LILIN

iMEGAPRO

Day & Night 1080P HD IP Camera

IPG1022ELS / IPG1022ELSX

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

CAUTION

⊗ **Do not drop or strike this equipment.**
Sensitive electronics inside are vulnerable to excessive shock.

⊗ **Do not install the equipment near any naked flames or heat sources.**
Excessive heat could damage this unit.

⊗ **Do not expose this unit to rain or excessive moisture, avoid smoke and dust.**
Please the camera in an environmental housing for protection. If the camera gets wet, unplug it and have it checked by qualified service personnel.

⊗ **Do not cover cloth or to install this unit in poorly ventilated places.**
This may lead to overheating.

⊗ **Do not continue to operate if there appears to be fault.**
If the unit ceases to function, contact qualified service personnel for help.

⊗ **Do not touch the power connection with wet hands.**
Risk of short circuit or electric shock.

⊗ **Do not damage the power cord or leave it under pressure.**
Risk of fire or shock circuit.

CONGRATULATIONS

Thank you for purchasing this D/N 1080P HD IP Camera. You now own one of the many fine network products we manufactured. This product has been carefully inspected under rigid quality control and should reach you in perfect condition. With reasonable care, it will provide years of reliable performance.

We recommend that you read this installation and operation manual thoroughly before installing and operation your new system.

Here you will find all the information you need to set up and use the system. If any questions are not answered in the manual, please contact your dealer.
Before proceeding, please read and observe all instructions and warnings contained in this manual. Retain this manual with the original bill of sale for future reference and, if necessary, warranty service.

When unpacking your new camera, check for missing or damaged items. If any item is missing, or if damage is evident, **DO NOT INSTALL OR OPERATE THIS PRODUCT**. Contact your dealer for assistance.

Executive Summary

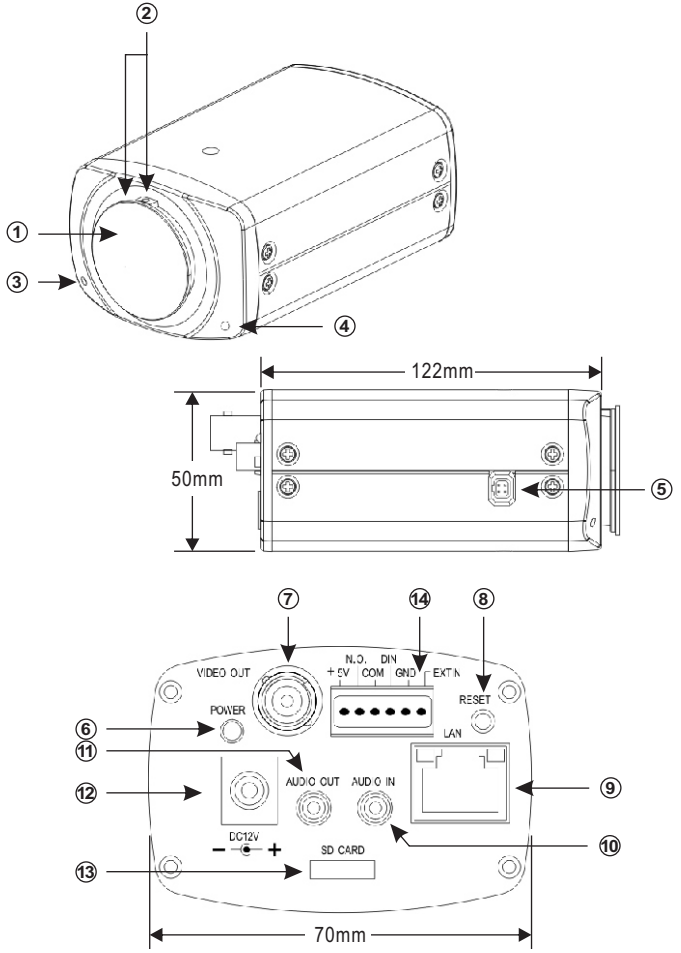
IPG1022ELS series is an 2 megapixel Day&Night 1080P HD IP Camera, built-in H.264 AVC(Advanced Video Coding) video compression. H.264 AVC video compression engine supports high definition video quality, 1080P(1920x1080) resolution, bandwidth efficiency with PPPoE and DDNS.

Also it provides higher bit rate of internet and diverse alarm functions such as movement video detection e-mail or FTP.

Moreover, IPG1022ELS series can do remote surveillance with iPad, iPhone or Android cell phone. The software R&D engineer can use HTTP protocol(HTTPAPI) or ONVIF protocol to develop related software, and integrate them with existing application software system.

IPG1022ELS series is ideal solution for remote video monitoring via internet.

PART DESCRIPTION & DIMENSION



1. LENS MOUNT CAP
   Prevent damages to the image sensor and to keep dust away.

2. FOCAL LENGTH ADJUSTMENT RING AND LOCKING SCREW
   Use this ring to adjusts the back-focal distance or picture focus. Rotate this ring clockwise or counterclockwise for a CS-mount lens.

3. MICROPHONE
   Built-in highly sensitive capacitive microphone.

4. LIGHT SENSOR
   Day and night function auto mode detect.

5. AUTO IRIS CONNECTOR(DC Type)
   Supplies control signals to an auto iris lens(jack not supplied).

6. POWER LED
   Power ON/OFF indicator.

7. LIVE VIDEO BNC JACK
   Plug the video input of monitor to the BNC jack and adjust focus and zoom.

8. RESET KEY
   To restore the server to factory default setting.

9. RJ-45 NETWORK CONNECTOR AND INDICATOR LEDS
   Green(LINK): While cable of network is connecting the LED is light.
   Orange(ACT): When data is communicating, the LED is flashed.
   (This network camera support PoE.)

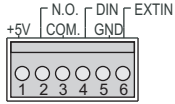
10. AUDIO INPUT 3.5mm PHONE JACK
    Can be accessed by an external microphone or audio input signal.
    (Choose from the audio settings menu to switch)

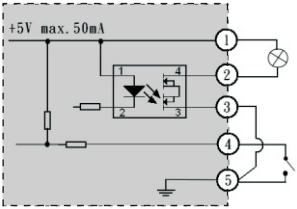
11. AUDIO OUTPUT 3.5mm PHONE JACK

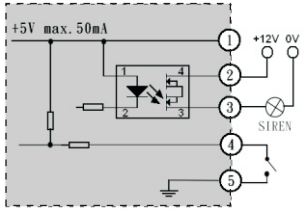
12. DC12V POWER INPUT JACK
DC12V (±10%) power input.

13. Micro SD CARD SLOT
This network camera is compliant with Micro SD/SDHC card.

14. ALARM IN/OUT & EXTIN TERMINAL







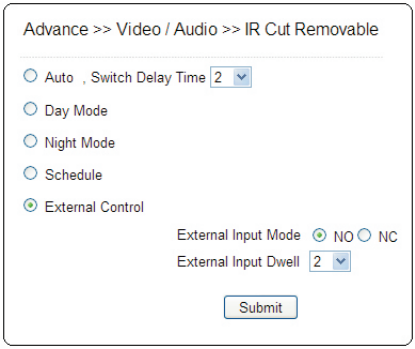
- +5V Output: Max. output 50mA.
- N.O./COM.: Max. load +60V/100mA.
- DIN terminal can be set either N.O. (normally open) or N.C. (normally close) mode.
- EXTIN: IR cut removable external control input.

◆ IR CUT REMOVABLE EXTERNAL CONTROL SETUP

Access into web page setup menu, under schedule menu, enable External Control option.

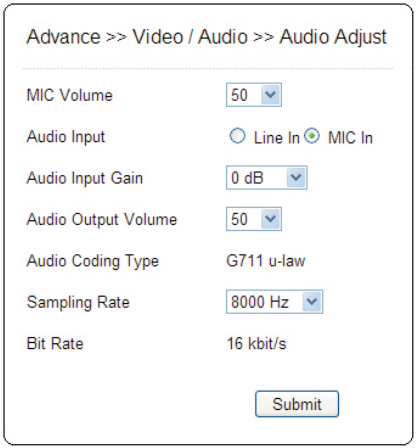
External input mode: normally open(NO) or normally closed(NC) mode is selectable.

External input dwell: may select 1, 2, 5, 10, 15, 20, 30 seconds delay time interval to avoid wrong operation caused by headlight of the front light.



◆ AUDIO INPUT MODE SETUP

Access into web page setup menu, under audio adjustment setup menu, may select Audio Input mode to either camera front microphone or rear's Audio In (Line IN).

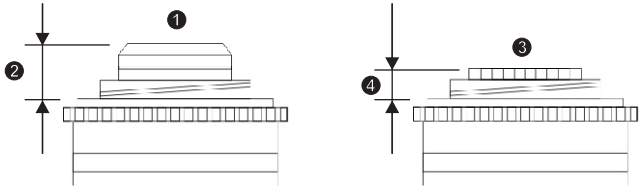


INSTALLATION

- **SUITABLE LENSES**

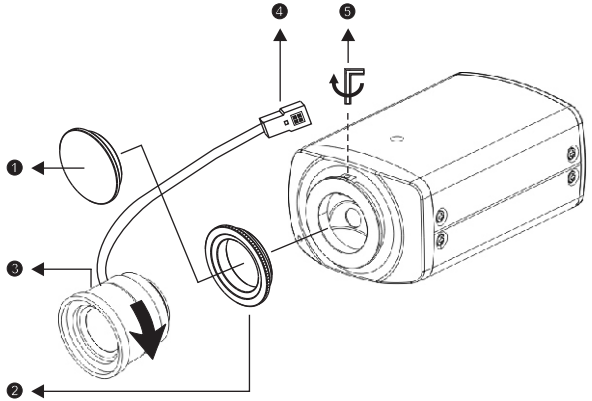
  The lens must be either a C or CS mount type. The protrusion behind the mounting surface must be within the following limits:

❶	C - mount lens	❸	CS - mount lens
❷	9mm or less	❹	4mm or less



- **FITTING THE LENS**

  ① Remove the lens mount cap.
  ② Screw in the C mount ring(not supplied), until it is secured. When using a CS mount lens skip step2.
  ③ Screw in the lens, until it is secured.
  ④ Insert the lens plug in the AUTO IRIS connector, when fitting a manual-iris lens, skip step4.
  ⑤ Adjust the focal length by turning the focal length adjustment ring. (Using hexagon screw driver, loose and tighten the screw.)

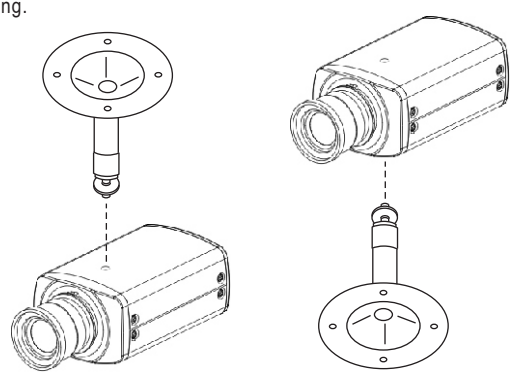


CAUTION

Keep the lens mount cap on the camera when not attaching a lens.

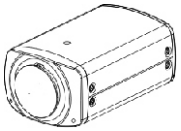
- **FITTING THE CAMERA**

1. The mounting hole on the top or bottom of the camera.
2. Tighten the screw to the mounting hole. Please refer to the following drawing.



PRODUCTION COMPONENTS

1. D/N 1080P HD IP Camera



3. CD Software Pack

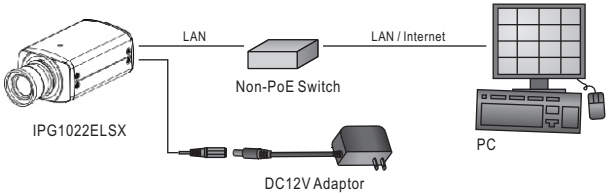
4. Bracket and Lens

(IPG1022ELSX ONLY)

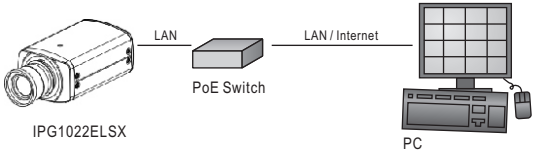
SYSTEM ARCHITECTURES

For connecting IPG1022ELS series to the network, please follow one of the system architectures:

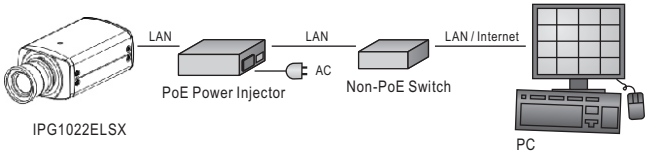
(1). Use DC12V power adapter and network switch connected to network.



(2). Use with PoE of the network switch connected to the network.



(3). Use PoE power injector and the network switch connected to the network.



EMERGENCY FACTORY DEFAULT

Use hardware to restore factory default settings, follow these steps:

1. Hold "RESET" key 10 seconds, then release.
2. After about 40 seconds, the network LED light is off, and then lit.
3. This camera has completed the factory default settings, and then reboot.
4. Use IPScan software search for this IP device.
5. Using a Internet browser open the IP device.
6. Enter the default username "admin" and password "pass" to operate.

NOTE

For the convenience of users, restore the factory default settings will revert to the default IP address 192.168.0.200.

SPECIFICATIONS

Day/Night 1080P HD IP CAMERA		
Model No.	IPG1022ELS	IPG1022ELSX
Pick Up Element	1/2.5" CMOS Image sensor	
Effective Pixels	1920(H) x 1080(V) = 2,073,600(pixel)	
Chip Size	5.70mm(H) x 4.28mm(V)	
Scanning System	Progressive Scan	
Infrared Cut Filter	Auto / Schedule / Day(Color) / Night(Mono) / External control	
Min. Illumination	0.25Lux at F1.4 (Low Light Mode)	
White Balance	Auto / Tungsten / Indoor / Fluorescents1 / Fluorescents2 / Outdoor1 / Outdoor2	
Back Light Compensation	Off/ On	
Electronic Shutter	1/30(25)s ~ 1/8,000s	
Sense Up	Off/ 1Frame/ 2Frames/ 3Frames/ 7Frames	
Sense Up Plus	Yes	
Auto Gain Control	36dB Variable Gain	
3D Noise Reduction	Off/ 1~32 Selectable	
2D WDR	Off/ x2/ x3/ x4	
Privacy Masking	Off/ On (4 zones)	
Image Effects	Brightness, Contrast, Hue, Saturation, Sharpness, Mirror, Flip	
Live Video Output	CVBS 1.0Vp-p, 75ohm, BNC connector	
Audio In/Output	Mono, 1.4 Vp-p, 50KΩ, 3.5mm phone jack	
Operating Temperature	-25°C ~ +50°C (-13°F ~ 122°F)	
Dimension	70mm(W) x 50mm(H) x 122mm(D)	
Weight	550g	
Power Input Voltage	DC12V ±10% / PoE (IEEE 802.3af compliant)	
Power Consumption	DC12V, 6W / PoE, 7.5W	

Design and specification are subject to change without notice.

NETWORK	
Video Compression	H.264, Motion JPEG
Resolution	1080P(1920x1080) / 720P(1280x720) / D1(720x480) / CIF(352x240)
Maximum Frame Rate	H.264: up to 15fps @1920x1080, 30fps @1280x720, 30fps @720x480
	Motion JPEG: up to 15fps @1920x1080, 30fps @720x480, 30fps @352x240
Video Streaming	RTP/HTTP, RTP/TCP, RTP/UDP
Video Bitrate	128Kbps ~ 5Mbps Frame rate and bit rate 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
Digital Zoom	Yes
OSD	Text overlay for date, time, and camera name
Alarm Functions	Alarm / motion detection triggering recording into SD card Image upload over FTP and E-mail by audio/ motion detection
CPU, Memory	Embedded SoC ARM11, 528MHz 256MB DDR2, 256MB flash memory
Maintenance	Firmware update via HTTP, Firmware available at web site
Network Interface	10Mbps / 100Mbps Base-T, RJ-45
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
Mobile Phone and PDA Support	iPad, iPhone 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 / PCM
SD Card Recording	Support Micro SD/SDHC card for circular recording (card is not included)
Alarm Input / Output	Digital 1 input (TTL, +3~5V) / 1 Output (N.O.)

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66-IPG1022LCSE