

CAMBRIDGE

CIG

INDUSTRIES (GROUP) CO LTD.

WF-0613A User Manual

8th Oct, 2013

VERSION 1

TABLE OF CONTENTS

1	Safety.....	3
2	Overview.....	3
3	Installation of device	6
3.1	Installation tools and environment.....	6
3.2	Installation Steps	6
4	Indicators	8
5	Thin AP mode basic configuration	9
5.1	Login to the Web interface and setting from FAT AP mode	9
5.2	Login to the Web interface and setting from Thin AP mode	11
6	Thin AP uplink debug mode.....	12

Notice

CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

1 Safety

- Do not install the device near the power line, electric lamp, power grid, or in any forceful power grid place, which is to avoid the AP abnormal work.
- Ensure the power adapter is grounded well if install the device indoor.
- Install other lightning protection equipment near the device if necessary, because the limitation of lightning protection module inside the device is 6KV.
- Use the steady power grid to provide the power to the device, which is to avoid the abnormal work.
- Use a less than 100m network cable to connect the PoE port, which is to acquire the steady power. The network cable complies with the DC resistance definition in the YD/926.2 protocol.

2 Overview

This document is used to describe the operation instruction of WF-0613A.

WF-0613A is a multifunctional outdoor wireless access point product. It is mainly used for carriers to provide stable outdoor Wi-Fi coverage and long distance wireless backhaul, to achieve high-quality, stable and convenient broadband service. It provides the most economical and effective way for last 1 km solution.

Having perfect compatibility, WF-0613A works with most wireless terminals and CPEs to builds a high capacity Wi-Fi system, which provides a solution of the fastest return on investment (ROI) for the operators.

WF-0613A has some perfect features like excellent performance, powerful function, flexible pattern, convenient installation and so on.

Notice

CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

Figure 1 Network Application for indoor coverage



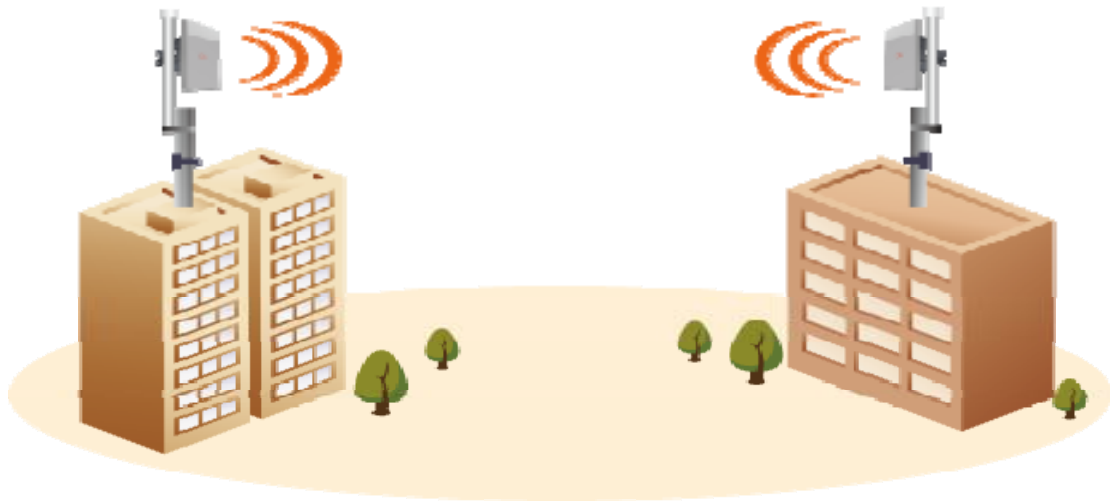
Figure 1 Network Application for cellular coverage



Notice

CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

Figure 2 Network Application for wireless bridge



Notice

CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

3 Installation of device

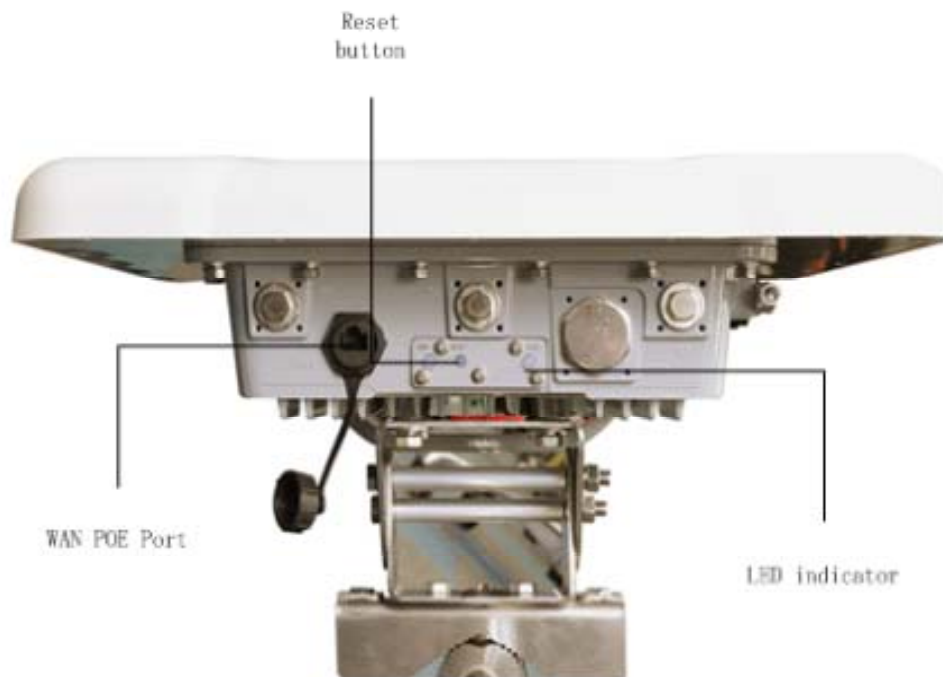
3.1 Installation tools and environment

- Installation tools: A laptop, super category5 outdoor network cables, a screwdriver, two wrenches, screws and a pole (optional).
- Installation environment: Need to ensure that it is visible between the AP and terminals and no tall obstacles between them.

3.2 Installation Steps

1. Mount the AP on the pole, and should confirm AP is fixed well. Use one RJ45 cable or SFP to connect the AP POE port.

Figure4 Ports of the WF-0613A



Notice

CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

Figure5 Pole mounting

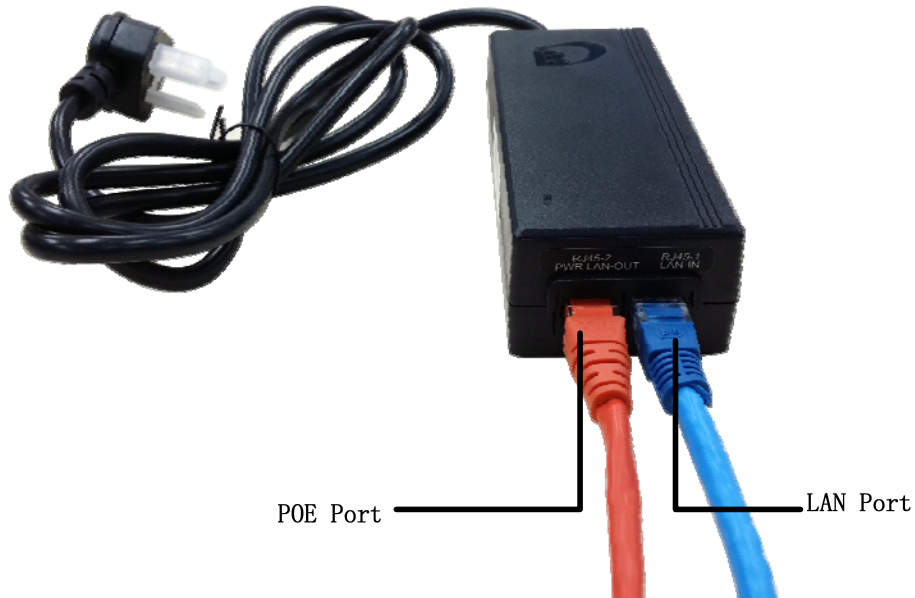


2. Connect the **WAN POE port** of the WF-0613A and the **POE** port of the adaptor by a network cable, and connect the **LAN** port of the adaptor and another network device (Laptop, switch etc.) by another network cable (or optical fiber). And then power on the adaptor.
Check the status of indicators of the WF-0613A. The detail Indicators refer to Figure 7.

Notice

CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

Figure6 Ports of the adaptor



Note:

The longest length of the network cable plugged in to the POE port is up to 100m, and the network cables should comply with the YD/926.2 protocol.

4 Indicators

Figure7 Indicators

LED	Color	Status	Description
Run	Green or Red	Off	● Powered off
		Solid	● Powered on Correctly
		Fast Blinking(1Hz)	● Failure on Power on self-test ● (Self test includes checking CPU, flash, DDR, RF radio, Ethernet)
		Slow Blinking (4Hz)	● Thin AP Mode, AP is Registered at AC
Ethernet	Green	Off	● None Ethernet Connection is available
		Solid	● Any Ethernet Connection is available
		Blinking	● Any Ethernet Connection has data

Notice

CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

5 Thin AP mode basic configuration

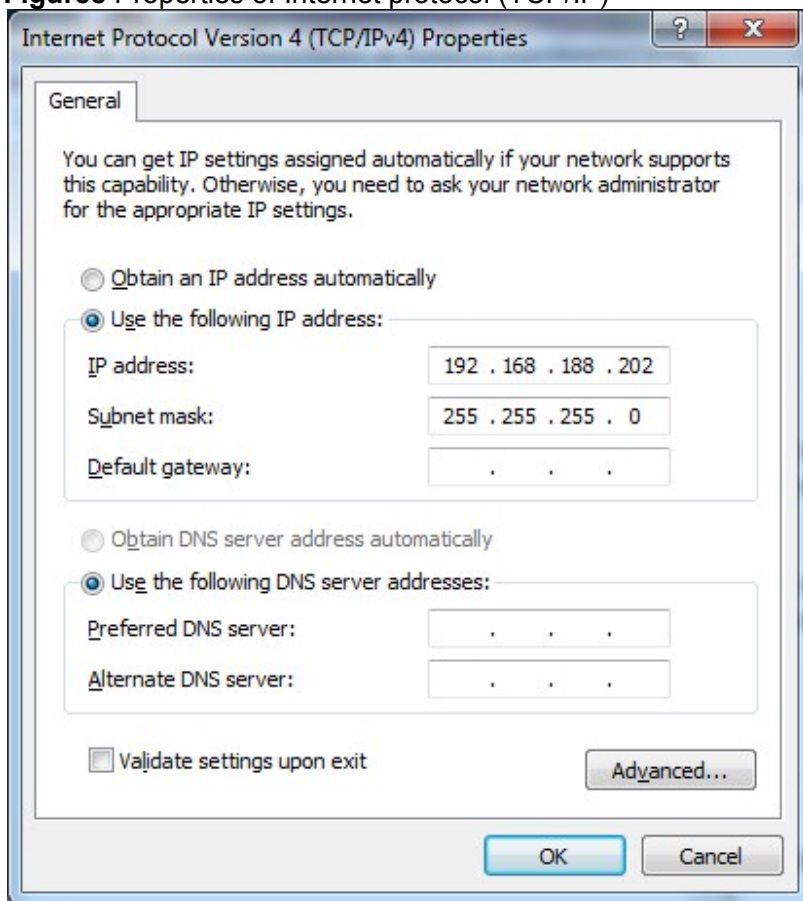
Note:

When do the thin AP settings, make sure the AP mode first, and then select the appropriate method to do the basic setting.

5.1 Login to the Web interface and setting from FAT AP mode

1. Power on WF-0613A, and connect the LAN port (refer to Figure 6) to laptop;
2. Set the laptop **wired NIC** IP address to 192.168.188.X (X is an any number except 251 and 255), and the subnet mask is set to 255.255.255.0. Figure 8 is a dialog box for modifying local area connection properties in the Windows 7 system.

Figure8 Properties of Internet protocol (TCP/IP)

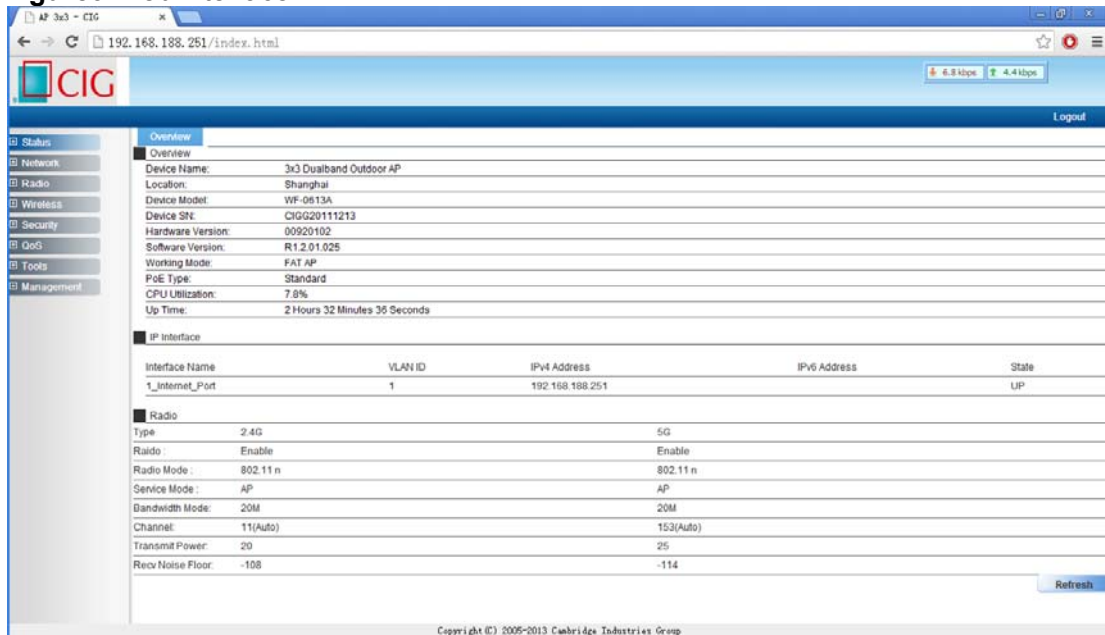


3. Input the default IP address “192.168.188.251” in the address bar of browser. Then enter the default username and password (username: admin, password: password) to enter the Web interface.

Notice

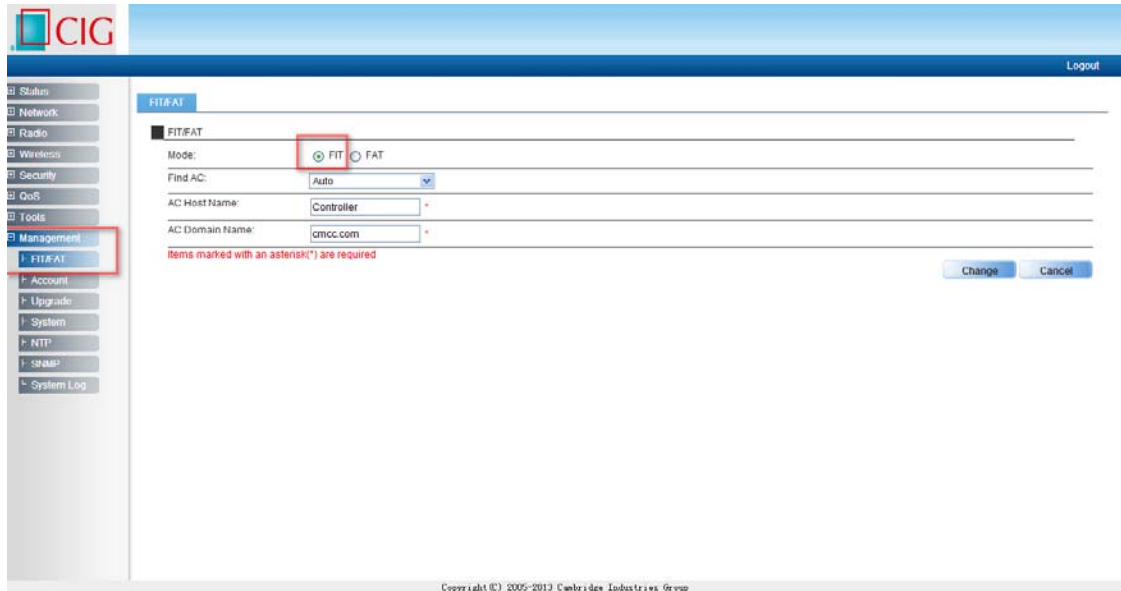
CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

Figure9 Web interface



4. In the Web interface, Select “Management” tab, then select “FIT/FAT” in the left-hand navigation tree, to do the setting. Select “FIT” in the “Mode” option.

Figure10 FIT AP setting

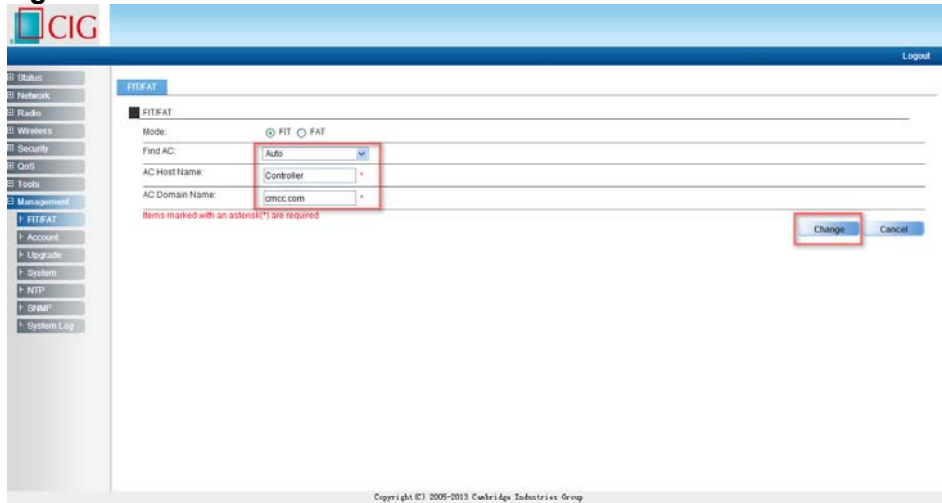


5. Here are two options in “Find AC”, “Auto” and “Static”.
 - i. If you select “Auto” mode, AP will use DHCP to get IP address from AC. Before you active the function, you should setting the AC host name and domain name. If no AC information to fill in, just jump and click “Change” button

Notice

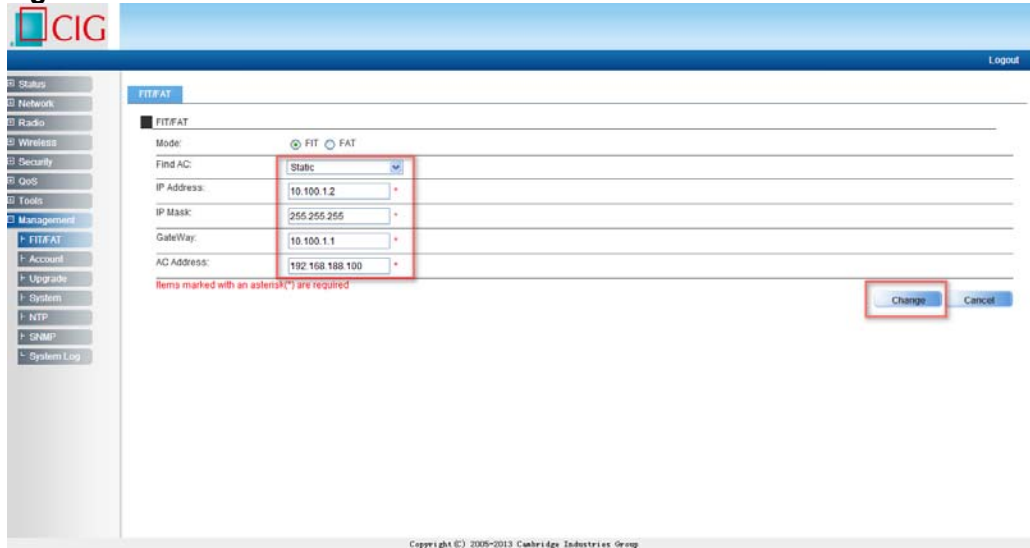
CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

Figure11 Find AC in auto mode



- ii. if you select “Static” mode. AP will use static IP register AC. Fill in AP static IP, Mask, Gateway and AC IP address is a **MUST**. Then click the change” button.

Figure12 Find AC in static mode



5.2 Login to the Web interface and setting from Thin AP mode

1. Power on WF-0613A;
2. Set the user computer **wireless NIC** IP address to 192.168.188.X (X is an any number except 251 and 255), and the subnet mask is set to 255.255.255.0. The method is the same as 5.1 step 1.
3. When the AP does not register with AC, AP will broadcast a SSID to help user

Notice

CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

connect. The SSID is named as “CIG2.4G_xxxxxxxxxx” in 2.4 GHz or “CIG5.8G_xxxxxxxxxx” in 5.8 GHz (the “xxxxxxxxxx” is the MAC address of AP) and it is encrypted as WPA/PSK. Use Windows wireless tool to connect the SSIDs with password “CIGW8888”.

Figure13 Thin AP SSID broadcast



4. After connect with AP SSID, 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.
5. If you need to change the AP configuration, please follow 5.1 step 3 and step 4.

6 Thin AP uplink debug mode

1. In the field, some problems may cause AP disconnect with AC. When AP under this situation, it can provide an uplink debug method to help engineer do the trouble shooting.
2. When AP disconnect with AC, AP will broadcast SSIDs in both 2.4 GHz and 5.8 GHz. The SSID is named as “CIG2.4G_xxxxxxxxxx” or “CIG5.8G_xxxxxxxxxx” (the “xxxxxxxxxx” is the MAC address of AP) and it is encrypted as WPA/PSK. Use Windows wireless tool to connect the SSIDs with the same password “CIGW8888”.

Notice

CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

3. Before connect with the SSID, PC wireless NIC should be set as static IP (the procedure is the same as 5.1 step 1), then it can connect with AP and use telnet or Web to catch all the information we need.

Notice

CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.

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 device generates and radiates radio-frequency energy. In order to comply with FCC radio-frequency exposure guidelines for an uncontrolled environment, this equipment must be installed and operated while maintaining a minimum body to antenna distance of 20 cm (approximately 8 in.) The equipment must not be co-located or operating in conjunction with any other antenna or transmitter.

For indoor use: the equipment is with frequency band in 5150-5250 MHz.

For fixed point-to point operation: the equipment is with frequency band in 5725-5850 MHz

Notice

CIG has the sole right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice, CIG has the final interpretation. This version is effective in the two months since the release date.