

CAMBRIDGE

CIG

INDUSTRIES (GROUP) CO LTD.

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# WF-630R1 AP User Manual

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Version 2

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# TABLE OF CONTENTS

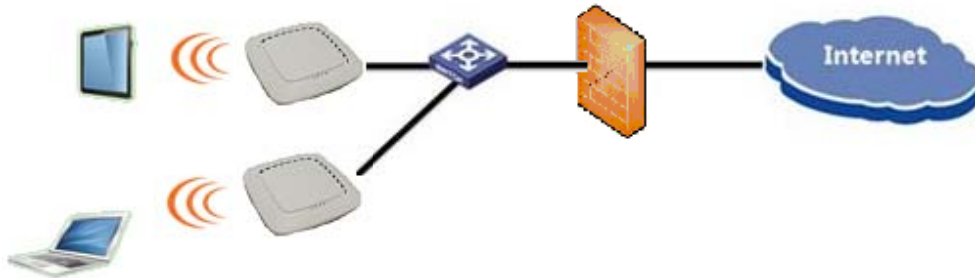
1	AP Network Topology .....	3
1.1	Connect PoE Adapter to AP .....	3
1.2	Configure PC IP address.....	4
1.3	Visit AP Web page.....	5
1.4	Configure IP address for AP .....	5
1.5	Connect AP to Switch.....	6
1.6	Configure location, Language and Country code for AP .....	6
1.7	Configure detailed WiFi parameters for AP .....	7
1.8	Configure Radius parameters for AP .....	7
1.9	Configure Portal parameters for AP .....	8
1.10	Configure security parameters for AP .....	9
1.11	Configure Rate limit rule (Optional).....	11
1.12	Configure Group ID (Optional) .....	13
1.13	Configure MAC ACL rule (Optional).....	14
1.14	Configure SSID.....	15
2	AP WDS Network Topology .....	17
2.1	Enable WDS function .....	17
2.2	Configure CPE WDS .....	18
3	NAWDS Network Topology.....	19
3.1	Configure WDS bridge mode .....	19
3.2	Input remote AP MAC .....	20
3.3	The configuration in remote AP.....	20
3.4	NAWDS Auto Find.....	22
4	Station Network Topology .....	23
4.1	Configure Station mode.....	23
4.2	Station Access to AP.....	24
4.3	Station Status .....	25
5	Troubleshooting .....	25
5.1	Ping Diagnose .....	25
5.2	TraceRT Diagnose .....	26
5.3	How to backup/restore setting.....	26
5.4	How to upgrade AP .....	27
5.5	How to reset AP to default setting.....	27
5.6	How to check AP Setting by console .....	错误! 未定义书签。

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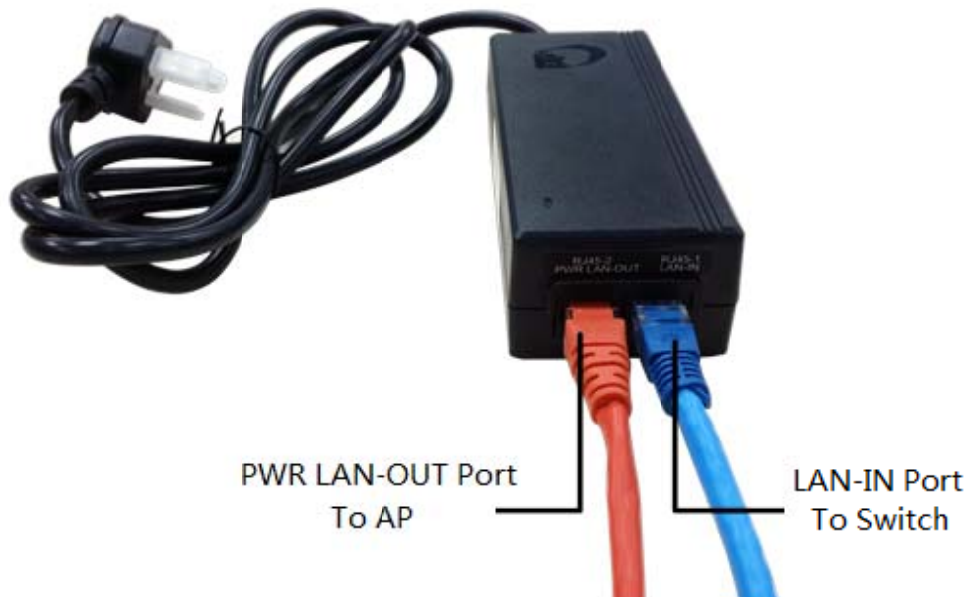
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# 1 AP Network Topology



## 1.1 Connect PoE Adapter to AP



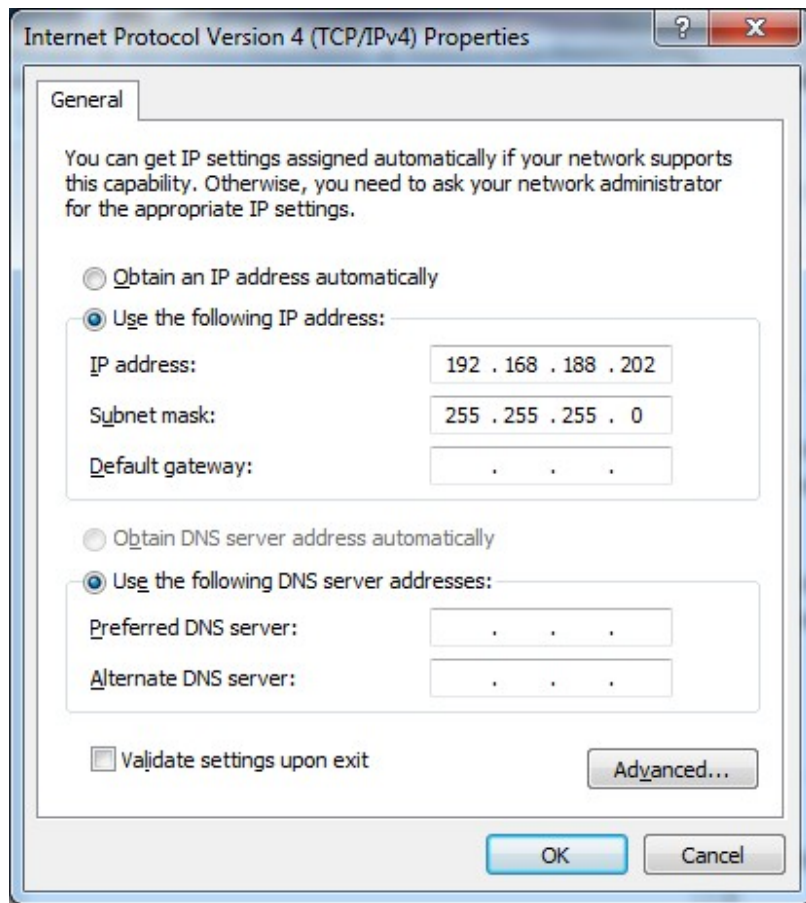
***Notes: Please connect the Ethernet Port labeled “PWR LAN-OUT” on PoE Adapter to “ETH1” port of AP and the Ethernet Port labeled “LAN-IN” on PoE Adapter to your PC or Switch.***

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## 1.2 Configure PC IP address



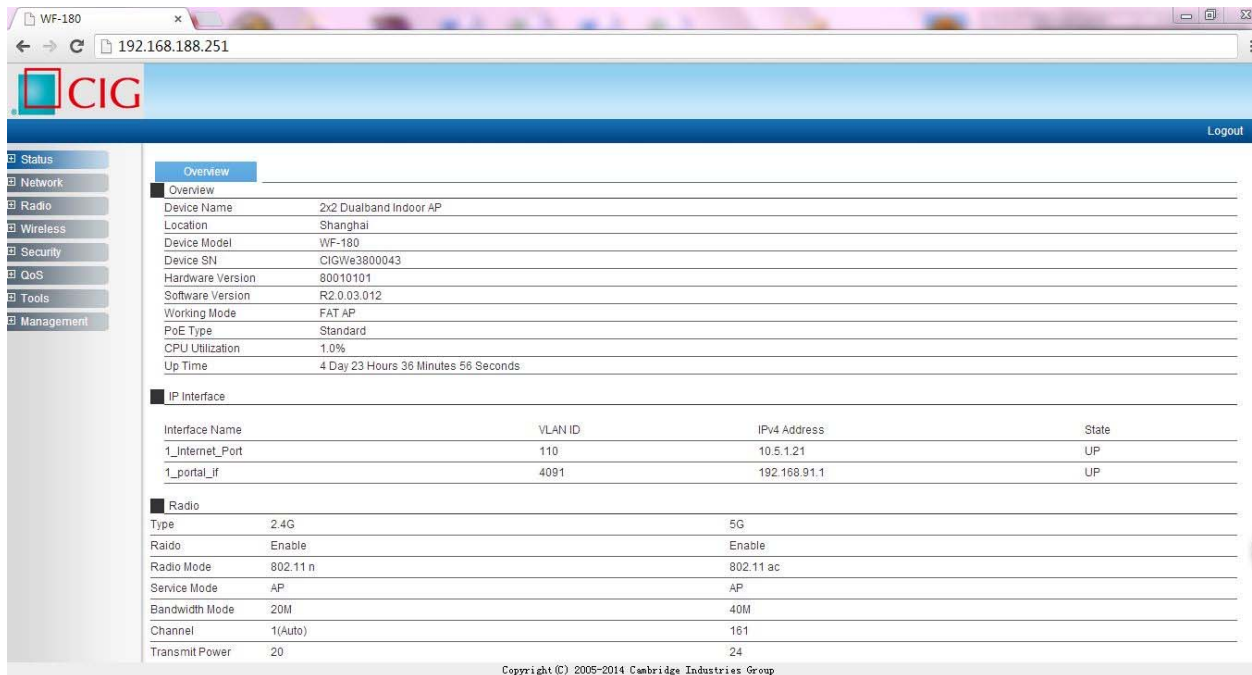
***Notes:*** Connect your PC to the "LAN-IN" port on PoE Adapter of AP, manually configure your wired NIC with a static IP address on the 192.168.188.x subnet (e.g. 192.168.188.202).

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### Notice

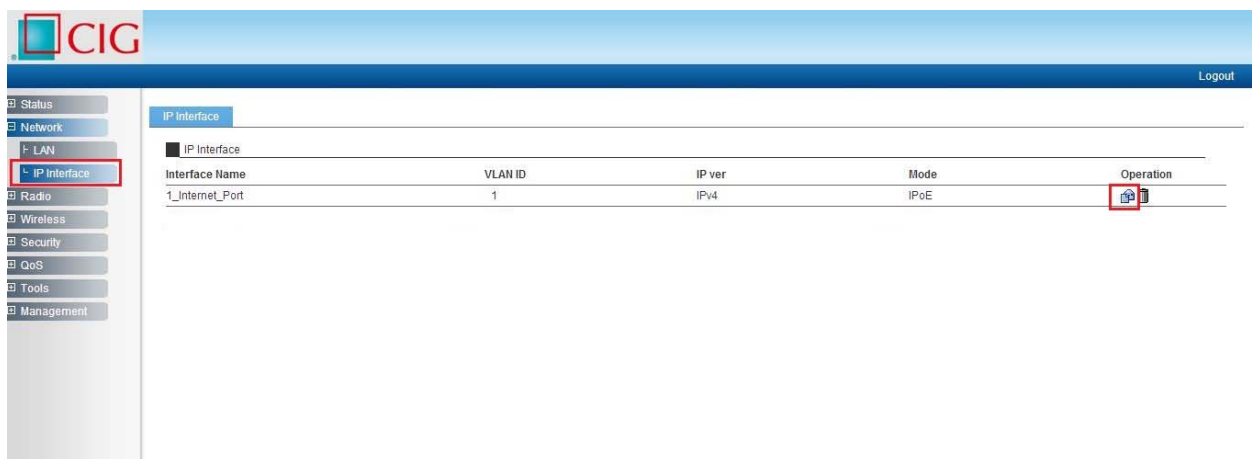
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### 1.3 Visit AP Web page



**Notes:** Input the default IP address "192.168.188.251" in the address bar of browser. Then enter the default username and password (username: admin, password: password) to enter the Web interface of AP.

### 1.4 Configure IP address for AP



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## 1.5 Connect AP to Switch

**Notes:** Connect AP to Switch and confirm it can visit Internet, then configure your PC to the same subnet and connect to the same Switch in order to continue to configuring the AP.

## 1.6 Configure location, Language and Country code for AP

**Notes:** The country code is US and can't be modified.

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## 1.7 Configure detailed WiFi parameters for AP

The screenshot shows the CIG configuration interface for a 2.4G WiFi AP. The left sidebar has a tree view with 'Radio' expanded and '2.4G' selected. The main panel has 'Basic' and 'Advance' tabs, with 'Basic' active. The configuration fields are as follows:

Radio	<input checked="" type="checkbox"/>
Service Mode	AP
TX Power	21 dBm
Radio Mode	802.11 n
Channel	Auto
<input type="radio"/> HT20	
<input type="radio"/> HT40	
802.11n:	
802.11n only	<input type="checkbox"/>
TX Beforming	<input checked="" type="checkbox"/>
Spatial Stream	2
Aggregation	AMPDU
Guard Interval	<input checked="" type="checkbox"/> Enable Short GI

Buttons: Ok, Cancel

The screenshot shows the CIG configuration interface for a 5G WiFi AP. The left sidebar has a tree view with 'Radio' expanded and '5G' selected. The main panel has 'Basic' and 'Advance' tabs, with 'Basic' active. The configuration fields are as follows:

Radio	<input checked="" type="checkbox"/>
Service Mode	AP
TX Power	21 dBm
Radio Mode	802.11 ac
Channel	161
<input type="radio"/> HT20	
<input checked="" type="radio"/> HT40	
<input type="radio"/> HT80	
802.11ac:	
802.11ac only	<input type="checkbox"/>
Spatial Stream	2
Aggregation	AMPDU
Guard Interval	<input checked="" type="checkbox"/> Enable Short GI

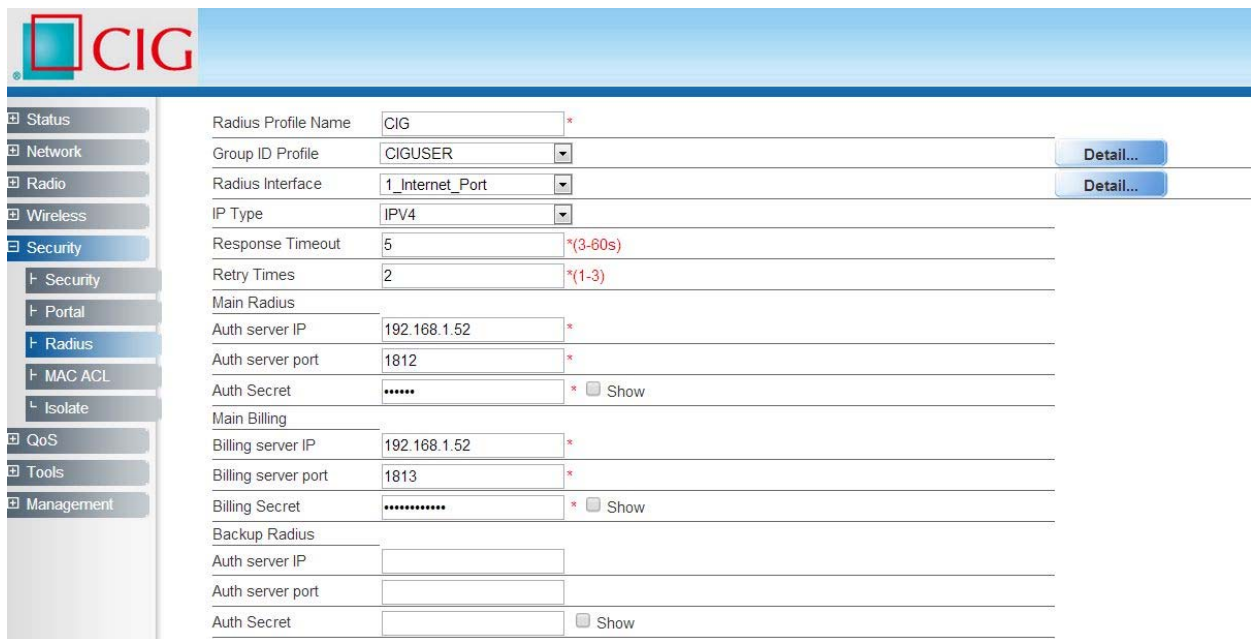
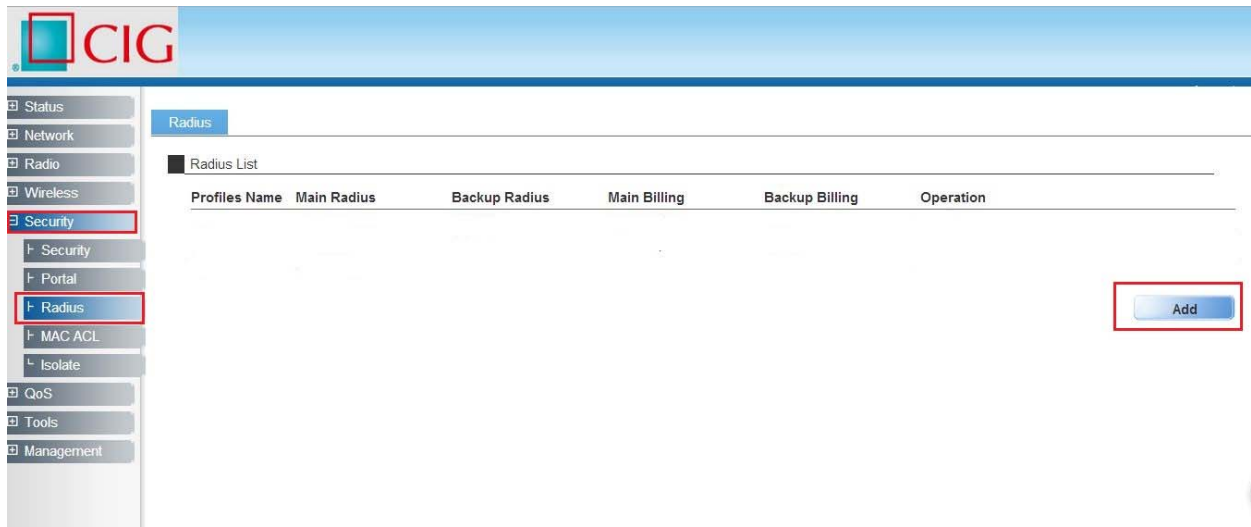
Buttons: Ok, Cancel

## 1.8 Configure Radius parameters for AP

**Notes:** If want to use the 802.1x authentication, it need to configure the Radius profile firstly. Then in the security profile, the radius profile will be presented in the drop-down list.

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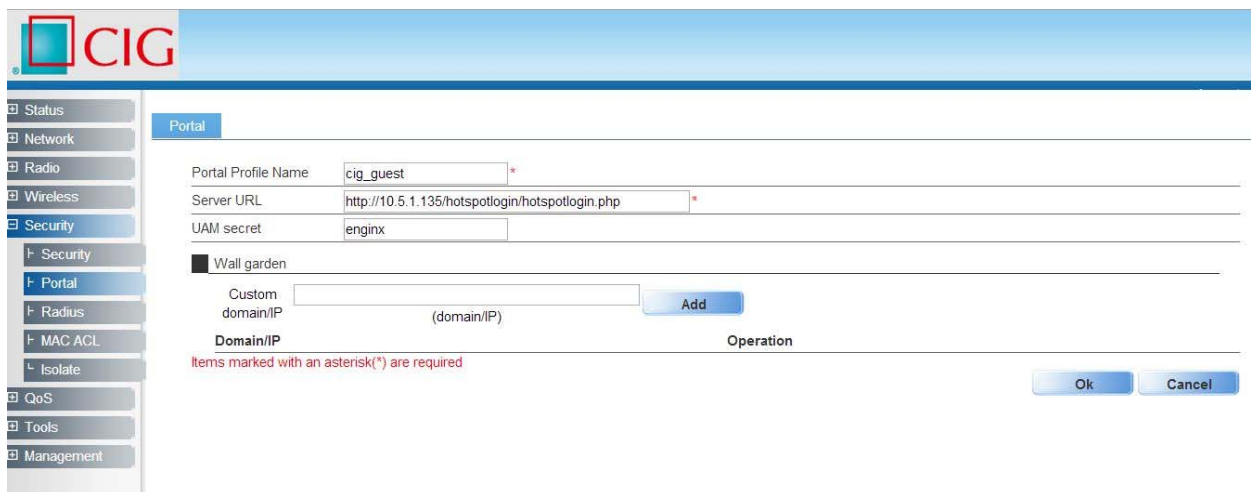
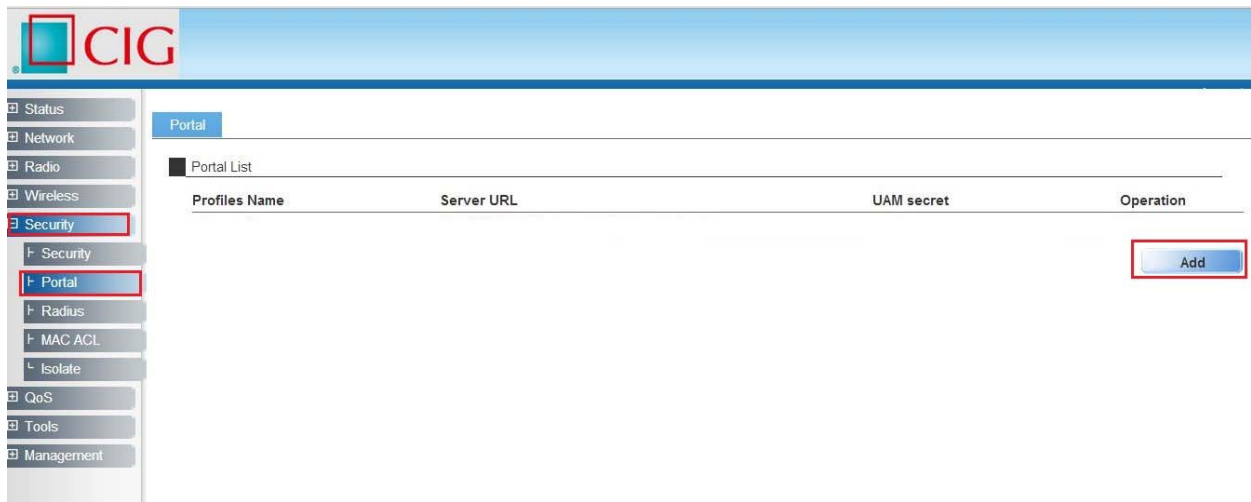
## 1.9 Configure Portal parameters for AP

**Notes:** The AP can support Web authentication based on Chillispot. If want to use the Web authentication, it need to configure the Portal profile and Radius profile firstly. Then in the security profile, the Portal profile and Radius profile will be presented in the drop-down list. Above all, you need to setup a Web authentication server and radius server.

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## 1.10 Configure security parameters for AP

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CIG

- Status
- Network
- Radio
- Wireless
- Security
  - Security
  - Portal
  - Radius
  - MAC ACL
  - Isolate
- QoS
- Tools
- Management

Security

Security

Profiles Name	Security Type	Operation

Add

## PSK

CIG

Logout

- Status
- Network
- Radio
- Wireless
- Security
  - Security
  - Radius
  - MAC ACL
  - Isolate
- QoS
- Tools
- Management

Security

Security-Add

Security Profile Name:  \*

Security Type:

Encryption:

Authentication Type:

WPA Preshared Key:  \*  Show

Items marked with an asterisk(\*) are required

Ok Cancel

## 802.1x Authentication

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**CIG**

Security

Security-Edit

Security Profile Name: CIG \*

Security Type: WPA/WPA2

Authentication Type: 802.1X/EAP

Radius Profile: CIG [Detail...](#)

Items marked with an asterisk(\*) are required

Ok Cancel

## Web Authentication

**CIG**

Security

Security-Edit

Security Profile Name: CIG\_Guest \*

Security Type: None

Authentication Type: MAC/Web

Portal Profile: cig\_guest [Detail...](#)

Radius Profile: RadiusProf1 [Detail...](#)

Items marked with an asterisk(\*) are required

Ok Cancel

## 1.11 Configure Rate limit rule (Optional)

***Notes: Rate Limit profile will be cited in the AP configuration.***

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Logout

- Status
- Network
- Radio
- Wireless
- Security
- QoS
  - Rate Limit
  - Group Id
- Tools
- Management

**Rate Limit**

Profile Name:  \*

Station MAC:  (12:13:56:78:9a:bc)

Egress Method:

Egress Rate:  \*kbps (0 means no limit)

Station MAC	Egress	Select
00:11:22:33:44:55	Fix_1024kbps	<input type="checkbox"/>

Items marked with an asterisk(\*) are required.

Logout

- Status
- Network
- Radio
- Wireless
  - AP
  - WDS Bridge
- Security
- QoS
- Tools
- Management

**AP**

■ VAP-Add

Radio:

SSID:  \*

Wireless Service:  Enable

Hidden SSID:  Enable

Station Isolation:  Enable

Maximum User:  \*(1-128)

Idle Kickout Times:  \*(0-255, 0 Means Disable Kickout function)

WDS:  Enable

VLAN Mode:

PVID:  \*(0-4090)

Pri:  \*(0-7)

Security Profile:

RateLimit Profile:

Mapping Profile:

MAC ACL Profile:

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## 1.12 Configure Group ID (Optional)

**Notes:** Group profile is used for 802.1x/Web authentication. Group is classified by Filter-ID attribute in radius access accept message. The Group is bound with the role of the user. Different group has different VLAN and rate limit configuration. When a station sends the username and password to the Radius server for authentication, the server can respond with a Filter-ID (optional) to the AP. After AP gets the Filter-ID attribute, AP will search the Filter-ID in the Group profiles. If the Filter-ID can be matched in one profile, the traffic VLAN and rate limit will be applied to the station. The Group profile is cited in the Radius server profile.

Group Id

Group ID - Edit

Profile Name

Group ID Rules - Edit

Group ID

VLAN ID[0-4090]

Ingress Method

Ingress Rate  \*kbps (0 means no limit)

Egress Method

Egress Rate  \*kbps (0 means no limit)

Group ID Rules List

Group ID	VLAN ID	Ingress Rate	Egress Rate	Select
RD	110	Fix_0kbps	Fix_0kbps	<input type="checkbox"/>

Items marked with an asterisk(\*) are required.

Radius-Edit

Radius Profile Name

Group ID Profile

Radius Interface

IP Type

Response Timeout  \*(3-60s)

Retry Times  \*(1-3)

Main Radius

Auth server IP

Auth server port

Auth Secret   Show

Main Billing

Billing server IP

Billing server port

Billing Secret   Show

Backup Radius

Auth server IP

Auth server port

Auth Secret   Show

Backup Billing

Billing server IP

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## 1.13 Configure MAC ACL rule (Optional)

**CIG** Logout

- Status
- Network
- Radio
- Wireless
- Security
  - Security
  - Radius
  - MAC ACL**
  - Isolate
- QoS
- Tools
- Management

### MAC ACL

**MAC-ACL-Profile-Edit**

MAC ACL Profile Name:  \*

Access Control Mode:  Black  white

**MAC ACL List**

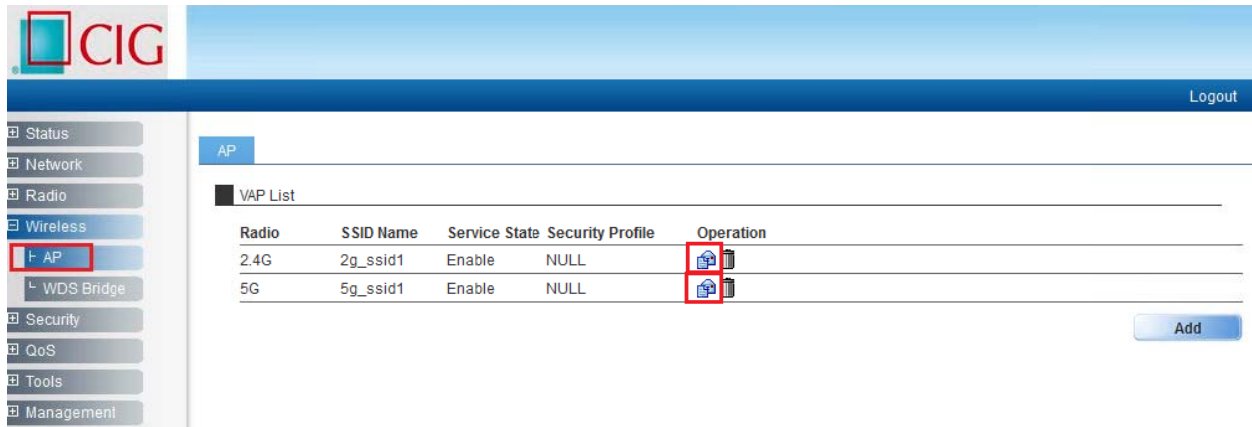
Enter MAC Address:  (XX:XX:XX:XX:XX:XX)

Items marked with an asterisk(\*) are required





### Notice

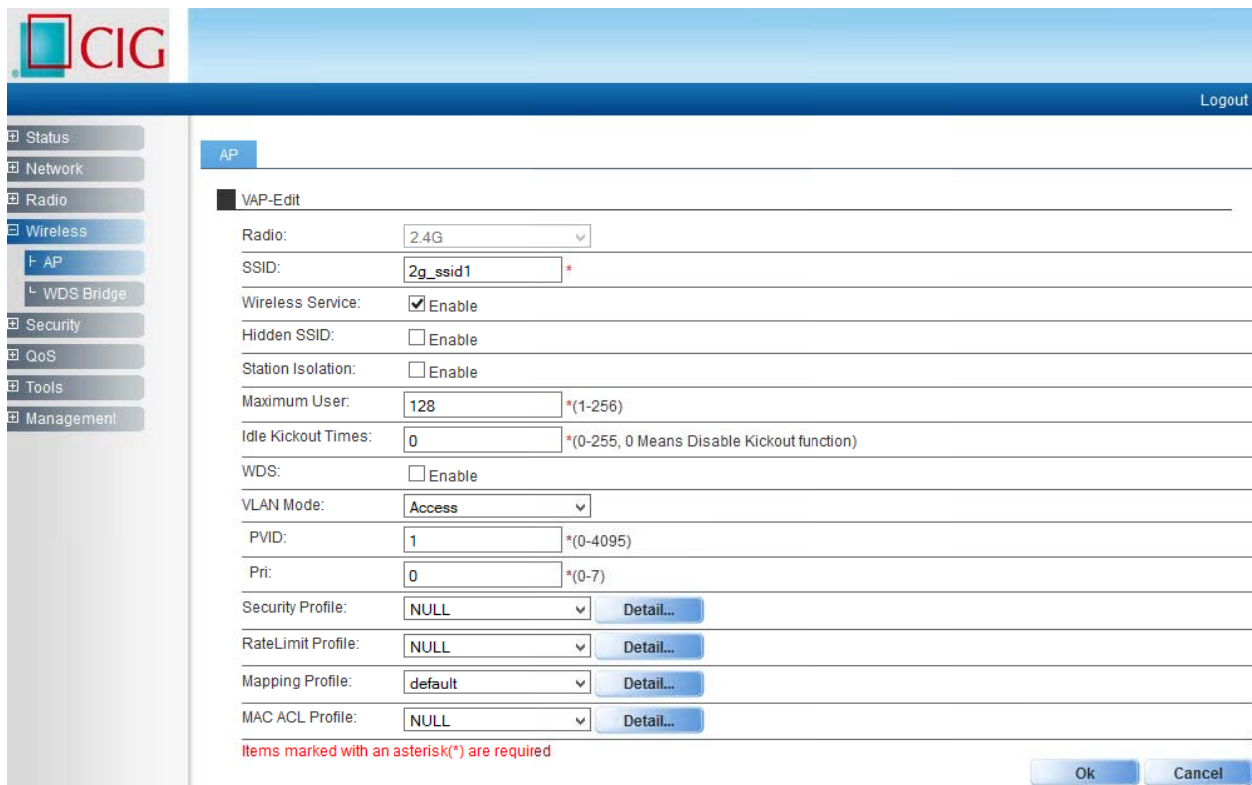
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## 1.14 Configure SSID



The screenshot shows the CIG web interface for AP configuration. The left sidebar has a tree view with 'Wireless' expanded and 'AP' selected. The main content area is titled 'AP' and contains a 'VAP List' table. The table has columns for Radio, SSID Name, Service State, Security Profile, and Operation. Two rows are visible: one for 2.4G with SSID '2g\_ssid1' and one for 5G with SSID '5g\_ssid1'. Both have 'Enable' service state and 'NULL' security profile. The 'Operation' column contains icons for edit and delete. A red box highlights the 'AP' menu item and the 'Operation' icons. An 'Add' button is at the bottom right.

Radio	SSID Name	Service State	Security Profile	Operation
2.4G	2g_ssid1	Enable	NULL	 
5G	5g_ssid1	Enable	NULL	 



The screenshot shows the 'VAP-Edit' configuration page in the CIG web interface. The left sidebar is the same as in the previous screenshot. The main content area is titled 'VAP-Edit' and contains a form with various fields. The 'Radio' field is set to '2.4G'. The 'SSID' field is '2g\_ssid1' with an asterisk. 'Wireless Service' is checked. 'Hidden SSID' and 'Station Isolation' are unchecked. 'Maximum User' is '128'. 'Idle Kickout Times' is '0'. 'WDS' is unchecked. 'VLAN Mode' is 'Access'. 'PVID' is '1'. 'Pri' is '0'. 'Security Profile', 'RateLimit Profile', 'Mapping Profile', and 'MAC ACL Profile' are all set to 'NULL'. Each of these last four fields has a 'Detail...' button. A red note at the bottom states 'Items marked with an asterisk(\*) are required'. 'Ok' and 'Cancel' buttons are at the bottom right.

Radio: 2.4G

SSID: 2g\_ssid1 \*

Wireless Service:  Enable

Hidden SSID:  Enable

Station Isolation:  Enable

Maximum User: 128 \*(1-256)

Idle Kickout Times: 0 \*(0-255, 0 Means Disable Kickout function)

WDS:  Enable

VLAN Mode: Access

PVID: 1 \*(0-4095)

Pri: 0 \*(0-7)

Security Profile: NULL [Detail...](#)

RateLimit Profile: NULL [Detail...](#)

Mapping Profile: default [Detail...](#)

MAC ACL Profile: NULL [Detail...](#)

Items marked with an asterisk(\*) are required

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The screenshot shows the CIG (Cisco Intelligent Gateway) web interface for configuring an AP. The left sidebar contains navigation menus for Status, Network, Radio, Wireless, AP, WDS Bridge, Security, QoS, Tools, and Management. The main content area is titled 'AP' and contains a 'VAP-Edit' configuration form. The form includes the following fields and options:

- Radio: 5G
- SSID: 5g\_ssid1 \*
- Wireless Service:  Enable
- Hidden SSID:  Enable
- Station Isolation:  Enable
- Maximum User: 128 \*(1-256)
- Idle Kickout Times: 0 \*(0-255, 0 Means Disable Kickout function)
- WDS:  Enable
- VLAN Mode: Access
- PVID: 1 \*(0-4095)
- Pri: 0 \*(0-7)
- Security Profile: NULL (Detail...)
- RateLimit Profile: NULL (Detail...)
- Mapping Profile: default (Detail...)
- MAC ACL Profile: NULL (Detail...)

At the bottom of the form, a red note states: "Items marked with an asterisk(\*) are required". There are 'Ok' and 'Cancel' buttons at the bottom right of the configuration area.

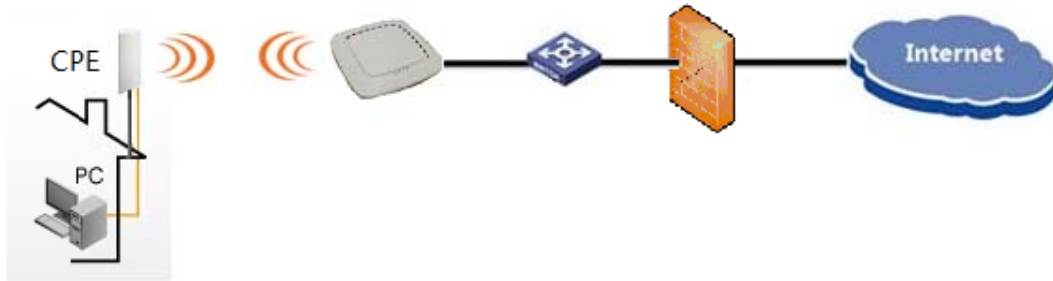
***Notes: You may apply the relevant Security, Rate Limit, Mapping or MAC ACL profiles which you configured here. After the above setting, wireless stations can connect to the relevant SSID of AP and get IP address from DHCP server of firewall to visit Internet.***

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## 2 AP WDS Network Topology



### 2.1 Enable WDS function

The screenshot shows the CIG (Customer Integration Gateway) configuration interface. The left sidebar contains a menu with the following items: Status, Network, Radio, Wireless, AP, WDS Bridge, Security, QoS, Tools, and Management. The 'Wireless' menu is expanded, and the 'AP' option is selected. The main configuration area is titled 'AP' and contains the following settings:

Field	Value	Notes
Radio	5G	
SSID	5g_ssid1	*
Wireless Service	<input checked="" type="checkbox"/> Enable	
Hidden SSID	<input type="checkbox"/> Enable	
Station Isolation	<input type="checkbox"/> Enable	
Maximum User	128	*(1-256)
Idle Kickout Times	0	*(0-255, 0 Means Disable Kickout function)
WDS	<input checked="" type="checkbox"/> Enable	
VLAN Mode	Access	
PVID	1	*(0-4095)
Pri	0	*(0-7)
Security Profile	SecPro1	Detail...
RateLimit Profile	RateLimitPro1	Detail...
Mapping Profile	QosMappingPro2	Detail...
MAC ACL Profile	macacl	Detail...

Items marked with an asterisk(\*) are required

**Note:** Enable WDS function when you configure SSID.

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## 2.2 Configure CPE WDS

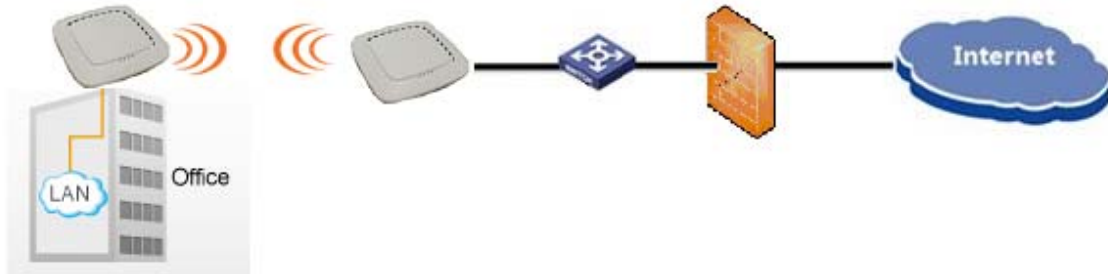
The screenshot displays the configuration page for a CPE device, specifically the 'Wireless' section. At the top, there are navigation tabs: 'Status', 'Configuration', 'Services', 'System', and 'Tools'. Below these are sub-tabs: 'Network', 'Wireless', 'Virtual AP', 'Wireless ACL', 'Traffic shaping', 'Port forwarding', and 'Static routes'. The 'Wireless' sub-tab is active. The main configuration area is divided into sections: 'Wireless mode', 'Basic', 'Security', and 'Advanced'. In the 'Wireless mode' section, 'Station' is selected for the mode, 'CT' for the country, and 'DISABLED' for non-standard channels. The 'Enable WDS' checkbox is checked and highlighted with a red box. The 'Basic' section includes SSID '5g\_ssid1', a 'Scan' button, 'A/N mixed' IEEE mode, and '20/40 MHz' channel width. The 'Security' section shows 'Personal WPA2' security and 'AES' encryption. The 'Advanced' section includes 'Tx power (dBm)' set to 26, 'Mode' set to 'MIMO 2x2', and 'Max data rate' set to 'Auto'.

**Note:** Enable WDS function too when you configure CPE to connect to AP.

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### 3 NAWDSNetwork Topology



#### 3.1 Configure WDS bridge mode

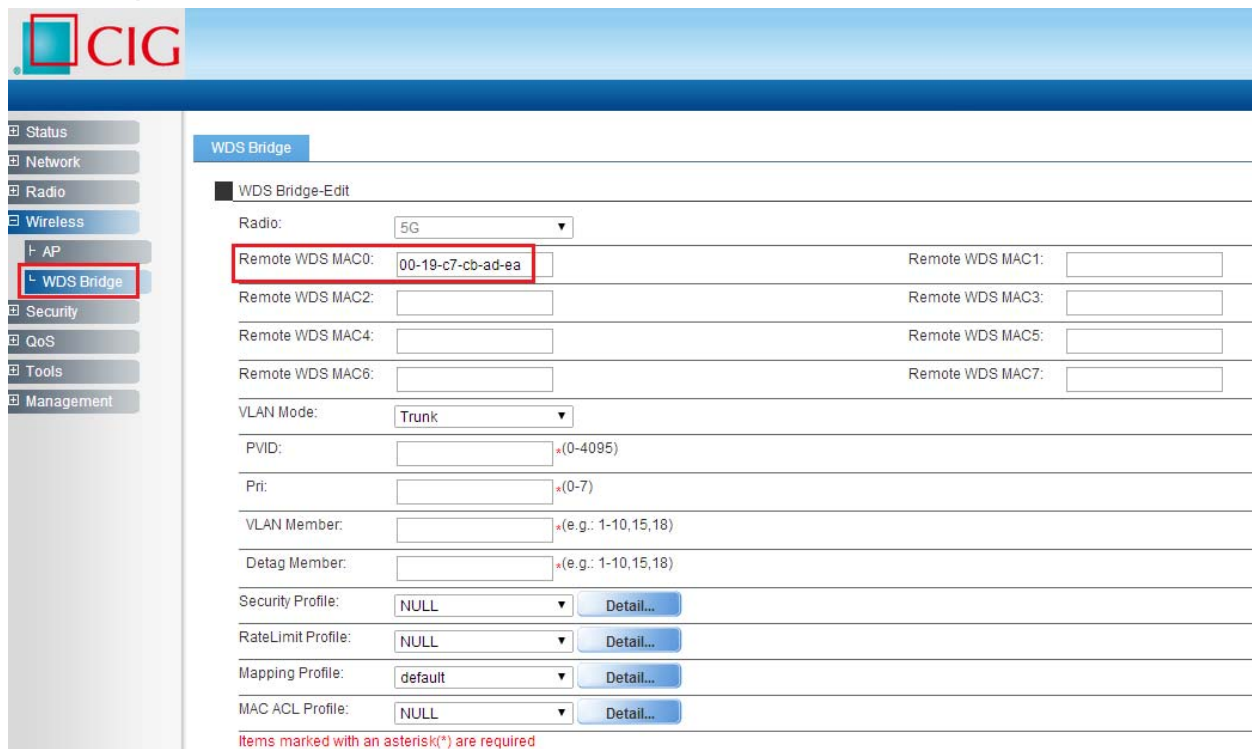
The screenshot shows the CIG configuration interface. The 'Radio' section is expanded to '5G'. The 'Basic' tab is selected. The 'Service Mode' dropdown is set to 'WDS Bridge' (highlighted with a red box). Other settings include 'TX Power' at 21 dBm, 'Radio Mode' at 802.11ac, 'Channel' at 161, and 'Guard Interval' checked for 'Enable Short GI'. The '802.11ac' section is also visible with 'Spatial Stream' set to 2 and 'Aggregation' set to AMPDU. 'Ok' and 'Cancel' buttons are at the bottom right.

**Note:** Please select a specified Channel (for example 161) here.

#### Notice

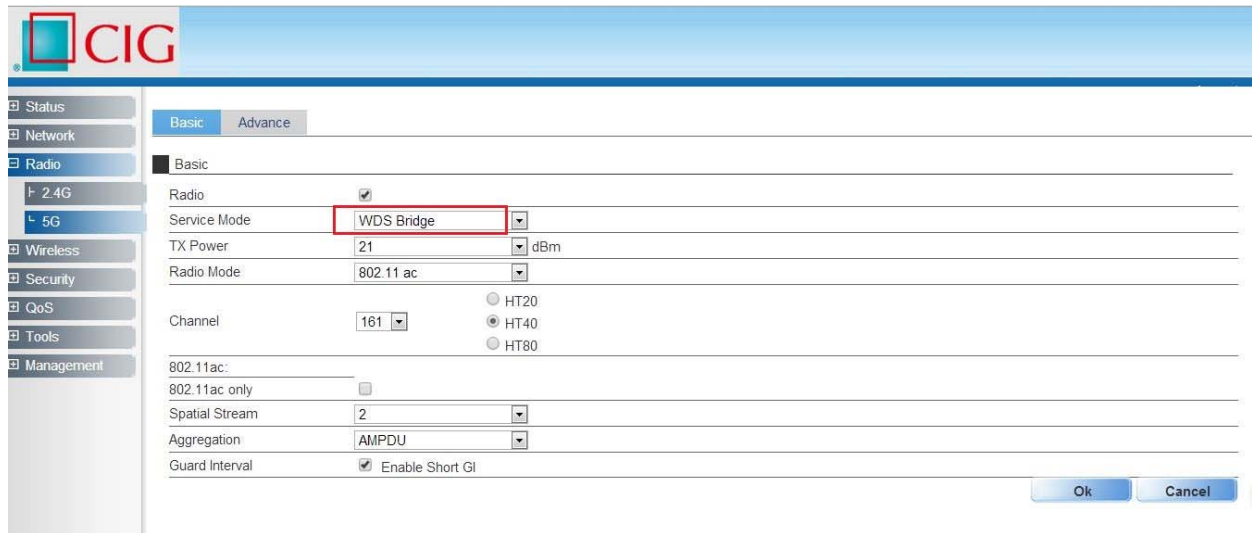
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### 3.2 Input remote AP MAC



The screenshot shows the 'WDS Bridge' configuration page in a web interface. The left sidebar contains a navigation menu with 'WDS Bridge' selected. The main content area is titled 'WDS Bridge-Edit' and contains several configuration fields. The 'Remote WDS MAC0' field is highlighted with a red box and contains the value '00-19-c7-cb-ad-ea'. Other fields include 'Radio' (5G), 'VLAN Mode' (Trunk), 'PVID', 'Pri', 'VLAN Member', 'Detag Member', 'Security Profile', 'RateLimit Profile', 'Mapping Profile', and 'MAC ACL Profile'. A note at the bottom states: 'Items marked with an asterisk(\*) are required'.

### 3.3 The configuration in remote AP




The screenshot shows the 'Basic' configuration page for a remote AP. The left sidebar shows '5G' selected. The main content area is titled 'Basic' and contains several configuration fields. The 'Service Mode' field is highlighted with a red box and contains the value 'WDS Bridge'. Other fields include 'Radio' (checked), 'TX Power' (21 dBm), 'Radio Mode' (802.11 ac), 'Channel' (161), '802.11ac' (checked), '802.11ac only' (unchecked), 'Spatial Stream' (2), 'Aggregation' (AMPDU), and 'Guard Interval' (checked). The page ends with 'Ok' and 'Cancel' buttons.

**Note:** Please select the same Channel as the Channel of AP which you want to connect via WDS.

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- Status
- Network
- Radio
- Wireless
  - AP
  - WDS Bridge
- Security
- QoS
- Tools
- Management

### WDS Bridge

WDS Bridge-Edit

Radio:	<input type="text" value="5G"/>	
Remote WDS MAC0:	<input type="text" value="00-19-c7-cb-5d-12"/>	Remote WDS MAC1: <input type="text"/>
Remote WDS MAC2:	<input type="text"/>	Remote WDS MAC3: <input type="text"/>
Remote WDS MAC4:	<input type="text"/>	Remote WDS MAC5: <input type="text"/>
Remote WDS MAC6:	<input type="text"/>	Remote WDS MAC7: <input type="text"/>
VLAN Mode:	<input type="text" value="Trunk"/>	
PVID:	<input type="text"/>	<small>*(0-4095)</small>
Pri:	<input type="text"/>	<small>*(0-7)</small>
VLAN Member:	<input type="text"/>	<small>*(e.g.: 1-10,15,18)</small>
Detag Member:	<input type="text"/>	<small>*(e.g.: 1-10,15,18)</small>
Security Profile:	<input type="text" value="NULL"/>	<input type="button" value="Detail..."/>
RateLimit Profile:	<input type="text" value="NULL"/>	<input type="button" value="Detail..."/>
Mapping Profile:	<input type="text" value="default"/>	<input type="button" value="Detail..."/>
MAC ACL Profile:	<input type="text" value="NULL"/>	<input type="button" value="Detail..."/>

Items marked with an asterisk(\*) are required

**Note:** Please input the MAC address of AP which you want to connect via WDS.

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### 3.4 NAWDS Auto Find

WF-630R1 also supports “NAWDS Auto Find” function, after you configure master AP, you may enable “NAWDS Auto Find” function in slave AP.

The screenshot shows the CIG web interface with the 'Radio' configuration page. The 'Basic' tab is active. The 'Service Mode' dropdown menu is set to 'WDS Bridge' and is highlighted with a red box. Other configuration options include TX Power (21 dBm), Radio Mode (802.11ac), Channel (161), and radio mode options (HT20, HT40, HT80) with HT40 selected. There are also options for 802.11ac only, Spatial Stream (2), Aggregation (AMPCU), and Guard Interval (Enable Short GI). 'Ok' and 'Cancel' buttons are at the bottom right.

**Notes:** Please select the same Channel as the Channel of AP which you want to connect via WDS.

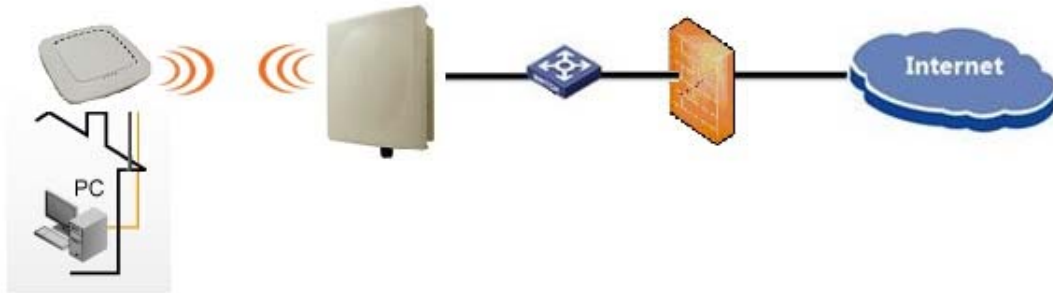
The screenshot shows the CIG web interface with the 'WDS Bridge' configuration page. The 'WDS Bridge-Edit' tab is active. The 'NAWDS Auto Find' checkbox is checked and highlighted with a red box. Other configuration options include Radio (5G), VLAN Mode (Access), PVID (1), Pri (0), Security Profile (NULL), RateLimit Profile (NULL), Mapping Profile (default), and MAC ACL Profile (NULL). Each profile dropdown has a 'Detail...' button next to it. A red note at the bottom states: 'Items marked with an asterisk(\*) are required'.

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**Notes:** After you enable “NAWDS Auto Find” function, the AP will connect to the master AP via WDS automatically.

## 4 Station Network Topology



**Notes:** WF-630R1 supports station mode. WF-630R1 access to the AP by Wi-Fi, and provide the Ethernet access to the client by the LAN port.

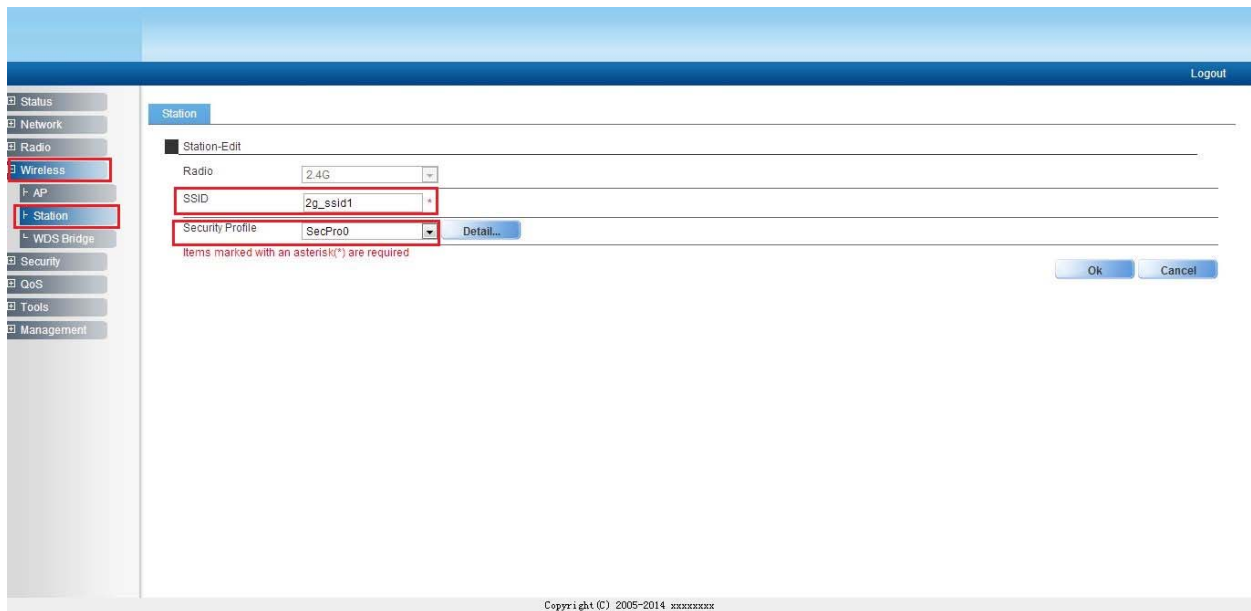
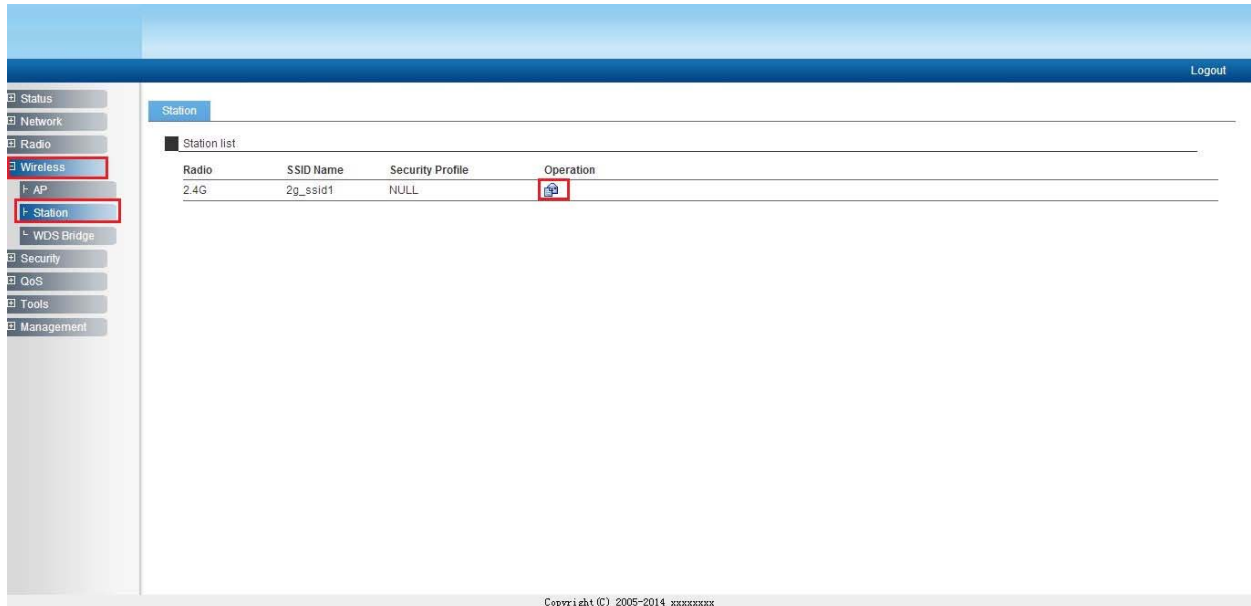
### 4.1 Configure Station mode

The screenshot shows the web interface for configuring the WF-630R1. The left sidebar contains a menu with options: Status, Network, Radio, 2.4G, 5G, Wireless, Security, QoS, Tools, and Management. The 'Radio' option is selected and highlighted. The main content area shows the 'Basic' tab for the 'Radio' configuration. The 'Service Mode' is set to 'Station'. The 'TX Power' is set to '21' dBm. The 'Radio Mode' is set to '802.11 n'. The 'Channel' is set to 'Auto', with radio buttons for 'HT20' and 'HT40' below it. 'Ok' and 'Cancel' buttons are at the bottom right. A 'Logout' link is in the top right corner. The footer contains the text 'Copyright (C) 2005-2014 xxxxxxxx'.

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## 4.2 Station Access to AP



***Notes: Need to configure the SSID manually. If want to use the security method, need to configure the “security profile” firstly and then cite it here.***

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## 4.3 Station Status

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**Notes:** After WF-630R1 access to a AP successfully, can check the station status on the Web GUI, for example, the SSID and BSSID.

## 5 Troubleshooting

### 5.1 Ping Diagnose

Reply From	Bytes	Time	TTL
203.84.197.25	32	39.210	47
203.84.197.25	32	45.901	47
203.84.197.25	32	39.171	47
203.84.197.25	32	36.807	47

Packets Sent	Packets Received	Packets Lost	Round Trip Min	Roundrip Max	Round Trip Average
4	4	0%	36.807	45.901	40.272

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## 5.2 TraceRT Diagnose

TraceRT

Interface Select:

IP Version:  IPv4  IPv6

IP Address/URL:

Traceroute Results

Hop	Host/IP Address	Time1	Time2	Time3
1	*	*	*	*
2	192.168.1.10	0.630ms	0.335ms	0.337ms
3	222.66.163.89	1.893ms	9.490ms	5.386ms
4	180.166.188.165	1.665ms	1.394ms	1.099ms
5	124.74.54.117	1.197ms	1.169ms	1.183ms
6	124.74.254.189	15.740ms	23.928ms	*
7	202.101.63.242	3.920ms	3.901ms	4.082ms
8	202.97.33.114	2.452ms	2.312ms	3.888ms
9	202.97.33.154	3.941ms	4.173ms	6.279ms
10	202.97.61.130	29.348ms	29.415ms	29.363ms
11	202.97.122.30	33.273ms	31.628ms	31.280ms

## 5.3 How to backup/restore setting

System

Region Code

Device Name:

Location:

Language:

Country Code:

NAS ID

NAS ID:

Factory Defaults

To restore a default setting, click on the "Restore" button below.

Restore Factory Configuration

Configuration Management

Backup Configuration

Specify the name and location of the file used to import the configuration.

Input File name:  No file chosen

Reboot Device

To reboot the gateway, click on the "Reboot" button below.

**Notes:** Press "Save" button to save current setting. Press "Upload" button to load saved setting.

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## 5.4 How to upgrade AP

The screenshot shows the CIG web management interface. The left sidebar contains a navigation menu with the following items: Status, Network, Radio, Wireless, Security, QoS, Tools, Management (highlighted), FIT/FAT, Account, Upgrade (highlighted), System, NTP, SNMP, and System Log. The main content area is titled 'Upgrade' and contains the following sections:

- Upgrade Software Image**
- Current Firmware Version: R1.2.02.003
- Downloaded file:  No file chosen
- 

**Notes:** Press “Choose File” button to select firmware file, then press “Upgrade” button to upgrade AP.

## 5.5 How to reset AP to default setting

The screenshot shows the CIG web management interface. The left sidebar contains a navigation menu with the following items: Status, Network, Radio, Wireless, Security, QoS, Tools, Management, FIT/FAT, Account, Upgrade, System (highlighted), NTP, SNMP, and System Log. The main content area is titled 'System' and contains the following sections:

- Region Code**
- Device Name: 2x2 Dualband Indoor AP
- Location: Shanghai
- Language: English
- Country Code: US
- 
- NAS ID**
- NAS ID: WF-180\_CIGWe3900043
- 
- Factory Defaults**
- To restore a default setting, click on the “Restore” button below
- Restore Factory Configuration:
- Configuration Management**
- Backup Configuration:
- Specify the name and location of the file used to import the configuration
- Import File name:  No file chosen
- Reboot Device**
- To reboot the gateway, click on the “Reboot” button below

**Notes:** If you can't visit AP web page, please press the “Reset” button of AP and hold for more than 5 seconds, the AP will reset to default setting automatically. Or you can do it by the Web GUI.

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### **Federal Communications Commission (FCC) 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 generate, 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.

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.

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.

### **RF exposure warning**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 66 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

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