

# FHD251E IP Camera

## User Manual



# Table of Contents

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<b>FCC STATEMENT</b> .....	<b>1</b>
<b>SAFETY PRECAUTIONS</b> .....	<b>3</b>
<b>1 INTRODUCTION</b> .....	<b>5</b>
1.1 PACKAGE CONTENTS.....	5
1.2 KEY FEATURES .....	6
1.3 HARDWARE OVERVIEW .....	7
<b>2 START USING THE CAMERA</b> .....	<b>11</b>
2.1 ASSEMBLING THE CAMERA & THE WIRELESS ADAPTER.....	11
2.2 CONNECTING THE CAMERA TO A NETWORK.....	14
2.3 REBOOTING AND RESETTING THE CAMERA .....	15
<b>3 APPENDIX</b> .....	<b>16</b>
3.1 SPECIFICATIONS AND COMPLIANCE .....	16
3.2 TROUBLESHOOTING .....	18
3.3 OBTAINING TECHNICAL SUPPORT .....	19
3.4 DISPOSAL INSTRUCTIONS .....	19

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# FCC Statement

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

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

## **FCC Radiation Statement**

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

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.

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

# Safety Precautions

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Please read this user manual before operating this product. The information contained in this document is subject to change without notice. Features or specifications may be different depending on the type of product model purchased.

## Safe Use of This Product

Carefully follow the warnings and safety notices presented within this manual. Please pay special attention to the following indications of potentially hazardous situations:

**Warning:** Indicates a hazardous situation, which, if not avoided, could result in serious injury.

**Caution:** Indicates a situation, which, if not avoided, could damage this product or other devices.

**Note:** Indicates additional user information to make the user aware of possible problems and to help the user understand, use, and maintain the product.

- This product needs only an occasional wipe with a dry cloth.
- Avoid high-moisture conditions and keep away from liquids and humidity.
- Do not install or use the product where it is exposed to direct sunlight or heat.
- Care must be taken when using the device in close proximity to personal medical devices, such as pacemakers and hearing aids.
- Do not use this product in environments where there are potential explosion hazards.
- The product must be placed horizontally on a hard, flat surface or installed firmly with wall-mount kits. Do not place the product where it may be subject to physical shock or vibration or where the product may drop, topple, slide, or shake; this may cause personal injury or damage to the product.
- If lightning is expected, or the product is not going to be used for a long period of time, unplug the power cord from the unit.
- The use of electronic transmitting devices in aircraft, hospitals, and petrol stations is forbidden. Please follow the rules and warnings in these conditions.
- The product must ONLY be used with the power supply cord and power adapter supplied by the manufacturer.
- Openings on the housing of the product are required for ventilation. Do not block or obstruct the air flow through these openings.
- Do not operate the product on a soft surface such as carpet, rug, bed, etc.

# 1 Introduction

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## 1.1 Package Contents

Thank you for purchasing this product. Before using the FHD251E IP Camera (referred to in this manual as “the camera”), please confirm that the packaging includes the following items and accessories:

- FHD251E IP Camera
- WFB100S Wireless Power over Ethernet (PoE) Adapter (referred to in this manual as “the wireless adapter”)
- Camera bracket & screws
- User manual

## 1.2 Key Features

### FHD251E

- Full HD 1080p @ 30 fps (1920 × 1080)
- Visualization in total darkness up to 15 meters
- Switchable IR cut filter for vivid color during the daytime
- Light sensor to automatically detect ambient light conditions
- Motion detection
- Digital PTZ
- HDR
- LDC
- Power over Ethernet
- Waterproof IP65
- Easily connects to home-network environments

### WFB100S

- Internal Power Module, V-in: 120 V, V-out: 48 V
- Wi-Fi: 2.4 GHz IEEE 802.11n 2 × 2
- RJ45 Ethernet connection
- IEEE 802.3af-compliant
- WPS for easy network pairing



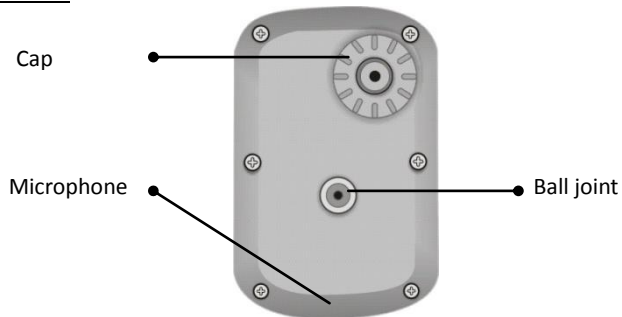
## 1.3 Hardware Overview

### FHD251E

#### Front view



#### Rear view



## LED functions

LED Color	Function Description	Status
Red	Pre-boot	Solid on if “power OK”
Blue	Operating system booting	Blinking 1 Hz, 50% duty cycle
Green	Post-boot; no network connectivity	Blinking 4 Hz, 50% duty cycle
Green	Standby; encoder recording locally	Solid on
Green	Streaming to the network	Blinking 1 Hz, 50% duty cycle

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## WFB100S



### LED functions:

LED color	Function description	Status
Blue	Normal operation and connected	Solid on
Blue	Power up and during firmware download	Fast blinking, 4 Hz, 50% duty cycle
Blue	Firmware download complete but no connectivity	Slow blinking, 1 Hz, 50% duty cycle
Blue	WPS mode activated	Off



## 2 Start Using the Camera

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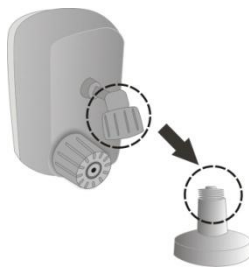
### 2.1 Assembling the Camera & the Wireless Adapter

Follow the steps below to set up your camera hardware and ensure that the camera operates properly.

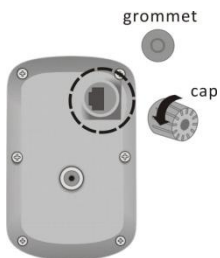
1. Attach the camera bracket to the camera by gently tightening it onto the camera.

**Caution:**

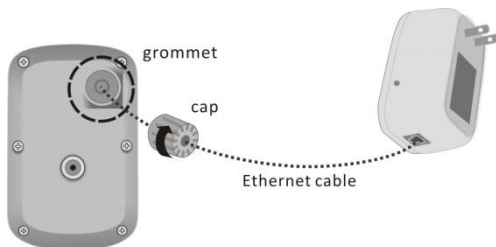
Ensure that the camera is securely fixed; otherwise it may fall and cause damage or injury.



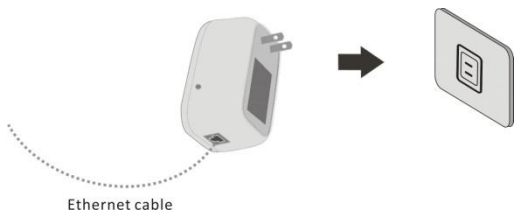
2. Remove the grommet and the cap on the rear side of the camera.



3. Insert the Ethernet cable into the camera's Ethernet port and connect the other end to the wireless adapter, then place the grommet back and screw on the cap.



4. Plug the wireless adapter into an electrical outlet.



## 2.2 Connecting the Camera to a Network

1. After inserting the Ethernet cable into the camera's Ethernet port and connecting the other end to the wireless adapter, the adapter will be able to supply power to the camera when plugged into a wall outlet.
2. Press the WPS button of the AP that you want to connect to, then press the adapter's button to connect to the AP. Once the Wi-Fi of the wireless adapter is paired with an AP via WPS, the camera then connects to the network through the wireless adapter.
3. The IP camera has been successfully added to your network after the connection between the wireless adapter and your AP is established.

**The installation process is now complete. Now you may start using the camera.**



## **2.3 Rebooting and Resetting the Camera and the Wireless Adapter**

1. Press and hold the button on the wireless adapter for 0 seconds–3 seconds or over 20 seconds.
2. For factory reset, press and hold the button on the wireless adapter for 10 seconds–20 seconds.

# 3 Appendix

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## 3.1 Specifications and Compliance

Model	FHD251E
Resolution	1080p (1920 × 1080) @ 30 fps
IR LEDs	12 pcs.
IR LED Illumination Range	15 meters
Sensitivity	0 lux when IR LED is on (black & white video).
Sensors	CMOS 1/3" 4 megapixels
Lens	6 glass
Status LEDs	1 pc (Tri color—red, blue, and green)
FOV	138° (D)
Operating Voltage	V-in: 48 V (DC)
Ambient Operating Temperature	-40 °C to +65 °C
Storage Temperature	-40 °C to +65 °C
Dimensions	77.05 mm × 115.97 mm × 79.2 mm
Weight	324 g
IP Rating	IP65
PoE	IEEE 802.3af

<b>Model</b>	<b>WFB100S</b>
CPU	RTL8196E
2.4 GHz	RTL8192ER
SPI Flash Memory	32 MB
DDR3	128 MB
Status LEDs	1 pc (Single color—blue)
RJ45	10/100 mbps
Operating Voltage	V-in: 120 V (AC), V-out : 48 V (DC)
Ambient Operating Temperature	0 °C to +50 °C
Storage Temperature	-40 °C to +65 °C
Dimensions	91 mm × 57 mm × 44 mm
Weight	124 g

## 3.2 Troubleshooting

Problem	Solution
The button has no response.	<ol style="list-style-type: none"><li data-bbox="329 215 809 240">1. Check the Ethernet connection status.</li><li data-bbox="329 247 824 309">2. Plug out and plug in once to reboot the wireless adapter.</li></ol>
The LED blinks slowly after the WPS process is completed.	<ol style="list-style-type: none"><li data-bbox="329 320 809 344">1. Check the Ethernet connection status.</li><li data-bbox="329 352 855 413">2. Restart WPS pairing and make sure the AP router is in signal range and is in WPS mode.</li></ol>

### **3.3 Obtaining Technical Support**

While we hope your experience with the FHD251E IP Camera is enjoyable, you may experience some issues or have questions that this User Manual has not answered.

If you have a problem with the FHD251E IP Camera, please contact us at:

Tel.:+886 3 666 7799 Ext.: 3214

E-mail: [Jacky.Liu@wnc.com.tw](mailto:Jacky.Liu@wnc.com.tw)

Mobile: +886 916 324 575

Website: [www.wnc.com.tw](http://www.wnc.com.tw)

### **3.4 Disposal Instructions**

WNC is committed to responsible environmental stewardship. Please dispose of this product in accordance with the local laws and regulations in your area. Contact your local waste-disposal authorities for relevant instructions.