

***108Mbps Super G
Wireless LAN
Access Point***

CAMEO/WLG2015

User Guide

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 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 of the following measures:

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

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this 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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

Radiation Exposure Statement:

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

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

EN 60 950-1: 2001 +A11: 2004

Safety of Information Technology Equipment

EN50385 : (2002-08)

Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields (110MHz - 40 GHz) - General public

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

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

EN 301 489-1 V1.6.1: (2005-09)

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

EN 301 489-17 V1.2.1 (2002-08)



Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment

This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

CE0560!

 Česky [Czech]	<i>[Jméno výrobce]</i> tímto prohlašuje, že tento <i>[typ zařízení]</i> je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
 Dansk [Danish]	Undertegnede <i>[fabrikantens navn]</i> erklærer herved, at følgende udstyr <i>[udstyrets typebetegnelse]</i> overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
 Deutsch [German]	Hiermit erkläre <i>[Name des Herstellers]</i> , dass sich das Gerät <i>[Gerätetyp]</i> in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
 Eesti [Estonian]	Käesolevaga kinnitab <i>[tootja nimi = name of manufacturer]</i> seadme <i>[seadme tüüp = type of equipment]</i> vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
 English	Hereby, <i>[name of manufacturer]</i> , declares that this <i>[type of equipment]</i> is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
 Español [Spanish]	Por medio de la presente <i>[nombre del fabricante]</i> declara que el <i>[clase de equipo]</i> cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
 Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ <i>[name of manufacturer]</i> ΔΗΛΩΝΕΙ ΟΤΙ <i>[type of equipment]</i> ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/EK.
 Français [French]	Par la présente <i>[nom du fabricant]</i> déclare que l'appareil <i>[type d'appareil]</i> est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
 Italiano [Italian]	Con la presente <i>[nome del costruttore]</i> dichiara che questo <i>[tipo di apparecchio]</i> è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo <i>[name of manufacturer / izgatavotāja nosaukums]</i> deklarē, ka <i>[type of equipment / iekārtas tips]</i> atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo <i>[manufacturer name]</i> deklaruoją, kad šis <i>[equipment type]</i> atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
 Nederlands [Dutch]	Hierbij verklaart <i>[naam van de fabrikant]</i> dat het toestel <i>[type van toestel]</i> in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
 Malti [Maltese]	Hawnhekk, <i>[isem tal-manifattur]</i> , jiddikjara li dan <i>[il-mudel tal-prodott]</i> jikkonforma mal-htigijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.







 Magyar [Hungarian]	Alulírott, <i>[gyártó neve]</i> nyilatkozom, hogy a <i>[... típus]</i> megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
 Polski [Polish]	Niniejszym <i>[nazwa producenta]</i> oświadczam, że <i>[nazwa wyrobu]</i> jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
 Português [Portuguese]	<i>[Nome do fabricante]</i> declara que este <i>[tipo de equipamento]</i> está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
 Slovensko [Slovenian]	<i>[Ime proizvajalca]</i> izjavlja, da je ta <i>[tip opreme]</i> v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	<i>[Meno výrobcu]</i> týmto vyhlasuje, že <i>[typ zariadenia]</i> spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
 Suomi [Finnish]	<i>[Valmistaja = manufacturer]</i> vakuuttaa täten että <i>[type of equipment = laitteen tyyppimerkintä]</i> tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
 Svenska [Swedish]	Härmed intygar <i>[företag]</i> att denna <i>[utrustningstyp]</i> står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

TABLE OF CONTENT

About This Guide.....	1
Purpose.....	1
Overview of this User's Guide.....	1
Unpacking and Setup	3
Unpacking.....	3
Setup	3
Hardware Instalation.....	5
Front panel	5
Rear Panel	5
Hardware connections.....	6
Connect to the xDSL/Cable Modem or Switch/Hub.....	6
Check the installation.....	6
Configuring the Wireless LAN Access Point	7
Login to the Wireless AP through WLAN.....	7
Login.....	7
Main Screen of the Access Point	8
Wizard.....	9
Status.....	11
Basic Setting	12
IP Setting.....	15
Advanced Setting.....	16
Access Point Mode	16
AP Client mode.....	17
Wireless Bridge mode.....	18
Multiple Bridge mode	19
Repeater mode	20
Security	22
Tools	23
Technical Specifications	25

ABOUT THIS GUIDE

Congratulations on your purchase of this 108Mbps Super-G Wireless LAN Access Point. This manual helps to features the innovating wireless technology that can help you build a wireless network easily! This manual contains detailed instructions in operation of this product. Please keep this manual for future reference.

With a WLAN Access Point, a mobile computer can share data with another mobile computer in a wireless way. Easy-to-use utilities are bundled with WLAN Access Point for configuration and monitoring purposes.

WLAN networking can wirelessly transmit and receive data, minimizing the need for wired connections, at a speed of up to 108Mbps (Super-G mode). With WLAN networking, you can locate your PC wherever you want without wires and cables.

WLAN networking provides users with an access to real-time information anywhere in their organization. The mobility provides productivity and service, which are not available under wired networks.

Purpose

This manual discusses how to install the WLAN Access Point.

Overview of this User's Guide

Introduction. Describes the WLAN Access Point and its features.

Unpacking and Setup. Helps you get started with the basic installation of the WLAN Access Point.

Hardware Installation. Describes the LED indicators of the AP.

Software Installation. Tells how to setup the driver and the utility setting.

Technical Specifications. Lists the technical (general, physical and environmental) specifications of the WLAN Access Point.

UNPACKING AND SETUP

This chapter provides unpacking and setup information for the Access Point.

Unpacking

Open the box of the Access Point and carefully unpack it. The box should contain the following items:

- ◆ One 108Mbps Super-G™ Wireless LAN Access Point
- ◆ One 2dBi dipole antenna
- ◆ One external power adapter
- ◆ One CD-Rom (User's guide)

If any item is found missing or damaged, please contact your local reseller for replacement.

Setup

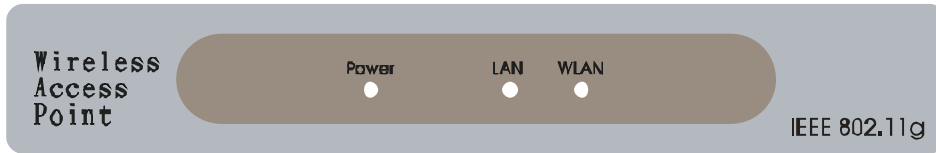
The setup of the Wireless Access Point can be performed using the following steps:

- ◆ Locate an optimum location for the Wireless LAN Access Point (AP). The best place for your AP is usually the center of your wireless network, with line of sight to all of your mobile stations.
- ◆ Visually inspect the Ethernet RJ-45 port connector and make sure that it is fully plugged in to the system's Ethernet switch/hub port.
- ◆ Fix the direction of the antennas. Try to place the AP in a position that can best cover your wireless network. Normally, the higher you place the antenna, the better the performance will be. The antenna's position enhances the receiving sensitivity.
- ◆ Visually inspect if the Power Adapter was fully plugged to the device power jack.

HARDWARE INSTALATION

Front panel

The figure below shows the LED Indicator of the Wireless LAN Access Point.



Power:

This indicator lights green when the Access Point receives power. Otherwise, it turns off.

WLAN:

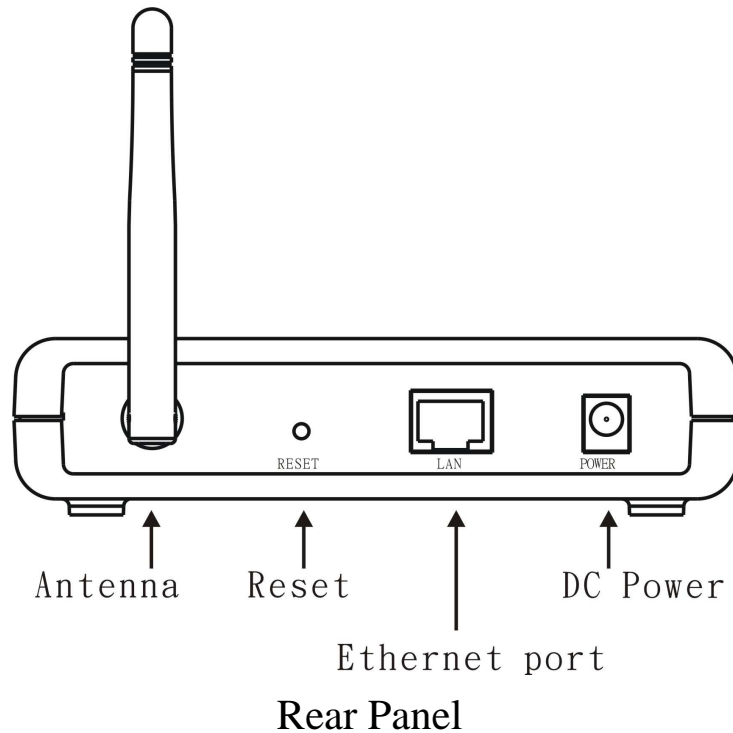
The indicator blinking green whiles the wireless LAN activity.

LAN (Link/ACT):

The indicator lights green when the LAN port is connected to an Ethernet network successful. Otherwise, the indicator blinking green while transmitting or receiving data on the Ethernet network.

Rear Panel

The figure below shows the rear panel of the Access Point



Ethernet port

Ethernet port with 10/100Mbps Fast Ethernet connections, connect this port to switch/hub.

Reset

The Reset function is to reset the setting back to factory default setting, once you press the “RESET” button more than 5 seconds.

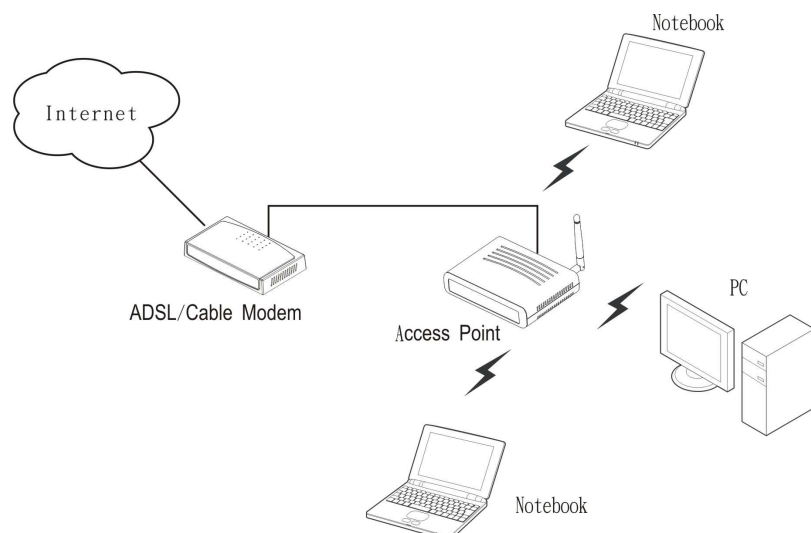
DC Power

Connect the Power Adapter DC plug to the AP’s power jack.

Antenna

One external 2dBi dipole antenna.

Hardware connections



Connect to the xDSL/Cable Modem or Switch/Hub

1. Plug in one end of the RJ45 network cable to the xDSL/Cable Modem or Switch/Hub Ethernet port.
2. Plug in the other end of the RJ45 network cable to the Wireless Access Point.

Check the installation

The LEDs of the Access Point are clearly visible and the status of the network link can be seen instantly:

1. With the power source on, once the device is connected, the Power, LAN and WLAN port LEDs will light up indicating a normal status.
2. If the LAN Port’s Link indicator does not light up then check the RJ-45 cable if it is firmly feed to the RJ45 port, while the LAN is link up to the Switch/Hub, the LAN port’s LED will light up.

CONFIGURING THE WIRELESS LAN ACCESS POINT

The Wireless Access Point has a Web GUI interface for the configuration. The AP can be configured through the Web Browser. A network manager can manage, control and monitor the AP from the local LAN. This section indicates how to configure the AP to enable its functions.

Login to the Wireless AP through WLAN

Before configuring the Wireless AP through WLAN, make sure that the SSID, Channel and the WEP was set properly.

The default setting of the Wireless AP that you will use:

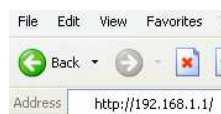
- ◆ SSID: default
 - ◆ Channel: 6
 - ◆ WEP Encryption: Disabled
 - ◆ IP address: 192.168.1.1
-

Login

Before you configure this device, note that when the AP is configured through an Ethernet connection, make sure the manager PC must be set on same the **IP network**. For example, when the default network address of the default IP address of the AP is **192.168.1.1**, then the manager PC should be set at 192.168.1.x (where x is a number between 2 and 254), and the default subnet mask is 255.255.255.0.

Open Internet Explorer 5.0 or above Web browser.

Enter IP address **http://192.168.1.1** (the factory-default IP address setting) to the address location.



When there is a screen needs to enter the User name and Password, both of the default Username and Password is “admin”



Main Screen of the Access Point

The screen will show the status of the AP when you login to the AP.

There are seven main functions included in the top side of the main screen: Wizard, Status, Basic Setting, IP Setting, Advanced Setting, Security and Tools. Point the selections in the top side of the menu screen.



The screenshot displays the 'Status' page of a Wireless Lan Access Point. The page has a blue header with the title 'Wireless Lan Access Point 108Mbps' and a navigation menu with options: Wizard, Status, Basic Setting, IP Setting, Advanced Setting, Security, and Tools. A left sidebar contains the 'Status' label. The main content area shows the following information:

Firmware Version :	1.00	Date :	Wed, 20 Sep 2006
LAN	MAC:	00-19-5b-43-29-7c	
	IP Address:	192.168.1.1	
	Subnet Mask:	255.255.255.0	
	Gateway:	192.168.1.254	
	Send:	87	
	Receive:	236	
Wireless			
	SSID:	default	
	Encryption :	Disabled	
	Channel:	6	
	Send:	27	
	Receive:	0	

At the bottom of the status area, there is a 'View Log' button.

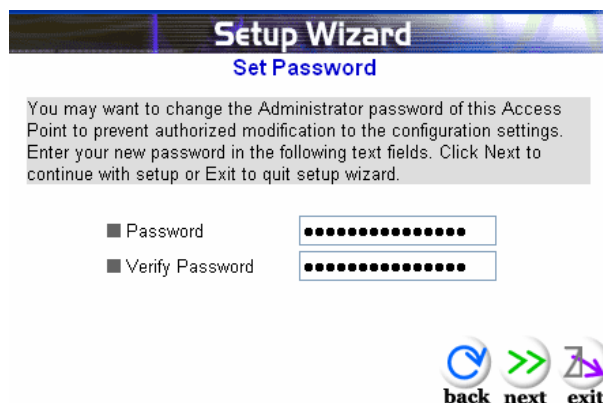
Wizard

Setup wizard is provided as the part of the web configuration utility. User can simply follow the step-by-step process to get Access Point configuration ready to run in 4 easy steps by clicking on the “**Wizard**” button on the function menu. The following screen will appear. Please click “**Next**” to continue.



Step 1: Set Password

User can change the password and then click “**Next**” to continue.



Step2: Set WLAN Connection

Please type the name of SSID and select the Channel. Then, click “**Next**” to continue.



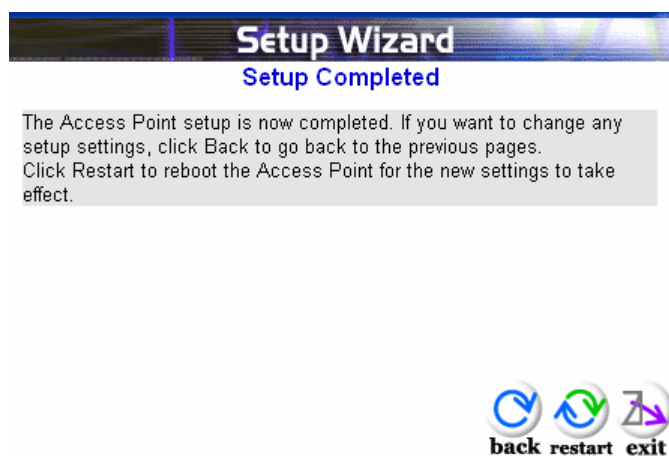
Step 3: Set WEP Encryption

If user wants to enable WEP, please click **“Enabled”**. Then, select the key size of WEP encryption and enter the key value in the key text box. Please click **“Next”** to continue.



Step 4: Restart

The Setup wizard is now completed. The new settings will be effective after the Access Point restarted. Please click **“Restart”** to reboot the Access Point. If user does not want to make any changes, please click **“exit”** to quit without any changes. User also can go back to modify the setting by clicking **“back”**.



Status

This page as below shows the following information.

Wireless Lan Access Point 108Mbps

Wizard | Status | Basic Setting | IP Setting | Advanced Setting | Security | Tools |

Status

Firmware Version : 1.00 Date : Wed, 20 Sep 2006

LAN MAC:	00-19-5b-43-29-7c
IP Address:	192.168.1.1
Subnet Mask:	255.255.255.0
Gateway:	192.168.1.254
Send:	87
Receive:	236

Wireless

SSID:	default
Encryption :	Disabled
Channel:	6
Send:	27
Receive:	0

Firmware Version: Shows the current firmware version and released date code.

LAN: Shows the Mac address, IP address (default: 192.168.1.1), Subnet Mask, Gateway Address. The current LAN traffic calculated in terms of number of packets sent and received by AP through wired connection is also displayed.

Wireless: Shows the current SSID, the status of Encryption Function (Enable or Disable), the current using channel. The current wireless traffic calculated in terms of number of packets sent and received by AP through wireless communication is also displayed.

View Log: Once clicked, the page will change to login page. The login page records every event and the time that it happens.

Wireless Lan Access Point 108Mbps

First Page Last Page Previous Page Next Page Clear Log Refresh

Time	Message
Jul/21/2006 14:38:26	Wireless PC connected 00-0e-35-f9-61-6d.
Jul/21/2006 14:38:25	System started
Jul/21/2006 14:38:25	AP 2.4GHz mode Ready. Channel : 6 TxRate : best SSID : default
Jul/21/2006 14:38:25	Access point: default started at channel 6.

User may clear the entries recorded in the log by clicking the “Clear Log” button, and refresh the screen to show the latest log entries by clicking the “Refresh” button.

Basic Setting

This is the page allow user to change the access point settings.

Wireless Lan Access Point 108Mbps

| Wizard | Status | **Basic Setting** | IP Setting | Advanced Setting | Security | Tools |

Basic Setting

AP Name: WirelessAccessPoint

SSID: default

Channel: 6 (Domain: ETSI)

Extended Range: Enabled Disabled

Authentication: Disable

Apply Cancel Help

* Enabling Extended Range will automatically disable "Super G with Static Turbo" and set "Tx Rates" auto.

AP Name: The name of the AP, which can be used to identify the Access Point among the all the Access Points in the wireless network.

SSID: Service Set Identifier, which is a unique name shared among all clients and nodes in a wireless network. The SSID must be identical for each clients and nodes in the wireless network.

Channel: The channel that AP will operate in. User can select the channel range from 1 to 11 for North America (FCC) domain, 1 to 13 for European (ETSI) domain and 1 to 14 for Japanese domain.

Extended Range: When you enable this function, AP will reduce data rate with a long distance.

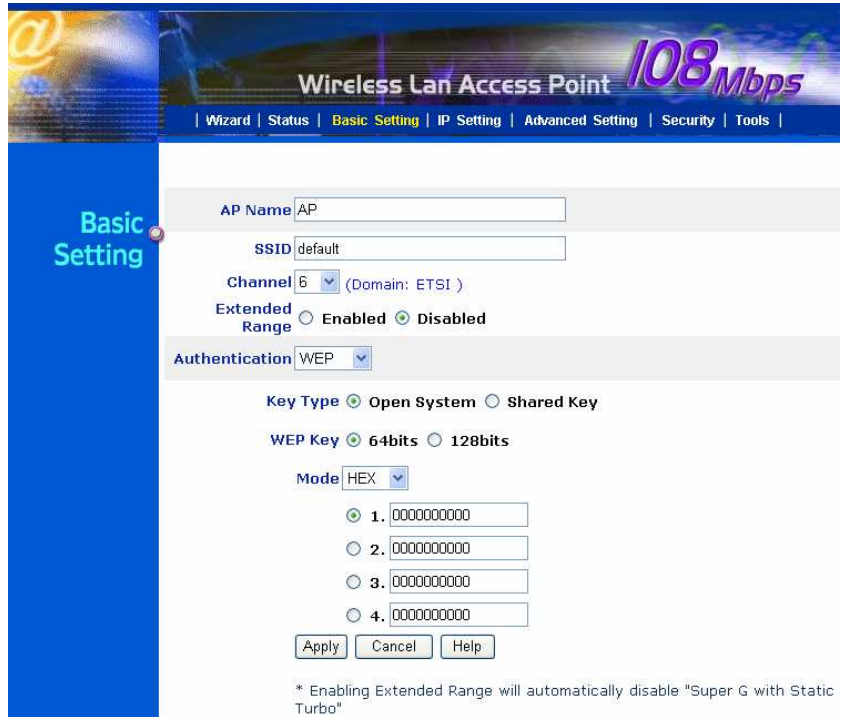
Authentication Type: There are four options: Disable, WEP, WPA and WPA2. All of the WLAN nodes and hosts on the network must use the same authentication type.

WEP Key:

1. **Key type:** Select the WEP key type for Open System or Shared Key; the Open System allows public access to the AP via wireless communications; the Shared Key requires the user to set a WEP key to exchange data with other wireless clients that have the same WEP key.
2. **WEP Key length:** Select the WEP key length for 64bits or 128 bits.
3. **Key mode:** Select the WEP key format for ASCII or HEX.
4. **Key 1 ~ Key 4:** Specify the WEP key value in key 1 ~ key 4.

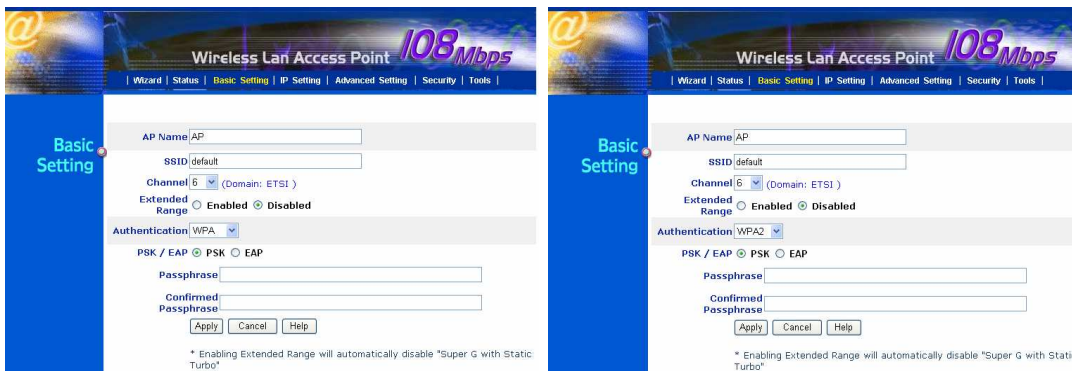
Press **Apply** button to save the new settings and the Access Point will be restart to activate the new settings.

Note: When the WEP security is enabled, all the wireless clients that wish to connect to the Access Point must also have WEP enabled with the identical WEP Key value entered.



WPA-PSK / WPA2-PSK:

If WPA-PSK or WPA2-PSK is selected, user needs to set the key in the passphrase field as the below screen. The key length should be 8 characters at least.



WPA / WPA2:

If WPA or WPA2 is selected, the below screen is shown. Please set the length of the encryption key and the parameters for the RADIUS server.

The image displays two screenshots of the 'Basic Setting' page for a Wireless LAN Access Point. The left screenshot shows WPA authentication selected, and the right screenshot shows WPA2 authentication selected. Both screenshots show fields for AP Name, SSID, Channel, Extended Range, Authentication, Encryption Key Length, Lifetime, and RADIUS Server 1 and 2 (optional) settings.

Left Screenshot (WPA):

- AP Name: AP
- SSID: default
- Channel: 6 (Domain: ETS1)
- Extended Range: Enabled Disabled
- Authentication: WPA
- PSK / EAP: PSK EAP
- Encryption Key Length: 64 bits 128 bits
- Lifetime: 30 Minutes
- RADIUS Server 1: IP (0, 0, 0, 0), Port (1812), Shared Secret
- RADIUS Server 2 (optional): IP (0, 0, 0, 0), Port (1812), Shared Secret

Right Screenshot (WPA2):

- AP Name: AP
- SSID: default
- Channel: 6 (Domain: ETS1)
- Extended Range: Enabled Disabled
- Authentication: WPA2
- PSK / EAP: PSK EAP
- Encryption Key Length: 64 bits 128 bits
- Lifetime: 30 Minutes
- RADIUS Server 1: IP (0, 0, 0, 0), Port (1812), Shared Secret
- RADIUS Server 2 (optional): IP (0, 0, 0, 0), Port (1812), Shared Secret

* Enabling Extended Range will automatically disable "Super G with Static Turbo"

Encryption Key: Select the Encryption Key Length ranging from 64 or 128 Bits that you would like to use.

RADIUS Server 1:

Enter the IP address and the Port number to be used by the Primary Radius Server, enter the Shared Secret, which is used by the Radius Server.

RADIUS Server 2: (optional)

Enter the IP address and the Port number to be used by the Secondary Radius Server, enter the Shared Secret, which is used by the Radius Server.

Press **Apply** button to save the new settings and the Access Point will be restart to activate the new settings.

IP Setting

This page allows user to configure the IP and DHCP settings of the Access Point.

Wireless Lan Access Point 108Mbps

Wizard | Status | Basic Setting | IP Setting | Advanced Setting | Security | Tools

IP Setting

LAN IP Obtain IP Automatically

Fixed IP

Address . . .

Subnet Mask . . .

Gateway . . .

DHCP Server On Off

From . . .

IP Range To . . .

DNS Server . . .

Apply Cancel Help

The default IP address of this access point is 192.168.1.1 with the subnet mask of 255.255.255.0. User can type in other values for IP Address, Subnet Mask and Gateway and click “**Apply**” button for the changes to be effective.

User can also set the Access Point to obtain the IP from a DHCP server, but it is not recommended. Select the option “Obtain IP Automatically” and click “**Apply**” button for the changes to be effective.

DHCP Server: It is not recommended to enable the DHCP Server if user has a DHCP server running in LAN network because it probably will cause possible the conflict of IP assignment. Enable the DHCP server function by selecting the option “**On**”, and enter the IP range.

DNS Server: When enabled the *DHCP Server*, enter IP address of the DNS server in the text boxes. Your ISP will provide you with this information.

Click “**Apply**” for the changes to be effective

Advanced Setting

This page contains configurations for advanced users, which the change reflects the wireless performance and operating modes.

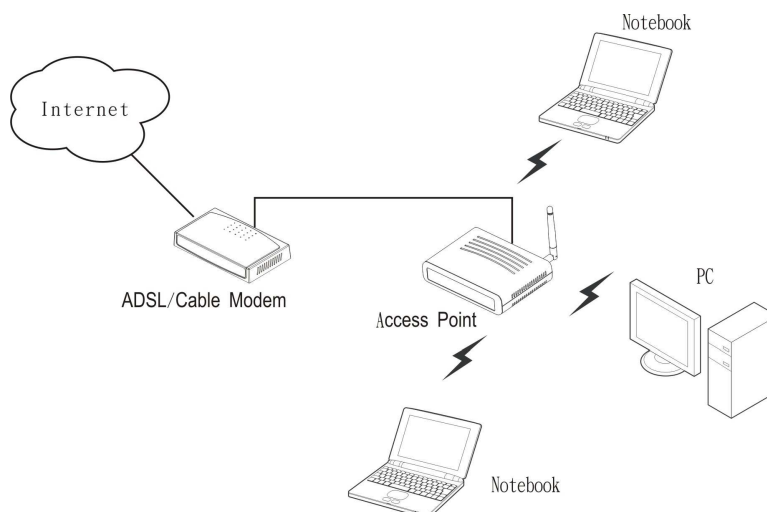
The screenshot shows the 'Advanced Setting' page for a 'Wireless Lan Access Point 108Mbps'. The page has a navigation bar with links: Wizard, Status, Basic Setting, IP Setting, **Advanced Setting**, Security, and Tools. A blue sidebar on the left is labeled 'Advanced Setting'. The main content area is titled 'AP Mode' and has a 'Site Survey' button. Under 'AP Mode', there are five radio button options: **AP** (selected), AP Client, Wireless Bridge, Multiple Bridge, and Repeat Mode. Below these are several configuration fields: Beacon Interval (100 msec), RTS Threshold (2346), Fragmentation Threshold (2346), DTIM Interval (1), SSID broadcast (Enable), TX Rates (Auto), CTS mode (Auto), WDS (Enable), 11g Only Mode (Disable), Super G Mode (Disabled), Antenna transmit power (full), and Aging Interval (86400 second). At the bottom are 'Apply', 'Cancel', and 'Help' buttons.

AP Mode: The WLAN AP supports five operation modes for Access Point, AP Client, Wireless Bridge, Multiple Bridge, and Repeater mode.

Access Point Mode

This screenshot shows the 'AP Mode' configuration section from the previous image. It features a 'Site Survey' button and five radio button options: **AP** (selected), AP Client, Wireless Bridge, Multiple Bridge, and Repeat Mode.

Configure the AP to Access Point mode; with this mode, WLAN clients can access LAN or other WLAN clients through this AP.

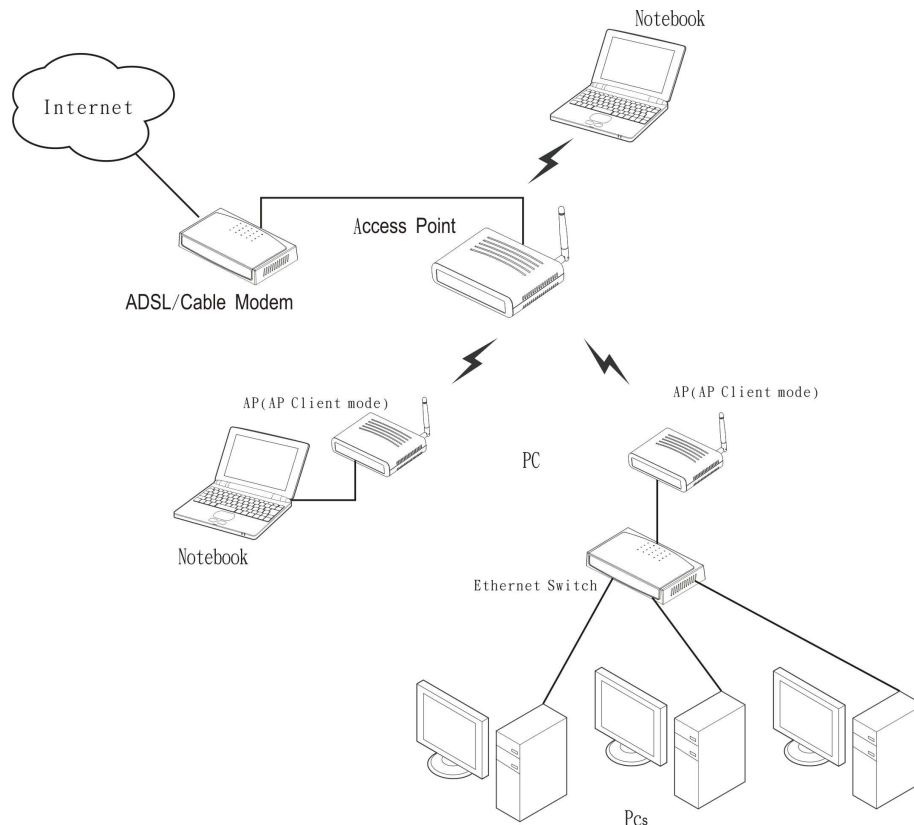


AP mode application

AP Client mode

AP Mode <input type="radio"/> AP		Site Survey
<input checked="" type="radio"/> AP Client	Remote AP SSID	default
<input type="radio"/> Wireless Bridge	Remote Bridge MAC	
<input type="radio"/> Multiple Bridge		
<input type="radio"/> Repeat Mode	Remote AP SSID	

Configure the AP to AP Client mode; the AP will be a wireless Ethernet adapter transforms any Ethernet-enabled devices to have the wireless function.



AP Client mode application

Remote AP SSID: Service Set Identifier, which is a unique name shared among all clients and nodes in a wireless network. The SSID must be identical for each clients and nodes in the wireless network.

Site Survey: This button allows user to enable the Site Survey function to scan for the available wireless network (wireless clients and Access Points) and establish wireless communications with one. Selected one of them in list to establish communications and click “Connect” button.

BSS	SSID	WEP	CHANNEL
<input type="radio"/> 00-15-e9-ec-75-e2		No	1
<input type="radio"/> 00-03-2f-1a-72-9a		Yes	6
<input checked="" type="radio"/> 00-c0-49-ee-5c-c6	Ethan_NBD	Yes	11
<input type="radio"/> 00-88-88-55-55-55	poe	No	3
<input type="radio"/> 00-0d-0b-ae-09-35	Weiwei	Yes	9

WDS: Select the client mode connection method for WDS, Clone MAC or Proxy.

WDS: Through this client mode AP, multiple users are allowed connecting to the wireless LAN network and with the users own MAC address.

MAC Clone: Through this client mode AP, only single user is allowed connecting to the wireless LAN network and with the user own MAC address.

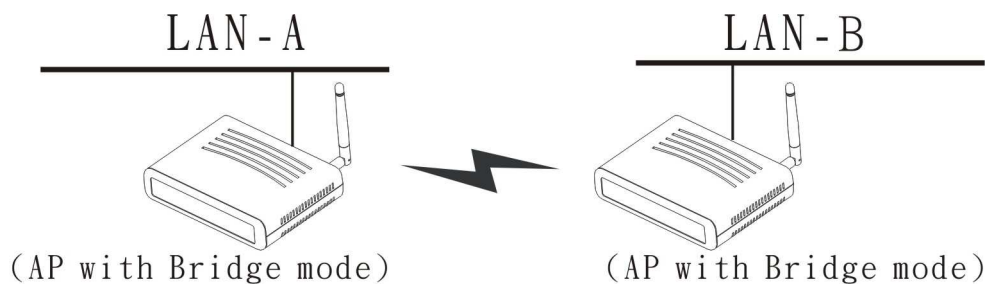
Proxy: Multiple users are allowed connecting to the wireless LAN network through this client mode AP and with the AP own MAC address.

Wireless Bridge mode

AP Mode AP

AP Client Remote AP SSID
 Wireless Bridge Remote Bridge MAC
 Multiple Bridge
 Repeat Mode Remote AP SSID

Configure to the wireless bridge mode; these APs will be a LAN to LAN wireless Ethernet bridge between two separated Ethernet LAN segments.



Bridge mode application

Remote Bridge MAC: Enter the MAC address of the opposite AP here.

Note: *These two APs must using same wireless channel setting.*

Multiple Bridge mode

AP Mode AP Site Survey

AP Client Remote AP SSID

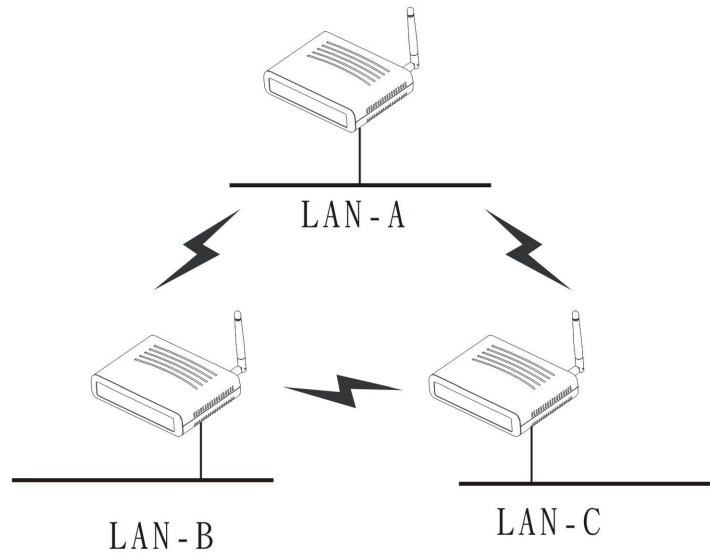
Wireless Bridge Remote Bridge MAC

Multiple Bridge

Repeat Mode Remote AP SSID

Configure to the multiple bridge mode; these APs will be a LAN to LAN wireless Ethernet bridge between two or more separated Ethernet LAN segments.

(AP with multiple bridge mode)



(AP with multiple bridge mode)

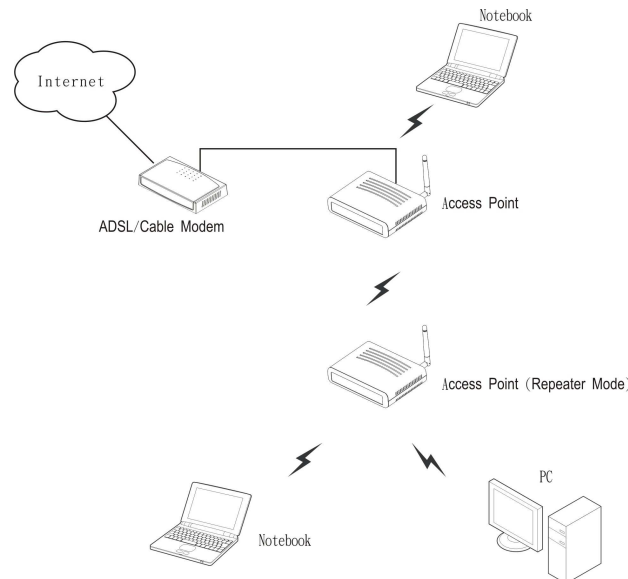
)AP with multiple bridge mode)

Note: These Multiple Bridge APs must using same SSID channel.

Repeater mode

AP Mode	<input type="radio"/> AP	<input type="button" value="Site Survey"/>
<input type="radio"/> AP Client	Remote AP SSID	
<input type="radio"/> Wireless Bridge	Remote Bridge MAC	
<input type="radio"/> Multiple Bridge		
<input checked="" type="radio"/> Repeat Mode	Remote AP SSID	<input type="text" value="default"/>

Configure the AP to Repeater mode; the AP will be a wireless LAN repeater that will be extended the WLAN coverage range.



Note: The SSID setting must same as remote AP.

Remote AP SSID: Service Set Identifier, which is a unique name shared among all clients and nodes in a wireless network. The SSID must be identical for each clients and nodes in the wireless network.

Site Survey: This button allows user to enable the Site Survey function to scan for the available wireless network (wireless clients and Access Points) and establish wireless communications with one. Selected one of them in list to establish communications and click “Connect” button.

Beacon Interval: To set the period of time in milliseconds that AP sends out a beacon. Default is 100 milliseconds.

RTS Threshold: RTS stands for “Request to Send”. This parameter controls what size data packet the low level RF protocol issues to an RTS packet. The default is 2346.

Fragmentation Threshold: To set the number of bytes used for the fragmentation boundary for directed messages. Default is 2346 bytes.

DTIM Interval: This value indicates the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the access point has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM interval value. Access point clients hear the beacons and awaken to receive the broadcast and multicast messages.

SSID Broadcast: While SSID Broadcast is enabled, all wireless clients will be able to communicate with the access point. For secure purpose, user may want to disable SSID broadcast to allow only those wireless clients with the AP SSID to communicate with the access point.

TX Rates: Select one of the wireless communications transfer rates, measured in megabytes per second, based upon the speed of wireless adapters connected to the WLAN.

CTS mode:

None: Disable CTS function.

Always: Regardless of wireless environment (11b or 11g), platform will always transfer 11b packet.

Auto: AP soon detected the wireless environment and decided the transmission packet, either 11b or 11g

11g Only Mode: To setting the AP operation mode for 802.11g only or 802.11b/802.11g mix mode.

Super G Mode: From the drop list, if you like to use Super-G™ to enhance the speed, there are three options on Super-G™ mode: *Super G without turbo*; *Super G with Dynamic turbo* and *Super G with Static turbo*. The turbo mode indicates the combination of two channels to enhance the throughput. Super G without turbo indicates that it is on Super G mode without the channel's combination. Dynamic turbo is able to automatically detect if any 'Super-G™ based' product is available. If no, the connection is via 'normal' G. Static turbo means it will not go back to 'normal' G once it starts.

Antenna transmit power: Adjust the power of the antenna transmission by selecting from the drop down list for *full*, *half (-3dB)*, *quarter (-6dB)*, *eighth (-9dB)* and *min*.

Note: Transmit power is regulated by international standard and users are forbidden to change its maximum limit.

Agging Interval: To limited STA connect timing.

Security

This page is where user configures the security features supported by this Access Point.

The screenshot shows the 'Security' configuration page for a 'Wireless Lan Access Point 108Mbps'. The page has a blue sidebar with the 'Security' label. The main content area is divided into sections. The 'Password' section includes an 'Administrator id' field with 'admin' entered, 'AP Password New' and 'Confirm' fields with masked characters, and 'Apply', 'Cancel', and 'Help' buttons. The 'MAC Filter' section has radio buttons for 'Enabled' and 'Disabled' (selected), and two options: 'Only deny PCs with MAC listed below to access device' and 'Only allow PCs with MAC listed below to access device'. Below this is a dropdown menu set to '1-10' and a table with 10 rows labeled 'MAC 1' through 'MAC 10', each with six input boxes for the MAC address. At the bottom of the table are 'Apply', 'Cancel', and 'Help' buttons.

Password: Allow user to change the new login password. Here are the necessary steps:

1. Enter the new Administrator id in the “*Administrator id*” field.
2. Enter the new password in the “*AP Password New*” field.
3. Enter the new password again in the “*Confirm*” field.
4. Click “**Apply**”

MAC Filter: MAC Filter function controls the MAC of the network devices that are listed in this table for access authorization or denial. There have three choices:

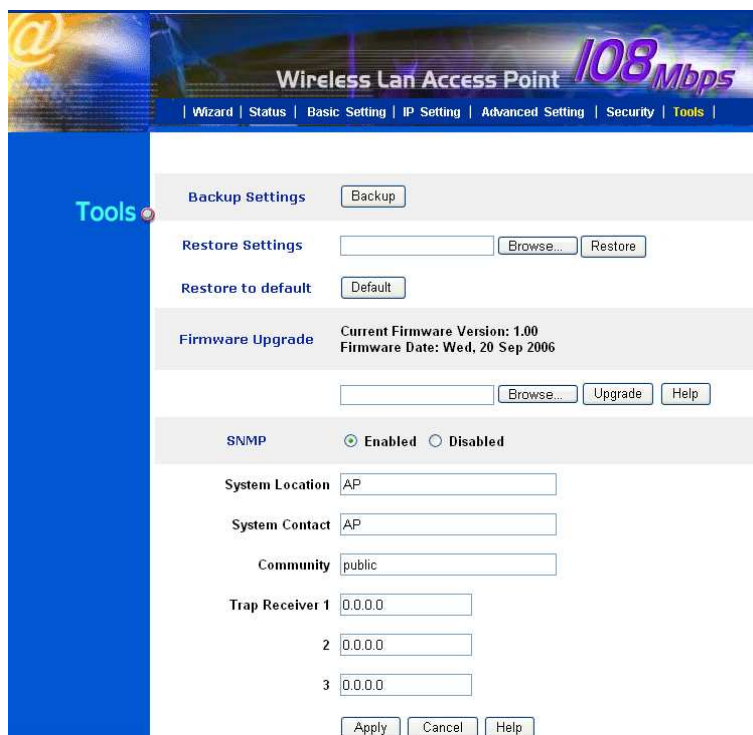
- ◆ MAC Filter: Disable or enable the MAC Filter function
- ◆ Only **allow** PCs with MAC listed below to access device
- ◆ Only **deny** PCs with MAC listed below to access device

The maximum number of MAC addresses that can be stored is 50. User can browse through the MAC address saved by selecting the MAC Filter List.

For any changes made in the security page, click “Apply” for the changes to be effective.

Tools

Four functions are provided in this page, Backup, Restore Settings, Restore default settings and Firmware Upgrade.



The screenshot shows the configuration interface for a Wireless Lan Access Point. The page title is "Wireless Lan Access Point 108Mbps". The navigation menu includes Wizard, Status, Basic Setting, IP Setting, Advanced Setting, Security, and Tools. The Tools section is active, showing several configuration options:

- Backup Settings:** A "Backup" button.
- Restore Settings:** A text input field, a "Browse..." button, and a "Restore" button.
- Restore to default:** A "Default" button.
- Firmware Upgrade:** Displays "Current Firmware Version: 1.00" and "Firmware Date: Wed, 20 Sep 2006". It includes a text input field, a "Browse..." button, an "Upgrade" button, and a "Help" button.
- SNMP:** Radio buttons for "Enabled" (selected) and "Disabled".
- System Location:** A text input field containing "AP".
- System Contact:** A text input field containing "AP".
- Community:** A text input field containing "public".
- Trap Receiver 1, 2, 3:** Three text input fields, each containing "0.0.0.0".
- At the bottom, there are "Apply", "Cancel", and "Help" buttons.

Backup Settings: Click on “**Backup**” button, which will open a FileSave Dialog box, where user gets to save all the current settings and configurations to a file.

Restore Settings: Click on the “**Browse**” button to open a FileOpen Dialog box, where user gets to select the file, which saves previous settings and configurations. Upon selecting the saved file, click “**Restore**” and complete the restore process when the access point re-operates after it restarts.

Restore to default settings: Click on “**Default**” button to restore the access point back to its manufacture default settings.

Firmware Upgrade: Click on the “**Browse**” button to open a FileOpen Dialog box, where gets to select the firmware file, which download from the web for the latest version. Upon selecting the firmware file, click “**Upgrade**” and complete the firmware upgrade process when the Access Point re-operates after it restarts.

SNMP: Enable or disable the SNMP agent on the AP.

System Location: Description the location of the AP.

System Contact: Description the contact information for the person responsible for the AP.

Community: SNMP system name for exchanging SNMP community messages. The name can be used to limit SNMP messages passing through the network. The default name is “*public*”.

Trap Receiver: Type the name of the destination PC that will receive trap messages.

WLG-2015 TECHNICAL SPECIFICATIONS

General	
Standards	IEEE 802.11b IEEE 802.11g IEEE 802.3u 10/100BASE-TX Fast Ethernet
Signal Type:	DSSS (802.11b) OFDM (802.11g)
Modulation:	QPSK / BPSK / CCK / OFDM
LED Indicators:	Power, LAN (Link/Activity), WLAN (Link)
Frequency	2412 MHz ~ 2462 MHz (FCC/NCC) 2412 MHz ~ 2472 MHz (ETSI) 2400 MHz ~ 2484 MHz (Japan)
Channel	1 ~ 11 Channels (FCC/NCC) 1 ~ 13 Channels (ETSI) 1 ~ 14 Channels (Japan)
Data Encryption:	64 bit / 128 bit WEP Encryption, WPA, WPA2, WPA-PSK, WPA2-PSK
Data Transfer Rate	Fast Ethernet: 10/100Mbps Wireless: Up to 54Mbps in 802.11g mode; up to 108Mbps in Super-G™ mode
Receiver Sensitivity	54Mbps: Typical -70 dBm @ 10% PER 11Mbps: Typical -85 dBm @ 8% PER
Transmit Power	18dBm
Transmission Range:	Outdoor: 100~300M (depends on environment) Indoor: 50~100M (depends on environment)
Network Cables	2-pair UTP/STP Cat. 3,4,5 (100 m)
Interface	1 x 10/100Mbps RJ45 port
Antenna:	2 dBi Dipole Antenna

Physical and Environmental

DC inputs	DC 7.5V /1A
Temperature	Operating: 0 ~ 40 °C, Storage: -10 ~ 70 °C
Humidity	Operating: 10% ~ 90%, Storage: 5% ~ 90%
Dimensions	140 x 98 x 30 mm (W x H x D) without Antenna
EMI:	FCC Class B, CE Mark B,