

Day / Night IR Color Camera

User Manual

V2.1.0

Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact dealer.

This manual is applicable to DS-2CC102P(N)-IR1(IR3)(IR5), DS-2CC112P(N)-IR1(IR3)(IR5), DS-2CC192P(N)-IR1(IR3)(IR5), DS-2CC102P(N)-IR, DS-2CC112P(N)-IR, DS-2CC192P(N)-IR, DS-2CC102P(N)-IRA, DS-2CC112P(N)-IRA, DS-2CC192P(N)-IRA, DS-2CC102P(N)-IRT, DS-2CC112P(N)-IRT, DS-2CC192P(N)-IRT, DS-2CC502P(N)-IR1(IR3), DS-2CC512P(N)-IR1(IR3), DS-2CC592P(N)-IR1(IR3), DS-2CC502P(N)-IR, DS-2CC512P(N)-IR, DS-2CC592P(N)-IR, DS-2CC502P(N)-IMB, DS-2CC572P(N)-IMB IR color cameras.

This manual may contain several technically incorrect places or printing errors, and the content is subject to change without notice. The updates will be added into the new version of this manual. We will readily improve or update the products or procedures described in the manual.



Safety Instructions

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into “Warnings” and “Cautions”

Warnings: Serious injury or death may cause if any of the warnings is neglected.

Cautions: Injury or equipment damage may cause if any of the cautions is neglected.

Warnings Follow these safeguards to prevent serious injury or death.	Cautions Follow these precautions to prevent potential injury or material damage.



Warnings

1. In the use of the product, you must be strict compliance with the electrical safety regulations of the nation and region.
2. Input voltage should meet both the SELV(Safety Extra Low Voltage) and the Limited Power Source with DC 12V according to the IEC60950—1 standard. Please refer to technical specifications for detail information.
3. Do not connect several devices to one power adapter as adapter overload may cause over-heat or fire hazard.
4. Please make sure that the plug is firmly connected on the power socket.
5. When the product is mounted on wall or ceiling, the device shall be firmly fixed.
6. If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
7. If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)



Cautions:

1. Make sure the power supply voltage is correct before using the camera.
2. Do not drop the camera or subject it to physical shock.
3. Do not touch CCD (Charge Coupled Device) modules with fingers. If cleaning is necessary, use clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period, please turn on the lens cap to protect the CCD from dirt.
4. Do not aim the camera at the sun or extra bright places. A blooming or smear may occur otherwise (which is not a malfunction however), and affecting the endurance of CCD at the same time.
5. The CCD may be burned out by a laser beam, so when any laser equipment is on using, make sure that the surface of CCD will not be exposed to the laser beam.
6. Do not place the camera in extremely hot, cold (the operating temperature shall be $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$), dusty or damp locations, and do not expose it to high electromagnetism radiation.
7. To avoid heat accumulation, good ventilation is required for operating environment.
8. Keep the camera away from liquid while on using.
9. While on a delivery, the camera shall be packed in its original packing, or packing of the same texture.
10. Regular part replacement: a few parts (e.g. electrolytic capacitor) of the equipment shall be replaced regularly according to their average enduring time. The average time varies because of differences between operating environment and using history, so regular checking is recommended for all the users. Please contact with your dealer for more details.

Table of Contents

C H A P T E R 1 Introduction	1
1.1 Features.....	2
1.2 IR Dome Camera.....	2
1.3 10m/30m/50m IR Box Camera	3
1.4 100m/110m IR Box Camera	4
1.5 IR Varifocal Box Camera	4
C H A P T E R 2 Installation	5
2.1 IR Dome Camera Installation Diagram.....	6
2.2 Rear Panel	7
2.3 Power Supply.....	8
2.4 IR Control	8
Appendix Specifications	9
3.1 Table 1	10
3.2 Table 2.....	11
3.3 Table 3.....	12
3.4 Table 4.....	13
3.5 Table 5.....	14
3.6 Table 6.....	15
3.7 Table 7	16

CHAPTER 1 Introduction

1.1 Features

Adopting high performance CCD and advanced print circuit board design technology, the camera features high resolution, low distortion, low noise, etc., and thus is extremely applicable to the surveillance system and image processing system.

- IR night vision, day/night surveillance;
- High color reproducibility;
- Low illumination;
- Automatic electronic Shutter;
- Backlight compensation
- High SNR;
- Automatic electronic gain;

1.2 IR Dome Camera



Figure. 1 Infrared Dome Camera

1.3 10m/30m/50m IR Box Camera



Figure. 2 Infrared Box Camera

1.4 100m/110m IR Box Camera



Figure. 3 Infrared Box Camera

1.5 IR Varifocal Box Camera



Figure. 4 Infrared Varifocal Box Camera

CHAPTER 2 Installation

Before mounting, please make sure that the device in the package is in good condition and all the assembly parts are complete.

2.1 IR Dome Camera Installation Diagram



Figure. 5

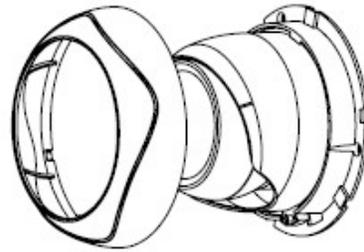


Figure. 6

Remove the enclosure: Take out the camera from the packaging box (Figure. 5), and rotate the enclosure. When the convex part of the shell is exactly aligned with the concave part of the dome, remove the enclosure from the dome camera (Figure. 6).



Figure. 7

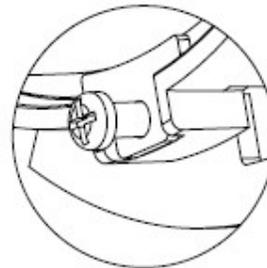


Figure.8

Adjust the lens angle: After having removed the enclosure (Figure. 7), loosen the screws on the dome drive and adjust the lens angle to the desired position; finally tighten the screws on the drive (Fig. 8).

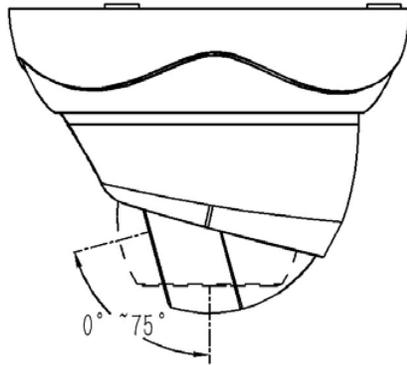


Figure 9

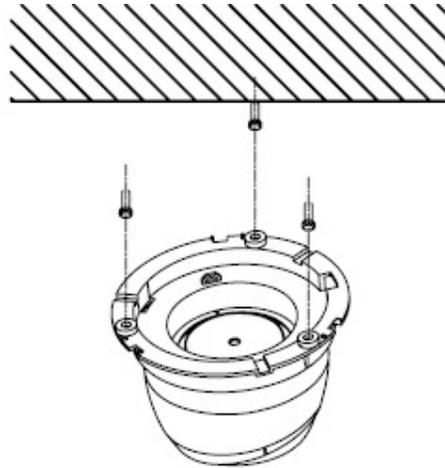


Figure 10

Note: The adjustable tilt angle range is $0^{\circ} \sim 75^{\circ}$ (Fig. 9).

In-ceiling mounting: Tighten the screws by aligning the mounting holes on the dome base with holes in the ceiling to secure the dome camera in position. (Fig. 10).

2.2 Rear Panel

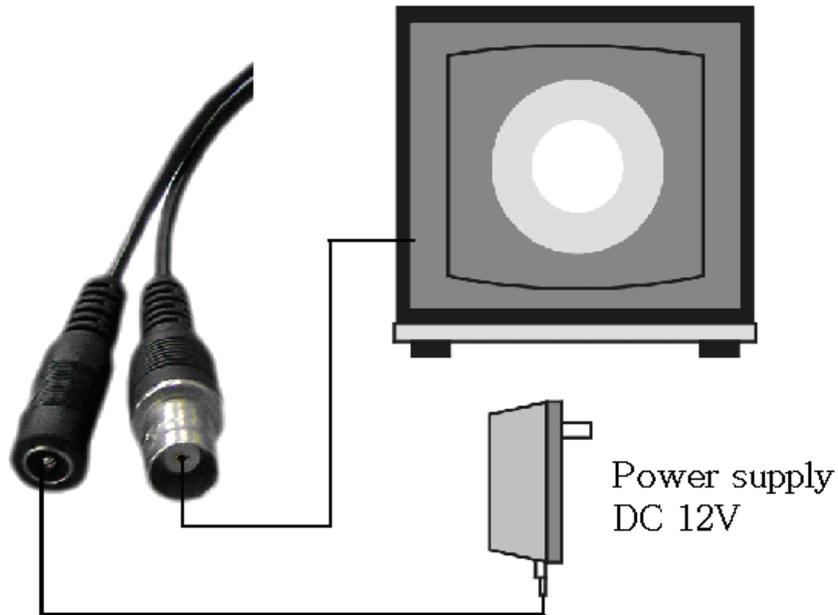


Figure. 11 Wiring Diagram

2.3 Power Supply

Before applying power to the camera, please check whether the power supply is correct or not. Generally the power supply for camera is 12VDC or 24VAC (please refer to the corresponding specifications for different models).

2.4 IR Control

After power-on, the focus control of IR varifocal camera can be operated by the remote controller. Refer to the following instructions:

Note: Only the up and down keys are operable; the others are reserved.

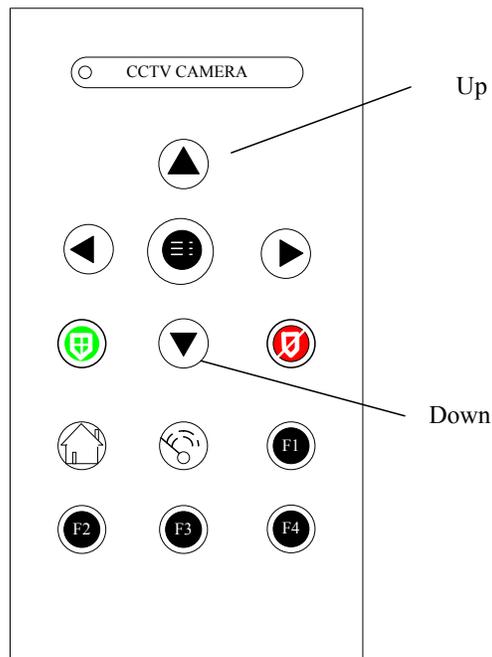


Figure. 11 Panel Descriptions

UP: Zoom out.

Down: Zoom in.

Appendix Specifications

3.1 Table 1

Parameter \ Model	DS-2CC102P(N)-IR1(IR3)(IR5)	DS-2CC112P(N)-IR1(IR3)(IR5)	DS-2CC192P(N)-IR1(IR3)(IR5)
Image Sensor	1/3 inch SONY CCD		
Signal System	PAL/NTSC		
Effective Pixels	PAL:500(H)×582(V) NTSC:510(H)×492(V)	PAL:752(H)×582(V) NTSC:768(H) ×494(V)	
Min. Illumination	0.1Lux @ F1.2(0 LUX with IR)		
Electronic Shutter	1/50(1/60)s~1/100,000s		
Lens	“-IR1” Series: 6mm (3.6mm optional) “-IR3” Series: 12mm(3.6mm,6mm,8mm,16mm optional) “-IR5” Series: 16mm(3.6mm,6mm,8mm,12mm optional)		
Horizontal Resolution	420 TVL	480TVL	540TVL
Synchronous	Internal Synchronization		
Video Output	1Vp-p Composite Output(75Ω/BNC)		
S/N Ratio	More than 48 dB		
BLC	ON		
Working Temperature	-10℃~60℃		
Water and Dust Resistance	IP66		
IR Distance	10m/30m/50m”-IR1” Series: IR Illuminators up to10 meters. “-IR3” Series: IR Illuminators up to30 meters. “-IR5” Series: IR Illuminators up to 50 meters		
Power Supply	DC 12V±10%		
Power Consumption	IR1: 3W MAX	IR3 : 6W MAX	IR5:8W MAX
Dimension(mm)	IR1: 76.5×73×125.5	IR3/IR5 : 86.5×83×160	
Weight	IR1: 600g	IR3/IR5: 1000g	

3.2 Table 2

Model	DS-2CC102P(N)-IR	DS-2CC112P(N)-IR	DS-2CC192P(N)-IR
Parameter			
Image Sensor	1/3 inch SONY CCD		
Signal System	PAL/NTSC		
Effective Pixels	PAL:500(H)×582(V) NTSC:510(H)×492(V)	PAL:752(H)×582(V) NTSC:768(H)×494(V)	
Min. Illumination	0.1Lux @ F1.2(0 LUX with IR)		
Electronic Shutter	1/50(1/60)s~1/100,000s		
Lens	6mm(2.8mm 3.6mm Optional)		
Horizontal Resolution	420 TVL	480TVL	540TVL
Synchronous	Internal Synchronization		
Video Output	1Vp-p Composite Output (75Ω/BNC)		
S/N Ratio	More than 48 dB		
BLC	ON		
IR Distance	10-20m		
Working Temperature	-10℃~60℃		
Water and Dust Resistance	IP66		
Power Supply	DC12V±10%		
Power Consumption	3W MAX		
Dimension (mm)	Φ58×80.5		
Weight	250g		

3.3 Table 3

Parameter \ Model	DS-2CC102P(N)-IRA	DS-2CC112P(N)-IRA	DS-2CC192P(N)-IRA
Image Sensor	1/3 inch SONY CCD		
Signal System	PAL/NTSC		
Effective Pixels	PAL:500(H)×582(V) NTSC:510(H)×492(V)	PAL:752(H)×582(V) NTSC:768(H)×494(V)	
Min. Illumination	0.1Lux @ F1.2(0 LUX with IR)		
Electronic Shutter	1/50(1/60)s~1/100,000s		
Lens	25mm(16mm Optional)		
Horizontal Resolution	420 TVL	480TVL	540TVL
Synchronous	Internal Synchronization		
Video Output	1Vp-p Composite Output (75Ω/BNC)		
S/N Ratio	More than 48 dB		
BLC	ON		
IR Distance	100-110m		
Working Temperature	-10°C~60°C		
Water and Dust Resistance	IP66		
Power Supply	AC24V±10% (DC12V±10% optional)		
Power Consumption	15W		
Dimension (mm)	255×177×95		
Weight	2500g		

3.4 Table 4

Parameter \ Model	DS-2CC102P(N)-IRT	DS-2CC112P(N)-IRT	DS-2CC192P(N)-IRT
Image Sensor	1/3 inch SONY CCD		
Signal System	PAL/NTSC		
Effective Pixels	PAL:500(H)×582(V) NTSC:510(H)×492(V)	PAL:752(H)×582(V) NTSC:768(H)×494(V)	
Min. Illumination	0.1Lux @ F1.2(0 LUX with IR)		
Electronic Shutter	1/50(1/60)s~1/100,000s		
Lens	4-9 mm(5-15 mm Optional) zoom lens, IR control		
Horizontal Resolution	420 TVL	480TVL	540TVL
Synchronous	Internal Synchronization		
Video Output	1Vp-p Composite Output (75Ω/BNC)		
S/N Ratio	More than 48 dB		
BLC	ON		
IR Distance	30-40m		
Working Temperature	-10℃~60℃		
Water and Dust Resistance	IP66		
Power Supply	AC24V±10%/DC12V±10%		
Power Consumption	12W MAX		
Dimension (mm)	190×104.2×87.8		
Weight	1000g		

3.5 Table 5

Parameter \ Model	DS-2CC502P(N)-IR1(IR3)	DS-2CC512P(N)-IR1(IR3)	DS-2CC592P(N)-IR1(IR3)
Image Sensor	1/3 inch SONY CCD		
Signal System	PAL/NTSC		
Effective Pixels	PAL:500(H)×582(V) NTSC:510(H)×492(V)	PAL:752(H)×582(V) NTSC:768(H) ×494(V)	
Min. Illumination	0.1Lux @ F1.2(0 LUX with IR)		
Electronic Shutter	1/50(1/60)s~1/100,000s		
Lens	“-IR1”: 6mm (3.6mm,2.8mm Optional) “-IR3”: 12mm(3.6mm,6mm,8mm,16mm Optional)		
Horizontal Resolution	420 TVL	480TVL	540TVL
Synchronous	Internal Synchronization		
Video Output	1Vp-p Composite Output (75Ω/BNC)		
S/N Ratio	More than 48 dB		
BLC	ON		
Working Temperature	-10°C~60°C		
Water and Dust Resistance	IP66		
IR Distance	“-IR1”: 10-20m “-IR3” : 30-40m		
Power Supply	DC12V±10%		
Power Consumption	IR1: 3W MAX IR3: 6W MAX		
Dimension (mm)	129×69		
Weight	700g		

3.6 Table 6

Parameter \ Model	DS-2CC502P(N)-IR	DS-2CC512P(N)-IR	DS-2CC592P(N)-IR
Image Sensor	1/3 inch SONY CCD		
Signal System	PAL/NTSC		
Effective Pixels	PAL:500(H)×582(V) NTSC:510(H)×492(V)	PAL:752(H)×582(V) NTSC:768(H) ×494(V)	
Min. Illumination	0.1Lux @ F1.2(0 LUX with IR)		
Electronic Shutter	1/50(1/60)s~1/100,000s		
Lens	6mm (3.6mm,2.8mm Optional)		
Horizontal Resolution	420 TVL	480TVL	540TVL
Synchronous	Internal Synchronization		
Video Output	1Vp-p Composite Output (75Ω/BNC)		
S/N Ratio	More than 48 dB		
BLC	ON		
Working Temperature	-10°C~60°C		
Water and Dust Resistance	IP66		
IR Distance	10-20m		
Power Supply	DC12V ±10%		
Power Consumption	3W MAX		
Dimension (mm)	89.5×60		
Weight	400g		

3.7 Table 7

Model Parameter	DS-2CC502P(N)-IMB	DS-2CC572P(N)-IMB
Image Sensor	1/3"SONY CCD	
Signal System	PAL / NTSC	
Effective Pixels	PAL: 500 (H) × 582 (V) NTSC: 510 (H) × 492 (V)	PAL: 752 (H) × 582 (V) NTSC: 768 (H) × 494 (V)
Min. Illumination	0.1Lux @ F1.2(0 Lux with IR)	
Electronic Shutter	1/50 (1/60)s to 1/100,000s	
Lens	3.6mm(2.8mm, 6mm optional)	
Horizontal Resolution	420TVL	540TVL
Synchronization	Internal Synchronization	
Video Output	1Vp-p Composite Output (75Ω/BNC)	
S/N Ratio	More than 48dB	
BLC	ON	
Working Temperature	-10°C~60°C	
Impact Protection	IEC60068-2-75 test, Eh, 50J; EN50102, up to IK10.	
Weather Proof	IP66	
IR Distance	Approx 10 to 20 meters, 12pcs	
Power Supply	DC 12V ± 10%	
Power Consumption	3W MAX	
Dimensions (mm)	φ108x70	
Weight	450g	