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.

H4 CAMERA

SOLID STATE DRIVE STORAGE

ACC™ SOFTWARE

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.

Avigilon HDSM SmartCodec technology™ H4 platform optimizes the video stream in real time using automatic ROI encoding to save bandwidth and storage requirements while maintaining image quality.

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
Avigilon HDSM SmartCodec technology for reduce bandwidth and storage requirements

Specifications

IMAGE PERFORMANCE

		1.0 MP	2.0 MP	3.0 MP
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 (high power 850 nm LEDs)	3 - 9 mm lens:	50 m (164 ft) max. distance at 0 lux; 30 m (98 ft) at -25 °C (-13 °F) or lower		
	9 - 22 mm lens:	70 m (230 ft) max. distance at 0 lux; 50 m (164 ft) at -25 °C (-13 °F) or lower		
Minimum Illumination	3 - 9 mm lens:	0.04 lux (F1.3) in color mode; 0 lux (F1.3) in monochrome mode with IR		
	9 - 22 mm lens:	0.08 lux (F1.6) in color mode; 0 lux (F1.6) in monochrome mode with IR		
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.	
			Full Feature = Camera will prioritize feature capabilities over image rate.	
3D Noise Reduction Filter		Yes	Yes	Yes

ONBOARD STORAGE

		1.0 MP	2.0 MP	3.0 MP
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)		

LENS

		1.0 MP	2.0 MP	3.0 MP
Lens	3 - 9 mm lens:	F1.3, P-Iris, remote focus and zoom		
	9 - 22 mm lens:	F1.6, P-Iris, remote focus and zoom		
Angle of View	3 - 9 mm lens:	30° – 91°		32° – 98°
	9 - 22 mm lens:	14° – 29°		15° – 31°

IMAGE CONTROL

Video Compression	H.264 (MPEG-4 Part 10/AVC), Motion JPEG, HDSM SmartCodec Technology
Streaming	Multi-stream H.264 and Motion JPEG
Bandwidth Management	HDSM
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
External I/O Terminals	Alarm In, Alarm Out
USB Port	USB 2.0

NETWORK

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	IPv6, 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

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		

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		

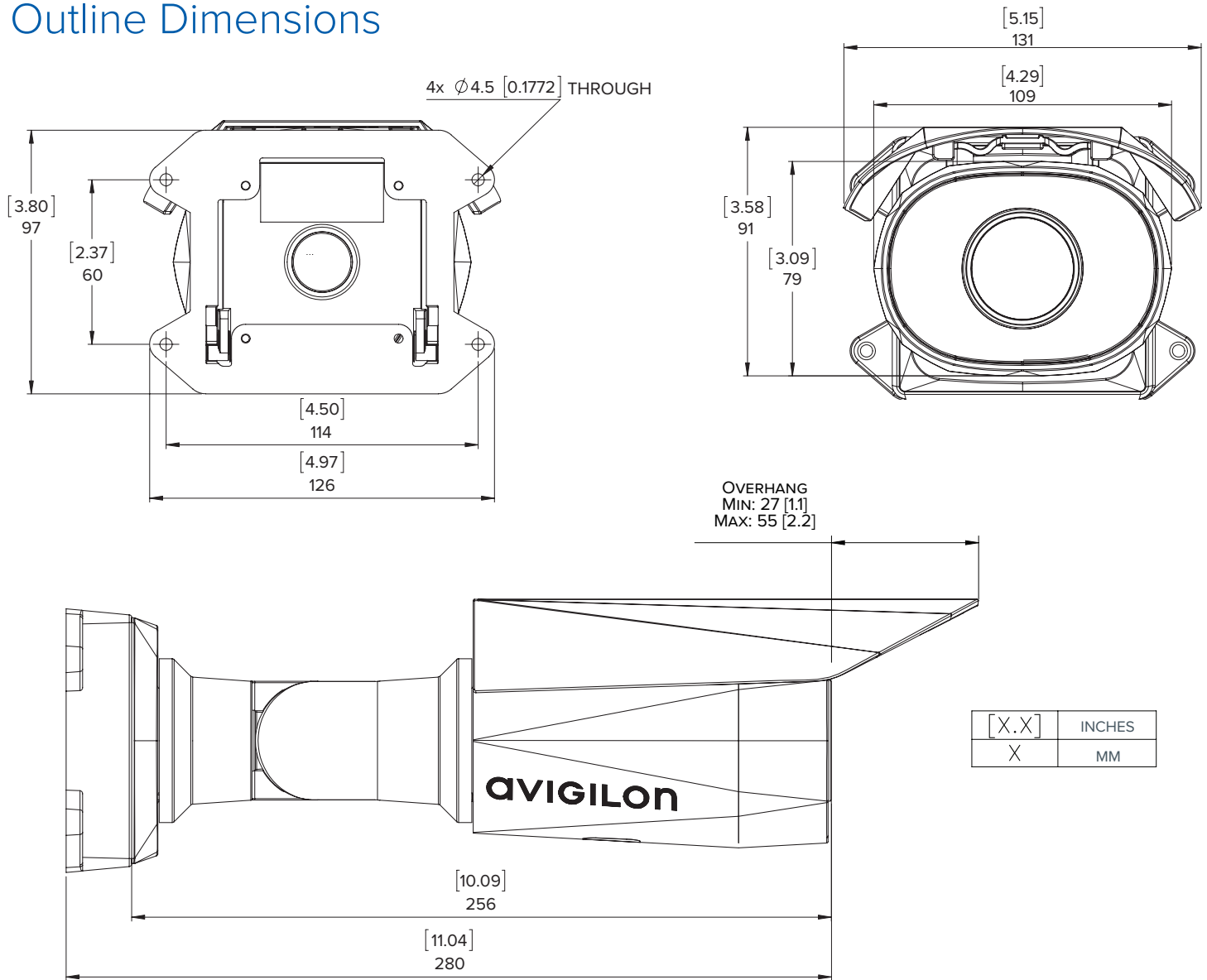| CERTIFICATIONS	Certifications/Directives	UL, cUL, CE, ROHS, WEEE, RCM, EAC, KC, BIS
	Safety	UL 60950-1, CSA 60950-1, IEC/EN 60950-1, IEC 62471
	Environmental	IK10 Impact Rating, UL/CSA/IEC 60950-22, IEC 60529 IP66 Rating
	Electromagnetic Emissions	FCC Part 15 Subpart B Class B, IC ICES-003 Class B, EN 55032 Class B, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 55011, EN 50121-4
	Electromagnetic Immunity	EN 55024, EN 61000-6-1, EN 50121-4

ENVIRONMENTAL	Operating Temperature	-40 °C to +55 °C (-40 °F to 131 °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 RULE BASED 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 • Editable Site View • Maps • Intelligent Virtual Matrix • Web pages • Collaborative investigations
	Recording, Searching and Playback	• Hourly configurable recording schedule • Thumbnail search • Intelligent motion search • Event search • Live export • Alarm search • Video archiving
	Integrations	All 3rd party integrations via the ACC SDK Plus: • CommScope iPatch • DDS Amadeus 5 • RS2 AccessIt! • DSX
	Additional Features	• Email event notification • Unlimited rule triggers • Digital input email trigger • Failover connections • Manual digital output trigger • Alarm escalation • Audio recording and talkdown • *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

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]

[10.09] 256
[11.04] 280

[X.X]	INCHES
X	MM

Ordering Information

	MP	WDR	LightCatcher Technology	Analytics	Storage	Lens	IR	HDSM SmartCodec
1.0C-H4A-12G-BO1-IR(-B)*	1.0	✓	✓	✓	128 G	3 - 9 mm	✓	✓
1.0C-H4A-12G-BO2-IR(-B)*	1.0	✓	✓	✓	128 G	9 - 22 mm	✓	✓
2.0C-H4A-25G-BO1-IR(-B)*	2.0	✓	✓	✓	256 G	3 - 9 mm	✓	✓
2.0C-H4A-25G-BO2-IR(-B)*	2.0	✓	✓	✓	256 G	9 - 22 mm	✓	✓
3.0C-H4A-25G-BO1-IR(-B)*	3.0	✓	✓	✓	256 G	3 - 9 mm	✓	✓
3.0C-H4A-25G-BO2-IR(-B)*	3.0	✓	✓	✓	256 G	9 - 22 mm	✓	✓

* These models are physically identical. (-B)* depicts an updated hardware version.

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, compatible with H4-BO-JBOX1
H4-MT-CRNR1	Aluminum corner mounting bracket for H4 HD Pendant Dome Cameras and H4 HD Bullet Cameras, compatible with H4-BO-JBOX1
H4-AC-WIFI2-NA	USB Wifi Adapter
H4-AC-WIFI2-EU	USB Wifi Adapter