#### Contents

- IR Night Vision Camera
- Mounting Kit / Allen Key
- 60ft BNC / Power Extension Cable
- BNC female / RCA male adapter
- Power Adapter

**WARNING** - A REGULATED UL / CSA APPROVED 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 Image Sensor\*
- Video image processor delivers up to 700TV lines of resolution
- 960H (960x480) image sensor delivers up to 34% more resolution than D1 and 5x more than CIF
- True-to-life non-stretched aspect ratio provides sharper, more detailed images
- 6mm fixed lens offers a close up view (53° diagonal field of view)
- ProLux IR LED's provide longer night vision range, longer lifespan, and illuminate more evenly
- Night vision up to 185ft (55m) away in ambient lighting conditions and up to 120ft (35m) away in total darkness\*\*
- Split glass design minimizes IR reflection
- Weatherproof rated housing for indoors & outdoor installation (IP66)\*\*\*
- Robust vandal resistant housing with cable pass through bracket

#### **Disclaimers:**

- \* When connected to a 960H capable DVR.
- \*\* Stated IR illumination range is based on ideal conditions in typical outdoor night time ambient lighting and in total darkness. 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 cameras within given temperature, humidity and voltage levels noted in 'Camera Specifications'.
- Do not disassemble the cameras.
- Do not point the cameras 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**

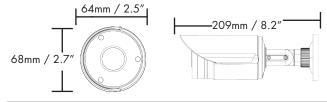
- Point the cameras where there is the least amount of obstructions (i.e. tree branches).
- Install the cameras where they are difficult for vandals to reach.
- Secure cabling so that it is not exposed or easily cut.
- Cameras rated for outdoor use. Installation in a sheltered location recommended.

## **Camera Specifications**

Image Sensor	1/3" 960H Advanced Image Sensor
Video Format	NTSC
Effective Pixels	H: 976 V: 496
Resolution	700 TVL
Scan System	2:1 Interlace
Sync System	Internal
S / N Ratio	46dB (AGC Off)
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	6mm F2.0 / Fixed
FOV (Diagonal)	53°
Termination	BNC Type
IR LED Qty. / Type	3 Super LED / 850nm
Night Vision Range*	185ft (55m) / 120ft (35m)
Power Requirement	12V DC ±10%
Power Consumption	Max. 460mA (w / IR)
Operating Temp. Range	14° ~ 122°F / –10° ~ 50°C
Operating Humidity Range	< 80% RH
Indoor/Outdoor**	Both (IP66)
Weight (including stand)	0.9lbs / 0.4kg

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

#### **Dimensions**



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Product Information

Specification Sheets

User Manuals

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Firmware Upgrades

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

## **Installing the Cameras**

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

#### Before installing the cameras:

- Decide whether to run the cables through the wall / ceiling (drilling required) or along the wall / ceiling.
- If you run the cables along the wall
   / ceiling, you must run the cable
   through the cable notch on the base.

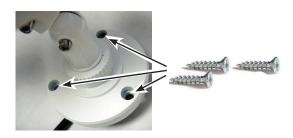
   This will keep the camera base flush
   to the surface when mounted.



Cable Notch

#### To install the cameras:

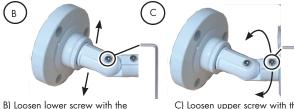
- Use the included mounting template or the camera base to mark holes for the mounting screws.
- 2. Drill the holes, then feed the cable through the mounting surface or cable notch and mount the camera stand to the surface using the provided screws. Make sure all screws are fastened tightly.



3. Set the position and angle of the camera.



A) Turn the adjustment ring to tighten / loosen the stand connection. Adjust the camera's horizontal position.

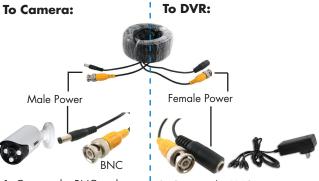


included Allen key to adjust the camera's vertical position.

 C) Loosen upper screw with the included Allen key to rotate the camera housing.

4. Remove the protective film from the camera lens.

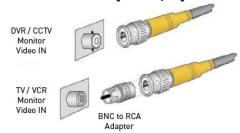
## **Connecting the Cameras**



1. Connect the BNC and power connectors to the camera.

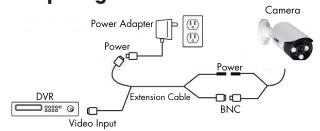
- 2. Connect the BNC connector to the video input of your DVR.
- 3. Connect the camera to the power adapter.

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



Connect the included BNC-to-RCA Adapter to connect the extension cable to RCA inputs (i.e. for a TV connection).

# **Setup Diagram**



**ATTENTION** - This camera includes an Auto Mechanical IR Cut Filter. When the camera changes between Day/Night viewing modes, an audible clicking noise may be heard from the camera. This clicking is normal, and indicates that the camera filter is working.

### **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

#### **Notes:**

- For optimal performance, consider using option 2 or 3. It is best to use the same cable type for the entire distance.
- 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 than 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

**Troubleshooting** 

Iroubleshooting		
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	Tensure your camera isn't pointed directly at a source of light (e.g. sun or spot light). Slide the sunshade (bullet cameras featuring adjustable sunshades only) forward to block excess light.  Move your camera to a different location.	
Picture is too dark	If using during the day, the camera may not be getting enough light. Slide the sunshade (bullet cameras featuring adjustable sunshades only) backwards to let in more light. 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.      Make sure that the cable run is within the limitations specified in the section 'Cable Extension Options'.	
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.	
BNC connection does not connect to my TV	Use a BNC-to-RCA adapter (not included) at the end of the extension cable.	