**Contents**

- IP Bullet Camera*
- Mounting Kit*
- Mounting Template*
- Cat5e Ethernet Extension Cable*

* Per camera.

**ATTENTION** - It is recommended to connect the camera to the NVR or an external PoE switch. If using a DC power adapter with the camera, 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 void the warranty.

**Features**

- High definition 1080p Sony Exmor image sensor delivers superior detail*
- Crystal clear video with outstanding quality, day or night
- Infrared cut filter ensures accurate color representation
- Night vision range up to 150ft (45m) in ambient lighting & 100ft (30m) in total darkness**
- Close up recognition in the dark with SmartIR
- Digital wide dynamic range backlight compensation ensures clear images in high and low light areas
- Anti-glare feature ensures clear images under strong lighting conditions
- ClearNight imaging for superior low light performance, improving recording efficiency
- 2D DNR Digital Noise Reduction for clear accurate images
- Split glass design minimizes IR reflection
- Weatherproof for outdoor & indoor installation ([IP66 Rated])***
- Wide angle 84° field of view
- Vandal resistant design with cable pass-through bracket
- Heavy-duty durable metal housing
- Simple installation of video and power on a single cable with Power over Ethernet (POE) CAT5e cable
- Versatile ceiling or wall mounting options
- Residential and business friendly compact design
- Expand your coverage with camera Ethernet cable up to 300’ from the NVR

**Disclaimers:**

* Compatible with Lorex HD NVR LNVR100/LNVR400 series only
** 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 / absorption level of object.
*** Not intended for submersion in water. Installation in a sheltered location recommended.

**Warning/Caution**

- Use the camera only with compatible Lorex NVRs
- 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
- 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

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**Camera Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Sensor</td>
<td>1/3” Sony Exmor Sensor</td>
</tr>
<tr>
<td>Effective Pixels</td>
<td>H: 1920 V: 1080</td>
</tr>
<tr>
<td>Resolution</td>
<td>1080P @ 30FPS (Frames Per Second)</td>
</tr>
<tr>
<td>Scan System</td>
<td>Progressive</td>
</tr>
<tr>
<td>Sync System</td>
<td>Internal</td>
</tr>
<tr>
<td>Iris</td>
<td>Auto Iris</td>
</tr>
<tr>
<td>Min. Illumination</td>
<td>0.1 Lux without IR LED</td>
</tr>
<tr>
<td>Min. Illumination</td>
<td>0 Lux with IR LED</td>
</tr>
<tr>
<td>Lens / Lens Type</td>
<td>3.6mm F1.6 / Fixed</td>
</tr>
<tr>
<td>Digital Noise Reduction</td>
<td>2D-DNR</td>
</tr>
<tr>
<td>Wide Dynamic Range</td>
<td>Digital WDR</td>
</tr>
<tr>
<td>FOV (Diagonal)</td>
<td>84°</td>
</tr>
<tr>
<td>IR LED Qty. / Type</td>
<td>32 pieces / 850nm</td>
</tr>
<tr>
<td>Night Vision Range*</td>
<td>150ft (45m) / 100ft (30m)</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>PoE (Power over Ethernet) Class 3 / 12V DC</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>350mA</td>
</tr>
<tr>
<td>Operating Temp. Range</td>
<td>14° ~ 140°F / –10° ~ 60°C</td>
</tr>
<tr>
<td>Operating Humidity Range</td>
<td>&lt; 85% RH</td>
</tr>
<tr>
<td>Indoor/Outdoor**</td>
<td>Both (IP66)</td>
</tr>
<tr>
<td>Weight (including stand)</td>
<td>0.9lbs / 0.4kg</td>
</tr>
</tbody>
</table>

* 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 / absorption level of object.
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**Dimensions**

![Dimension Diagram]

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**FOR SUPPORT AND INFORMATION, VISIT WWW.LOREXTECHNOLOGY.COM**
Installing the Camera

**ATTENTION** - Ensure the camera is working correctly prior to permanent installation by temporarily connecting the camera(s) and cable(s) to the NVR.

**Before installing the camera:**
- 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 wall / ceiling when mounted.

**To install the camera:**

1. Use the included mounting template to mark holes for the screws. Drill holes for the mounting screws.
   **NOTE:** Insert the included drywall anchors if you are installing the camera in drywall.
2. Feed the cable through the mounting surface or cable notch and mount the camera stand to the surface using the provided screws.
3. Use a Philips head screwdriver (not included) to loosen the adjustment screw.
4. Adjust the camera position as needed, and then tighten the adjustment screw to secure the position. See below for suggested stand positions.

**Connecting the Camera**

**To Camera:**
- Connect the Ethernet cable to the camera.

**NOTE:** A 12V DC power adapter (Model# CVA4902, not included) is only required if connecting the camera’s Ethernet cable to a router or switch that does not support PoE.

**To NVR:**
- Connect the other end of the Ethernet cable to the NVR’s PoE ports. The camera may take up to 1 minute to power up after being connected to the NVR.
- OR
- Connect the other end of the Ethernet cable to a router or switch on your network. See the NVR Instruction Manual for details on connecting the camera to your NVR.

**Setup Diagram**

**SCENARIO 1:** Connect Cameras to NVR

**SCENARIO 2:** Connect Cameras to Local Area Network (LAN)

**Troubleshooting**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No picture / signal</td>
<td>• The camera may take up to 1 minute to power up after being connected to the NVR. Wait two minutes before following the steps below. • Ensure the camera is connected to your NVR or to your local network. • If you are not using PoE, you must connect the camera to a 12V DC power adapter (not included). • If the camera is connected to the LAN, you must search your network for cameras using the NVR. See the NVR’s Instruction Manual. • Ensure your NVR is connected to a TV/monitor. • There may be an issue with your extension cable run. Connect the camera to the NVR using a different Ethernet cable. • Reset the camera to factory default settings. See ‘Resetting the Camera’ for details.</td>
</tr>
<tr>
<td>Picture is too bright</td>
<td>• Ensure 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. • Check the brightness and contrast settings on the NVR.</td>
</tr>
<tr>
<td>Picture is too dark</td>
<td>• 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 on the NVR.</td>
</tr>
<tr>
<td>Night vision is not working</td>
<td>• The night vision activates when light levels drop. The area may have too much light.</td>
</tr>
<tr>
<td>Picture is not clear</td>
<td>• 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’.</td>
</tr>
<tr>
<td>Bright spot in video when viewing camera at night</td>
<td>• Night vision reflects when pointing a camera at a window. Move the camera to a different location.</td>
</tr>
</tbody>
</table>

**Cable Extension Options**

Extend the Ethernet cable run for your camera up to 300ft. See table below.

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Max Cable Run Distance</th>
<th>Max # of Extensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat5e or higher Ethernet cable</td>
<td>300ft / 92m</td>
<td>3</td>
</tr>
</tbody>
</table>

You can use a RJ45 Coupler (not included) or switch (not included) to connect male ends of Ethernet cable together.