

# H4 Edge Solution (ES) Outdoor Dome Camera Line

The H4 Edge Solution Camera line combines high-definition imaging, self-learning video analytics, network video recorder functionality, and embedded Avigilon Control Center<sup>™</sup> video management software to create an all-in-one intelligent surveillance solution.



## Onboard Solid-State Drive (SSD) storage

The H4 Edge Solution Camera records video directly to an onboard solid-state drive, eliminates the need for a separate network video recorder, and reduces installation and system costs.

## Avigilon Control Center (ACC Software) Built-in

The H4 Edge Solution Camera line provides unique flexibility and versatility, with deployment options ranging from standalone installation, multi-camera solutions, to seamless integration into a conventional network video surveillance system.

As an Internet of Things device, the solution acts as both a camera and out-of-the-box video management software platform, providing a uniquely easy-to-install and cost-effective surveillance solution.

## KEY FEATURES

|   |
|---|
| 1-3 megapixel models  |
| Factory installed and licensed with ACC Video Management software running on the camera   |
| Up to 256 GB on-board Solid-State Drive (SSD)   |
| Up to 30 day of video retention   |
| Self-learning video analytics   |
| Patented Advanced Video Pattern Detection and Teach by Example Technology   |
| Patented High Definition Stream Management (HDSM) <sup>™</sup> Technology maintains image quality while reducing bandwidth                            |
| Idle Scene Mode lowers the bandwidth and storage usage if there are no motion events detected in the scene  |
| Wifi camera configuration support   |
| Zoom and content adaptive integrated IR (Infrared) LEDs provide uniform illumination in the dark, even at 0 lux, up to a maximum of 30 m (98 ft) away |
| Avigilon LightCatcher <sup>™</sup> technology provides exceptional image quality in low light environments  |
| Triple Exposure Ultra Wide Dynamic Range  |
| Factory pre-configured image preset modes for maximum image performance in a variety of lighting conditions   |

# Specifications

|                          |  | 1.0 MP  | 2.0 MP   | 3.0 MP  |        |                    |                                  |              |              |       |
|--------------------------|--|---|--|---|--------|--------------------|----------------------------------|--------------|--------------|-------|
| <b>IMAGE PERFORMANCE</b> | Image Sensor   | 1/2.8" progressive scan CMOS  |  |   |        |                    |                                  |              |              |       |
|                          | Aspect Ratio   | 16:9  |  | 4:3   |        |                    |                                  |              |              |       |
|                          | Active Pixels (H x V)  | 1280 x 720  | 1920 x 1080                                      | 2048 x 1536   |        |                    |                                  |              |              |       |
|                          | Imaging Area (H x V)   | 4.8 mm x 2.7mm; 0.189" x 0.106"   |  | 5.12 mm x 3.84 mm; 0.202" x 0.151"  |        |                    |                                  |              |              |       |
|                          | IR Illumination Option (high power 850 nm LEDs)                    | 30 m (98 ft) max. distance at 0 lux   |  |   |        |                    |                                  |              |              |       |
|                          | Minimum Illumination   | 0.04 lux (F1.3) in color mode; 0.008 lux (F1.3) in monochrome mode  |  |   |        |                    |                                  |              |              |       |
|                          | Image Rate   | High Framerate  | 30 fps   | 30 fps  | 30 fps |                    |                                  |              |              |       |
|                          |  | Full Feature  |  | 12 fps  | 12 fps |                    |                                  |              |              |       |
|                          | Dynamic Range  | 67 dB   |  |   |        |                    |                                  |              |              |       |
|                          | Dynamic Range (WDR enabled)  | 120 dB triple exposure (20 fps or less); 100 dB dual exposure (30 fps)  |  | 120 dB triple exposure (Full Feature Mode). WDR is disabled in High Framerate Mode  |        |                    |                                  |              |              |       |
|                          | Resolution Scaling   | Down to 768 x 432   |  |   |        |                    |                                  |              |              |       |
|                          | Camera Operating Mode  | N/A   |  | High Framerate = Camera will prioritize maximum image rate over other features. WDR is disabled.<br>Full Feature = Camera will prioritize feature capabilities over image rate. |        |                    |                                  |              |              |       |
|                          | 3D Noise Reduction Filter  | YES   |  |   |        |                    |                                  |              |              |       |
|                          | <b>ONBOARD STORAGE</b>   | Solid-State Drive (SSD)   | 128 G  | 256 G   | 256 G  |                    |                                  |              |              |       |
| Retention Rate           |  | Up to 30 days (2 Mbps stream based on 30% motion duty cycle)  |  |   |        |                    |                                  |              |              |       |
| <b>LENS</b>              | Lens   | 3 - 9 mm F1.3, P-Iris, remote focus and zoom  |  |   |        |                    |                                  |              |              |       |
|                          | Angle of View  | 30° – 91°   |  | 32° – 98°   |        |                    |                                  |              |              |       |
| <b>IMAGE CONTROL</b>     | Image Compression Method   | H.264 (MPEG-4 Part 10/AVC), Motion JPEG   |  |   |        |                    |                                  |              |              |       |
|                          | Streaming  | Multi-stream H.264 and Motion JPEG  |  |   |        |                    |                                  |              |              |       |
|                          | Bandwidth Management   | HDSM and 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  |  |   |        |                    |                                  |              |              |       |
|                          | White Balance  | Automatic, Manual   |  |   |        |                    |                                  |              |              |       |
|                          | 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, A/V mini-jack (3.5 mm)   |  |   |        |                    |                                  |              |              |       |
|                          | Video Output   | (1.0 - 2.0 MP only) NTSC/PAL, A/V mini-jack (3.5 mm)  |  |   |        |                    |                                  |              |              |       |
| External I/O Terminals   | Alarm In, Alarm Out  |   |  |   |        |                    |                                  |              |              |       |
| USB Port                 | USB 2.0  |   |  |   |        |                    |                                  |              |              |       |
| <b>NETWORK</b>           | Network  | 100BASE-TX  |  |   |        |                    |                                  |              |              |       |
|                          | Cabling Type   | CAT5  |  |   |        |                    |                                  |              |              |       |
|                          | Connector  | RJ-45   |  |   |        |                    |                                  |              |              |       |
|                          | ONVIF  | ONVIF compliant with version 1.02, 2.00, Profile S and 2.2.0 of the Analytics Service Specification (*bounding boxes and scene descriptions not available with third-party VMS) |  |   |        |                    |                                  |              |              |       |
|                          | Security   | Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication  |  |   |        |                    |                                  |              |              |       |
|                          | Protocol   | IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP/UDP, IGMP, ICMP, DHCP, Zeroconf, ARP  |  |   |        |                    |                                  |              |              |       |
|                          | Streaming Protocols  | RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP   |  |   |        |                    |                                  |              |              |       |
|                          | Device Management Protocols  | SNMP v2c, SNMP v3   |  |   |        |                    |                                  |              |              |       |
| <b>MECHANICAL</b>        | Dimensions (LxWxH)   | <b>PENDANT DOME CAMERA</b>  |  | <b>SURFACE MOUNT OUTDOOR DOME CAMERA</b>  |        |                    |                                  |              |              |       |
|                          |  | dome camera only:   | 172 mm x 172 mm x 124 mm; (6.8" x 6.8" x 4.9")   | 163 mm x 163 mm x 121 mm; (6.4" x 6.4" x 4.8")  |        |                    |                                  |              |              |       |
|                          |  | with wall mount (H4-MT-WALL1):  | 275 mm x 172 mm x 152.1 mm (10.8" x 6.8" x 6.0") |   |        |                    |                                  |              |              |       |
|                          | Weight   | dome camera only:   | 1.55 kg (3.42 lbs)                               | 1.35 kg (2.97 lbs)  |        |                    |                                  |              |              |       |
|                          |  | with wall mount (H4-MT-WALL1):  | 3.00 kg (6.62 lbs)                               |   |        |                    |                                  |              |              |       |
|                          |  | with NPT mount (H4-MT-NPTA1):   | 1.80 kg (3.98 lbs)                               |   |        |                    |                                  |              |              |       |
|                          | Dome Bubble  | Polycarbonate, clear  |  |   |        |                    |                                  |              |              |       |
|                          | Body   | Aluminum  |  |   |        |                    |                                  |              |              |       |
|                          | Housing  | Pendant mount, vandal resistant - with wall mount (H4-MT-WALL1) / NPT mount (H4-MT-NPTA1)   |  | Surface mount, vandal resistant   |        |                    |                                  |              |              |       |
|                          | Finish   | Powder coat, RAL 9003   |  |   |        |                    |                                  |              |              |       |
| Adjustment Range         | 360° pan, 9° – 95° tilt (30° – 95° with -IR option), ±180° azimuth |   |  |   |        |                    |                                  |              |              |       |
| <b>ELECTRICAL</b>        | Power Consumption  | 9 W   |  |   |        |                    |                                  |              |              |       |
|                          | Power Source   | VDC: 12 V +/- 10%, 9 W min  | VAC: 24 V +/- 10%, 13 VA min                     | PoE: IEEE802.3af Class 3 compliant  |        |                    |                                  |              |              |       |
|                          | Power Connector  | 2-pin terminal block  |  |   |        |                    |                                  |              |              |       |
|                          | RTC Backup Battery   | 3V manganese lithium  |  |   |        |                    |                                  |              |              |       |
| <b>ENVIRONMENTAL</b>     | Operating Temperature  | -40 °C to +60 °C (-40 °F to 140 °F)   |  |   |        |                    |                                  |              |              |       |
|                          | Storage Temperature  | -10 °C to +70 °C (14 °F to 158 °F)  |  |   |        |                    |                                  |              |              |       |
|                          | Humidity   | 0 - 95% non-condensing  |  |   |        |                    |                                  |              |              |       |
| <b>CERTIFICATIONS</b>    | Certifications/Directives  | UL  | cUL  | CE  | ROHS   | WEEE               | RCM                              | KC           | EAC          |       |
|                          | Safety   | UL 60950-1  |  | CSA 60950-1   |        | IEC/EN 60950-1     | IEC 62471 (for -IR options only) |              |              |       |
|                          | Environmental  | UL/CSA/IEC 60950-22   |  | IEC 60529 IP66 Rating   |        | IK10 Impact Rating |                                  |              |              |       |
|                          | Electromagnetic Emissions  | FCC Part 15 Subpart B Class B   |  | IC ICES-003 Class B   |        | EN 55032 Class B   | EN 61000-6-3                     | EN 61000-3-2 | EN 61000-3-3 | KN 32 |
|                          | Electromagnetic Immunity   | EN 55024  |  |   |        | EN 61000-6-1       | KN 35                            |              |              |       |

**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.  |

**SUPPORTED ACC FEATURES**

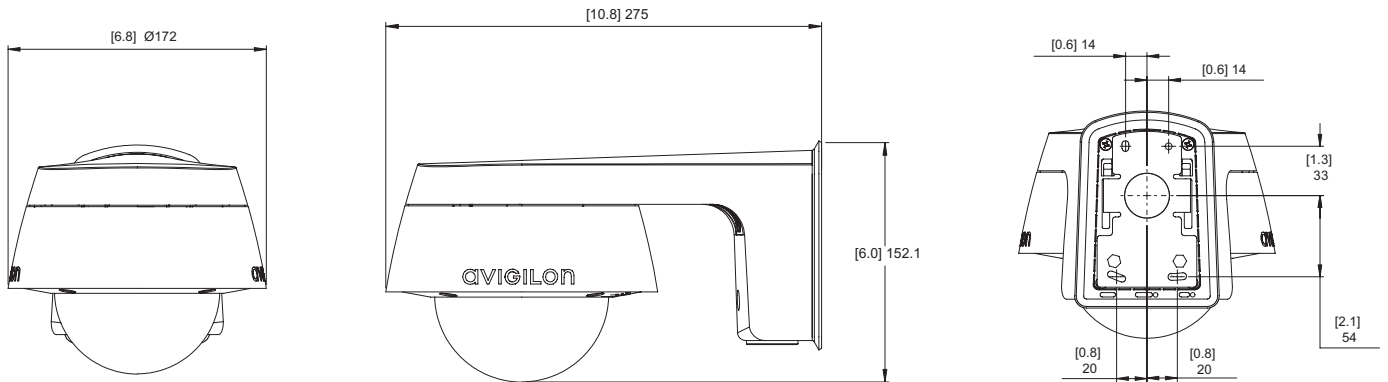
|                                   |  |
|-----------------------------------|--|
| System                            | <ul style="list-style-type: none"> <li>1 camera per server (connection to self)</li> <li>2 simultaneous client connections (override supported)</li> <li>Site supports up to 200 cameras and a total of 100 defined users. H4 ES Cameras can be part of a site with 15 other H4 ES Cameras, ACC ES HD Recorders, or ACC servers</li> </ul> |
| Recording Rate                    | 12 Mbps  |
| Stream Out Rate                   | 24 Mbps  |
| Client                            | <ul style="list-style-type: none"> <li>Saved Views</li> <li>Maps</li> <li>Web pages</li> <li>Editable Site View</li> <li>Intelligent Virtual Matrix</li> <li>Collaborative investigations</li> </ul>   |
| Recording, Searching and Playback | <ul style="list-style-type: none"> <li>Hourly configurable recording schedule</li> <li>Intelligent motion search</li> <li>Live export</li> <li>Video archiving</li> <li>Thumbnail search</li> <li>Event search</li> <li>Alarm search</li> </ul>  |
| Integrations                      | <p><a href="#">All 3rd party integrations via the ACC SDK</a> Plus:</p> <ul style="list-style-type: none"> <li>CommScope iPatch</li> <li>RS2 AccessIt!</li> <li>DDS Amadeus 5</li> <li>DSX</li> </ul>  |
| Additional Features               | <ul style="list-style-type: none"> <li>Email event notification</li> <li>Digital input email trigger</li> <li>Manual digital output trigger</li> <li>Audio recording and talkdown</li> <li>Unlimited rule triggers</li> <li>Failover connections</li> <li>Alarm escalation</li> <li>*Redundant recording</li> </ul>                        |

\* Depending on level of security (e.g. camera, analytics, etc), redundant recording to a secondary server may exhibit a degradation in performance.

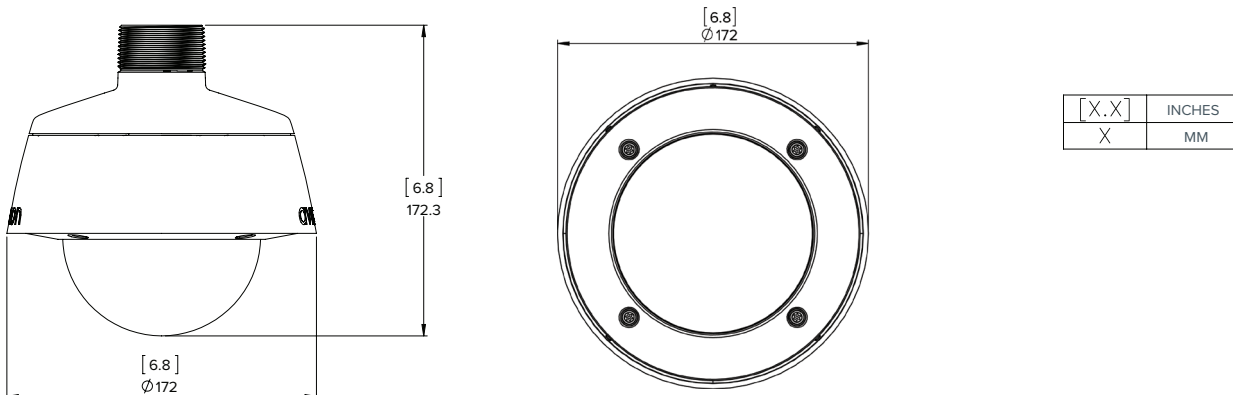
# Outline Dimensions

## Pendant Dome Camera

**WITH WALL MOUNT (H4A-MT-WALL1)**

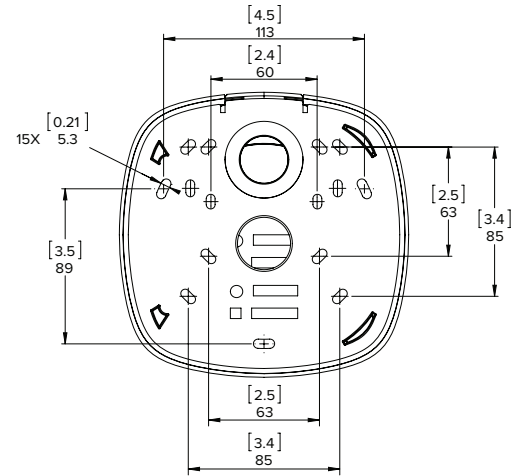
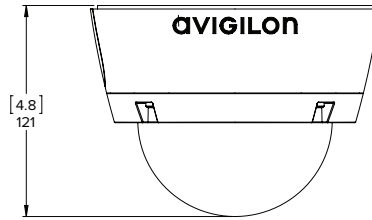
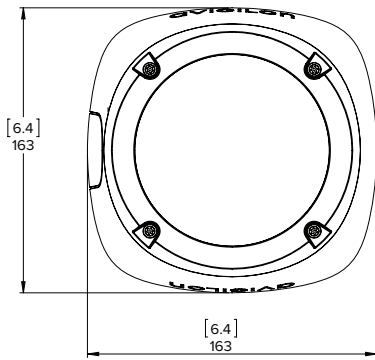


**WITH NPT MOUNT (H4A-MT-NPTA1)**



# Surface Mount Outdoor Dome Camera

(H4A-DO)



## Ordering Information

| PENDANT DOME CAMERAS               | MP   | WDR | LIGHTCATCHER | ANALYTICS | STORAGE | LENS     | IR | HDSM<br>SMARTCODEC |
|------------------------------------|--|-----|--------------|-----------|---------|----------|----|--------------------|
| 1.0C-H4A-12G-DP1-IR                | 1.0  | ✓   | ✓            | ✓         | 128 G   | 3 - 9 mm | ✓  | ✓                  |
| 2.0C-H4A-25G-DP1-IR                | 2.0  | ✓   | ✓            | ✓         | 256 G   | 3 - 9 mm | ✓  | ✓                  |
| 3.0C-H4A-25G-DP1-IR                | 3.0  | ✓   | ✓            | ✓         | 256 G   | 3 - 9 mm | ✓  | ✓                  |
| H4A-MT-WALL1                       | Indoor/Outdoor Pendant Wall Arm Mount  |     |              |           |         |          |    |                    |
| H4A-MT-NPTA1                       | Indoor/Outdoor Pendant NPT Mount   |     |              |           |         |          |    |                    |
| H4A-DP-SMOK1                       | Dome Camera Cover with Smoked Bubble   |     |              |           |         |          |    |                    |
| H4A-DP-CLER1                       | Dome Camera Cover with Clear Bubble  |     |              |           |         |          |    |                    |
| 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 |     |              |           |         |          |    |                    |
| H4A-AC-GROM1                       | Camera Sealing Grommet, Pack of 10   |     |              |           |         |          |    |                    |
| H4-AC-WIFI2-NA                     | USB Wifi Adapter   |     |              |           |         |          |    |                    |
| H4-AC-WIFI2-EU                     | USB Wifi Adapter   |     |              |           |         |          |    |                    |
| CM-AC-AVIO1                        | 3.5 mm Jack with 1.8 m Fly Wires   |     |              |           |         |          |    |                    |
| CM-AC-GROM1                        | Pipe Grommet, Pack of 10   |     |              |           |         |          |    |                    |
| SURFACE MOUNT OUTDOOR DOME CAMERAS | MP   | WDR | LIGHTCATCHER | ANALYTICS | STORAGE | LENS     | IR | HDSM<br>SMARTCODEC |
| 1.0C-H4A-12G-DO1-IR                | 1.0  | ✓   | ✓            | ✓         | 128 G   | 3 - 9 mm | ✓  | ✓                  |
| 2.0C-H4A-25G-DO1-IR                | 2.0  | ✓   | ✓            | ✓         | 256 G   | 3 - 9 mm | ✓  | ✓                  |
| 3.0C-H4A-25G-DO1-IR                | 3.0  | ✓   | ✓            | ✓         | 256 G   | 3 - 9 mm | ✓  | ✓                  |
| H4A-DO-SMOK1                       | Outdoor Dome Camera Cover with Smoked Bubble   |     |              |           |         |          |    |                    |
| H4A-DO-CLER1                       | Outdoor Dome Camera Cover with Clear Bubble  |     |              |           |         |          |    |                    |
| H4-AC-WIFI2-NA                     | USB Wifi Adapter   |     |              |           |         |          |    |                    |
| H4-AC-WIFI2-EU                     | USB Wifi Adapter   |     |              |           |         |          |    |                    |
| H4A-AC-GROM1                       | Camera Sealing Grommet, Pack of 10   |     |              |           |         |          |    |                    |
| CM-AC-AVIO1                        | 3.5 mm Jack with 1.8 m Fly Wires   |     |              |           |         |          |    |                    |
| CM-AC-GROM1                        | Pipe Grommet, Pack of 10   |     |              |           |         |          |    |                    |