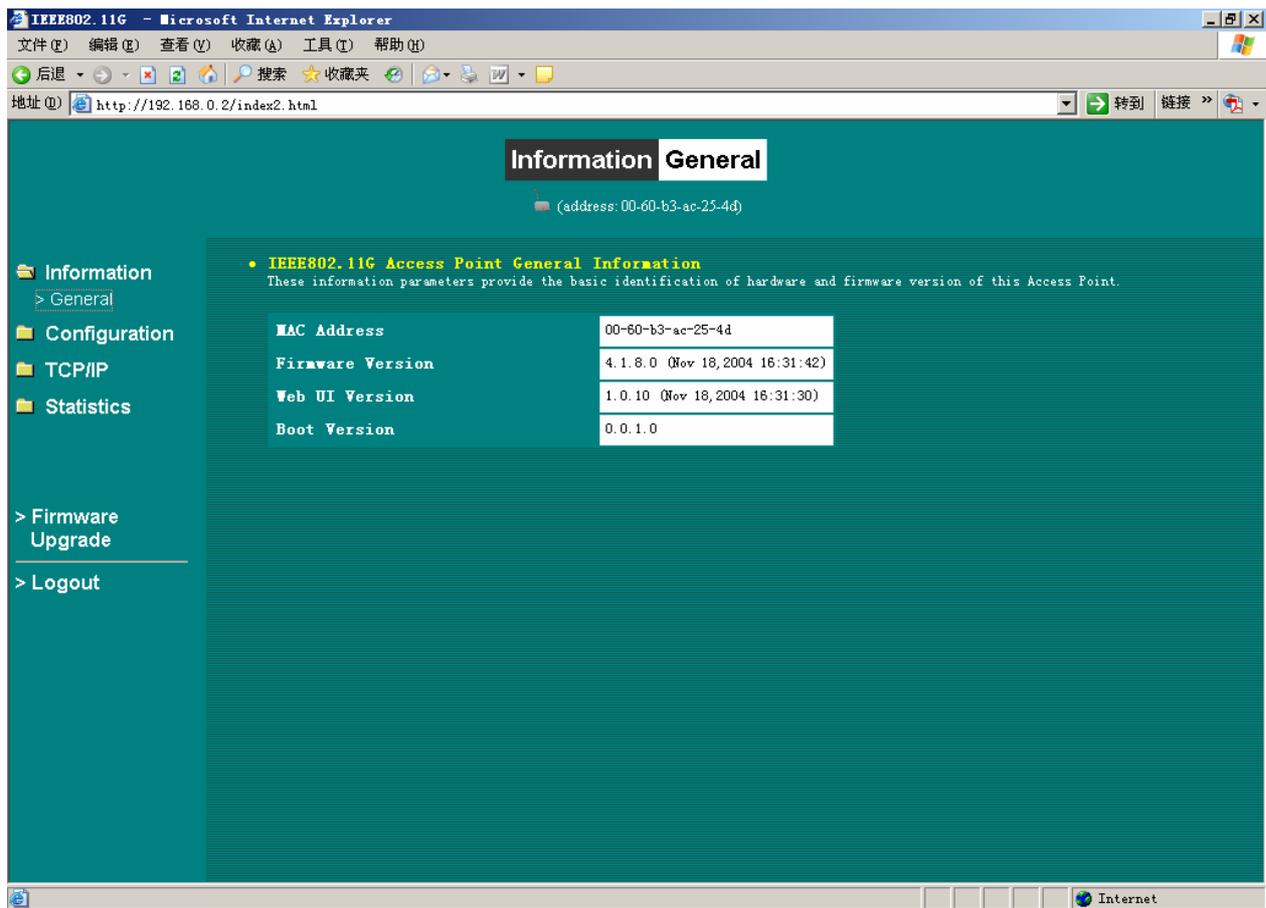
> ➢ **Configuration:**
> ✧ **General:** You may make the settings on the AP such as Access Point Name, Radio mode, ESSID, channel and password etc.
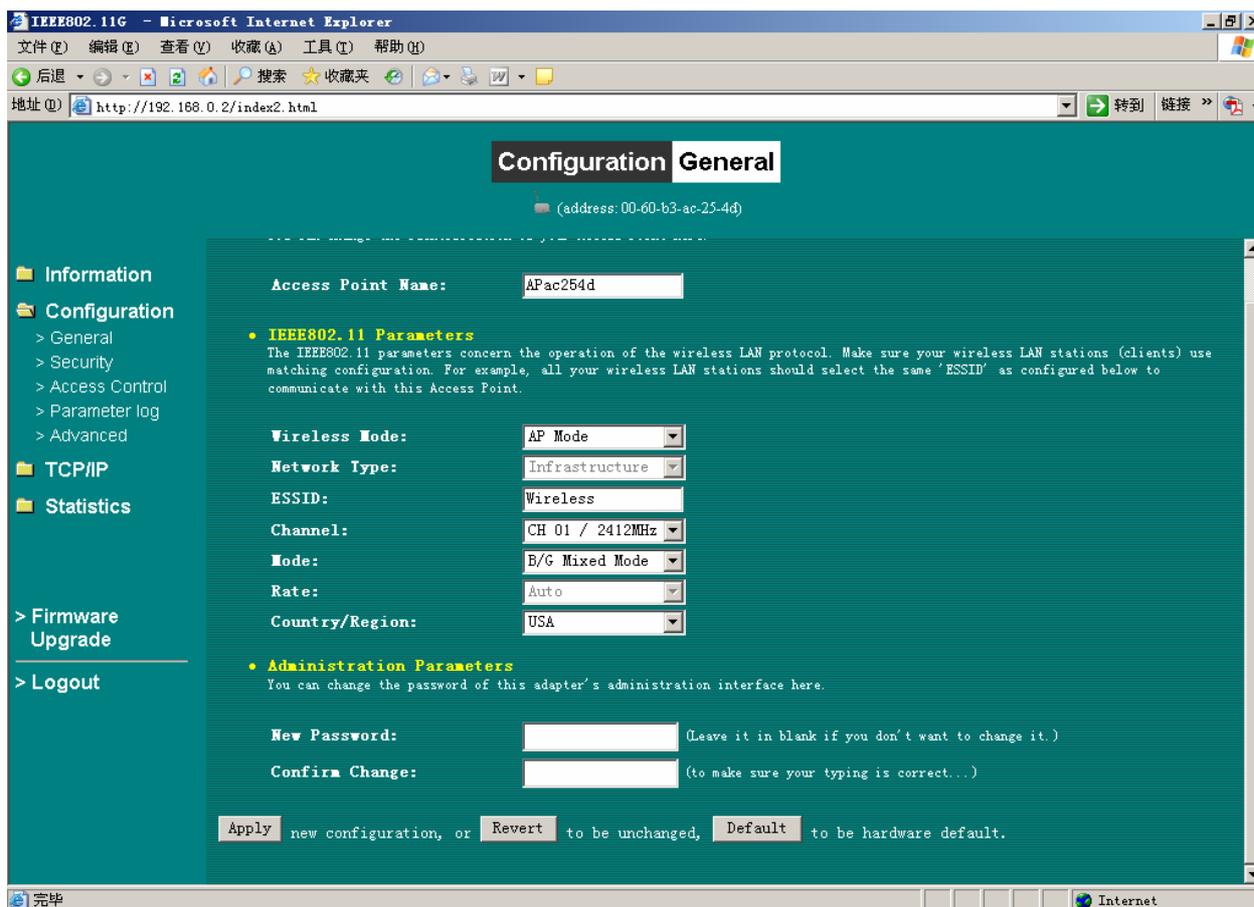
AP Name: In this field, you may enter any name. This will enable you to manage your AP more easily if you have multiple Access Points on the network. Besides, Access Point Name can be used to prevent you from forgetting an IP Address and fail to access the website. Try to type the nickname you like to identify the website, then press the button of **"Apply"** to reboot. Whenever you want to get back to the website again, just type the name you login.

Wireless Mode: Select the work mode.

   AP Mode: The system can be configured to work as a wireless network access point. Note that the AP acts only as a layer 2 bridge and does not act as a DHCP server. In other words, it does not supply dynamic IP addresses and instead relies on the network to supply them.

   Station Mode: When configuring as a station mode, the device is now acting as a wireless client. The product will associate to an AP within its range in infrastructure mode, or join with another 5-in-1 device in Client mode in an ad-hoc network.

   AP with repeating: In this mode, you can extend the range of a wireless network. Wireless clients can associate with the repeater to communicate with each client on your network. Note that all the Access Points' IP address must be set in the same network and make sure that Mode, SSID, Channel and encryption settings are set the same for all of your AP with repeating(s).

Network Type: There are 2 network types for the wireless station adapter to operate. If you need to access company network or Internet via Access Point, select "**Infrastructure**". To set up a group of wireless stations for files and printer sharing, select "**Ad-Hoc**" (without Access Point). For **Ad-Hoc** operation, the *same ESSID* is required to set for the wireless stations.

ESSID: The ESSID is a unique ID used by Access Points and Stations to identify a wireless LAN. Wireless clients associating to any Access Point must have the same ESSID. The default ESSID is ANY. The ESSID can have up to 32 characters.

Channel: Select a clear and available channel as an operational channel for your wireless station adapter when it performs as Ad-Hoc mode.

Mode: There are three different wireless modes to operate, "B Only Mode", "G Only Mode", and "B/G Mixed Mode". In B/G Mixed Mode, the wireless station adapter is compatible with a mix of both 802.11g and 802.11b clients. You will see that the factory-set default "B/G Mixed Mod" will prove the most efficient. B Only Mode is compatible with 802.11b clients only. This mode can be used only if you do not allow any 802.11g clients to join a network. G Only Mode is compatible with 802.11g clients only. This mode can be used only if you do not allow any 802.11b clients to access to the network. To switch the mode, select the desired mode form the pull-down menu next to "**Mode**".

Rate: The wireless station adapter provides various data rate options for you to choose. Data rates options include Auto, 1, 2, 5.5, 11, 6, 9, 12, 18, 24, 36, 48 and 54. The default setting is Auto.

Country/Region: Allows you to select country domain in case there is any chances that you would use wireless network in other countries. There are a total of 11 countries for you to select. They are Africa, Asia, Australia, Canada, Europe, France, Israel, Japan, Mexico, South America, and USA. Note that if your AP and station adapter are in different standards, please use the **"Country/Region"** item to switch the standards of the station adapter (For example, when set to client mode, if your Access Point is America standard but your station adapter is Japanese standard, you can pull down the **"Country/Region"** option to switch your station adapter from Japanese standard to American standard.).

Password: You may change the default password by entering the new password.

⚠	Note：Click **"Apply"** if you have made any changes.

✧ **Security**

WEB Mode: This wireless adapter allows you to create up to 4 data encryption keys to secure your data from being eavesdropping by unauthorized wireless user. To enable the encryption, all devices on the network must share the same WEP key.

Disable: Allows the wireless station adapter to communicate with the Access Point without any data encryption.

WEP40: Requires the wireless station adapter to use data encryption with 40-bit algorithm when communicating with the Access Point.

WEP128: Allows the wireless station adapter to communicate with the Access Point with data 128-bit encryption algorithm.

WPA-PSK: Allows the wireless station adapter to communicate with the Access Point with a

more secure data protection than the WEP. Here you can select the WPA with PSK mode to improve the data security and privacy during wireless transmission. The present WPA supplied with this adapter is used in a pre-shared key mode, which does not require an authentication (Radius) server.
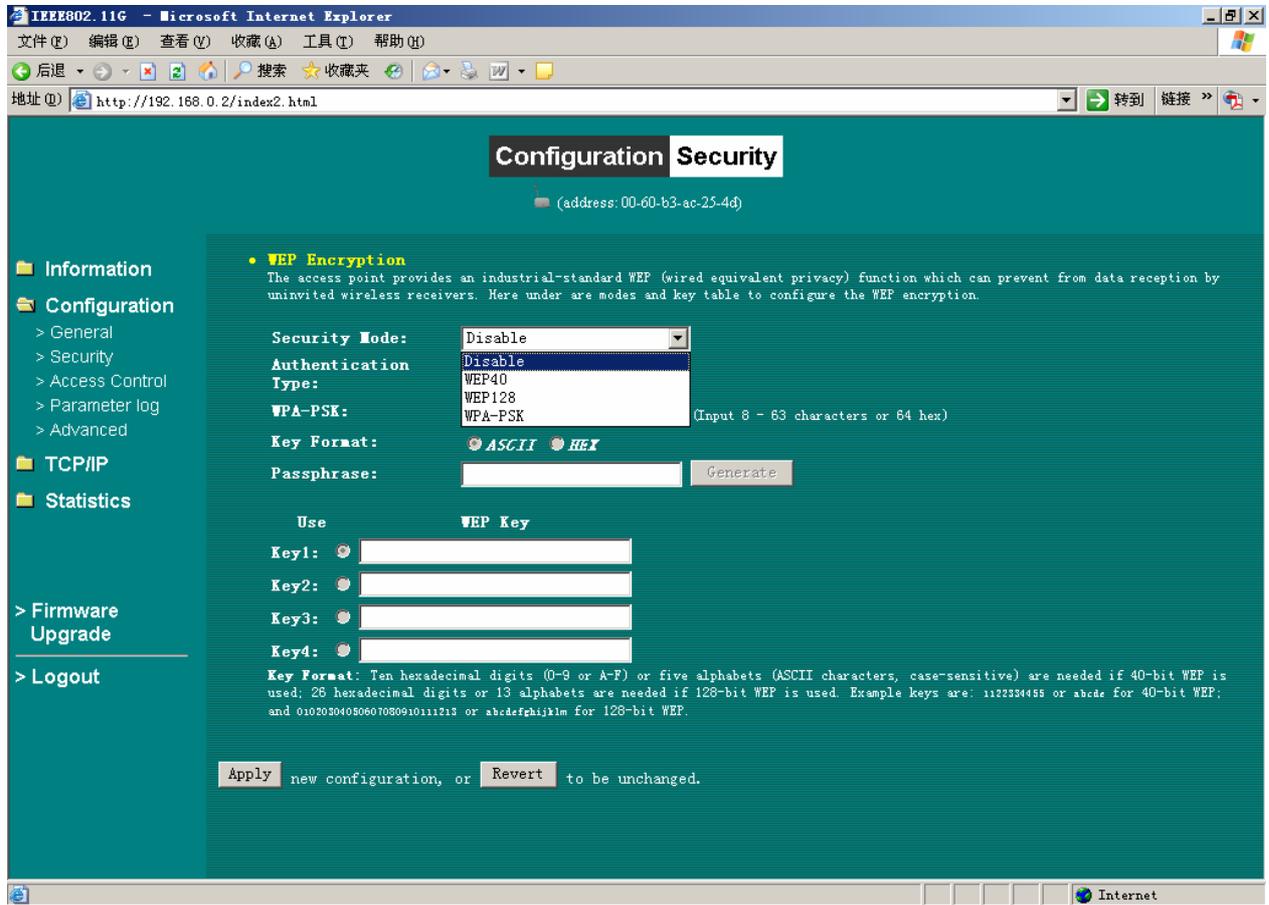
✧ **Access Control**

When configuring the adapter with AP mode operation, the Access Control is a powerful security feature that allows you to specify which wireless stations are allowed or denied in the list including:

Open: Allows any wireless station to access the network.

Allow: Any wireless station in this list attempting to access the network is allowed.

Deny: Any wireless station in this list will be denied access.

To add the Mac address of each wireless station on your network by entering the Mac address of the client you desire to add into the list. Click **"Add"**, and then **"Apply"** to save the settings. To delete a Mac address from the list, select the Mac address you want to delete by clicking **"Del"** and then **"Apply"** to save the settings.
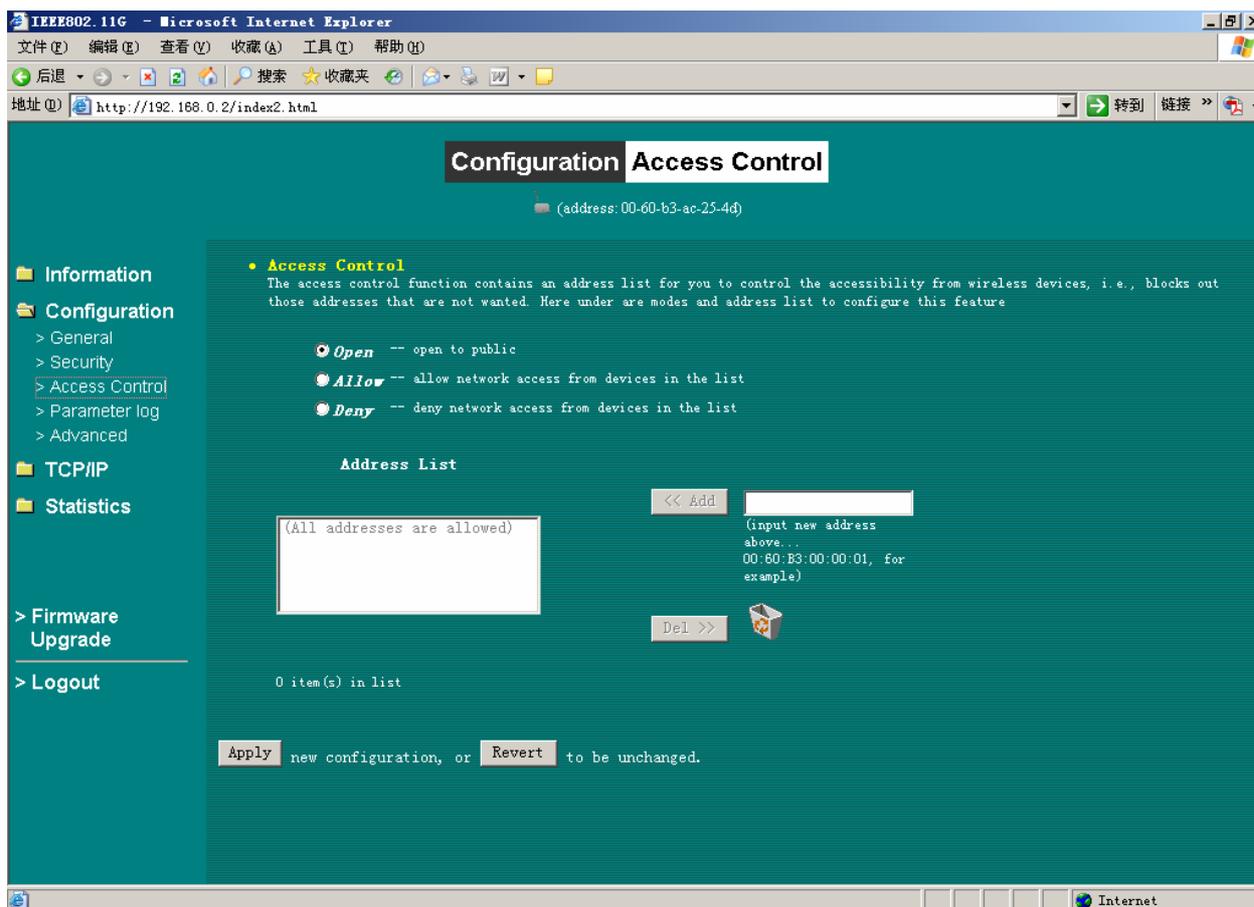
◇ **Parameter Log**

The Parameter log item allows you to save settings to the local hard drive by clicking**"Save"**. When you click the **"Browse"** button, you can select the saved setting files.To click **"Load"**, the saved settings will be loaded back.
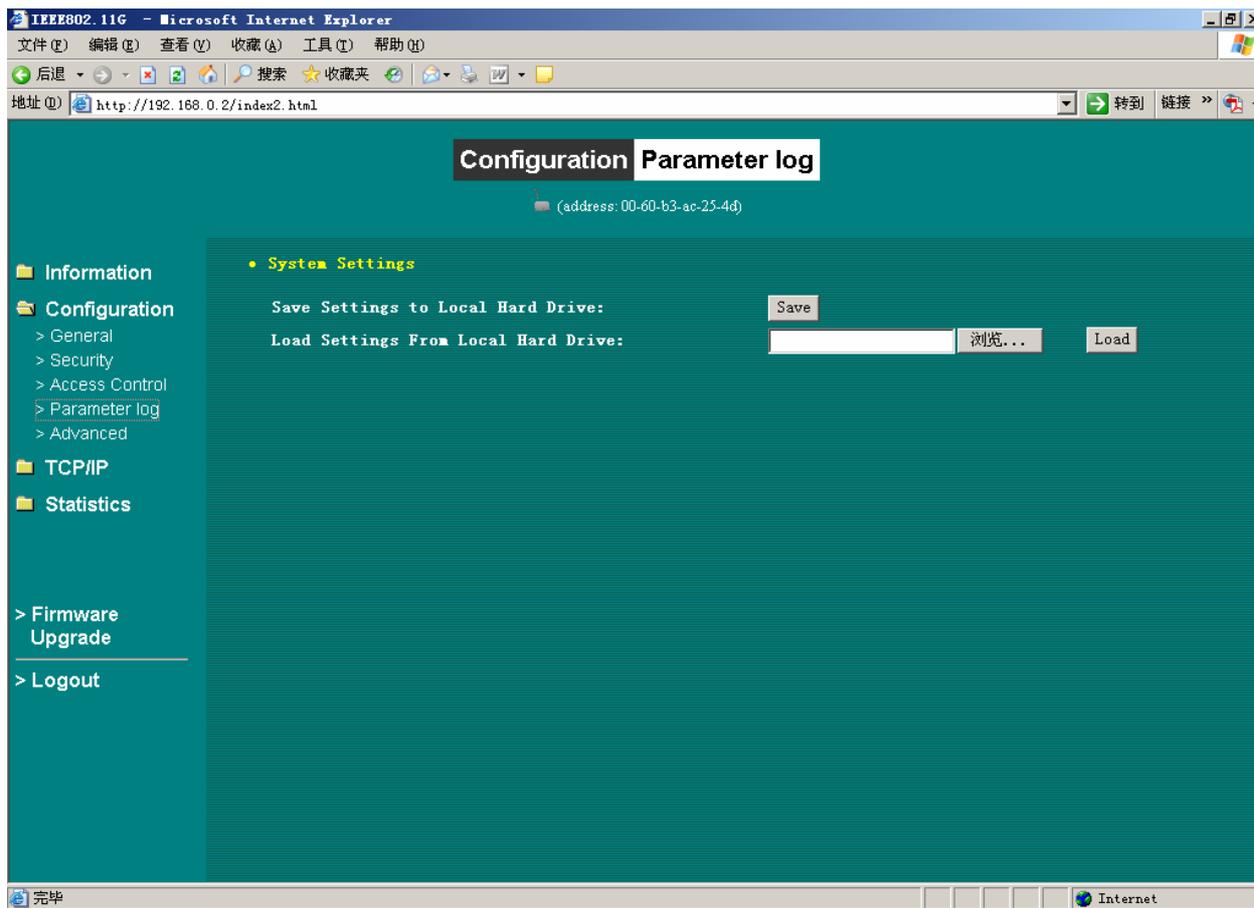
 ✧ **Advanced**
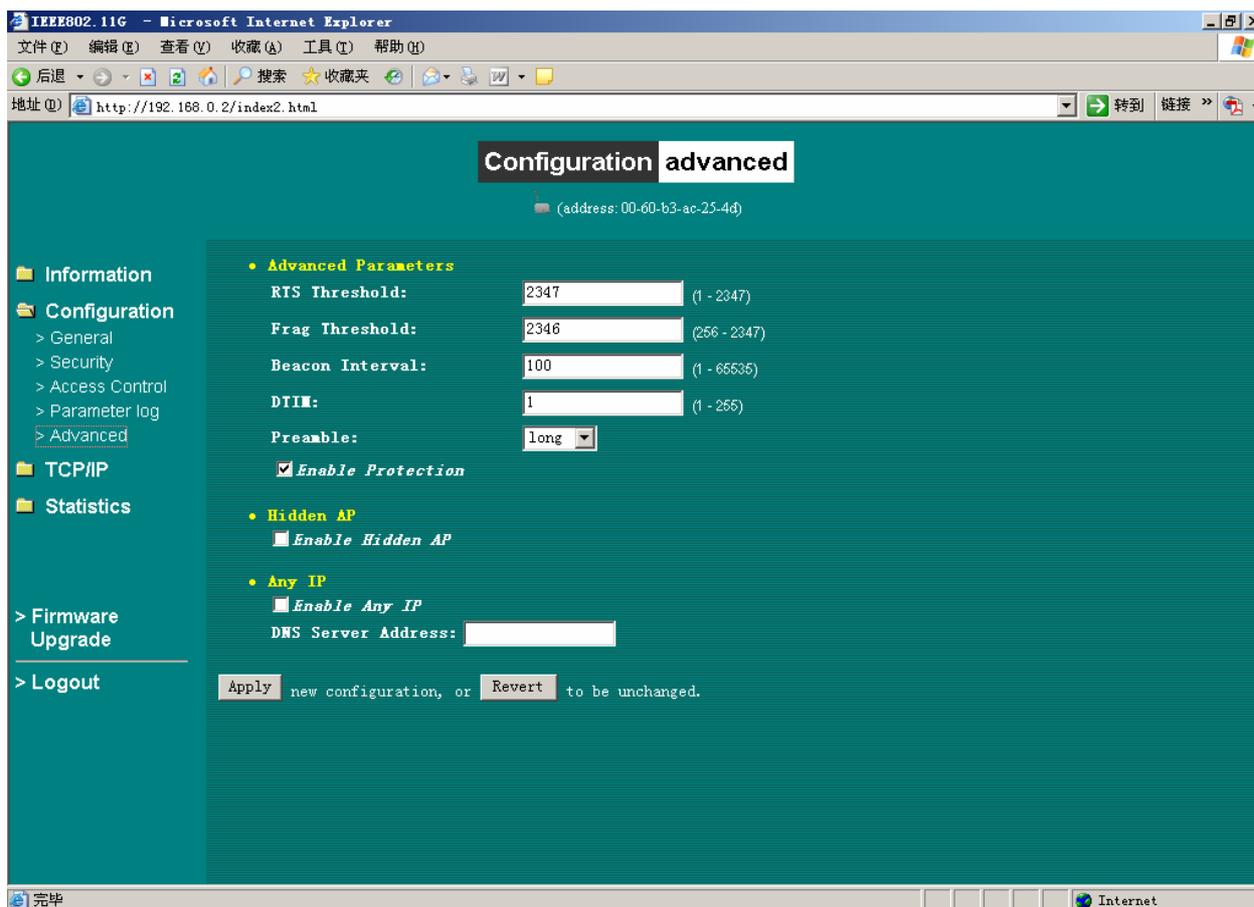
RTS Threshold:

Request to Send Threshold. The packet size that is used to determine if it should use the CSMA/CD(Carrier Sense Multiple Access with Collision Detection)mechanism or the CSMA/CA mechanism for packet transmission. With the CSMA/CD transmission mechanism, the transmitting station sends out the actual packet as soon as it has waited for the silence period. With the CSMA/CA transmission mechanism, the transmitting station sends out an RTS packet to the receiving station, and waits for the receiving station to send back a CTS (Clear to Send) packet before sending the actual packet data.
Default: 2346

Fragmentation Threshold:

This is the maximum packet size used for fragmentation. Packets larger than the size programmed in this field will be fragmented. The Fragment Threshold value must be larger than the RTS Threshold value.
Default: 2346

Beacon Interval:

The Beacon Interval. Specifies the interval time between 20ms and 1000ms for each beacon transmission
Default: 100

DTIM:

The Delivery Traffic Indication Message. Specifies the data beacon rate between 1 and 255. Default: 1

Preamble Type:
A long transmit preamble may provide a more reliable connection or slightly longer range. A auto transmit preamble gives better performance.

Enable Protection:
The function protect link quality.

Enable Hidden AP: Enable the function ,The AP don't broadcast the ESSID .

AnyIP(Unable in Bridge Mode):the terminal with any ip address can visit the network

➢ **TCP/IP**
　　✧ **General**
You may assign a proper IP address to your wireless adapter manually. If you would like the wireless adapter to obtain the IP address from the DHCP server on your network automatically, enable the DHCP client function. Click the **"Apply"** button to make it effect.
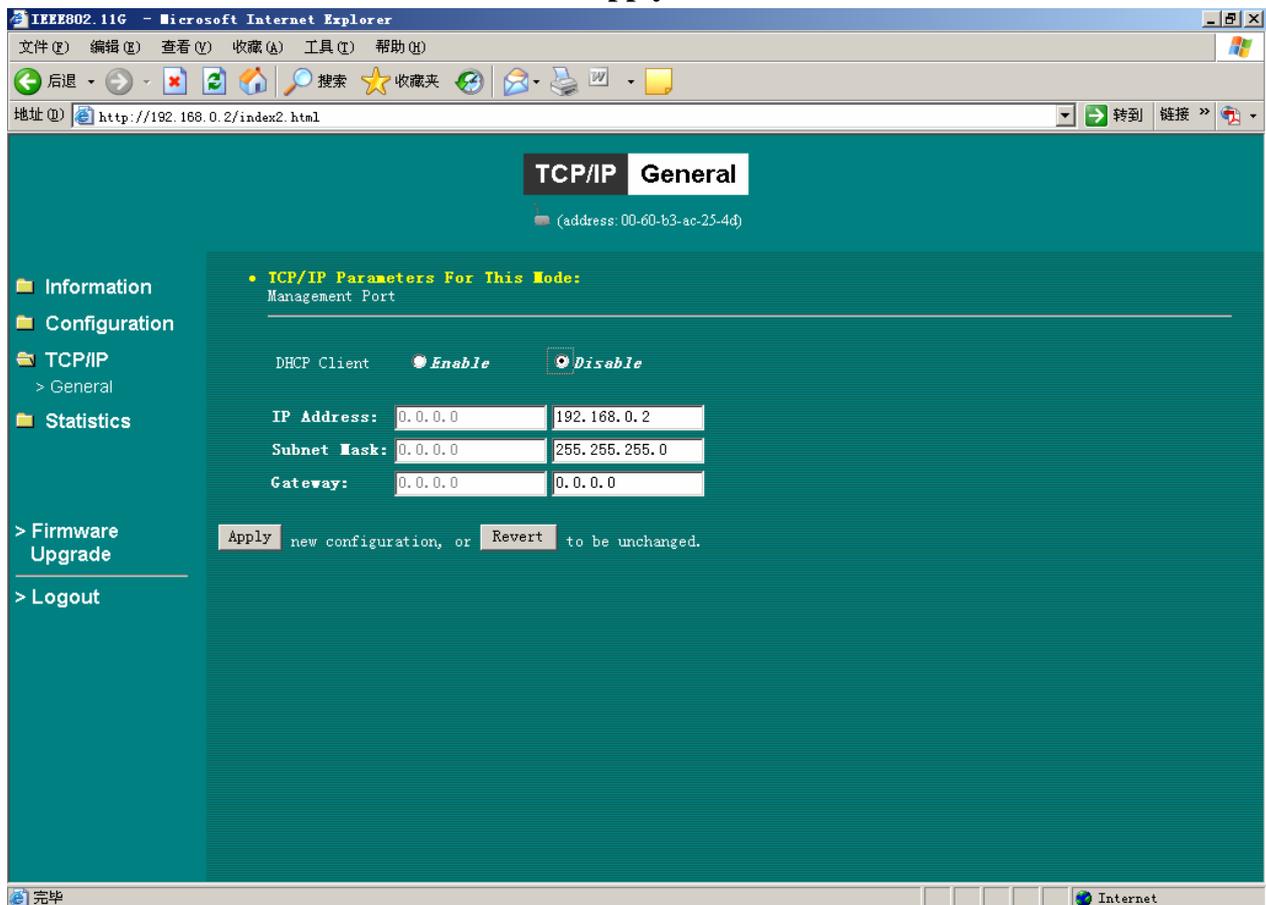
➢ **Statistics**
  ✧ **General**

This item will allow you to monitor the connection status when set to AP mode such as the Mac Address, Link Status, Rate Type as well as RX/TX from Ethernet packets.

When set to Client mode, you may also open the **General** page to view the available Access Points around your environment. The status includes Link Status, ESSID, BSSID, Channel and Signal as well as RX/TX from Ethernet packets.

  ✧ **AP Browser**

This AP Browser shows only when configuring your 3-in-1 as Station mode. By clicking the **"Refresh"** button, the AP Browser will reload and display available Access Points around the working environment. Besides showing the BSSID of each Access Point, it also displays ESSID, Channel, Support Rate and Capability. To connect one of displayed Access Points, just select the Access Point you desire and then click the **"Connect"** button to make the connection.
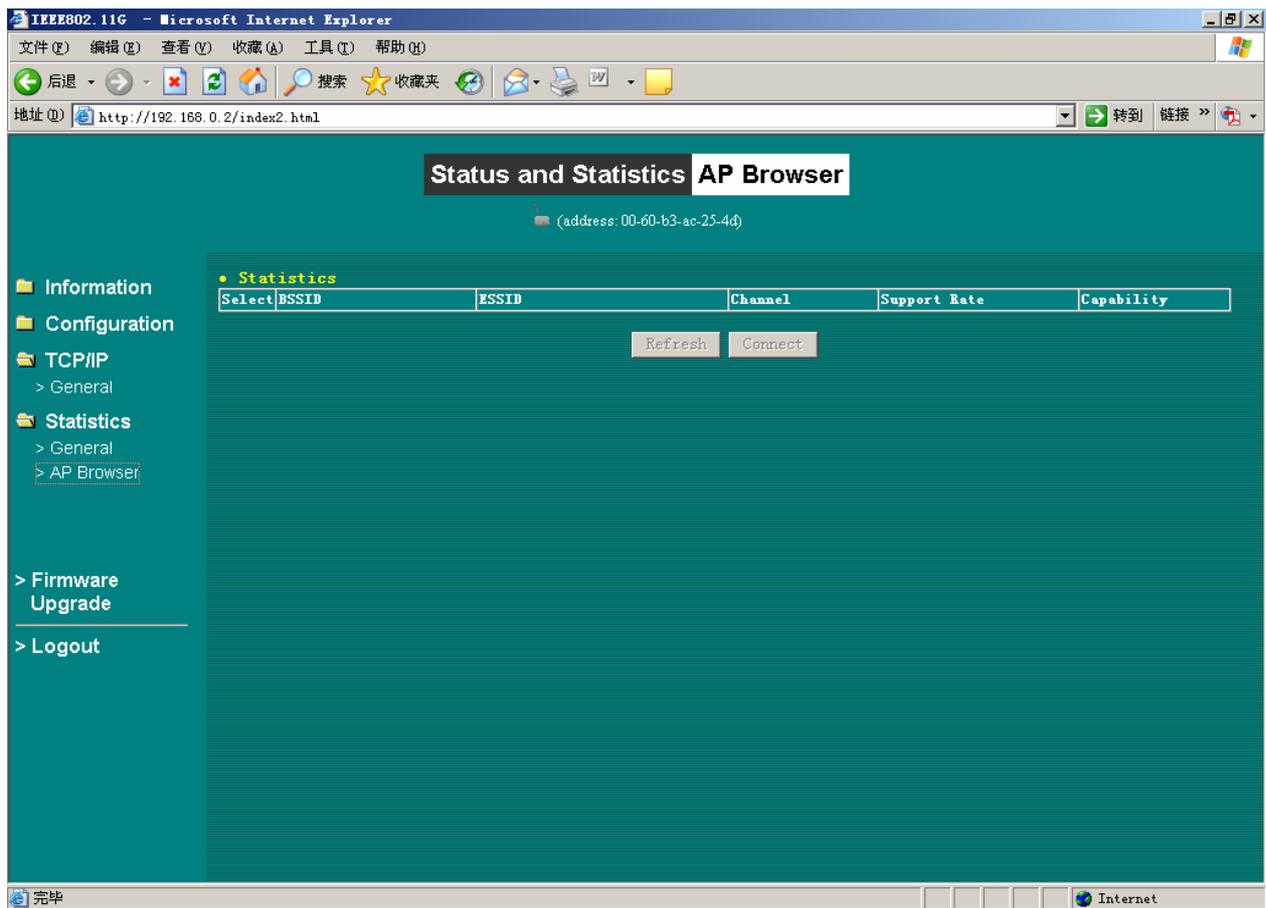
> ➢ **Firmware Upgrade**

Here, you can upload the latest firmware of the wireless adapter. You may either enter the file name in the entry field or browse the file by clicking the **"Browse"** button. Then click the **"Apply"** button to begin to upgrade the process.
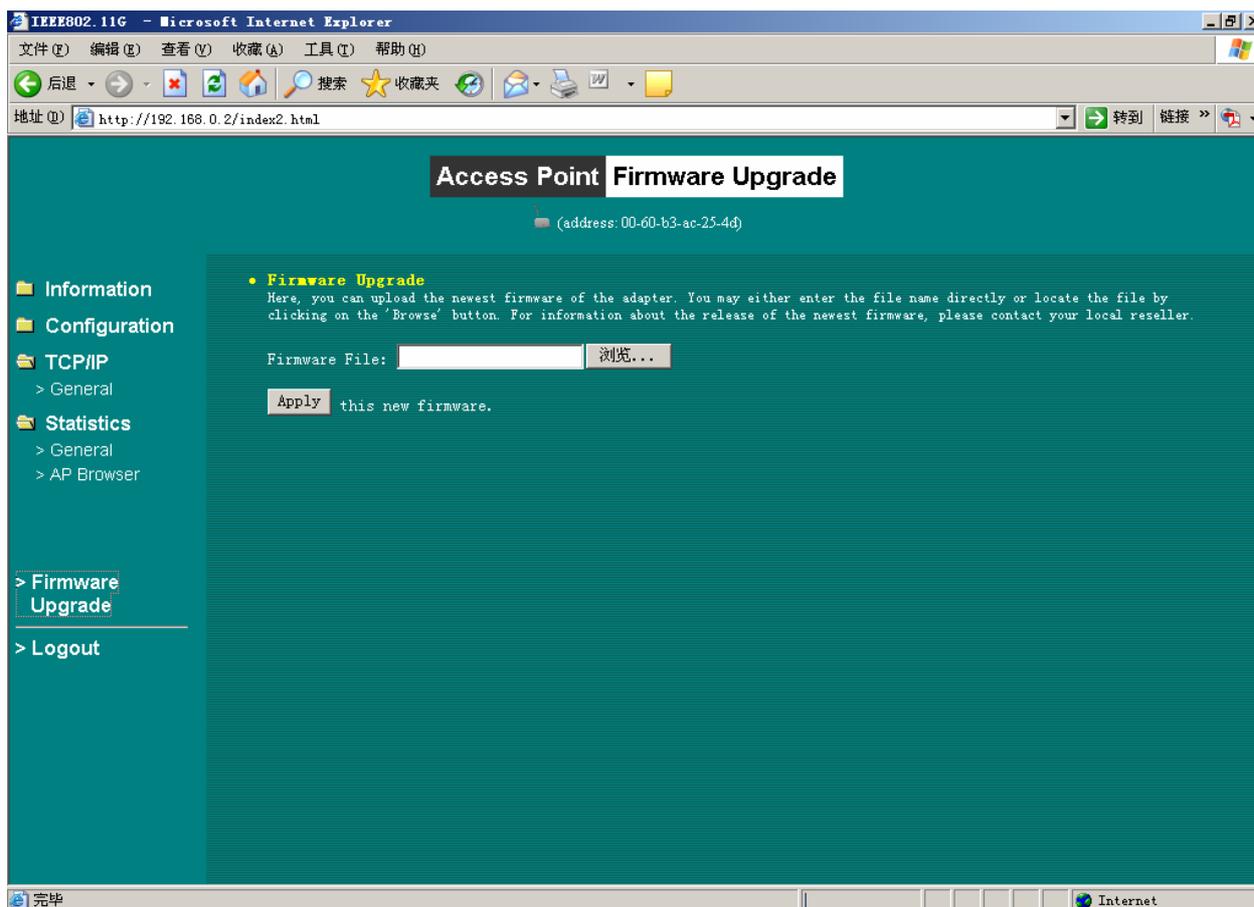
4. Troubleshooting

➢ **FAQ**
➢ **Technical support**

FAQ

Technical support

If you meet difficulty and please contact our supplier in the course of installing and using the AP.

Appendix

- ➤ **Technical Specifications**
- ➤ **Glossary**
- ➤ **ASCII**

Technical Specifications

Feature	
Description	IEEE 802.11b/g WLAN Station Adapter
Host interface	One 10/100BaseT R-45 LAN port with Auto-MDIX
Antenna	One external dipole antenna
Data Rate	11g Mode: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 11b Mode: 11, 5.5, 2, 1 Mbps
Power Consumption	11g: TX:650mA ; RX: 450mA (max) 11b: TX: 500mA ; RX: 450mA (max)
Voltage	DC 5V/2A
Support OS	Win98SE/ME/2000/XP
Channels	USA (FCC) 11 Channels: 2.412GHz~2.462GHz Europe (ETSI) 13 Channels : 2.412GHz~2.472GHz Japan (TELEC) 14 Channels : 2.412GHz~2.483GHz
RF output	15dBm Typical
Sensitivity	11g : 54Mbps OFDM<-65dBm 11b+: 22Mbps PBCC<-80dBm
Modulation	11g Orthogonal Frequency Division Multiplexing (64QAM, 16QAM, QPSK, BPSK) 11b Direct Sequence Spread Spectrum (CCK, DQPSK, DBPSK)
Security	64/128-bit WEP Encryption
Dimension	80.90mm(L)*108.20mm(W)*29.80mm(H)
Weight	<75g
Environment	
Operating Temperature	0~55C
Storage Temperature	-20~70C
Humidity	5~95%

Glossary

AP	The abbreviation of Access Point, refer in particular to the wireless access point.
BWA	The abbreviation of Broadband Wireless Access Point, does not have the network bridge to refer in particular to broadband .
IEEE 802.11	Include IEEE 802.11a/b/g。
🟡Notice	Show that there is important information that reminds you with better using the equipment.
🔴warning	It have potential dangerous operation will do harm to hardware of the equipment or make data not to lose or make equipment not to can be used normally all to show.
SSID	It distribute to may make wireless users can connect to the network name of AP to use for. It is different from the access point name of AP, it was used for distinguishing AP that that is only available for AP.
AP IP address	If has not used DHCP server in the network , has needed to assign a legal IP address for AP , used to land to AP through HTTP. IP address of acquiescence is http://192. 168. 0. 228.
HTTP User's name/password	Used for landing admin password or password of user name of acquiescence to AP from WEB page.
Encrypt setting	Which kind of encryption ways are not needed to decide to set up for AP with you according to the environment.
Link test	When AP is chosen as mode of bridge graft, this function can be used for determining the connection state with an purpose MAC address.
MAC control	This function is only valid under AP mode, invalid under the mode of bridge graft. Used in MAC address to filter.

ASCII

You can dispose sexadecimal number system counting or ACSII one yard of keys encrypted as WEP . Sexadecimal number system is made up by 0-9 and A-F (letter does not distinguish capital and small letter); ACSII yard is by 0-9 figures , A-F , a-f (letter distinguishes capital and small letter), and the punctuation mark makes up . Each ACSII yard can is it say to count by one sexadecimal number system of two. One-one ASCII yard of all and sexadecimal number system are counted to make forms and list all.

ASCII Character	Hex Equivalent	ASCII Character	Hex Equivalent	ASCII Character	Hex Equivalent	ASCII Character	Hex Equivalent
!	21	9	39	Q	51	i	69
"	22	:	3A	R	52	j	6A
#	23	;	3B	S	53	k	6B
$	24	<	3C	T	54	l	6C
%	25	=	3D	U	55	m	6D
&	26	>	3E	V	56	n	6E
'	27	?	3F	W	57	o	6F
(	28	@	40	X	58	p	70
)	29	A	41	Y	59	q	71
*	2A	B	42	Z	5A	r	72
+	2B	C	43	[	5B	s	73
,	2C	D	44	\	5C	t	74
-	2D	E	45	]	5D	u	75
.	2E	F	46	^	5E	v	76
/	2F	G	47	_	5F	w	77
0	30	H	48	`	60	x	78
1	31	I	49	a	61	y	79
2	32	J	4A	b	62	z	7A
3	33	K	4B	c	63	{	7B
4	34	L	4C	d	64			7C
5	35	M	4D	e	65	}	7D
6	36	N	4E	f	66	~	7E
7	37	O	4F	g	67		
8	38	P	50	h	68		