#### **Contents**

- Weatherproof IR dome camera
- Mounting screws (x4) / hex allen key (x1) / flat-head screwdriver (x1)
- Rubber weatherproofing plugs (x 2)
- 60ft BNC / power extension cable
- BNC female / RCA male adapter
- 12V DC power adapter

WARNING - A REGULATED UL / CSA APPROVED 12V DC power supply is REQUIRED for use with this camera. Use of a non-regulated, non-conforming power supply can damage this product and voids the warranty.

#### **Features**

- Advanced 960H Sony EXview™ II image sensor.
- Video image processor delivers up to 700TV lines of resolution.
- 960H capable image sensor delivers up to 34% more resolution than D1 and 5x more than CIF\*.
- Offers a true to life non-streched aspect ratio that provides sharper, more detailed images.
- 2.8–12mm manual zoom lens to customize viewing angle (33–104° diagonal field of view).
- ClearNight Imaging for enhanced low light performance improving recording efficiency up to 30%.
- Night Vision up to 155ft away in ambient lighting conditions and up to 100ft away in total darkness\*\*.
- · Split glass design minimizes IR reflection.
- Weatherproof rated housing for indoor and outdoor installation \*\*\*.
- Robust vandal resistant housing.

#### Disclaimers:

- \* When connected to a 960H capable DVR.
- \*\* Stated IR illumination range is based on ideal conditions in total darkness and in typical outdoor night time ambient lighting. Actual range and image clarity depends on installation location, viewing area, and light reflection/absorption level of object.
- \*\*\* Not intended for submersion in water. Installation in a sheltered location recommended

## Warning/Caution

- Read this guide carefully and keep it for future reference.
- Follow all instructions for safe use of the product and handle with care
- Use the camera within given temperature, humidity, and voltage levels noted in 'Camera Specifications'.
- Do not disassemble the camera.
- Do not point the camera directly towards the sun or a source of intense light.
- Use only the supplied regulated power supply. Use of a non-regulated, non-conforming power supply can damage this product and voids the warranty.
- Periodic cleaning may be required. Use a damp cloth only. Do not use harsh cleaners or aerosol cleaners.
- The supplied extension cable is rated for surface mounting only.
- Cables for in-wall / floor-to-floor installations are sold separately.

## Installation Tips

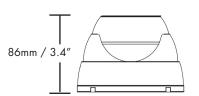
- Point the camera where there is the least amount of obstructions (i.e. tree branches).
- Install the camera in a location that is difficult for vandals to reach.
- Secure cabling so that it is not exposed or easily cut.
- Camera rated for outdoor use. Installation in a sheltered location recommended.

## **Camera Specifications**

Image Sensor	1/3" Sony EXview HAD™ II 960H
Video Format	NTSC
Effective Pixels	H: 976 V: 494
Resolution	Up to 700 TV Lines
Scan System	2:1 Interlace
Sync System	Internal
S / N Ratio	> 48dB
Iris	AES
AES Shutter Speed	1/60 ~ 1/100,000 sec.
Min. Illumination	0.1 Lux without IR LED 0 Lux with IR LED
Video Output	Composite 1.0Vpp @ 75ohm
Lens / Lens Type	2.8–12mm F1.4 / Varifocal
FOV (Diagonal)	33–104°
Termination	BNC Type
IR LED Qty. / Type	36 pieces / 850nm
Night Vision Range*	155ft (47m) / 100ft (31m)
Power Requirement	12V DC ±10%
Power Consumption	Max. 450mA (w/IR)
Operating Temp. Range	14° ~ 122°F / –10° ~ 50°C
Operating Humidity Range	< 80% RH
Indoor / Outdoor**	Both (IP66)
Weight (including stand)	1.4lbs / 0.6kg

<sup>\*</sup> Stated IR illumination range is based on ideal conditions in typical outdoor night time ambient lighting and total darkness. Actual range and image clarity depends on installation location, viewing area, and light reflection, obsorption level of object.

## **Dimensions**





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Product Information

Specification Sheets

User Manuals

■ Software Upgrades

(7) Quick Start Guides

1e Firmware Upgrades

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Quick Start Guide English Version 1.0





<sup>\*\*</sup> Not intended for submersion in water, Installation in a sheltered location recommended.

## Installing the Camera

**ATTENTION** - Test the camera prior to selecting a permanent mounting location by temporarily connecting the camera(s) and cables to the DVR.

#### Before installing the camera:

- · Decide whether to run the cables through the wall / ceiling (drilling required) or along the wall / celing.
- If you run the cables along the wall / ceiling, you must run the cable through the cable notch on the base. This will keep the camera base flush to the wall / ceiling when mounted.



Cable Notch

#### To install the camera:

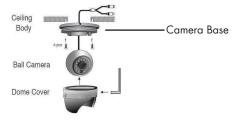
1. Use the included Allen key to loosen the screw on the dome cover.



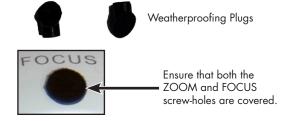
- 2. Rotate the camera base counterclockwise to separate it from the ball camera and dome cover.
- 3. Feed the BNC / power cable through the camera base. If you are running the cables against a wall or ceiling, make sure to pass the cable through the cable notch as shown above.
- 4. Connect the video and power cable as shown in the next section 'Connecting the Camera'.
- 5. Mount the camera base to the wall or ceiling using the included screws.



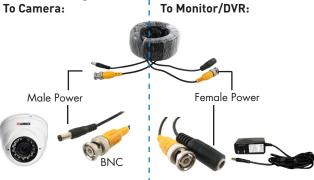
- 6. Position the dome cover over the camera and screw it clockwise halfway onto the camera base.
- 7. Move the ball camera to the desired position. While holding the ball camera firmly in place, screw the dome cover the rest of the way to secure it to the camera base. Holding the camera prevents it from moving while installing the dome cover.
- 8. Use the included Allen key to tighten the screw on the dome cover.



- 9. Adjust the Zoom and Focus control screws with the included flat-head screwdriver as needed (see 'Lens Adjustment' for details).
- 10. Insert rubber weatherproofing plugs (2x) firmly into the ZOOM and FOCUS screwholes to ensure a weatherproof seal.

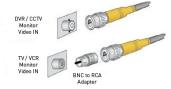


## **Connecting the Camera**

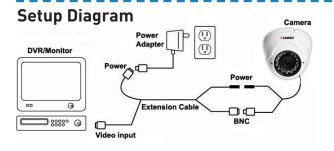


- 1. Connect the BNC and power connectors to the camera.
- 2. Connect the BNC connector to the video input of a DVR.
- 3. Connect the camera to the power adapter. See 'Setup Digaram' for details.

## **BNC to RCA Adapter (Optional)**



Attach the included BNC to RCA adapter to connect the extension cable to RCA inputs (i.e. for a TV connection).



### Cable Extension Options

Extend the cable run for your camera up to 300ft or more depending on the cable type used. See table below:

Option	Cable Type	Max Cable Run Distance	Max # of Extensions
1	Regular BNC (sold separately)	180ft / 55m	3
2	'RG59' or 'Coax' or 'Coaxial BNC' (sold separately)	300ft / 92m	5
3	Lorex Universal Cable (sold separately)	300ft / 92m	3

- 1. For optimal performance, consider using option 2 or 3. It is best to use the same cable type for the entire distance.
- 2. Cable run recommendation based on typical camera power consumption (up to 500mA). For specialty cameras with higher current consumption, maximum cable run may be reduced. Consider providing power to the camera at the camera side, rather then at the end of the extension cable
- 3. Indicators that your cable run may be too long:
  - Video is permanently black & white (even during day time)
  - Video is distorted

## Lens Adjustment

Use the included flat-head screwdriver to adjust the Focus and Zoom control screws on the camera if necessary.

**NOTE:** Have a second person verify the camera image when you adjust the focus and zoom.



## **Troubleshooting**

Problem	Solution
No picture / signal	Ensure your TV is on the correct input channel. Common terms of an input channel: INPUT, AV CHANNEL, LINE1, LINE2, AUX.     Ensure your DVR is properly connected to your TV / Monitor.     Ensure connections are properly connected.
	Ensure the camera power supply is plugged in.
Picture is too bright	Ensure your camera isn't pointed directly at a source of light (e.g. sun or spot light).     Move your camera to a different location.
Picture is too dark	Check the brightness and contrast settings of the device your camera connects to (TV / Monitor / DVR).
Night vision is not working	The night vision activates when light levels drop. The area may have too much light.
Picture is not clear	Check the camera lens for dirt, dust, spiderwebs. Clean the lens with a soft, clean cloth. Use water only as chemical cleaners may damage the camera.     Make sure that the cable run is within the limitations specified in the section 'Cable Extension Options'.     The camera may be out of focus. Adjust the zoom and focus control screws. See the section 'Lens Adjustment'.
Bright spot in video when viewing camera at night	Night vision reflects when pointing a camera at a window. Move the camera to a different location. Ensure your camera isn't pointed directly at a source of light (e.g. spotlight).
BNC does not connect to my TV.	Use a BNC to RCA adapter at the end of the extension cable.