H4 Edge Solution (ES) Bullet 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™ 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)™ 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
Integrated IR (Infrared) LEDs provide uniform illumination in the dark, even at 0 lux, up to maximum of 70 m (230 ft) away
Avigilon LightCatcher™ 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

<table>
<tr><td></td><td></td><td>**1.0 MP**</td><td>**2.0 MP**</td><td>**3.0 MP**</td></tr>
<tr><td rowspan="12">**IMAGE PERFORMANCE**</td><td>Image Sensor</td><td colspan="3">1/2.8" progressive scan CMOS</td></tr>
<tr><td>Aspect Ratio</td><td colspan="2">16:9</td><td>4:3</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></tr>
<tr><td>Imaging Area (H x V)</td><td colspan="2">4.8 mm x 2.7mm; 0.189" x 0.106"</td><td>5.12 mm x 3.84 mm; 0.202" x 0.151"</td></tr>
<tr><td>IR Illumination (high power 850 nm LEDs) — 3 - 9 mm lens:</td><td colspan="3">50 m (164 ft) max. distance at 0 lux; 30 m (98 ft) at -25 °C (-13 °F) or lower</td></tr>
<tr><td>9 - 22 mm lens:</td><td colspan="3">70 m (230 ft) max. distance at 0 lux; 50 m (164 ft) at -25 °C (-13 °F) or lower</td></tr>
<tr><td>Minimum Illumination — 3 - 9 mm lens:</td><td colspan="3">0.04 lux (F1.3) in color mode; 0 lux (F1.3) in monochrome mode with IR</td></tr>
<tr><td>9 - 22 mm lens:</td><td colspan="3">0.08 lux (F1.6) in color mode; 0 lux (F1.6) in monochrome mode with IR</td></tr>
<tr><td>Image Rate — High Framerate</td><td>30 fps</td><td>30 fps</td><td>30 fps</td></tr>
<tr><td>Full Feature</td><td></td><td>12 fps</td><td>12 fps</td></tr>
<tr><td>Dynamic Range</td><td colspan="3">67 dB</td></tr>
<tr><td>Dynamic Range (WDR enabled)</td><td>120 dB triple exposure (20 fps or less); 100 dB dual exposure (30 fps)</td><td colspan="2">120 dB triple exposure (Full Feature Mode). WDR is disabled in High Framerate Mode</td></tr>
<tr><td></td><td>Resolution Scaling</td><td colspan="3">Down to 768 x 432</td></tr>
<tr><td></td><td>Camera Operating Mode</td><td>N/A</td><td colspan="2">High Framerate = Camera will prioritize maximum image rate over other features. WDR is disabled.
Full Feature = Camera will prioritize feature capabilities over image rate.</td></tr>
<tr><td rowspan="2">**ONBOARD STORAGE**</td><td>Solid-State Drive (SSD)</td><td>128 G</td><td>256 G</td><td>256 G</td></tr>
<tr><td>Retention Rate</td><td colspan="3">Up to 30 days (2 Mbps stream based on 30% motion duty cycle)</td></tr>
<tr><td rowspan="5">**LENS**</td><td>Lens — 3 - 9 mm lens:</td><td colspan="3">F1.3, P-Iris, remote focus and zoom</td></tr>
<tr><td>9 - 22 mm lens:</td><td colspan="3">F1.6, P-Iris, remote focus and zoom</td></tr>
<tr><td>Angle of View — 3 - 9 mm lens:</td><td colspan="2">30° – 91°</td><td>32° – 98°</td></tr>
<tr><td>9 - 22 mm lens:</td><td colspan="2">14° – 29°</td><td>15° – 31°</td></tr>
<tr><td rowspan="18">**IMAGE CONTROL**</td><td>Image Compression Method</td><td colspan="3">H.264 (MPEG-4 Part 10/AVC), Motion JPEG</td></tr>
<tr><td>Streaming</td><td colspan="3">Multi-stream H.264 and Motion JPEG</td></tr>
<tr><td>Bandwidth Management</td><td colspan="3">HDSM and Idle Scene Mode</td></tr>
<tr><td>Motion Detection</td><td colspan="3">Pixel and classified objects</td></tr>
<tr><td>Camera Tampering Detection</td><td colspan="3">Yes</td></tr>
<tr><td>Electronic Shutter Control</td><td colspan="3">Automatic, Manual (1/6 to 1/8000 sec)</td></tr>
<tr><td>Iris Control</td><td colspan="3">Automatic, Manual</td></tr>
<tr><td>Day/Night Control</td><td colspan="3">Automatic, Manual</td></tr>
<tr><td>Flicker Control</td><td colspan="3">50 Hz, 60 Hz</td></tr>
<tr><td>White Balance</td><td colspan="3">Automatic, Manual</td></tr>
<tr><td>Backlight Compensation</td><td colspan="3">Adjustable</td></tr>
<tr><td>Privacy Zones</td><td colspan="3">Up to 64 zones</td></tr>
<tr><td>Audio Compression Method</td><td colspan="3">G.711 PCM 8 kHz</td></tr>
<tr><td>Audio Input/Output</td><td colspan="3">Line level input and output</td></tr>
<tr><td>External I/O Terminals</td><td colspan="3">Alarm In, Alarm Out</td></tr>
<tr><td>USB Port</td><td colspan="3">USB 2.0</td></tr>
<tr><td rowspan="8">**NETWORK**</td><td>Network</td><td colspan="3">100BASE-TX</td></tr>
<tr><td>Cabling Type</td><td colspan="3">CAT5</td></tr>
<tr><td>Connector</td><td colspan="3">RJ-45</td></tr>
<tr><td>ONVIF</td><td colspan="3">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)</td></tr>
<tr><td>Security</td><td colspan="3">Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication</td></tr>
<tr><td>Protocol</td><td colspan="3">IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP,UDP, IGMP, ICMP, DHCP, Zeroconf, ARP</td></tr>
<tr><td>Streaming Protocols</td><td colspan="3">RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP</td></tr>
<tr><td>Device Management Protocols</td><td colspan="3">SNMP v2c, SNMP v3</td></tr>
<tr><td rowspan="7">**MECHANICAL**</td><td>Dimensions (LxWxH)</td><td colspan="3">126 mm x 280 mm x 91 mm; 4.97" x 11.04" x 3.58" (including mounting bracket)</td></tr>
<tr><td>Weight — Camera:</td><td colspan="3">1.71 kg (3.77 lbs)</td></tr>
<tr><td>Mounting Bracket:</td><td colspan="3">0.21 kg (0. 46 lbs)</td></tr>
<tr><td>Body</td><td colspan="3">Aluminum</td></tr>
<tr><td>Housing</td><td colspan="3">Surface mount, tamper resistant</td></tr>
<tr><td>Finish</td><td colspan="3">Powder coat, RAL 9003</td></tr>
<tr><td>Adjustment Range</td><td colspan="3">±175° pan, ±90° tilt, ±175° azimuth</td></tr>
<tr><td rowspan="3">**ELECTRICAL**</td><td>Power Consumption</td><td colspan="3">13 W</td></tr>
<tr><td>Power Source</td><td>VDC: 12 V ± 10%, 13 W min</td><td>VAC: 24 V ± 10%, 19 VA min</td><td>PoE: IEEE802.3af Class 3 compliant</td></tr>
<tr><td>RTC Backup Battery</td><td colspan="3">3V manganese lithium</td></tr>
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CERTIFICATIONS

Certifications/Directives	UL	cUL	CE	ROHS	WEEE	RCM
Safety	UL 60950-1		CSA 60950-1		IEC/EN 60950-1	IEC 62471
Environmental	IK10 Impact Rating		UL/CSA/IEC 60950-22		IEC 60529 IP66 Rating	
Electromagnetic Emissions	FCC Part 15 Subpart B Class B		IC ICES-003 Class B		EN 55022 Class B EN 61000-6-3	EN 61000-3-2 ... EN 61000-3-3
Electromagnetic Immunity	EN 55024				EN 61000-6-1	

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<tr><td rowspan="4">**ENVIRONMENTAL**</td><td>Operating Temperature</td><td>-40 °C to +55 °C (-40 °F to 131 °F)</td></tr>
<tr><td>IR Illuminator Behavior</td><td>IR illuminator will not turn on if temperature is 45 °C (113 °F) or higher</td></tr>
<tr><td>Storage Temperature</td><td>-10 °C to +70 °C (14 °F to 158 °F)</td></tr>
<tr><td>Humidity</td><td>0 - 95% non-condensing</td></tr>
</table>

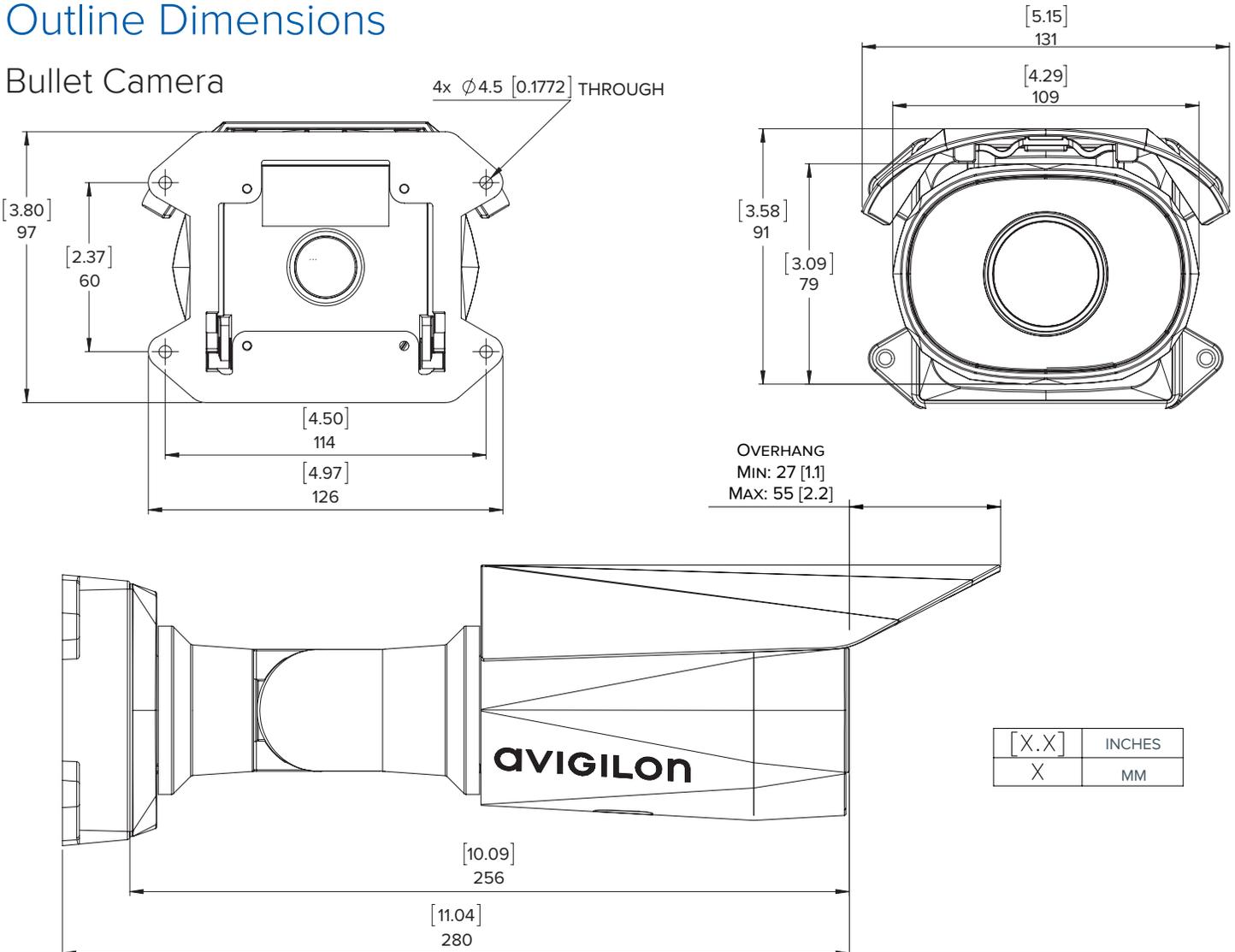| SUPPORTED VIDEO ANALYTICS EVENTS	Objects in Area	The event is triggered when the selected object type moves into the region of interest.
	Object Loitering	The event is triggered when the selected object type stays within the region of interest for an extended amount of time.
	Objects Crossing Beam	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	• 1 camera per server (connection to self) • 2 simultaneous client connections (override supported) • 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
	Recording Rate	12 Mbps
	Stream Out Rate	24 Mbps
	Client	• Saved Views • Maps • Web pages • Editable Site View • Intelligent Virtual Matrix • Collaborative investigations
	Recording, Searching and Playback	• Hourly configurable recording schedule • Intelligent motion search • Live export • Video archiving • Thumbnail search • Event search • Alarm search
	Integrations	All 3rd party integrations via the ACC SDK Plus: • CommScope iPatch • RS2 AccessIt! • DDS Amadeus 5 • DSX
	Additional Features	• Email event notification • Digital input email trigger • Manual digital output trigger • Audio recording and talkdown • Unlimited rule triggers • Failover connections • Alarm escalation • *Redundant recording

*Depending on level of site activity (site, camera, analytics, etc), redundant recording to a secondary server may exhibit a degradation in performance.

Outline Dimensions

Bullet Camera

4x ⌀4.5 [0.1772] THROUGH

[3.80] 97
[2.37] 60
[4.50] 114
[4.97] 126

[5.15] 131
[4.29] 109
[3.58] 91
[3.09] 79

OVERHANG
MIN: 27 [1.1]
MAX: 55 [2.2]

avigilon

[X.X]	INCHES
X	MM

[10.09] 256
[11.04] 280

Ordering Information

	MP	WDR	LIGHTCATCHER	ANALYTICS	STORAGE	LENS	IR
1.0C-H4A-12G-BO1-IR	1.0	✓	✓	✓	128 G	3 - 9 mm	✓
1.0C-H4A-12G-BO2-IR	1.0	✓	✓	✓	128 G	9 - 22 mm	✓
2.0C-H4A-25G-BO1-IR	2.0	✓	✓	✓	256 G	3 - 9 mm	✓
2.0C-H4A-25G-BO2-IR	2.0	✓	✓	✓	256 G	9 - 22 mm	✓
3.0C-H4A-25G-BO1-IR	3.0	✓	✓	✓	256 G	3 - 9 mm	✓
3.0C-H4A-25G-BO2-IR	3.0	✓	✓	✓	256 G	9 - 22 mm	✓

H4-BO-JBOX1	Junction box for H4A-BO-IR H4 HD Bullet Cameras
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
H4-AC-WIFI1-NA	USB Wifi Adapter