H4 HD Bullet Camera with Self-Learning Video Analytics

Avigilon offers a broad range of high definition cameras – from 1 – 5 MP and 4 – 7K (based on horizontal resolution) – and are available in a variety of formats, including dome, panoramic and fixed. Whether it’s a small storefront that requires a few cameras or a large complex system requiring complete coverage of numerous areas, you can trust that you’re getting an exceptional solution for your security needs.

The innovative H4 HD Bullet camera is just one way Avigilon can help provide effective monitoring and protection.

The H4 HD Bullet camera from Avigilon is ideal for seeing objects and activity in complete darkness. Embedded with self-learning video analytics, the H4 HD cameras seamlessly integrate with Avigilon Control Center (ACC)®, allowing security personnel to respond proactively and mitigate an incident before damage is done. With unique adaptive IR technology, this camera provides both wide and narrow illumination, enabling consistent illumination in complete darkness to enhance image quality regardless of scene conditions. Avigilon bullet cameras are equipped with new Triple Exposure Ultra-Wide Dynamic Range (WDR) and patented LightCatcher™ technology, ensuring you receive excellent image detail. Onboard storage capabilities let you manage storage directly on the camera using a standard SD memory card. The bullet camera is effective at monitoring a variety of environments that require discreet nighttime coverage, including parking lots, campuses and industrial yards.

KEY FEATURES

1-5 megapixel and 4K Ultra HD (8 MP ) resolution
Patented Advanced Video Pattern Detection and Teach by Example Technology
Self-learning video analytics
Patented High Definition Stream Management (HDSM)™ Technology
Available with 3-9 mm F1.3, 4.3-8 mm F1.8, or 9-22 mm F1.6 P-Iris lens with remote focus and zoom
Wifi camera configuration support
Avigilon LightCatcher technology provides exceptional image quality in low light environments
Triple Exposure Ultra Wide Dynamic Range (1-3 MP models)
Integrated IR (Infrared) LEDs provide uniform illumination in the dark, even at 0 lux, up to maximum of 70 m (230 ft) away
Zoom and content adaptive IR provides effective illumination throughout zoom positions, while maintaining the best scene illumination
Factory pre-configured image preset modes for maximum image performance in variety of lighting conditions
Idle Scene Mode lowers bandwidth and storage usage if there are no motion events detected in the scene
Vandal resistant construction and IP66 compliant
ONVIF compliant with version 2.2.0 of the Analytics Service Specification
Full Feature or High Framerate camera operating modes (4K Ultra HD model)
Specifications

**H4 HD CAMERA SERIES**

### IMAGE CONTROL

- **Image Compression Method**
  - H.264 (MPEG-4 Part 10/AVC), Motion JPEG
  - Multi-stream H.264 and Motion JPEG

- **Streaming Bandwidth Management**
  - (1.0 - 3.0 MP) HDSM; (5.0 MP and 4K Ultra HD) HDSM 2.0; (ALL) Idle Scene Mode

- **Motion Detection**
  - Pixel and classified objects

- **Camera Tampering Detection**
  - Yes

- **Electronic Shutter Control**
  - Automatic, Manual (1/6 to 1/8000 sec)

- **Iris Control**
  - Automatic, Manual

- **Day/Night Control**
  - Automatic, Manual

- **Flicker Control**
  - 50 Hz, 60 Hz

- **Backlight Compensation**
  - Adjustable

- **Privacy Zones**
  - Up to 64 zones

- **Audio Compression Method**
  - G.711 PCM 8 kHz

- **Audio Input/Output**
  - Line level input and output

- **External I/O Terminals**
  - Alarm In, Alarm Out

- **USB Port**
  - USB 2.0

### LENS

- **Lens**
  - 3 - 9 mm lens: F1.3, P-Iris, remote focus and zoom
  - 4.3 - 8 mm lens: F1.8, P-Iris, remote focus and zoom
  - 9 - 22 mm lens:
    - F1.6, P-Iris, remote focus and zoom
    - F1.8, P-Iris, remote focus and zoom

- **Angle of View**
  - 3 - 9 mm lens:
    - 30° – 91°
    - 32° – 98°
    - N/A
  - 4.3 - 8 mm lens:
    - N/A
    - 46° – 86°
    - N/A
  - 9 - 22 mm lens:
    - 14° – 29°
    - 15° – 31°
    - 18° – 41°

### IMAGE PERFORMANCE

<table>
<thead>
<tr>
<th>Image Sensor</th>
<th>1.0 MP</th>
<th>2.0 MP</th>
<th>3.0 MP</th>
<th>5.0 MP</th>
<th>4K ULTRA HD (8.0 MP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect Ratio</td>
<td>1/2.8&quot;</td>
<td>1/2.8&quot;</td>
<td>1/2.8&quot;</td>
<td>1/1.8&quot;</td>
<td>1/2.3&quot;</td>
</tr>
<tr>
<td>Active Pixels (H x V)</td>
<td>1280 x 720</td>
<td>1920 x 1080</td>
<td>2048 x 1536</td>
<td>2592 x 1944</td>
<td>3840 x 2160</td>
</tr>
<tr>
<td>Imaging Area (H x V)</td>
<td>4.8 mm x 2.7 mm; 0.389&quot; x 0.106&quot;</td>
<td>5.12 mm x 3.84 mm; 0.202&quot; x 0.151&quot;</td>
<td>6.22 mm x 4.66 mm; 0.245&quot; x 0.183&quot;</td>
<td>5.95 mm x 3.35 mm; 0.234&quot; x 0.132&quot;</td>
<td></td>
</tr>
<tr>
<td>IR Illumination</td>
<td>50 m (164 ft) max. distance at 0 lux; 30 m (98 ft) at -25 °C (13 °F) or lower N/A N/A N/A N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 - 9 mm lens:</td>
<td>50 m (164 ft) max. distance at 0 lux; 25 m (82 ft) at -25 °C (13 °F) or lower N/A N/A N/A N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3 - 8 mm lens:</td>
<td>70 m (230 ft) max. distance at 0 lux; 50 m (164 ft) at -25 °C (13 °F) or lower N/A N/A N/A N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum Illumination</td>
<td>0.04 lux (F1.3) in color mode; 0 lux (F1.3) in monochrome mode with IR 0.0331 lux (F1.8) in color mode; 0 lux (F1.8) in monochrome mode with IR N/A N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 - 9 mm lens:</td>
<td>0.08 lux (F1.6) in color mode; 0 lux (F1.6) in monochrome mode with IR 0.026 lux (F1.6) in color mode; 0 lux (F1.6) in monochrome mode with IR N/A N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3 - 8 mm lens:</td>
<td>N/A N/A N/A N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 - 22 mm lens:</td>
<td>30 fps (20 fps with WDR enabled) 30 fps 30 fps 20 fps (30 fps in High Framerate mode)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>67 dB 91 dB 91 dB 91 dB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic Range (WDR enabled)</td>
<td>120 dB triple exposure (20 fps or less); 100 dB dual exposure (30 fps) N/A N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolution Scaling</td>
<td>Down to 768 x 432 Down to 1792 x 1344 Down to 3072 x 1728</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camera Operating Mode</td>
<td>N/A N/A N/A N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MECHANICAL

- **Dimensions (LxWxH)**: 126 mm x 280 mm x 91 mm; 4.97" x 11.04" x 3.58" (including mounting bracket)
- **Weight**: Camera: 1.71 kg (3.77 lbs) Mounting Bracket: 0.21 kg (0.46 lbs)
- **Body**: Aluminum
- **Housing**: Surface mount, tamper resistant
- **Finish**: Powder coat, RAL 9003
- **Adjustment Range**: ±175° pan, ±90° tilt, ±175° azimuth
- **Onboard Storage**: SD/SDHC/SDXC slot – minimum class 4; class 6 or better recommended

### ELECTRICAL

- **Power Consumption**: 13 W
- **Power Source**: VDC: 12 V ± 10%, 13 W min; VAC: 24 V ± 10%, 19 VA min; PoE: IEEE802.3af Class 3 compliant
- **RTC Backup Battery**: 3V manganese lithium

### ENVIRONMENTAL

- **Operating Temperature**: -40 °C to +55 °C (-40 °F to 131 °F)
  - (8.0 MP only): -35 °C to +50 °C (-31 °F to 122 °F)
- **IR Illuminator Behavior**: IR illuminator will not turn on if temperature is 45 °C (113 °F) or higher
- **Storage Temperature**: -10 °C to +70 °C (14 °F to 158 °F)
- **Humidity**: 0 - 95% non-condensing
**SUPPORTED VIDEO ANALYTICS EVENTS**

- **Objects in Area**: The event is triggered when the selected object type moves into the region of interest.
- **Object Loitering**: The event is triggered when the selected object type stays within the region of interest for an extended amount of time.
- **Objects Crossing Beam**: The event is triggered when the specified number of objects have crossed the directional beam that is configured over the camera's field of view. The beam can be unidirectional or bidirectional.
- **Object Appears or Enters Area**: The event is triggered by each object that enters the region of interest. This event can be used to count objects.
- **Object Not Present in Area**: The event is triggered when no objects are present in the region of interest.
- **Objects Enter Area**: The event is triggered when the specified number of objects have entered the region of interest.
- **Objects Leave Area**: The event is triggered when the specified number of objects have left the region of interest.
- **Object Stops in Area**: The event is triggered when an object in a region of interest stops moving for the specified threshold time.
- **Direction Violated**: The event is triggered when an object moves in the prohibited direction of travel.
- **Tamper Detection**: The event is triggered when the scene unexpectedly changes.

**Outline Dimensions**

*Bullet Camera*

*(H4A-BO-IR)*

**Certifications/Directives**

- UL 60950-1
- CSA 60950-1
- ROHS
- WEEE
- RCM

**Safety**

- UL/CMA/IEC 60950-22
- IEC 60529 IP66 Rating

**Environmental**

- IK10 Impact Rating
- UL/CSA/IEC 60950-22
- IEC 60529 IP66 Rating

**Electromagnetic Emissions**

- FCC Part 15 Subpart B Class B
- IEC/EN 60950-1
- EN 55022 Class B
- EN 61000-6-3
- EN 61000-3-2
- EN 61000-3-3

**Electromagnetic Immunity**

- EN 55024
- EN 61000-6-1

**Overhang**

- Min: 27 [1.1]
- Max: 55 [2.2]
Ordering Information

<table>
<thead>
<tr>
<th>MP</th>
<th>WDR</th>
<th>LIGHTCATCHER</th>
<th>ANALYTICS</th>
<th>LENS</th>
<th>IR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0C-H4A-BO1-IR</td>
<td>1.0</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>1.0C-H4A-BO2-IR</td>
<td>1.0</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2.0C-H4A-BO1-IR</td>
<td>2.0</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2.0C-H4A-BO2-IR</td>
<td>2.0</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3.0C-H4A-BO1-IR</td>
<td>3.0</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3.0C-H4A-BO2-IR</td>
<td>3.0</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>5.0L-H4A-BO1-IR</td>
<td>5.0</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>5.0L-H4A-BO2-IR</td>
<td>5.0</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>8.0-H4A-BO1-IR</td>
<td>8.0</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**HD Bullet Camera Junction Box**

(H4-BO-JBOX1)

- Junction box for H4A-BO-IR H4 HD Bullet Cameras

**H4-AC-WIFI1-NA**

USB Wifi Adapter

**H4-MT-POLE1**

Aluminum pole mounting bracket for H4 HD Pendant Dome Cameras and H4 HD Bullet Cameras

**H4-MT-CRNR1**

Aluminum corner mounting bracket for H4 HD Pendant Dome Cameras and H4 HD Bullet Cameras