

Wireless LAN Device Series

Multi-Mode AP

ZWA-G120 User Manual

Version. 1.0.0 (13.05.2005)

TABLE OF CONTENTS

PREFACE	1
CH 1. ZWA-G120 INSTALLATION.....	2
PACKING LIST	2
HARDWARE INSTALLATION	2
CH 2. FIRST TIME CONFIGURATION	3
BEFORE START TO CONFIGURE	3
KNOWING THE NETWORK APPLICATION	3
ADVANCED SETTINGS	28
CONFIGURING WIRELESS SECURITY	31
CONFIGURING AS WLAN CLIENT ADAPTER	34
QUICK START TO CONFIGURE	34
CH 3. CONFIGURING WDS	37
WDS NETWORK TOPOLOGY	37
WDS APPLICATION.....	39
CH 4. ADVANCED CONFIGURATIONS	41
CONFIGURING LAN TO WAN FIREWALL	41
PORT FILTERING	41
IP FILTERING	41
MAC FILTERING.....	42
CONFIGURING PORT FORWARDING (VIRTUAL SERVER).....	42
MULTIPLE SERVERS BEHIND NAT EXAMPLE:	43
CONFIGURING DMZ	43
CONFIGURING WAN INTERFACE.....	44
STATIC IP.....	45
DHCP CLIENT (DYNAMIC IP).....	46
PPPoE.....	46
PPTP	47
CONFIGURING CLONE MAC ADDRESS	48
CONFIGURING DHCP SERVER	50
USING CLI MENU	51
THE SYSTEM MANAGEMENT	51
ABOUT SNMP AGENT	52
FIRMWARE UPGRADE	52
CONFIGURATION DATA BACKUP & RESTORE	53

Preface

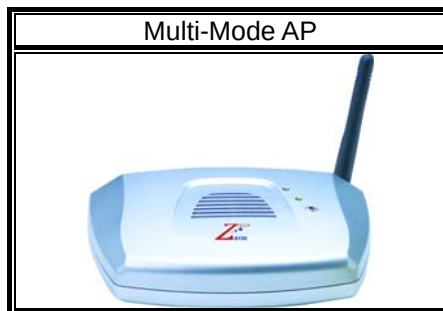
This guide is for the networking professional who installs and manages the Ziwel ZWA-G120 Multi-Mode AP, hereafter referred to as the “device”. To use this guide, you should have experience working with the TCP/IP configuration and be familiar with the concepts and terminology of wireless local area networks.

Ch 1. ZWA-G120 Installation

Packing List

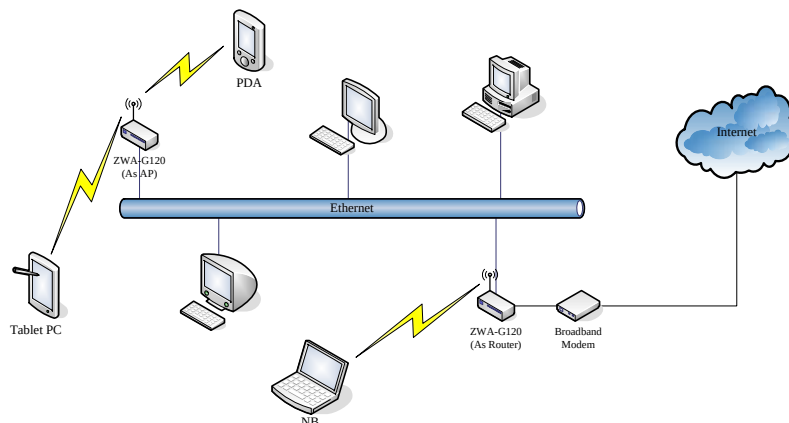
Before you start to install the device, make sure the package contains the following items :

- ZWA-G120 Multi-Mode AP * 1
- Power Adapter * 1
- RJ-45 Cable * 1



Hardware Installation

Once you check off everything from the package, you can start to install the device. You can use the wall mount hole on the bottom of the device to mount the device on the wall, or just put the device on the desktop. The administrator can refer to the figure below while constructing your WLAN environment.



Ch 2. First Time Configuration

Before Start to Configure

There are two ways to configure the device, one is through web-browser, and the other is through Secure Shell CLI interface. To access the configuration interfaces, make sure you are using a computer connected to the same network as the device. The default IP address of the device is 192.168.2.254, and the subnet-mask is 255.255.255.0.

The device has three operation modes (Router/Bridge/WISP). In bridge mode, also known as AP Client, you can access the device by both WLAN (Wireless Local Area Network) and wired LAN. And in router/WISP modes, the device can be accessed by both WLAN and WAN. The default IP addresses for the device are 192.168.2.254(for LAN), 172.1.1.1(for WAN), so you need to make sure the IP address of your PC is in the same subnet as the device, such as 192.168.2.X (for LAN), 172.1.1.X (for WAN).

Please note that the DHCP server inside the device is default to up and running. Do not have multiple DHCP servers in your network environment, otherwise it will cause abnormal situation.

We also provide an auto-discovery tool which is for finding out the IP of the device. In case, you've forgot the IP of the device or the IP of the device has been changed, you can use the tool to find out the IP of the device even your PC is not in the same subnet as the device is.

Knowing the Network Application

ZWA-G120 can act as the following roles, and it supports WDS (Wireless Distribution System) function.

- Access Point
- WDS (Wireless Repeater)
- Bridge/Router
- WISP
- AP Client

The device provides 3 different operation modes and the wireless radio of device can act as AP/Client/WDS. The operation mode is about the communication mechanism between the wired Ethernet NIC and wireless NIC, the following is the

types of operation mode.

Router

The wired Ethernet (WAN) port is used to connect with ADSL/Cable modem and the wireless NIC is used for your private WLAN. The NAT is existed between the 2 NIC and all the wireless clients share the same public IP address through the WAN port to ISP. The default IP configuration for WAN port is static IP. You can access the web server of device through the default WAN IP address 172.1.1.1 and modify the setting base on your ISP requirement.

Bridge

The wired Ethernet and wireless NIC are bridged together. Once the mode is selected, all the WAN related functions will be disabled.

WISP (Wireless ISP)

This mode can let you access the AP of your wireless ISP and share the same public IP address form your ISP to the PCs connecting with the wired Ethernet port of the device. To use this mode, first you must set the wireless radio to be client mode and connect to the AP of your ISP then you can configure the WAN IP configuration to meet your ISP requirement.

The wireless radio of the device acts as the following roles.

AP (Access Point)

The wireless radio of device serves as communications “hub” for wireless clients and provides a connection to a wired LAN.

AP Client

This mode provides the capability to connect with the other AP using infrastructure/Ad-hoc networking types. With bridge operation mode, you can directly connect the wired Ethernet port to your PC and the device becomes a wireless adapter. And with WISP operation mode, you can connect the wired Ethernet port to a hub/switch and all the PCs connecting with hub/switch can share the same public IP address from your ISP.

WDS (Wireless Distribution System)

This mode serves as a wireless repeater; the device forwards the packets to another AP with WDS function. When this mode is selected, all the wireless clients can't survey and connect to the device. The device only allows the WDS connection.

WDS+AP

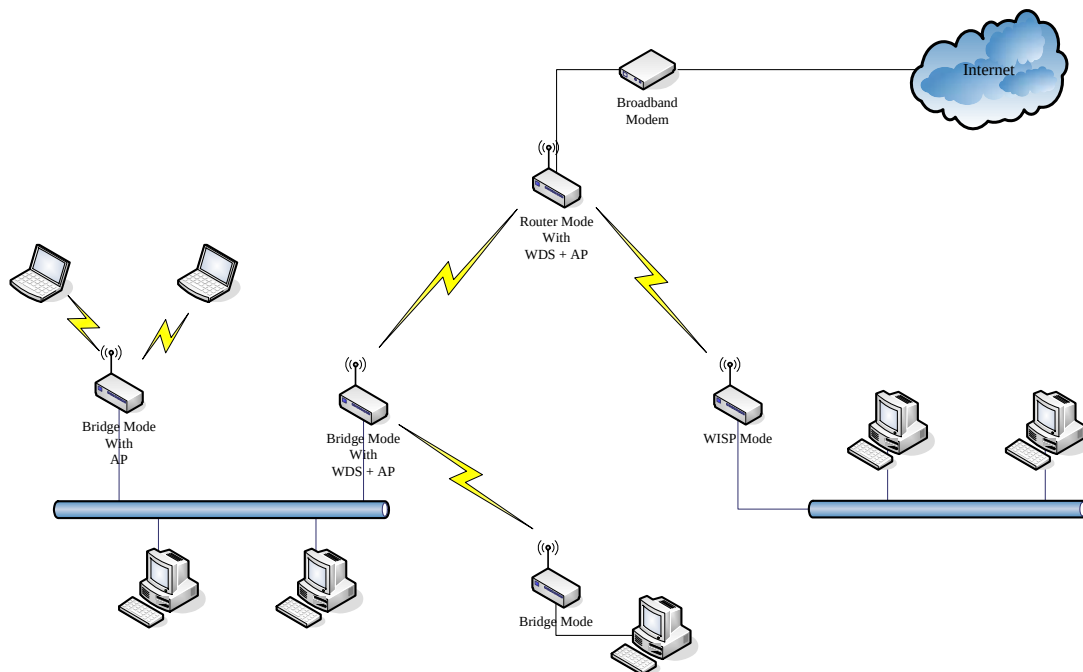
This mode combines WDS plus AP modes, it not only allows WDS connections but

also the wireless clients can survey and connect to the device.

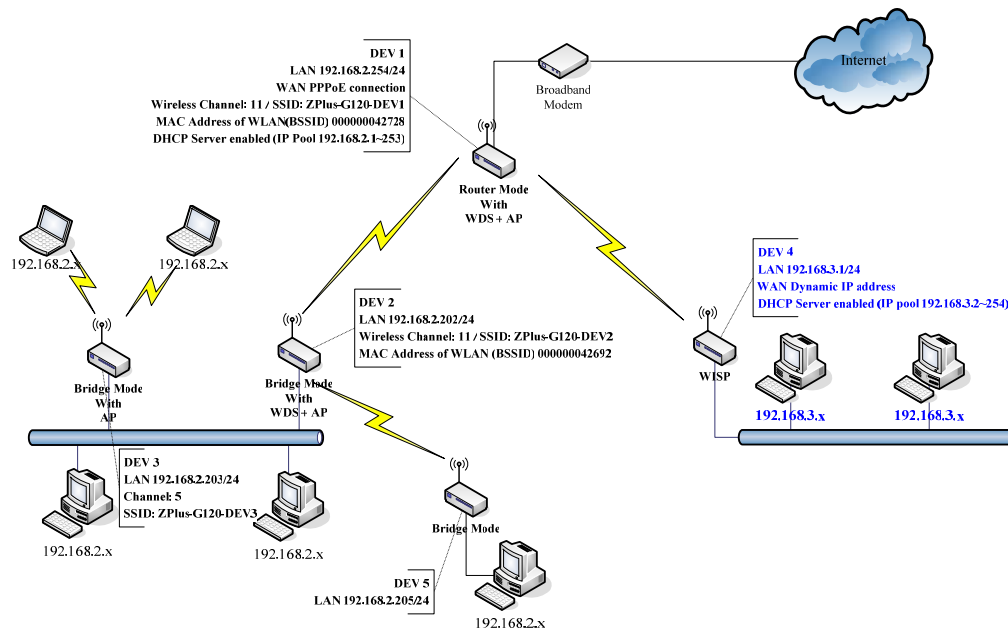
The following table shows the supporting combination of operation and wireless radio modes.

	<i>Bridge</i>	<i>Router</i>	<i>WISP</i>
AP	V	V	X
WDS	V	V	X
Client	V	X	V
AP+WDS	V	V	V

Hereafter are some topologies of network application for your reference.



Examples of Configuration



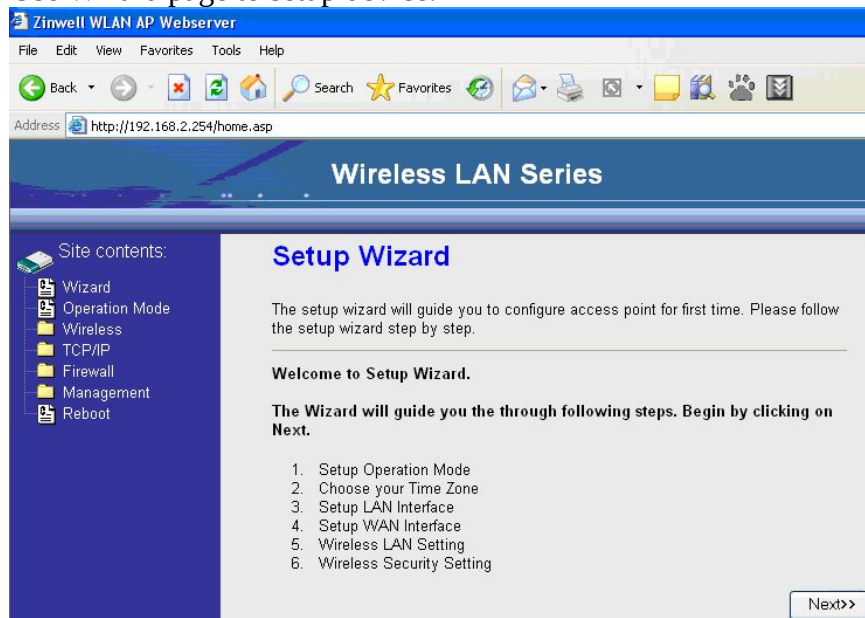
This example demonstrates how to set up a network with different device configurations. There are 2 DHCP servers (DEV1/DEV4) in the network to control the IP configuration of 2 domains (192.168.2.x/192.168.3.x). Once the setting is done, all the PCs can visit Internet through DEV1.

We assume all the devices keep the factory default setting. To make sure that user can continuing press the rest button for more than 5 seconds to restore the factory default setting.

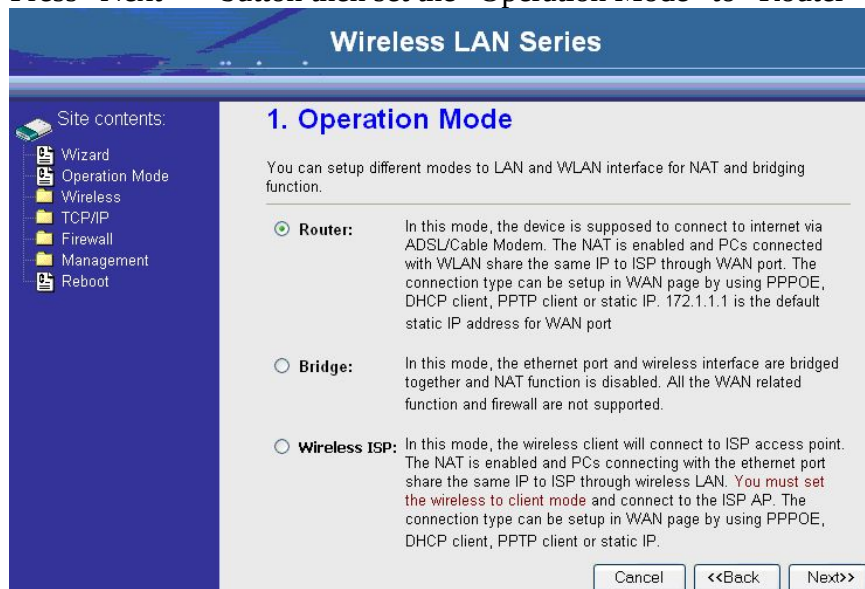
The following descriptions show the steps to configure DEV1 to DEV5.

Configure DEV1:

1. Connect the ADSL modem to Ethernet port of device using Ethernet cable.
2. Access the web server (<http://192.168.2.254>) of device from the wireless station.
3. Use Wizard page to setup device.



4. Press "Next>>" button then set the "Operation Mode" to "Router" mode.



5. Press "Next>>" button then disable "Time Zone" function.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Reboot

2. Time Zone Setting

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

☐ Enable NTP client update

Time Zone Select: (GMT-08:00)Pacific Time (US & Canada): Tijuana

NTP server: 192.5.41.41 - North America

Cancel <<Back Next>>

6. Press “Next>>” button then set the IP address of LAN interface.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Reboot

3. LAN Interface Setup

This page is used to configure the parameters for local area network which connects to the device. Here you may change the setting for IP address, subnet mask. The DHCP Server will be up and running, please make sure there is no another DHCP Server in your network when the device is in Bridge/Client Modes.

IP Address: 192.168.2.254

Subnet Mask: 255.255.255.0

Cancel <<Back Next>>

7. Press “Next>>” button then select the “PPPoE” for “WAN Access Type” and fill in the “User Name” and “Password” fields.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Reboot

4. WAN Interface Setup

This page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point. Here you may change the access method to static IP, DHCP, PPPoE or PPTP by click the item value of WAN Access type.

WAN Access Type: PPPoE

User Name: 87043609@hinet.net

Password: ••••••••

Cancel <<Back Next>>

8. Press “Next>>” button then select the “AP+WDS” for “mode” and change the SSID to “ZPlus-G120-DEV1”.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Reboot

5. Wireless Basic Settings

This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. If you want to use Wireless ISP mode, please choose the Client Mode.

Band: 2.4 GHz (B+G)

Mode: AP+WDS

Network Type: Infrastructure

SSID: ZPlus-G120-DEV1

Channel Number: 11

☐ Enable Mac Clone (Single Ethernet Client)

Cancel <<Back Next>>

- Press “Next>>” button then select “None” for “Encryption” then press “Finished” button.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Reboot

6. Wireless Security Setup

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

Encryption: None

Cancel <<Back Finished

- Wait for refreshing web page.

Wireless LAN Series

Site contents:

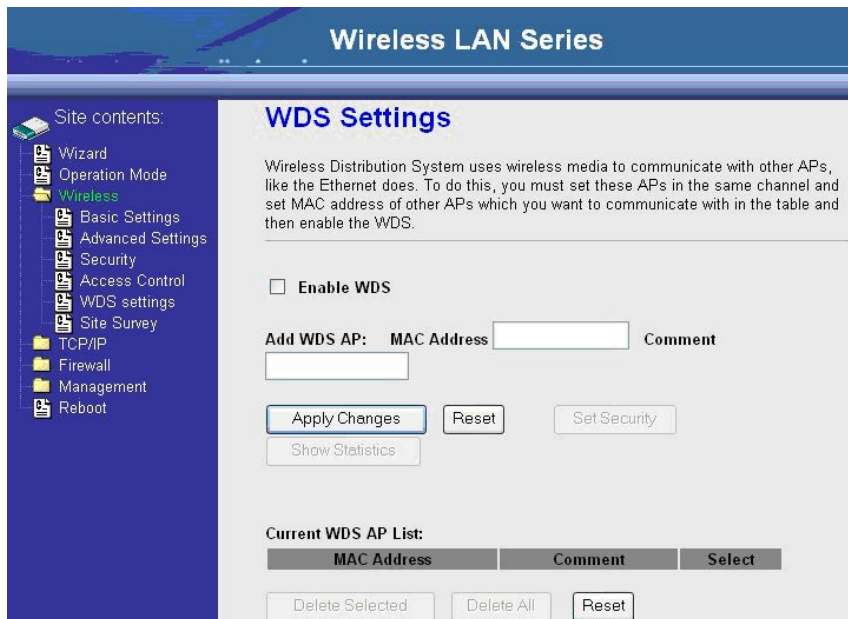
- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Reboot

Change setting successfully!

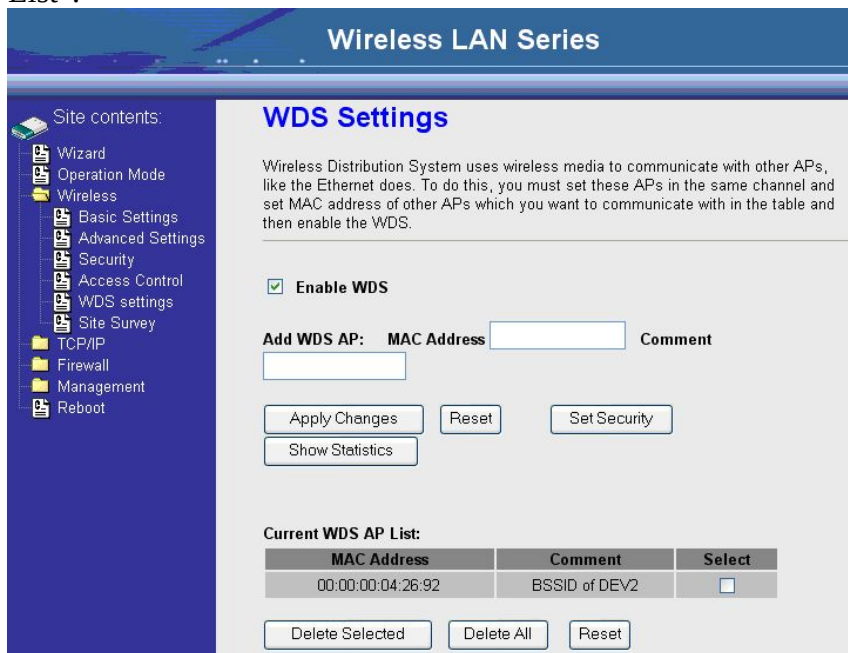
Please wait a while for refreshing webpage.

If IP address was modified, you have to re-connect the WebServer with the new address.

- Use “WDS Settings” page to configure WDS.



12. Enable WDS function and add the BSSID of DEV2 to “Current WDS AP List”.



13. Since we access the device by wireless connection, it may temporarily disconnect when applying the WDS setting. After re-connecting to the device, use the “Status” page to check the settings.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
 - Basic Settings
 - Advanced Settings
 - Security
 - Access Control
 - WDS settings
 - Site Survey
- TCP/IP
- Firewall
- Management
 - Status
 - Statistics
 - DDNS
 - Time Zone
 - Log
 - Upgrade Firmware
 - Save/Reload Setting
 - Password
- Reboot

Free Memory	1060 kB
Firmware Version	v1.2.1
Webpage Version	v1.2.1
Wireless Configuration	
Mode	AP+WDS - Router
Band	2.4 GHz (B+G)
SSID	ZPlus-G120
Channel Number	11
Encryption	Disabled(AP), Disabled(WDS)
BSSID	00:00:00:04:27:28
Associated Clients	2
Power(OFDM/G)	100mW
Power(CCK/B)	250mW
TCP/IP Configuration	
Attain IP Protocol	Fixed IP
IP Address	192.168.2.254
Subnet Mask	255.255.255.0
Default Gateway	192.168.2.254
DHCP Server	Enabled
MAC Address	00:00:00:04:27:28
WAN Configuration	
Attain IP Protocol	PPPoE Connected
IP Address	218.168.150.18
Subnet Mask	255.255.255.255
Default Gateway	218.168.128.254
MAC Address	04:05:06:07:08:09

Configure DEV2:

1. Access the web server (<http://192.168.2.254>) of device from the Ethernet port.

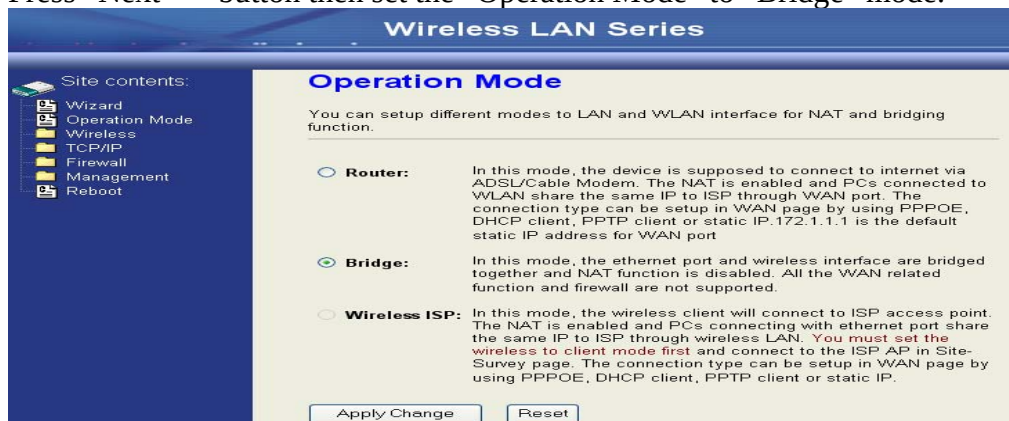
Caution

If you configure multiple devices in the same PC, since the devices have the same default IP address but different MAC addresses, it may cause you not able to access the web server of device. If the situation happens, please try to clean the ARP table of your PC by DOS command “arp -d” then you can access the web server of device using the default IP address.

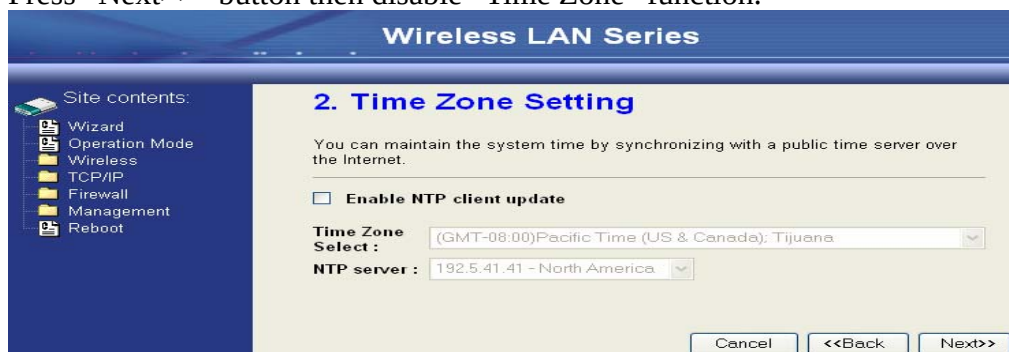
2. Use Wizard page to setup device.



3. Press “Next>>” button then set the “Operation Mode” to “Bridge” mode.



4. Press “Next>>” button then disable “Time Zone” function.



5. Press “Next>>” button then set the IP address of LAN interface.

The screenshot shows the '3. LAN Interface Setup' page. On the left is a 'Site contents' menu with options: Wizard, Operation Mode, Wireless, TCP/IP, Firewall, Management, and Reboot. The main area has a title '3. LAN Interface Setup' and a description: 'This page is used to configure the parameters for local area network which connects to the device. Here you may change the setting for IP address, subnet mask. The DHCP Server will be up and running, please make sure there is no another DHCP Server in your network when the device is in Bridge/Client Modes.' Below this, there are two input fields: 'IP Address' with the value '192.168.2.202' and 'Subnet Mask' with the value '255.255.255.0'. At the bottom right are three buttons: 'Cancel', '<<Back', and 'Next>>'.

6. Press “Next>>” button then select the “AP+WDS” for “mode” and change the SSID to “ZPlus-G120-DEV2”.

The screenshot shows the '5. Wireless Basic Settings' page. On the left is a 'Site contents' menu with options: Wizard, Operation Mode, Wireless, TCP/IP, Firewall, Management, and Reboot. The main area has a title '5. Wireless Basic Settings' and a description: 'This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. If you want to use Wireless ISP mode, please choose the Client Mode.' Below this, there are several settings: 'Band' set to '2.4 GHz (B+G)', 'Mode' set to 'AP+WDS', 'Network Type' set to 'Infrastructure', 'SSID' set to 'ZPlus-G120-DEV2', and 'Channel Number' set to '11'. There is also an unchecked checkbox for 'Enable Mac Clone (Single Ethernet Client)'. At the bottom right are three buttons: 'Cancel', '<<Back', and 'Next>>'.

7. Press “Next>>” button then select “None” for “Encryption” then press “Finished” button.

The screenshot shows the '6. Wireless Security Setup' page. On the left is a 'Site contents' menu with options: Wizard, Operation Mode, Wireless, TCP/IP, Firewall, Management, and Reboot. The main area has a title '6. Wireless Security Setup' and a description: 'This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.' Below this, there is an 'Encryption' dropdown menu set to 'None'. At the bottom right are three buttons: 'Cancel', '<<Back', and 'Finished'.

8. Wait for refreshing web page.

The screenshot shows a confirmation message page. On the left is a 'Site contents' menu with options: Wizard, Operation Mode, Wireless, TCP/IP, Firewall, Management, and Reboot. The main area has a title 'Wireless LAN Series' and the text: 'Change setting successfully!', 'Please wait a while for refreshing webpage.', and 'If IP address was modified, you have to re-connect the WebServer with the new address.'

9. Access the web server by new IP address “192.168.2.202” then use “LAN Interface” page to disable DHCP Server.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
 - TCP/IP
 - LAN Interface
 - WAN Interface
- Firewall
- Management
- Reboot

LAN Interface Setup

This page is used to configure the parameters for local area network which connects to the device. Here you may change the setting for IP addresss, subnet mask, DHCP, etc..

IP Address: 192.168.2.202

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DHCP: Disabled

DHCP Client Range: 192.168.2.1 - 192.168.2.201 [Show Client](#)

802.1d Spanning Tree: Disabled

Clone MAC Address: 000000000000

[Apply Changes](#) [Reset](#)

10. Wait for refreshing web page.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
 - TCP/IP
 - LAN Interface
 - WAN Interface
- Firewall
- Management
- Reboot

Change setting successfully!

Please wait a while for refreshing webpage.

If IP address was modified, you have to re-connect the WebServer with the new address.

11. Use “WDS Settings” page to configure WDS.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
 - Basic Settings
 - Advanced Settings
 - Security
 - Access Control
 - WDS settings
 - Site Survey
- Firewall
- Management
- Reboot

WDS Settings

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

☐ Enable WDS

Add WDS AP:

MAC Address	Comment

[Apply Changes](#) [Reset](#) [Set Security](#) [Show Statistics](#)

Current WDS AP List:

MAC Address	Comment	Select
		☐

[Delete Selected](#) [Delete All](#) [Reset](#)

12. Enable WDS function and add the BSSID of DEV1 to “Current WDS AP List”.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- Basic Settings
- Advanced Settings
- Security
- Access Control
- WDS settings
- Site Survey
- TCP/IP
- Firewall
- Management
- Reboot

WDS Settings

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

☒ **Enable WDS**

Add WDS AP: **MAC Address** **Comment**

Current WDS AP List:

MAC Address	Comment	Select
00:00:00:04:27:28	BSSID of DEV1	☐

13. Use the “Status” page to check the settings.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Status
- Statistics
- DDNS
- Time Zone
- Log
- Upgrade Firmware
- Save/Reload Setting
- Password
- Reboot

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

System	
Uptime	0day:1h:46m:9s
Free Memory	2136 kB
Firmware Version	v1.2.1
Webpage Version	v1.2.1
Wireless Configuration	
Mode	AP+WDS - Bridge
Band	2.4 GHz (B+G)
SSID	ZPlus-G120-DEV2
Channel Number	11
Encryption	Disabled(AP), Disabled(WDS)
BSSID	00:00:00:04:26:92
Associated Clients	2
Power(OFDM/G)	100mW
Power(CCK/B)	250mW
TCP/IP Configuration	
Attain IP Protocol	Fixed IP
IP Address	192.168.2.202
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DHCP Server	Disabled
MAC Address	00:00:00:04:26:92

Configure DEV3:

1. Access the web server (<http://192.168.2.254>) of device from the Ethernet port.

Caution

If you configure multiple devices in the same PC, since the devices have the same default IP address but different MAC addresses, it may cause you not able to access the web server of device. If the situation happens, please try to clean the ARP table of your PC by DOS command “arp -d” then you can access the web server of device using the default IP address.

2. Use “LAN Interface” page to set the IP address of LAN interface and disable DHCP server.

3. Wait for refreshing web page.

4. Access the web server by new IP address “192.168.2.203” then use “Basic Settings” page to change SSID and CHANNEL.

5. Use the “Status” page to check the settings.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management**
 - Status**
 - Statistics
 - DDNS
 - Time Zone
 - Log
 - Upgrade Firmware
 - Save/Reload Setting
 - Password
 - Reboot

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

System	
Uptime	0day:1h:26m:28s
Free Memory	1912 kB
Firmware Version	v1.2.1
Webpage Version	v1.2.1
Wireless Configuration	
Mode	AP - Bridge
Band	2.4 GHz (B+G)
SSID	ZPlus-G192-DEV3
Channel Number	5
Encryption	Disabled
BSSID	00:00:aa:bb:dd:91
Associated Clients	0
Power(OFDM/G)	100mW
Power(CCK/B)	250mW
TCP/IP Configuration	
Attain IP Protocol	Fixed IP
IP Address	192.168.2.203
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DHCP Server	Disabled
MAC Address	00:00:aa:bb:dd:91

Configure DEV4:

1. Access the web server (<http://192.168.2.254>) of device from the Ethernet port.

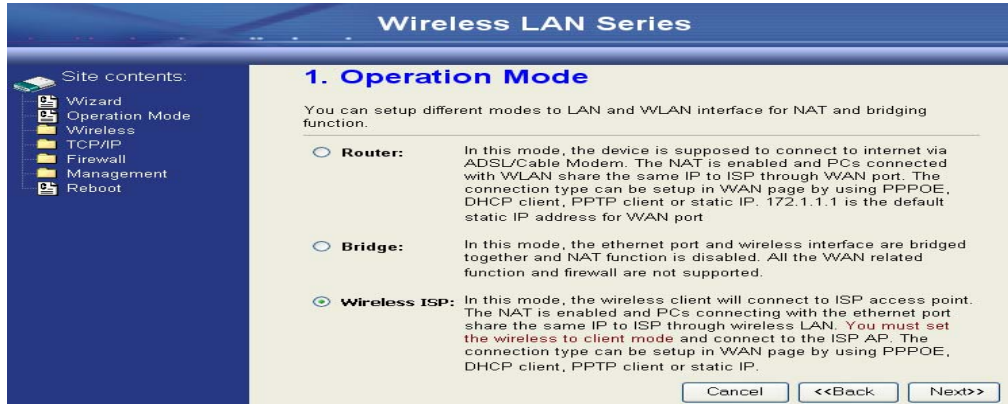
Caution

If you configure multiple devices in the same PC, since the devices have the same default IP address but different MAC addresses, it may cause you unable to access the web server of device. If the situation happens, please try to clean the ARP table of your PC by DOS command “arp -d” then you can access the web server of device using the default IP address.

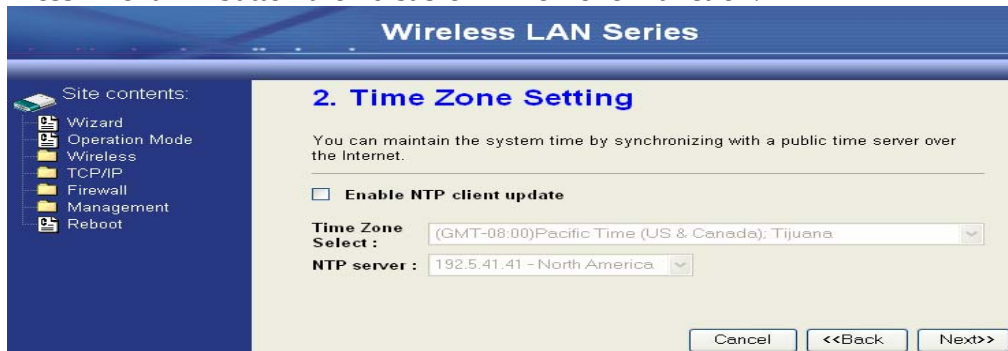
2. Use Wizard page to setup device.



3. Press “Next>>” button then set the “Operation Mode” to “Wireless ISP” mode.



4. Press “Next>>” button then disable “Time Zone” function.



5. Press “Next>>” button then set the IP address of LAN interface.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Reboot

3. LAN Interface Setup

This page is used to configure the parameters for local area network which connects to the device. Here you may change the setting for IP addresss, subnet mask. The DHCP Server will be up and running, please make sure there is no another DHCP Server in your network when the device is in Bridge/Client Modes.

IP Address: 192.168.3.1

Subnet Mask: 255.255.255.0

Cancel <<Back Next>>

6. Press “Next>>” button then select the “DHCP Client” for “WAN Access Type”.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Reboot

4. WAN Interface Setup

This page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point. Here you may change the access method to static IP, DHCP, PPPoE or PPTP by click the item value of WAN Access type.

WAN Access Type: DHCP Client

Cancel <<Back Next>>

7. Press “Next>>” button then select the “Client” for “mode” and change the SSID to “ZPlus-G120-DEV4”.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Reboot

5. Wireless Basic Settings

This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. If you want to use Wireless ISP mode, please choose the Client Mode.

Band: 2.4 GHz (B+G)

Mode: Client

Network Type: Infrastructure

SSID: ZPlus-G192-DEV1

Channel Number: 11

☐ Enable Mac Clone (Single Ethernet Client)

Cancel <<Back Next>>

8. Press “Next>>” button then select “None” for “Encryption” then press “Finished” button.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Reboot

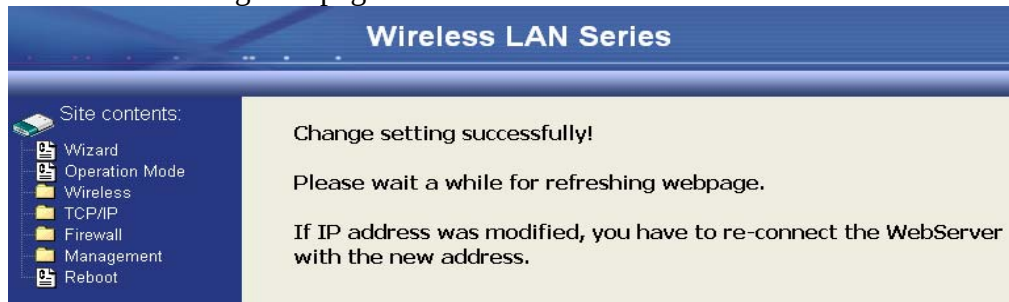
6. Wireless Security Setup

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

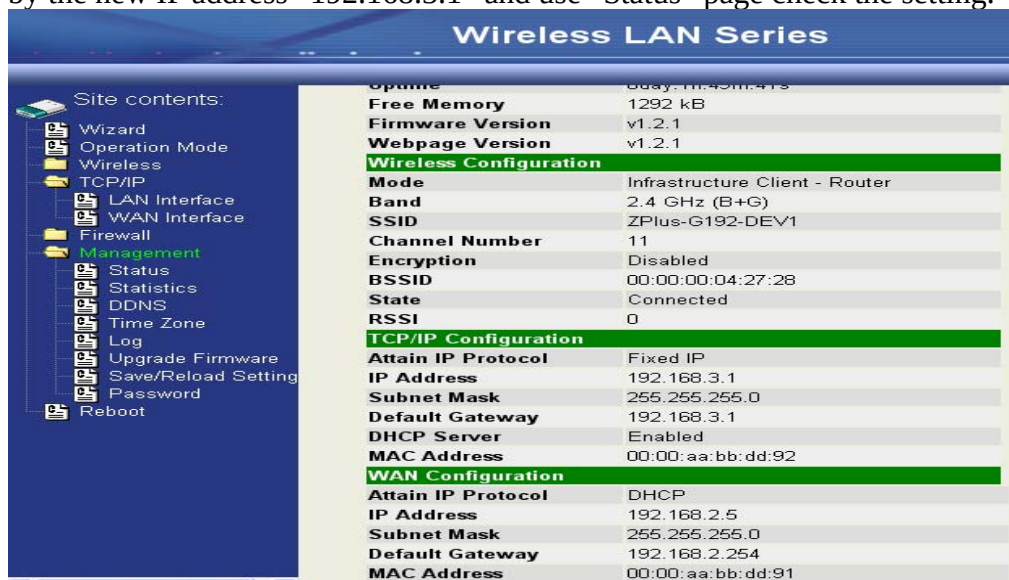
Encryption: None

Cancel <<Back Finished

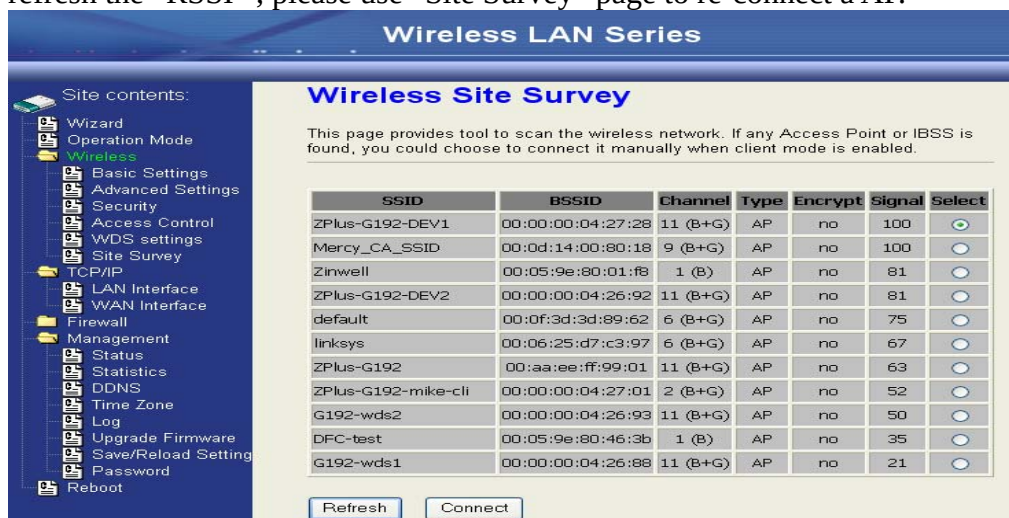
9. Wait for refreshing web page.



10. Change the IP address of your PC to 192.168.3.x then access the web server by the new IP address "192.168.3.1" and use "Status" page check the setting.



11. If the "State" of "Wireless Configuration" is not "Connected" or you want to refresh the "RSSI", please use "Site Survey" page to re-connect a AP.



Configure DEV5:

1. Access the web server (<http://192.168.2.254>) of device from the Ethernet port.

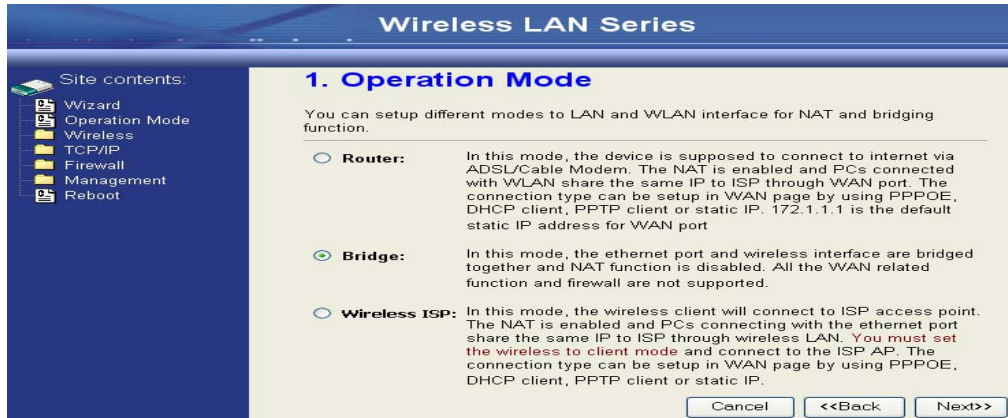
Caution

If you configure multiple devices in the same PC, since the devices have the same default IP address but different MAC addresses, it may cause you unable to access the web server of device. If the situation happens, please try to clean the ARP table of your PC by DOS command “arp -d” then you can access the web server of device using the default IP address.

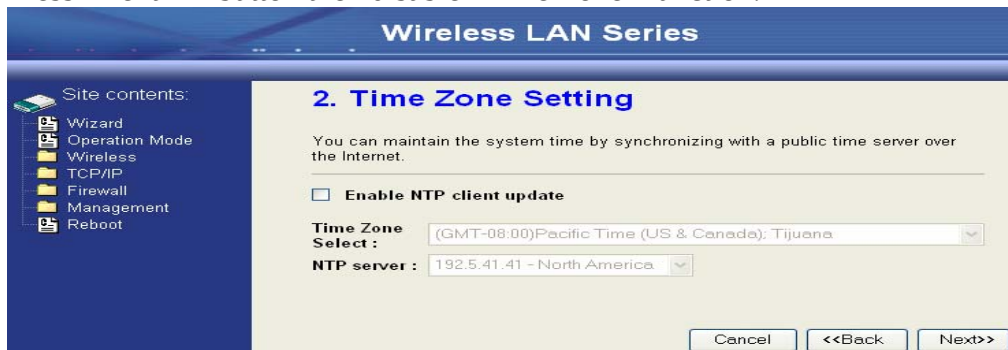
2. Use Wizard page to setup device.



3. Press “Next>>” button then set the “Operation Mode” to “Wireless ISP” mode.



4. Press “Next>>” button then disable “Time Zone” function.



5. Press “Next>>” button then set the IP address of LAN interface.

The screenshot shows the '3. LAN Interface Setup' page. On the left is a 'Site contents' sidebar with a tree view containing: Wizard, Operation Mode, Wireless, TCP/IP, Firewall, Management, and Reboot. The main area has a title '3. LAN Interface Setup' and a description: 'This page is used to configure the parameters for local area network which connects to the device. Here you may change the setting for IP addresss, subnet mask. The DHCP Server will be up and running, please make sure there is no another DHCP Server in your network when the device is in Bridge/Client Modes.' Below this are two input fields: 'IP Address:' with the value '192.168.2.205' and 'Subnet Mask:' with the value '255.255.255.0'. At the bottom right are three buttons: 'Cancel', '<<Back', and 'Next>>'.

6. Press “Next>>” button then select the “Client” for “mode” and change the SSID to “ZPlus-G120-DEV5”.

The screenshot shows the '5. Wireless Basic Settings' page. The 'Site contents' sidebar is the same as in the previous screenshot. The main area has a title '5. Wireless Basic Settings' and a description: 'This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. If you want to use Wireless ISP mode, please choose the Client Mode.' Below this are several settings: 'Band:' set to '2.4 GHz (B+G)', 'Mode:' set to 'Client', 'Network Type:' set to 'Infrastructure', 'SSID:' set to 'ZPlus-G192-DEV2', and 'Channel Number:' set to '11'. There is an unchecked checkbox labeled 'Enable Mac Clone (Single Ethernet Client)'. At the bottom right are three buttons: 'Cancel', '<<Back', and 'Next>>'.

7. Press “Next>>” button then select “None” for “Encryption” then press “Finished” button.

The screenshot shows the '6. Wireless Security Setup' page. The 'Site contents' sidebar is the same. The main area has a title '6. Wireless Security Setup' and a description: 'This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.' Below this is an 'Encryption:' dropdown menu currently set to 'None'. At the bottom right are three buttons: 'Cancel', '<<Back', and 'Finished'.

8. Wait for refreshing web page.

The screenshot shows a confirmation page titled 'Change setting successfully!'. It contains the text: 'Please wait a while for refreshing webpage.' and 'If IP address was modified, you have to re-connect the WebServer with the new address.' The 'Site contents' sidebar is the same as in the previous screenshots.

9. Access the web server by the new IP address “192.168.2.205” and use “LAN Interface” page to disable DHCP Server.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- LAN Interface
- WAN Interface
- Firewall
- Management
- Reboot

LAN Interface Setup

This page is used to configure the parameters for local area network which connects to the device. Here you may change the setting for IP address, subnet mask, DHCP, etc..

IP Address: 192.168.2.205

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DHCP: Disabled

DHCP Client Range: 192.168.2.1 - 192.168.2.204 [Show Client](#)

802.1d Spanning Tree: Disabled

Clone MAC Address: 000000000000

[Apply Changes](#) [Reset](#)

10. Wait for refreshing webpage.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- LAN Interface
- WAN Interface
- Firewall
- Management
- Reboot

Change setting successfully!

Please wait a while for refreshing webpage.

If IP address was modified, you have to re-connect the WebServer with the new address.

11. Use “State” page to check setting.

Wireless LAN Series

Site contents:

- Wizard
- Operation Mode
- Wireless
- TCP/IP
- Firewall
- Management
- Status
- Statistics
- DDNS
- Time Zone
- Log
- Upgrade Firmware
- Save/Reload Setting
- Password
- Reboot

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

System	
Uptime	0day:2h:56m:6s
Free Memory	1520 kB
Firmware Version	v1.2.1
Webpage Version	v1.2.1
Wireless Configuration	
Mode	Infrastructure Client - Bridge
Band	2.4 GHz (B+G)
SSID	ZPlus-G192-DEV2
Channel Number	11
Encryption	Disabled
BSSID	00:00:00:04:26:92
State	Connected
RSSI	0
TCP/IP Configuration	
Attain IP Protocol	Fixed IP
IP Address	192.168.2.205
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DHCP Server	Disabled
MAC Address	00:00:aa:bb:dd:91

12. If the “State” of “Wireless Configuration” is not “Connected” or you want to refresh the “RSSI “, please use “Site Survey” page to re-connect a AP.

Wireless LAN Series

Site contents:

Wizard

Operation Mode

Wireless

Basic Settings

Advanced Settings

Security

Access Control

WDS settings

Site Survey

TCP/IP

Firewall

Management

Reboot

Wireless Site Survey

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

SSID	BSSID	Channel	Type	Encrypt	Signal	Select
Mercy_CA_SSID	00:0d:14:00:80:18	9 (B+G)	AP	no	100	☐
ZPlus-G192-DEV1	00:00:00:04:27:28	11 (B+G)	AP	no	100	☐
ZPlus-G192-DEV2	00:00:00:04:26:92	11 (B+G)	AP	no	84	☒
default	00:0f:3d:3d:89:62	6 (B+G)	AP	no	81	☐
Zinwell	00:05:9e:80:01:f8	1 (B)	AP	no	80	☐
ZPlus-G192	00:aa:ee:ff:99:01	11 (B+G)	AP	no	63	☐
linksys	00:06:25:d7:c3:97	6 (B+G)	AP	no	61	☐
ZPlus-G192-mm	00:00:00:04:27:01	2 (B+G)	AP	no	52	☐
G192-wds2	00:00:00:04:26:93	11 (B+G)	AP	no	41	☐
DFC-test	00:05:9e:80:46:3b	1 (B)	AP	no	29	☐
G192-wds1	00:00:00:04:26:88	11 (B+G)	AP	no	23	☐
3F-PRINTER	00:0c:6e:c1:9b:11	7 (B+G)	AP	yes	18	☐

Refresh

Connect

Basic Settings

Disable Wireless LAN Interface

Disable the wireless interface of device

Band:

The device supports 2.4GHz(B), 2.4GHz(G) and 2.4GHz(B+G) mixed modes.

Mode:

The radio of device supports different modes as following:

1. AP

The radio of device acts as an Access Point to serves all wireless clients to join a wireless local network.

2. Client

Support Infrastructure and Ad-hoc network types to act as a wireless adapter.

3. WDS

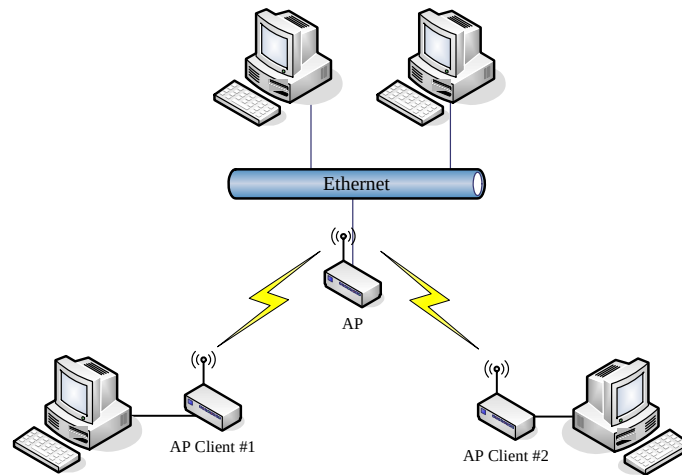
Wireless Distribution System, this mode serves as a wireless repeater, only devices with WDS function supported can connect to it, all the wireless clients can't survey and connect the device when the mode is selected.

4. AP+WDS

Support both AP and WDS functions, the wireless clients and devices with WDS function supported can survey and connect to it.

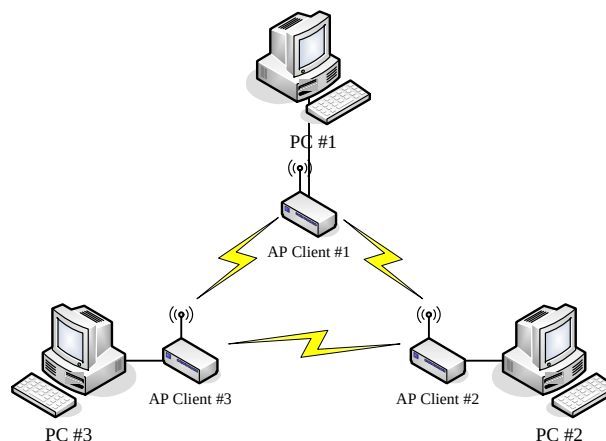
- **Infrastructure:**

This type requires the presence of 802.11b/g Access Point. All communication is done via the Access Point.



- **Ad Hoc:**

This type provides a peer-to-peer communication between wireless stations. All the communication is done from Client to Client without any Access Point involved. Ad Hoc networking must use the same SSID and channel for establishing the wireless connection.



In client mode, the device can't support the Router mode function including Firewall and WAN settings.

SSID:

The SSID is a unique identifier that wireless networking devices use to establish and maintain wireless connectivity. Multiple access point/bridges on a network or sub-network can use the same SSID. SSIDs are case sensitive and can contain up to 32 alphanumeric characters. Do not include spaces in your SSID.

Channel Number

The following table is the available frequencies (in MHz) for the 2.4-GHz radio:

Channel No.	Frequency	Country Domain
1	2412	Americas, EMEA, Japan, and China
2	2417	Americas, EMEA, Japan, and China
3	2422	Americas, EMEA, Japan, Israel, and China
4	2427	Americas, EMEA, Japan, Israel, and China

5	2432	Americas, EMEA, Japan, Israel, and China
6	2437	Americas, EMEA, Japan, Israel, and China
7	2442	Americas, EMEA, Japan, Israel, and China
8	2447	Americas, EMEA, Japan, Israel, and China
9	2452	Americas, EMEA, Japan, Israel, and China
10	2457	Americas, EMEA, Japan, and China
11	2462	Americas, EMEA, Japan, and China
12	2467	EMEA and Japan only
13	2472	EMEA and Japan only
14	2484	Japan only

When set to “Auto”, the device will find the least-congested channel for use.

Associated Client

Show the information of active wireless client stations that connected to the device.

REMARK: Channels are used (CH1~CH11) by firmware controlled in U.S.A..