

Operating Instructions



1080P 2.4GHz Digital Wireless Rear View Camera

Please read this manual thoroughly before operating the device.

V1.0

Contents

1. Precautions	1
2. Features	2
3. Technical Specifications	3
4. Product Introduction	3
4.1 Brief Introduction	3
4.2 Parts Identification	4
4.3Pairing Operation	4
4.4 Installation Advice	4
5. FAQ	4
6. FCC Warning	4
7.Laser Specification	5

1. Precautions

● Storage and Keeping

- 1) Do not expose the camera to excessive heat or coldness. Storage temperature is -30~+80°C; Operating temperature is -20~+70°C; Humidity is Rh95%.
- 2) Never use this device near a bathtub, wash basin, kitchen, damp basement, swimming pool or similar places.
- 3) Never use this device in the environment with excessive moisture, dust or smoke.
- 4) Avoid dropping or striking.
- 5) Never use this device in enclosed spaces, areas with excessive vibration or subject to severe impacts.
- 6) Never puncture, scratch or use abrasive cleaning materials on this device.\
- 7) Do not place cables where they may be pinched or stepped on.
- 8) Leave at least a 2" space between the monitor and walls, cabinets or other objects to allow adequate air circulation around the device.
- 9) The camera is designed to be waterproof.

● Operating Precautions

- 1) The device may be powered by a 12 or 24 volt automotive battery or vehicle electrical system.
- 2) Make sure all cables are connected properly. Observe polarity. Improper cable connections may damage the camera. Remove the power cable connections when you do not intend to use the device.



Warning

Please keep the clear glass cover of the camera clean and do not scratch it with sharp tools.



Special Notice

Please install and use the camera correctly, for specific installation and operation methods, please read this user manual.

● Maintenance

- 1) Remove all the cable connections from the camera before cleaning the device.
- 2) Use a mild household detergent and clean the unit with a slightly damp, soft cloth.
- 3) Never use strong solvents such as thinner or benzene, as they might damage the finish of the device.

	Caution	
	Risk of electric shock Do not open	
Caution: to reduce the risk of electric shock, Do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.		



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



This symbol is intended to alert the user not to waste electrical and electronic equipment.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your warrantee and necessitate expensive repairs.

2. Features

- Waterproof Rating:IP69K
- Delay: 130ms
- Viewing angle: 70°
- DC power: 10~32V
- Anti-vibration: ISO 16750-3 2012 (5.9G)
- Working temperature: -20°C ~ +70°C
- Mirror / normal image switchable
- Operation Frequency: 2408MHz-2478MHz
- Transmission Distance: 100m@20dBm、70m@16dBm、50m@10dBm
- RF Bit Rate:12Mbps

3. Technical Specifications

Image Device	1/2.9" CMOS		
Effective Pixels	1920 (H) x 1080 (V)		
S/N Ratio	38		
White Balance	Auto		
BLC	Auto		
Dynamic Range	81dB		
Operation Frequency:	2408MHz-2478MHz		
Transmission Distance (Barrier Free):	FCC:100m	CE:70m	MIC:50m
Receiving Sensitivity:	-83dBm		
Video Codec:	H.264		
Transmission Power:	FCC:≤20dBm	CE:≤16dBm	MIC:≤10dBm
Modulation:	FHSS		
Delay:	Wireless Monitor:130ms Wireless Receiver:170ms		
RF Bit Rate:	12Mbps		
Operating Temperature	-20℃ ~ 70℃, RH95%MAX.		
Storage Temperature	-30℃ ~ 80℃, RH95%MAX.		
Minimum Illumination	0.1Lux		
Power Supply	DC10-32V		
Power Consumption	Day:1.8W~2.5W	Night: 3.6W~4.3W	
Night Vision Distance	3~5m		
Waterproof Rating	IP69K		
Audio	No		
Heater	No		
IR-Cut	No		

4. Product Introduction

4.1 Brief Introduction

The 1080P vehicle digital 2.4G wireless monitoring camera uses 2.4G wireless technology, operating in collocation with our digital wireless segmentation monitor. The wireless transmission distance can reach 300 meters, support automatically white-balance and backlight compensation. At the same time this product adopts the FHSS technology to guarantee better anti-interference performance.

4.2 Parts Identification



4.3 Pairing Operation

- Firstly ensure the monitor enters the pairing mode (Please refer to the monitor user manual)
- Cameras enter the pairing mode
- (1) If the camera is not powered on, it will enter the pairing mode after 10s of power supply.
- Monitor will show the camera image after pairing successfully.
- The paired camera will be connected with the paired monitor after power supply again, it will automatically enter the pairing mode if it can't be connected successfully in 10 seconds.

4.4 Installation Advice

Please check the user manual of monitor for your reference.

5. FAQ

Q: Pairing unsuccessfully?

A: Please ensure the monitor and the camera both in the pairing statues at the same time.

Q: How to reset?

A: Please try to reset via the monitor side as the camera doesn't support this function.

6. FCC Warning

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.

NOTE 1: 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 or more 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.

NOTE 2: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

7. Laser Specification

This product complies with the laser safety standards IEC 60825-1 and EN 60825-1, and belongs to Class 1. The laser classification label is affixed above the casing, as shown in the diagram below:	
	
Caution	Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation.
The laser module information is as follows	
Maximum output power	$3.08 \times 10^{-8} \text{ J}$
Pulse width	10KHz
Emitted wavelength	520nm
Laser class	class 1