Avigilon offers the broadest range of high definition cameras in the industry – 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 the best solution for your security needs.

The innovative HD Bullet camera is just one way Avigilon can help provide the very best monitoring and protection.

The HD Bullet camera with self-learning video analytics brings together Avigilon’s world renowned camera technology with video analytics. The combination of instant and accurate object detection and classification alerts, with the identification performance of high-definition video, provides users with an unmatched level of perimeter protection to keep both personnel and assets safe. Equipped with built-in adaptive infrared (IR) illumination, our HD Bullet cameras increase in-the-dark detection and visibility without using a visible light source.

**KEY FEATURES**

- Patented Advanced Video Pattern Detection and Teach by Example Technology
- Self-Learning Video Analytics
- Available with 3-9 mm or 9-22 mm P-Iris lens with remote focus and zoom
- Up to 30 images per second
- Triple Exposure Ultra Wide Dynamic Range (3 Megapixel)
- Avigilon’s LightCatcher™ technology provides unsurpassed image quality in low light environments
- SD card slot for onboard storage support
- Integrated IR (Infrared) LEDs provide uniform illumination in the dark, even at 0 lux, up to maximum of 200 ft (60 m) away
- Zoom and content adaptive IR provides the most effective illumination at all zoom positions, while maintaining optimum scene illumination
- PoE (Power over Ethernet) enables operating temperatures of -40°C to 50°C (-40°F to 122°F) with no auxiliary power required.
- Additional configuration Ethernet port for easy installation
- Vandal resistant construction and IP66 compliant
- ONVIF compliant with version 2.2.0 of the Analytics Service Specification
## Specifications

### HD VIDEO ANALYTICS CAMERA

<table>
<thead>
<tr>
<th>1.0 MP</th>
<th>2.0 MP</th>
<th>3.0 MP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Image Sensor</strong></td>
<td>1/2.8” progressive scan CMOS</td>
<td>1/2.8” progressive scan CMOS</td>
</tr>
<tr>
<td><strong>Active Pixels</strong></td>
<td>1280 (H) x 720 (V)</td>
<td>1920 (H) x 1080 (V)</td>
</tr>
<tr>
<td><strong>Imaging Area</strong></td>
<td>4.8 mm (H) x 2.7 mm (V); 0.189” (H) x 0.106” (V)</td>
<td>4.92 mm (H) x 2.69 mm (V); 0.194” (H) x 0.105” (V)</td>
</tr>
<tr>
<td><strong>Illuminator Technology</strong></td>
<td>High power IR LEDs</td>
<td>High power IR LEDs</td>
</tr>
<tr>
<td><strong>IR Illumination</strong></td>
<td>9-22 mm lens:</td>
<td>9-22 mm lens:</td>
</tr>
<tr>
<td></td>
<td>850 nm wavelength; 30 m (100 ft) max. distance of IR illumination at 0 lux with auxiliary power or PoE</td>
<td>850 nm wavelength; 60 m (200 ft) max. distance of IR illumination at 0 lux with auxiliary power or PoE</td>
</tr>
<tr>
<td><strong>Dynamic Range</strong></td>
<td>100 dB Dual Exposure True WDR</td>
<td>100 dB Dual Exposure True WDR</td>
</tr>
<tr>
<td><strong>Image Rate</strong></td>
<td>30 fps (full resolution)</td>
<td>20 fps (at full resolution); 30 fps (at 1920 x 1080 or smaller)</td>
</tr>
<tr>
<td><strong>PoE:</strong></td>
<td>IEEE802.3af Class 3 compliant</td>
<td>IEEE802.3af Class 4 PoE Plus</td>
</tr>
</tbody>
</table>

### LENS

- **Lens:** 3-9 mm, F1.2, P-Iris, remote focus and zoom
- **Iris:** 3-9 mm, F1.6, P-Iris, remote focus and zoom
- **Angle of View:** 32° - 9°
- **Focal Length:** 9-22 mm, F1.6, P-Iris, remote focus and zoom
- **Minimum Focal Length:** 3-9 mm lens: 0.2 lux (F1.2) in color mode; 0 lux in monochrome mode with IR
- **Maximum Focal Length:** 9-22 mm lens: 9-22 mm lens: 0.2 lux (F1.2) in color mode; 0 lux in monochrome mode with IR
- **Image Compression Method:** H.264 (MPEG-4 Part 10/AVC), Motion JPEG
- **Video Analytics Supported:** Event is triggered when no objects are present in the region of interest.

### ELECTRICAL

- **Power Source:** VDC: 12 V +/- 10%, 28 VA min
- **Power Consumption:** 22 W with external power or IEEE802.3at Class 4 PoE Plus
- **RTC Backup Battery:** 3V Lithium Manganese

### NETWORK

- **Network:** 100BASE-TX
- **ONVIF:** ONVIF compliant with version 1.2, 2.0, Profile S and 2.0.0 of the Analytics Service Specification
- **Security:** Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication
- **Streaming Protocols:** RTP/UDLP, RTSP/HTTP/TCP, RTP/RTSP/HTTP/UDP, RTP/RTSP/HTTPS/TCP, RTP/RTSP/HTTP/UDP/TCP
- **Cabling Type:** CAT5

### ENVIRONMENTAL

- **Operating Temperature:** -40 °C to +70 °C (-40 °F to 158 °F)
- **Storage Temperature:** -40 °C to +80 °C (-40 °F to 180 °F)
- **Humidity:** 0 - 95% non-condensing

### MECHANICAL

- **Weight:** 1.15 kg (2.5 lbs)
- **Dimensions (LxWxH):** 241.7 mm x 94.9 mm x 70 mm; 9.5" x 3.7" x 2.8"

### SAFETY

- **Safety:** UL 60950-1, CSA 60950-1, CE, ROHS, WEEE, RCM
- **FCC Part 15 Subpart B Class B:**
- **ICES-003 Class B:**
- **EN 55022 Class B:**

### SUPPORTED VIDEO ANALYTICS EVENTS

- **Objects in Area:**
- **Objects Not In Area:**
- **Objects Enter Area:**
- **Objects Leave Area:**
- **Object Appears or Enters Area:**
- **Object Not Present in Area:**
- **Object Loitering:**
- **Objects Crossing Beam:**
- **Direction Violated:**
- **Tamper Detection:**

- **Privacy Zones:**
- **Alarm In, Alarm Out:**
- **Audio Input/Output:** Line level input and output
- **External I/O Terminals:** Alarm In, Alarm Out
- **Network Protocols:** IPv4, HTTP, HTTPS, SOAP, DNS, FTP, RTSP, RTP, TCP/UDP, ISM, ICMP, DHCP, Zeroconf, ARP
- **Streaming Protocols:** RTP/UDLP, RTSP/HTTP/UDP, RTSP/HTTP/TCP, RTP/RTSP/ HTTP/UDP, RTP/RTSP/HTTPS/TCP, RTP/RTSP/HTTP/UDP/TCP, RTP/RTSP/HTTP/TCP
- **PoE:** IEEE802.3at Class 4 PoE Plus

- **Image Control:**
- **Camera Tampering Detection:** Yes
- **Electronic Shutter Control:** Automatic, Manual (1/6 to 1/8000 sec)
- **Iris Control:** Automatic, Manual
- **Day/Night Control:** Automatic, Manual
- **Onboard Storage:** SD/SDHC/SDXC slot – minimum class 4; class 6 or better recommended
- **Finish:** Powder coat, cool gray 2
- **Housing:** Surface mount, tamper resistant
- **Adjustment Range:** 0° to 90° tilt, 90° to 180° pan, 0° to 90° pan, 0° to 90° tilt
- **Iris Control:** Automatic, Manual
- **Electronic Shutter Control:** Adjustable
- **Privacy Zones:** Yes
- **Audio Compression Method:** G.711 PCM 8 kHz
- **Audio Input/Output:** Line level input and output
- **External I/O Terminals:** Alarm In, Alarm Out
- **Electromagnetic Immunity:** EN 61000-4-1, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11
- **Energy Efficiency:** RoHS, WEEE, CE, ROHS, WEEE, RCM

### Additional Specifications

- **Power Consumption:** 22 W with external power or IEEE802.3at Class 4 PoE Plus
- **Power Source:** VDC: 12 V +/- 10%, 22 W with external power or IEEE802.3at Class 4 PoE Plus
- **Camera Tampering Detection:** Yes
- **Electronic Shutter Control:** Automatic, Manual (1/6 to 1/8000 sec)
- **Iris Control:** Automatic, Manual
- **Day/Night Control:** Automatic, Manual
- **Onboard Storage:** SD/SDHC/SDXC slot – minimum class 4; class 6 or better recommended
- **Finish:** Powder coat, cool gray 2
- **Housing:** Surface mount, tamper resistant
- **Adjustment Range:** 0° to 90° tilt, 90° to 180° pan, 0° to 90° pan, 0° to 90° tilt
- **Iris Control:** Automatic, Manual
- **Electronic Shutter Control:** Adjustable
- **Privacy Zones:** Yes
- **Audio Compression Method:** G.711 PCM 8 kHz
- **Audio Input/Output:** Line level input and output
- **External I/O Terminals:** Alarm In, Alarm Out
- **Electromagnetic Immunity:** EN 61000-4-1, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11

- **Power Consumption:** 22 W with external power or IEEE802.3at Class 4 PoE Plus
- **Power Source:** VDC: 12 V +/- 10%, 22 W with external power or IEEE802.3at Class 4 PoE Plus
- **Camera Tampering Detection:** Yes
- **Electronic Shutter Control:** Automatic, Manual (1/6 to 1/8000 sec)
- **Iris Control:** Automatic, Manual
- **Day/Night Control:** Automatic, Manual
- **Onboard Storage:** SD/SDHC/SDXC slot – minimum class 4; class 6 or better recommended
- **Finish:** Powder coat, cool gray 2
- **Housing:** Surface mount, tamper resistant
- **Adjustment Range:** 0° to 90° tilt, 90° to 180° pan, 0° to 90° pan, 0° to 90° tilt
- **Iris Control:** Automatic, Manual
- **Electronic Shutter Control:** Adjustable
- **Privacy Zones:** Yes
- **Audio Compression Method:** G.711 PCM 8 kHz
- **Audio Input/Output:** Line level input and output
- **External I/O Terminals:** Alarm In, Alarm Out
- **Electromagnetic Immunity:** EN 61000-4-1, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11
Outline Dimensions

HD Bullet Camera

(H3A-BO-IR)

HD Bullet Camera Junction Box

(H3-BO-JB)

Ordering Information

1.0C-H3A-BO1-IR  1.0 Megapixel WDR 3-9 mm HD Bullet Camera with Self-Learning Video Analytics and LightCatcher Technology
1.0C-H3A-BO2-IR  1.0 Megapixel WDR 9-22 mm HD Bullet Camera with Self-Learning Video Analytics and LightCatcher Technology
2.0C-H3A-BO1-IR  2.0 Megapixel WDR 3-9mm HD Bullet Camera with Self-Learning Video Analytics and LightCatcher Technology
2.0C-H3A-BO2-IR  2.0 Megapixel WDR 9-22 mm HD Bullet Camera with Self-Learning Video Analytics and LightCatcher Technology
3.0C-H3A-BO1-IR  3.0 Megapixel WDR 3-9 mm HD Bullet Camera with Self-Learning Video Analytics and LightCatcher Technology
3.0C-H3A-BO2-IR  3.0 Megapixel WDR 9-22 mm HD Bullet Camera with Self-Learning Video Analytics and LightCatcher Technology

H3-BO-JB  Junction box for the H3-BO-IR HD Bullet Cameras
MNT-AD-POLE-B  Aluminum pole mounting bracket for Dome Cameras and HD Bullet Cameras using Pendant Mount Brackets
MNT-AD-CORNER  Aluminum corner mounting bracket for Dome Cameras and HD Bullet Cameras using Pendant Mount Brackets