



D/N 1080P HD Fast Dome IR IP Camera



IPS2102E
Instruction Manual

IMPORTANT SAFEGUARDS



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.

GRAPHIC SYMBOL EXPLANATION

The lightning flash with arrowhead symbol, within an equilateral triangle, 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 a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the unit.



CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED
BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING
TO THE INSTRUCTIONS



PREFACE

IPS2102E with High resolution of HD/Full HD offer significant enhancement and refinements to bring you the most innovative surveillance solutions.

IPS2102E are the leading product in the industry offering the most advanced features such as 10X optical zoom lens, Digital Zoom, Auto Focus Control, Auto Iris Control, Day & Night Control, Infrared LED Control, Wide Dynamic Range, Digital Noise Reduction , High Light Compensation and Digital Image Stabilizer ... Etc.

IPS2102E measure only 135mm in diameter and is capable of making 360 degrees continuous rotation with a speed range of 0.5 to 120 degrees per second, ensures direct and accurate target positioning. When required the dome can be quickly spun through 180 degrees, an important feature when something passes directly under the camera.

Up to 128 preset positions can be programmed and recalled with an accuracy of 0.25 degrees. Can be set to auto-sequence mode, perform automatic monitoring presets.

IPS2102E H.264 AVC (Advanced Video Coding) video compression engine provides high video quality, SXGA/1080P resolution, bandwidth efficiency, and real-time streaming. The cutting edge of H.264 AVC main profile encoding technology can provide better compression rate and superior video quality at 56 Kbps to 3 Mbps bit rate. Dual streaming design, JPEG and H.264 AVC allow to stream video at low bandwidth (Internet) and high bandwidth (LAN) for optimizing video quality. Low latency design for both Intranet and Internet is a key factor of operating PTZ. Four PTZ web interfaces including lens absolute positioning are designed for easy-to-use purpose.

FEATURES

- Auto Focus Lens
Build-in 10X optical zoom lens with focal length 4.9 ~ 49mm
- Day & Night (IR cut removable)
- 1920x1080(1080P) Horizontal TV lines
- Automatic/Manual Iris Control
- High efficiency infrared LED 850nm, radiant distance - 16meters
- Private Mask
- 360° continuous rotation
- Up to 128 programmable preset positions
- Preset positions auto scanning
- High speed rotation and tilt, speed range varies from 0.5° /sec ~ 120° /sec
- 180° Horizontal Instant Flip
- 1 alarm inputs, 1 alarm output for each Fast Dome IP Camera
- Build in high resolution DSP color camera:
 1. Color / Mono Switch (IR Cut Filter)
Day → Color
Night → Mono
Auto → Switch from color to mono when light drops below 3 lux
 2. x64 Digital Zoom
 3. Digital effect: Mirror & Flip
 4. Minimum Illumination: Color 0.5Lux at F1.8, Mono 0Lux [IR ON]
 5. Sens. Up Function
 6. Lens Iris: F1.8~F16/ Close
 7. Auto Gain Control : 0dB ~ 42dB
 8. White Balance Control: Indoor, Outdoor, AWC, ATW, Manual
 9. Sharpness
 10. Privacy Zone: Off/ On (Up to 8 Zone Settings)
 11. Digital noise reduction: Off/ On (2C, 3D)
 12. Back Light Compensation: Off, BLC, WDR
- Power supply options: PoE+ (IEEE 802.3at) or DC+12V 1.5A adaptor
- In live monitoring: 1080P(1920x1080), 720P(1280x720), D1(720x480), CIF(352x240)
- True H.264AVC/ MPEG-4 part 10 real-time video compression
- Full duplex H.264 AVC and JPEG streaming
- 2-Way Audio supported
- iPhone and Android Support
- ONVIF Support

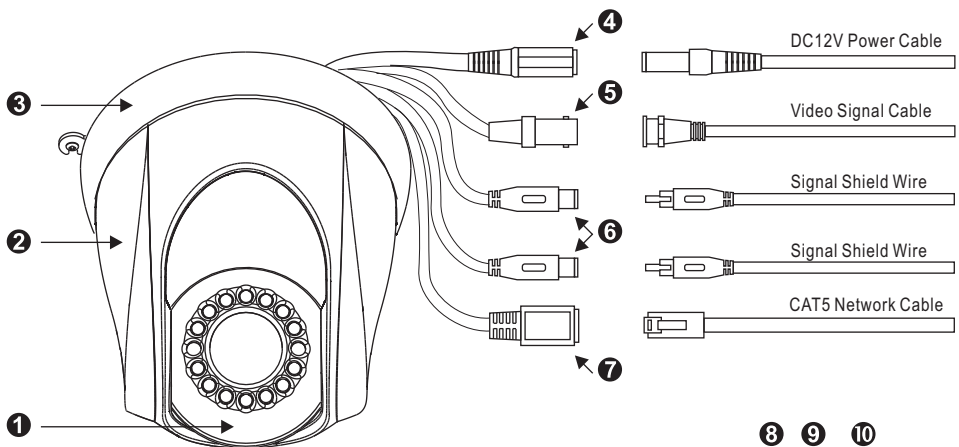
WARNINGS & CAUTIONS

Please read the manual before attempting installation or operation

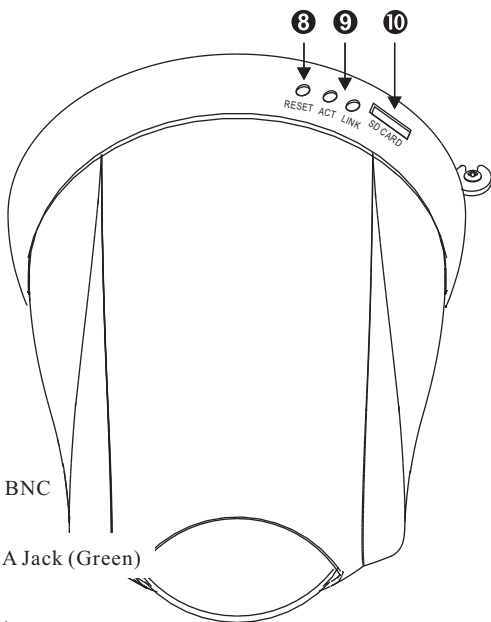
1. Please be aware to the warnings and cautions notice.
2. Don't use any chemical detergent to clean the machine surface, use a damp cotton cloth only.
Regularly clean the dome cover to assure proper focus ability.
3. Please install the Fast Dome in a dry area, water and high humidity may cause damage on internal parts. External housing should be used for outdoor installation.
4. Please use parts supplied by the manufacturer only, any unqualified part using in the equipment may violate the warranty.
5. Avoid installing the equipment in an unstable area. Make sure the area is firm and stable.
Falling equipment may injure personnel and damage the equipment.
6. Do not install the equipment near any flammable gas. Violation may cause fire or injury.
7. Avoid running video cable and signal cable through or passing interference sources such as video waves, broadcast station, power generator, elevator motor or high voltage area etc.
Violation may cause interference.
8. Make sure the power cable is properly fixed. Un-suitably fixed cable may cause serious short circuit or fire.
9. Correct cable connection is important. Do not place any object on the connection cable and change the cable if there is damage on cable. Violation may cause short circuit, fire and injury.
10. Make sure ground is well connected to avoid damage caused by lightning.
11. Do not put any foreign objects inside the equipment and do not spray any liquid on equipment.
This will avoid short circuit damage.
12. Do not touch power connection with wet hands to avoid short circuit or electricity shock.
13. Do not apply smash-force on the equipment. Violation may cause damage.
14. Do not install the equipment in a location that may expose the equipment directly to sunlight.
Violation may cause colour fading or damage.
15. Do not install the equipment in high temperature or low temperature environment to avoid damage.
The normal operational temperature is between $-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$.
16. Fast Dome contains high sensitive electric parts inside. Do not try to repair them without qualified personnel.
17. Turn off the power immediately and contact the technician when the following occurs:
 - A. Damage on power cable or plug.
 - B. Water leak into the equipment.
 - C. Fast Dome can not be operated normally.
 - D. Equipment falling on ground or damage on external case.
 - E. Unusual occurrence.
18. Warning: Do not try to repair the equipment. Only a qualified technician may disassemble and repair the equipment. Shut off the power before disassemble the equipment and don't put power on unless the case is completely assembled.



STRUCTURAL ELEMENT

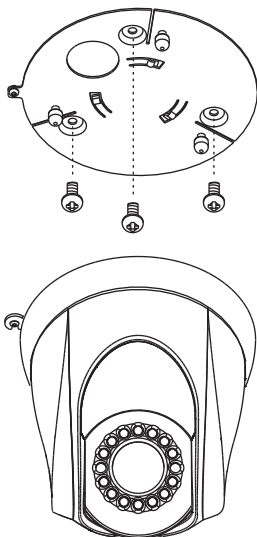


- 1** Camera Body
- 2** Camera Case
- 3** Bottom Chassis
- 4** Power In DC Jack (DC12V In DC Jack)
DC Input: DC12V $\pm$ 10%
- 5** Video Out BNC Jack
Video Signal Output: CVBS 1.0Vp-p 75 Ω BNC
Recommend Signal Cable: 5C2V
- 6** Audio In RCA Jack (Red) & Audio Out RCA Jack (Green)
Audio: 1.4Vp-p(1 Vrms)
Recommend Signal Cable: Signal shield wire
- 7** RJ45 Network Connector (Support PoE+)
LAN: 10/100Mbps
Recommend Signal Cable: CAT5
- 8** Reset Key
To restore the server to factory default setting.
- 9** Network Indicator LEDs
Green(LINK): Network connection. This LED lit.
Orange(ACT): Data communications. This LED flashes.
- 10** Micro SD Card Slot: Support Micro SD/SDHC/SDXC



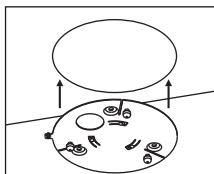
INSTALLATION

Attached Mounting Installation Structural Drawing

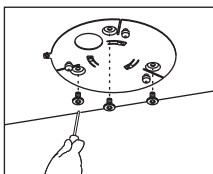


Attached Mounting (Fixed Ceiling)

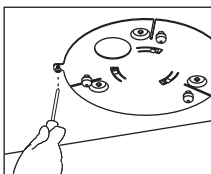
● Step 1 Fix The Metal Clips of ceiling



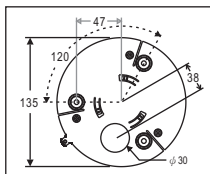
Put fixed metal clips on installation position of ceiling.



Tighten the three tapping screws into the ceiling.

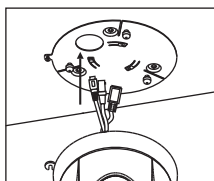


Loose the screw of bottom chassis.
(Don't need taking out the screw)

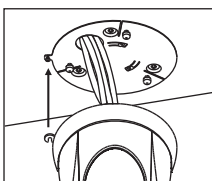


Base size and screw location.

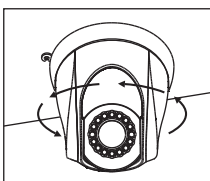
● Step 2 Attach the Camera and Metal Clips



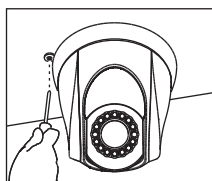
Set all of control cable on middle position and through the hole of ceiling



Attach dome camera body to metal clips.

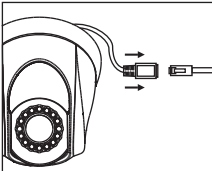
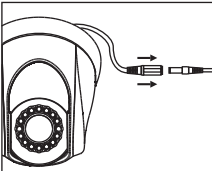
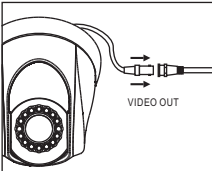
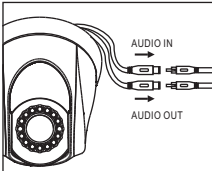


Turn camera body counter clockwise to tight position.



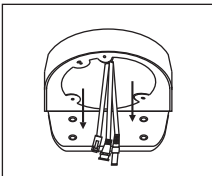
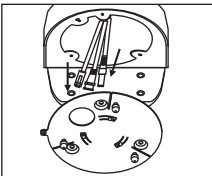
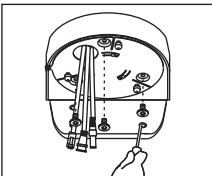
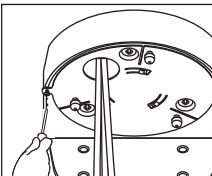
Tighten the screw to fix camera body.

● Step 3 Connection

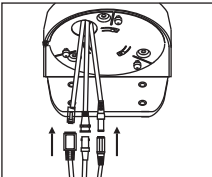
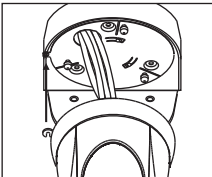
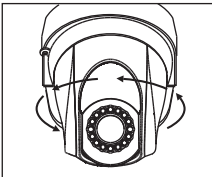
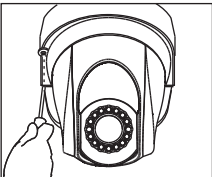
			
Connect Ethernet cable.	Connect DC12V of power cable. (Suggest to use the ADAPTOR from the factory)	Connect Video signal cable.	Connect Audio in/out signal cable.

Wall Mounting (Fixed Bracket)

● Step 1 Fix The Bracket & Metal Clips of Bracket

			
Fixed bracket first, and pull ethernet cable and other cable from bracket cable outlet.	Set all of control cable through the hole of metal clips.	Tighten the three screws to fix bracket.	Loose the screw of bottom chassis. (Don't need taking out the screw)

● Step 2 Attach the Camera and Metal Clips

			
Connect ethernet cable and other cable with connection cable model.	Pull all of control cable into the bracket and attach dome camera body to metal clips.	Turn camera body counter clockwise to tight position.	Tighten the screw to fix camera body.

SPECIFICATION

10X D/N 1080P HD FAST DOME IR IP CAMERA			
General			
Model		IPS2102E	
Power Supply		DC12V	PoE+ (IEEE 802.3at)
Power Consumption		13W	15.5W
Image Pick-up Device		1/3" MOS Sensor	
effective Pixels		1944(H) x 1092(V) = 2,122,848(pixel)	
Total number of pixel		2010(H) x 1108(V) = 2,227,080(pixel)	
Scanning System		Progressive Scan	
Video Output		CVBS 1.0Vp-p/ 75Ω BNC	
Minimum illumination		Color: 0.5Lux at F1.8, Mono: 0Lux (IR ON)	
Ambient Operation Temperature		-10°C ~ +50°C (-14°F ~ 122°F)	
Operating Humidity		0% ~ 90%	
IR LED	Peak Wavelength	850nm	
	Radiant Distance	16M	
	Beam Spread	30°	
Dimensions		142mm(H) x 135mm(D)	
Weight		1100g	
Pan & Tilt			
Panning Range		360° Endless	
Panning Mode		Manual, Auto, Manual Position, Sequential Position	
Panning Speed		Manual Approx. 0.5°/s ~ 90°/s 8Steps, Preset Approx. 1°/s ~ 120°/s 8Steps	
Tilting Range		0° ~ +90°	
Tilting Mode		Manual, Auto, Manual Position, Sequential Position	
Tilting Speed		Manual Approx. 0.5°/s ~ 90°/s 8Steps, Preset Approx. 1°/s ~ 120°/s 8Steps	
Lens			
Zoom Ratio		10X Optical Zoom	
Focal Length		4.9mm ~ 49mm	
Minimum Aperture Ratio		1 : 1.8 (Wide) ~ 3.0(Tele)	
Minimum Object Distance		1.0m (Tele)	
Angle Field of View		Wide: 57.23°(H) 34.07°(V) , Tele: 6.25°(H) 3.51°(V)	
Main Function			
Control Function		Pan and Tilt/ Zoom and Focus/ Iris and ICR/ 128 Preset Position/ Home Position	
Digital Zoom Ratio		x64	
Zoom Speed		1~15 Selectable [15: approx. 5.0 second (In to Out) in manual mode]	
Focus Speed		1~15 Selectable [15: approx. 5.0 second (Far to Near) in manual mode]	
Focus		Auto (Continue/ Zoom Trigger), Manual Focus	
Iris		F1.8 ~ F16, Close	
Day & Night		Day/ Night/ Auto	
Electronic Shutter Speed		Auto/ manual (1/30(25) to 1/10,000)	
Back Light Compensation		OFF/ BLC/ WDR	
Sharpness		Adjustable	
White Balance		Indoor/ Outdoor/ AWC/ ATW/ Manual(1800K~10500K)	
Auto Gain Control		0 ~ 42dB	
Digital Noise Reduce		Off/ On (2D, 3D)	
Auto Mode		Off/ AUTO/ SEQ/ TOUR/ PATROL	
Privacy Function		Off/ On (Up to 8 Zones Settings)	
Digital Effect		OFF/ Mirror	
Schedule Setting		Off/ Auto Mode/ Preset Position	

Design and specification are subject to change without notice.

Network Function	
Video compression	H.264, Motion JPEG
Resolution	1080P(1920x1080), 720P(1280x720), D1(720x480), CIF(352x240)
Frame rate	H.264: up to 30FPS at 1080P(1920x1080)
	Motion JPEG: Up to 30/25FPS at Full D1 resolution
Video streaming	RTP/HTTP, RTP/TCP, RTP/UDP, Multicast
Video bitrate	128Kbps ~ 5Mbps
	Frame rate and bitrate controllable on-the-fly
	VBR/ CBR/ GOP supported
Security	Base64 HTTP encryption
	Multiple user access levels with password protection
	10 user accounts available
Users	8 simultaneous users
OSD	Text overlay for date, time, and camera name, and PTZ position
Alarm Function	Image upload over FTP and E-mail by alarm/ motion detection
CPU, memory	Embedded SoC ARM11, 528MHz, 256MB DDR2, 256MB flash memory
Web PTZ control	Pan, tilt, zoom in/ out, absolute position, and video-click-n-move
PTZ preset scheduling	Yes, via web interface
Maintenance	Firmware update via HTTP
	Firmware available at web site
Network Interface	10Mbps / 100Mbps, RJ-45
Client PC requirement	OS : Windows 2000, Windows XP, Windows Vista, Windows 7
	Browser : Windows Internet Explorer 6, 7, 8
	CPU : Intel Pentium 4 1.8GHz or above
	RAM : 1GB or above, Independent Display Card
Network protocols	IP, TCP, UDP, HTTP, SMTP, NTP, DDNS, UPnP, FTP, ARP, DHCP, PPPoE, DNS, RTSP, RTCP, Telnet, ONVIF, ICMP, IGMP
Mobile phone and PDA	iPhone, iPad and Android support
System integration	ONVIF & LILIN HTTP API
CMX	CMX HD3.6 support
Video display	LILIN Universal ActiveX & LILIN Java Applet
OS	Embedded Linux 2.6.32
Two-way Audio	G.711
SD Card Recording	Support Micro SD/SDHC card for circular recording(card is not included)

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