Chapter 4 Wireless Access Point

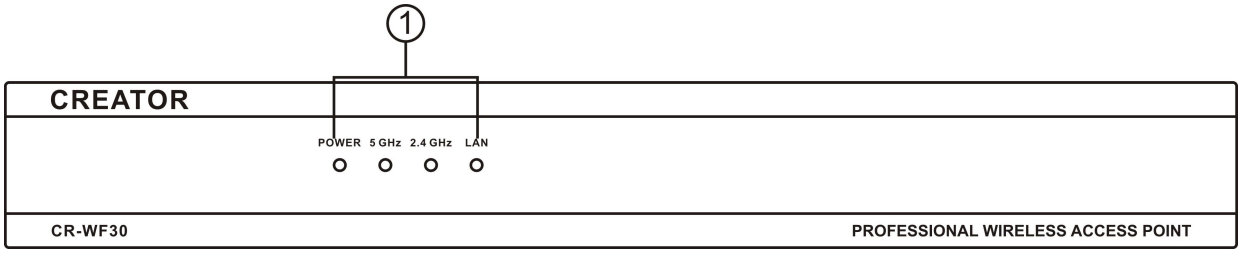
4.1 Product Overview

CR-WF30 wireless access point is a router for wireless network.

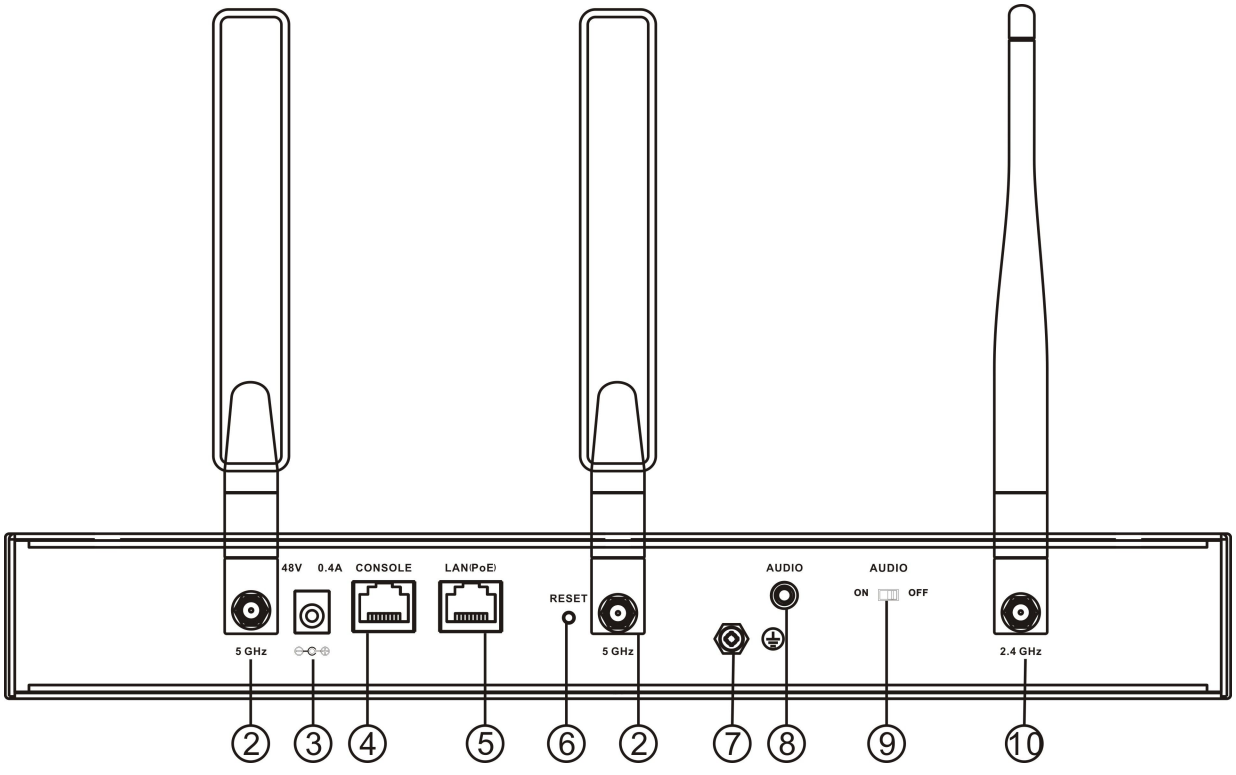
The wireless access point is used for communication connection between the wireless conference unit and network control host, providing convenient, flexible and reliable conference environment based on wireless network.

4.2 CR-WF30 Panel Description

Side view 1:



Side view 2:



① **POWER**

The power indicator: the power indicator lights up when it is normally powered, in reverse, the indicator won't be lit.

5GHz

5GHz wireless network signal indicator, when the 5GHz wireless network signal is passing through, the light flashes, suggests it is sending or receiving signal.

2.4GHz

2.4GHz RF wireless digital audio signal indicator, when the 2.4GHz RF wireless digital audio is opened, the indicator is lit and flashes.

LAN

Ethernet signal indicator, when the Ethernet signal is passing through, indicator is lit, says it is sending or receiving signal.

② **5GHz antenna**

Provide a pair of 5GHz free rotation antenna to adjust the best sending or receiving range.

③ **DC 48V**

The DC power input port, the controller supports DC 48V power input.

④ **CONSOLE**

The control port, preserved

⑤ **LAN(PoE)**

Ethernet port, used to connect the WIFI conference controller or network switcher.

⑥ **RESET**

The reset button, press the reset button for about 10 seconds, the access device would be reset to factory default configuration.

The reset button will remove all settings and return to the default value, including all the wireless security and the IP address. The reset IP address is 192.168.0.50, user name: admin, password is empty.

⑦ **Ground wire interface**

⑧ **AUDIO**

Balanced audio input port, used to connect the conference controller.

⑨ **AUDIO ON/OFF**

AUDIO ON/OFF is used to open or close the 2.4G RF wireless digital audio of the wireless AP access point.

⑩ **2.4GHz antenna**

Provide a pair of 2.4GHz free rotating antenna for adjusting the best sending scope of RF wireless digital audio.

4.3 CR-WF30 Function Characteristics

◆WiFi signal transmission using WPA/WPA2 digital encryption technology ensures the conference confidentiality and avoids eavesdropping and malicious interference;

◆With a RJ45 interface, it can be connected to the CR-WiFi6201 host or switch interface. Connecting cable recommended the use of high quality CAT5 cross cable;

◆With a 4 road 3.5mm interface, can be connected to the CR-WiFi6201 host, providing 1 balanced audio and control signal input;

◆In the open area, in the case of weak interference, the circular signal coverage area can reach a radius of 30 meters and the general coverage area can reach a radius of 25 meters;

◆According to IEEE802.1 1n WIFI network standard;

◆The three antenna design makes the data transmission more stable.

4.4 Settings of CR-WF30

Step 1

Connect the LAN (PoE) port of CR-WF30 and computer with cable, and set the IP of computer cable network to the same network segment as the router, for instance: the router IP is 192.168.2.1 (default),then the computer IP should be set to 192.168.2. (0~255).

First open the "local area connection" in the

"network neighborhood", pops up "local connection" dialog box, select "Internet protocol (TCP/IP)", and click " attributes " to enter the IP setting interface "Internet protocol TCP/IP) attributes". As shown in figure 4-1.

Step 2

When the setup is completed, open IE browser, input the 192.168.2.1 in the address bar and press the Enter key, as shown in figure 4-2. If the connection IP is normal, router login dialog box will pop up, enter the user name: admin (default) Password: admin (default) in the dialog box, press Enter to confirm, as shown in figure 4-3.

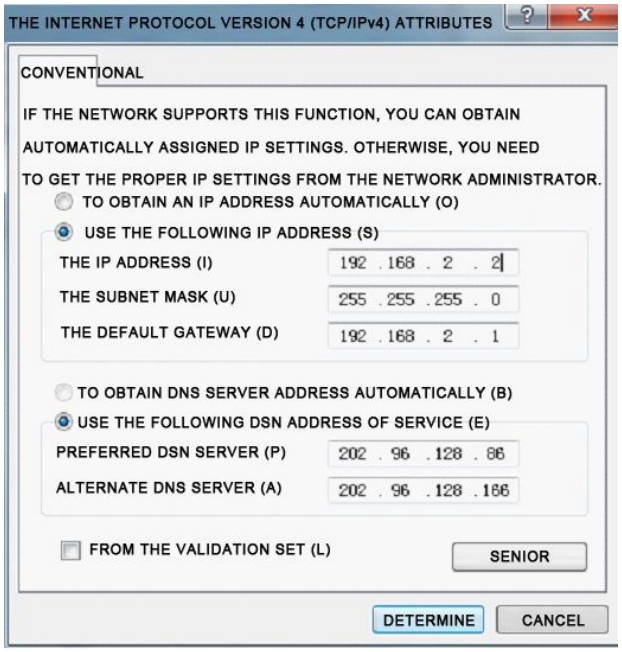


Figure 4-1

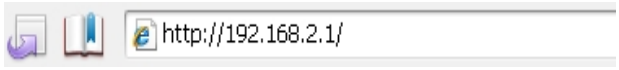


Figure 4-2

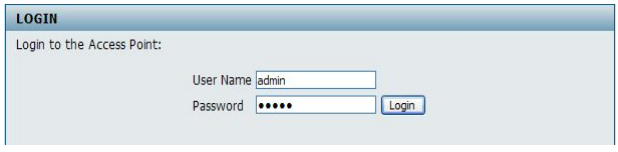


Figure 4-3

Step 3

Enter the first page of CR-WF30 setup interface, display as below, main setting items including Basic Settings, Advanced Settings and administration Settings under Maintenance menu.

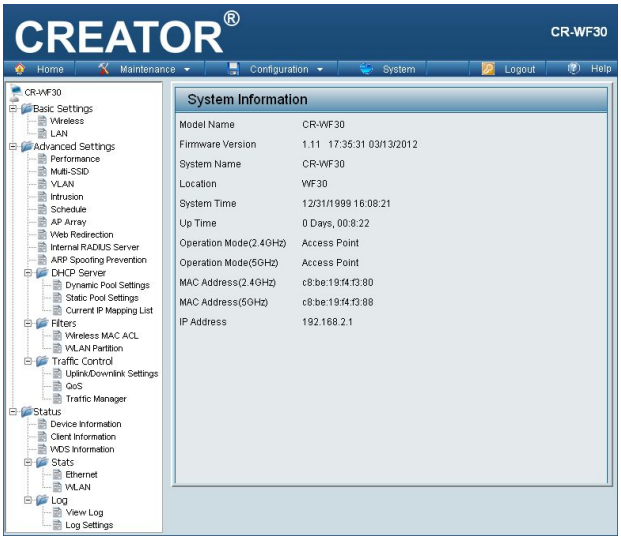


Figure 4-4

4.4.1 Basic Settings

In Basic Settings options, system settings can be divided into the Wireless setting and LAN setting. (As shown in Figure 4-4)

◆ **Wireless**

Wireless setting is used to set the wireless frequency, wireless mode, wireless name (SSID), wireless channel and wireless password.

Wireless Band:

2.4GHz or 5GHz band is optional. 5GHz band should be chosen in WIFI conference system.

Mode:Wireless mode, select Access point

Network Name (SSID): SSID name, the name of this AP can be seen in all wireless network shared by all equipment. In the application of WIFI conference system, SSID should be fixed to any value from"CRWF301" to "CRWF30F".

SSID Visibility:

SSID name can be visible or invisible, for convenient connection, please set "enable".

Auto Channel Selection:

Whether automatically choose the wireless channel. If you choose "Disable", select an interference free channel in the next option; when you are not sure whether the channel is with

interference or not, select "Auto".

Channel:

Channel selection, you should select the channel with no or little interference in current network, otherwise it is easy to cause interference to the WIFI conference system.

Channel Width:

Occupied channel width, which directly affect the network maximum transmission rate. Select "20MHz", the maximum transmission rate is 150Mbps, select "40MHz", the maximum transmission rate is 300Mbps, you are recommended to choose "Auto 20/40 MHz".

Authentication:

Authentication: password authentication type. In order to ensure data security, WIFI conference system’s fixed password authentication type is "WPA-personal".

WPA Mode:

WPA is a WLAN security enhancement solution which is based on standard. It is interoperable, can greatly enhance the data protection and access control level of existing and future wireless LAN systems. In order to improve the security levels of data, WIFI conference system fixed the option as "WPA2 Only".

Cipher Type: Password type is fixed "AES"”

Group Key Update Interval:

AES/TKIP password update interval. The fixed password is "AES" in the former setting, this setting does not work, just keep the default value. Choose password update to "Manual", custom.

Pass Phrase:

Wireless password, the password required for the unit terminal to change AP through wireless connection. It should be fixed to "9999999999", 10 "9"s.

Confirm Pass Phrase:

Confirm the password. Input the former password again.

So far Wireless Settings are completed. As shown below:



Figure 4-5

Click on the Save button to save the setting.

◆ **LAN:**

Network setting: set the IP address in the setting options of this column.

LAN Settings:

Select the fixed IP address (the default), if you want to assign a static IP address or a fixed address, you have to complete the following matters.

Select "Static IP (manual)" option in "Get IP From" menu, set as follows:

Local IP Address: The local IP address, in the same network the IP address must be the one and only, the system default IP address is 196.168.2.1.

Subnet Mask:

Subnet mask, the subnet masks in the same network must be identical, the system default is 255.255.255.0.

Default Gateway: can leave blank, without setting.

As shown below::

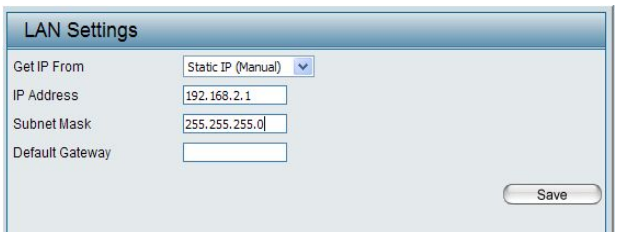


Figure 4-6

Click the Save button to save, this setup is completed.

4.4.2 Advanced Settings

Advanced settings: In WiFi conference system, users only need to set the Performance option, as well as Dynamic Pool Settings option under DHCP Server, other options stay factory default settings, no need to change.

4.4.2.1 Performance Settings

In WIFI wireless conference system, the AP should set as working in 5GHz wireless band.

◆ **The configuration of 5GHz wireless band**

As far as 5GHz wireless band configuration is concerned, WIFI conference system only need to configure the following options, other options remain the default value.

Wireless band: Wireless AP band selection; select "5GHz".

Wireless: Please choose "On" to open the wireless 5GHz band.

Wireless Mode: Please choose "802.11n Only" mode, the wireless data transmission speed is up to 300Mbps.

Beacon Interval (25-500): Choose the minimum value "25" as the beacon Interval. This option will affect the output audio quality of WIFI conference system, please make sure it is set to the minimum value.

WMM (Wi-Fi Multimedia):Recommended to be set as disable

Till now the Performance setup is completed, as shown below:

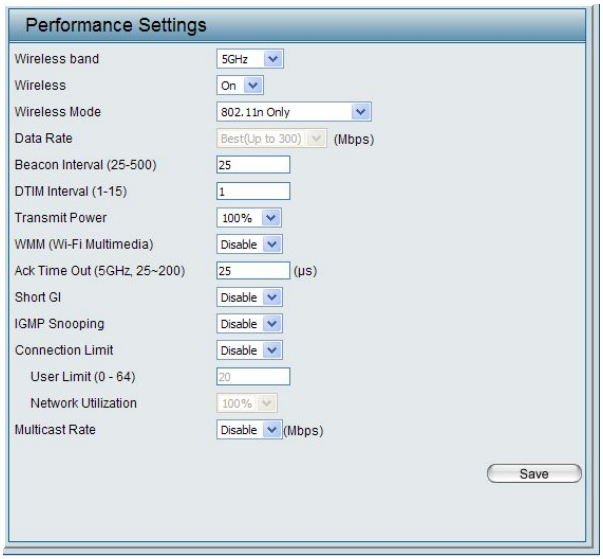


Figure 4-7

Click the "Save" button to save the setting.

After open the AP 5GHz band, you should close the AP 2.4GHz band, make AP worke alone in the band of 5GHz, as follows:

Wireless band:"2.4GHz".

Wireless: Select "off" to close the 2.4GHz wireless band. So far 2.4GHz band has been closed, the following options are unworkable, you can keep the default values. Click the "Save" button in the lower right corner to save.

4.4.2.2 Dynamic Pool Settings

In WIFI conference system, wireless AP access device allocate IP to each unit by DHCP. With "Advanced Settings" - > "DHCP Server" - > "Dynamic Pool Setting" menu, enable the CR-WF30 DHCP functions, settings as shown below:

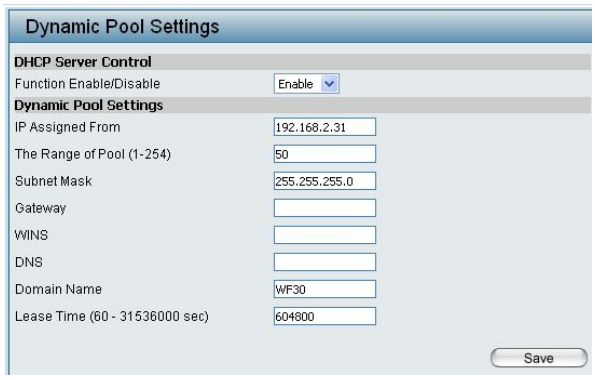


Figure 4-8

After the completion of setting, click the "Save" button in the lower right corner to save.

IP Assigned Form must be "192.168.2.*",and "*" > 30 , Lease Time > 100000.

When multiple CR-WF30 wireless AP access device are used in the system simultaneously, the IP settings of DHCP cannot overlap.

4.4.3 Administration Settings

This interface can be opened in Administration Settings below the main menu Maintenance. Administration is about management setting options, it includes Limit Administrator, System Name Settings, Login Settings, Console Settings, SNMP Settings and Ping Control Setting. As shown below:

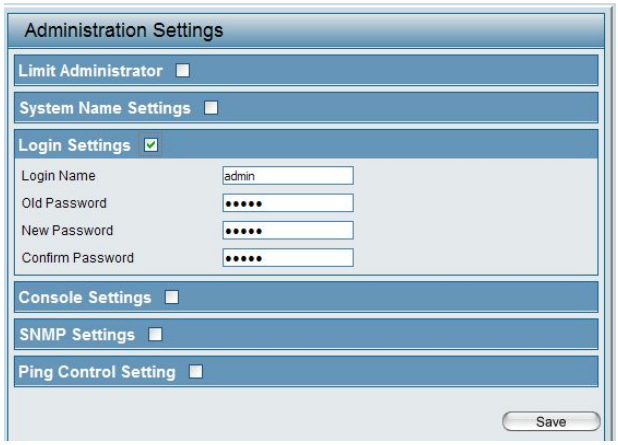


Figure 4-9

Login Settings: You can reset the user name and password, CREATOR recommends that you use the default username and password, which are convenient for subsequent maintenance.

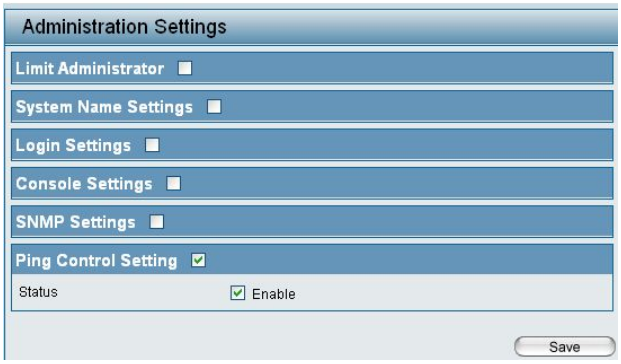


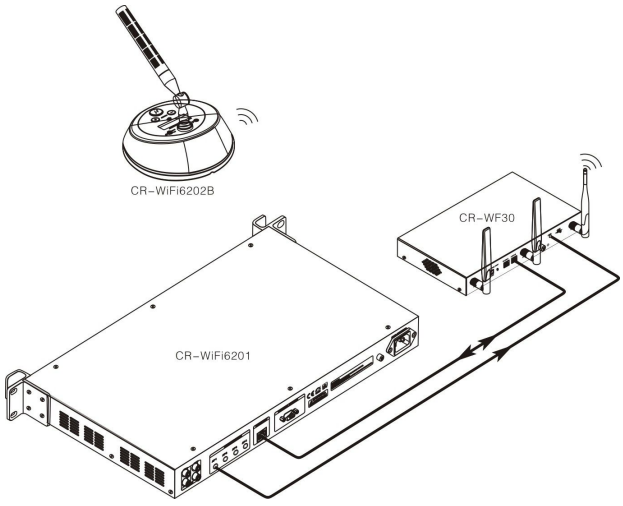
Figure 4-10

Ping Control Setting: For the user of WIFI conference system: in order to ensure the normal communication between routing and controller, please be sure to hook the "enable". Click the "Save" button to save the setting.

4.4.4 Settings to Take Effect

When all the settings are completed and saved, click the "Save and Activate" in the main menu "Configuration", router's automatically restart is finished, settings can enter into force by then.

4.5 Connection Diagram



4.6 Technical Parameters

Network standards	IEEE Draft 2.0 802.11n
Network interface	10/100Base-T
Radio frequency range	5GHz(Chinese standard:5.725GHz to 5.85GHz)
Data transfer rate	A maximum of 300 Mbps
Transmit power	802.11N:17dBm
Antenna	2.4G:3dBi, 5G:5dBi
Connection unit number	In the AP signal range, single AP connect up to 50
Signal coverage area	In the open area, in the case of weak interference, the circular signal coverage area can reach a radius of 30 meters and the general coverage area can reach a radius of 25 meters;
Power supply	DC48V
Working temperature	0℃~40℃
Maximum power dissipation	19W
Dimension	324L×203.7W×43.6H(mm)

◆CR-WiFi6204B wireless digital network delegate unit

◆CR-WF30 wireless AP access device

1.4 System Overview Diagram

