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 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. 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.
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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

Avigilon HDSM SmartCodec technology for reduce bandwidth and storage requirements

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

IMAGE PERFORMANCE

		1.0 MP	2.0 MP	3.0 MP	5.0 MP	4K ULTRA HD (8.0 MP)
Image Sensor		1/2.8" progressive scan CMOS			1/1.8" progressive scan CMOS	1/2.3" progressive scan CMOS
Aspect Ratio		16:9		4:3		16:9
Active Pixels (H x V)		1280 x 720	1920 x 1080	2048 x 1536	2592 x 1944	3840 x 2160
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"	6.22 mm x 4.66 mm; 0.245" x 0.183"	5.95 mm x 3.35 mm; 0.234" x 0.132"
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			N/A	N/A
	4.3 - 8 mm lens:	N/A			50 m (164 ft) max. distance at 0 lux; 25 m (82 ft) at -25 °C (-13 °F) or lower	30 m (98 ft) max. distance at 0 lux; 15 m (49 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				N/A
Minimum Illumination	3 - 9 mm lens:	0.04 lux (F1.3) in color mode; 0 lux (F1.3) in monochrome mode with IR			N/A	N/A
	4.3 - 8 mm lens:	N/A			0.033 lux (F1.8) in color mode; 0 lux (F1.8) in monochrome mode with IR	0.29 lux (F1.8) in color mode; 0 lux (F1.8) 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			0.026 lux (F1.6) in color mode; 0 lux (F1.6) in monochrome mode with IR	N/A
Image Rate (Full Resolution)		30 fps		30 fps (20 fps with WDR enabled)	30 fps	20 fps (30 fps in High Framerate mode)
Dynamic Range		67 dB			83 dB	91 dB
Dynamic Range (WDR enabled)		120 dB triple exposure (20 fps or less); 100 dB dual exposure (30 fps)			N/A	N/A
Resolution Scaling		Down to 768 x 432			Down to 1792 x 1344	Down to 3072 x 1728
Camera Operating Mode		N/A				Full Feature or High Framerate mode (HDSM 2.0 and analytics disabled in High Framerate mode)
3D Noise Reduction Filter		Yes				

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		
Angle of View	3 - 9 mm lens:	30° – 91°	32° – 98°	N/A
	4.3 - 8 mm lens:	N/A	N/A	46° – 86°	44° – 81°
	9 - 22 mm lens:	14° – 29°	15° – 31°	18° – 41°	N/A

IMAGE CONTROL

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

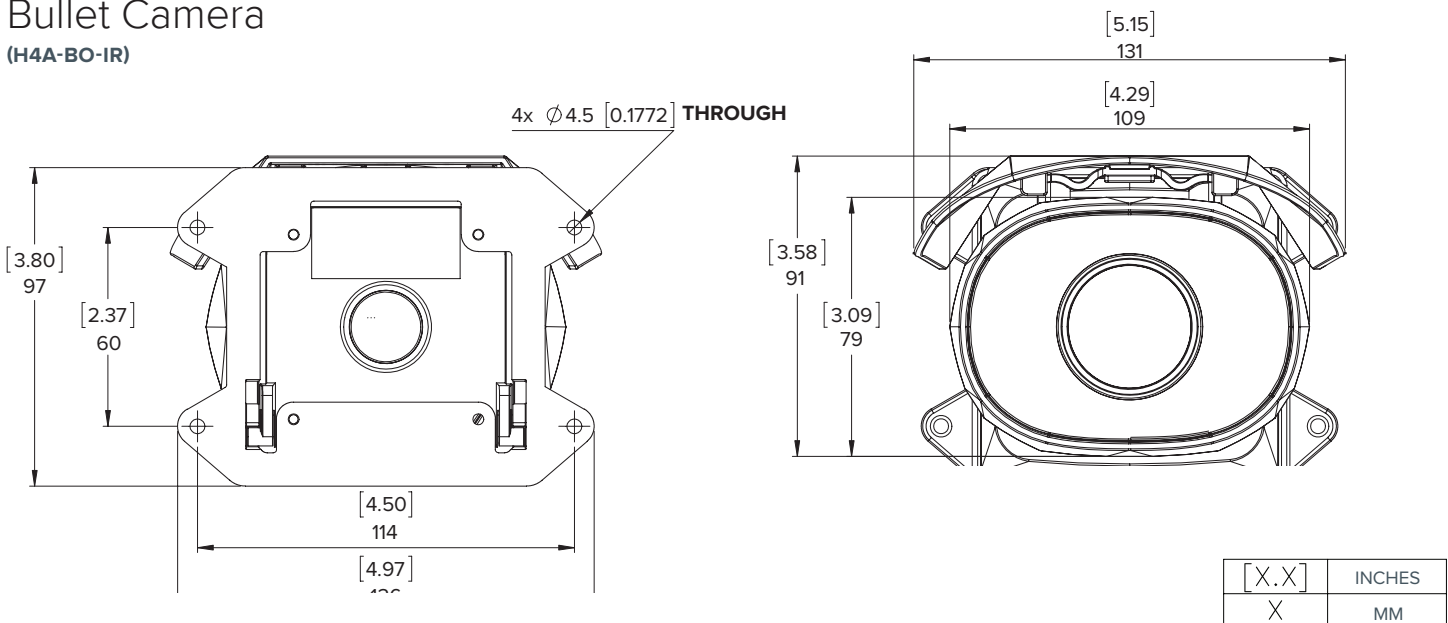| ENVIRONMENTAL	Operating Temperature	-40 °C to +55 °C (-40 °F to 131 °F) (8.0 MP only) -35 °C to +50 °C (-31 °F to 122 °F)
	IR Illuminator Behavior	IR illuminator will not turn on if temperature is 45 °C (113 °F) or higher
	Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)
	Humidity	0 - 95% non-condensing

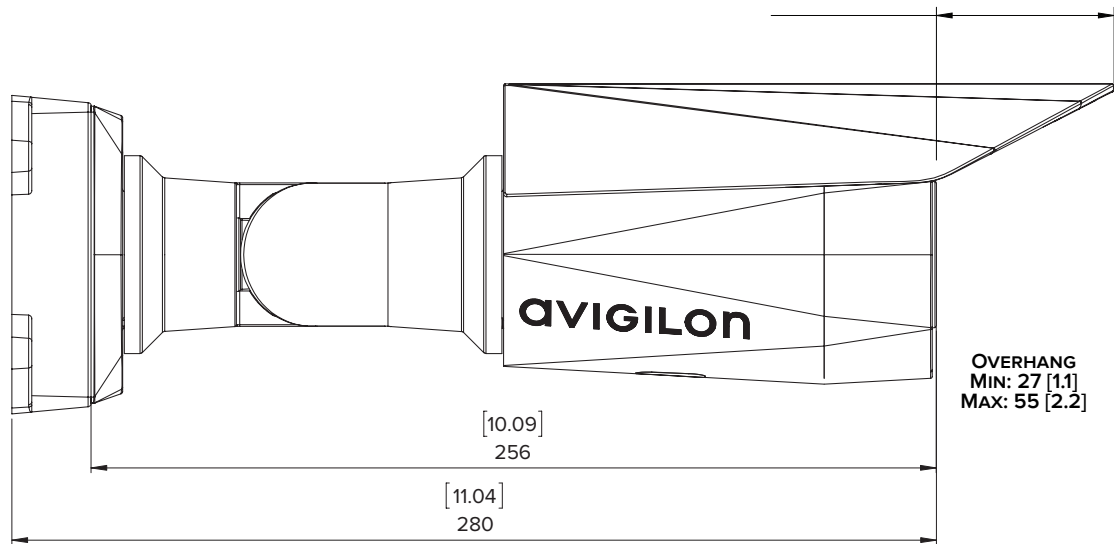| CERTIFICATIONS	Certifications/Directives	UL	cUL	CE	ROHS	WEEE	RCM	KC	EAC
	Safety	UL 60950-1		CSA 60950-1		IEC/EN 60950-1	IEC 62471		
	Environmental	IK10 Impact Rating		UL/CSA/IEC 60950-22		IEC 60529 IP66 Rating			
	Electromagnetic Emissions	FCC Part 15 Subpart B Class B		IC ICES-003 Class B		EN 55032 Class B	EN 61000-6-3	EN 61000-3-2	EN 61000-3-3 KN 32
	Electromagnetic Immunity	EN 55024				EN 61000-6-1		KN 35	

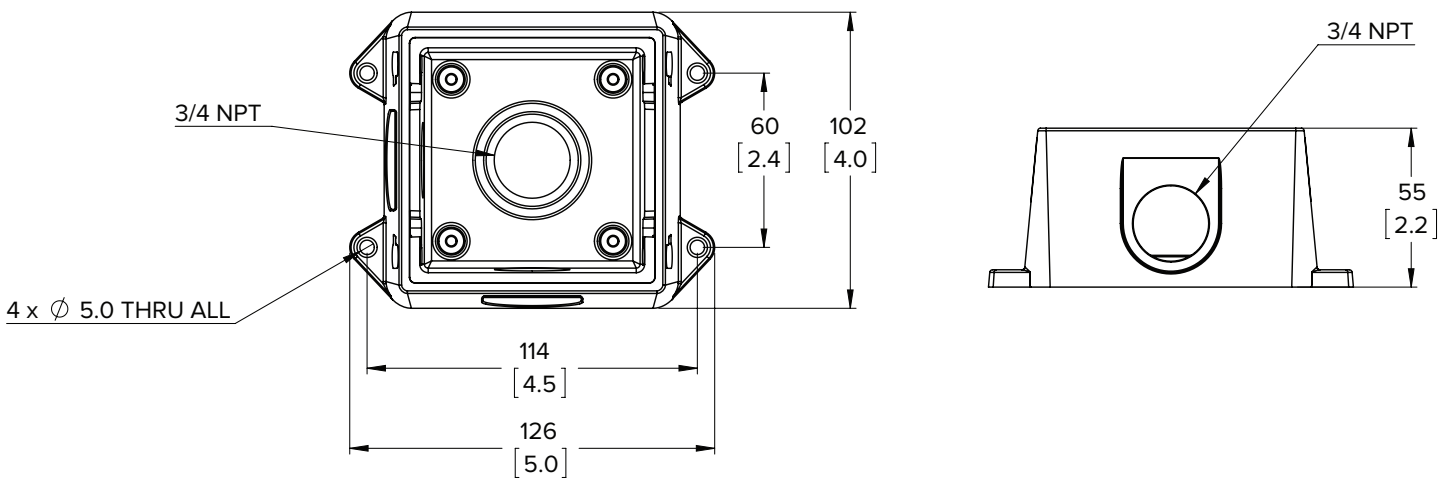| SUPPORTED VIDEO ANALYTICS EVENTS	Objects in Area	The event is triggered when the selected object type moves into the region of interest.
	Object Loitering	The event is triggered when the selected object type stays within the region of interest for an extended amount of time.
	Objects Crossing Beam	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.

Outline Dimensions
Bullet Camera
(H4A-BO-IR)

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

[X.X]	INCHES
X	MM

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

$\begin{bmatrix} 10.09 \end{bmatrix}$
256

$\begin{bmatrix} 11.04 \end{bmatrix}$
280

AVIGILON

HD Bullet Camera Junction Box
(H4-BO-JBOX1)

3/4 NPT

3/4 NPT

4 x ⌀ 5.0 THRU ALL

60 $\begin{bmatrix} 2.4 \end{bmatrix}$ 102 $\begin{bmatrix} 4.0 \end{bmatrix}$

55 $\begin{bmatrix} 2.2 \end{bmatrix}$

114 $\begin{bmatrix} 4.5 \end{bmatrix}$

126 $\begin{bmatrix} 5.0 \end{bmatrix}$

Ordering Information

	MP	WDR	LightCatcher Technology	Analytics	Lens	IR	HDSM SmartCodec
1.0C-H4A-BO1-IR	1.0	✓	✓	✓	3 - 9 mm	✓	✓
1.0C-H4A-BO2-IR	1.0	✓	✓	✓	9 - 22 mm	✓	✓
2.0C-H4A-BO1-IR	2.0	✓	✓	✓	3 - 9 mm	✓	✓
2.0C-H4A-BO2-IR	2.0	✓	✓	✓	9 - 22 mm	✓	✓
3.0C-H4A-BO1-IR	3.0	✓	✓	✓	3 - 9 mm	✓	✓
3.0C-H4A-BO2-IR	3.0	✓	✓	✓	9 - 22 mm	✓	✓
5.0L-H4A-BO1-IR	5.0		✓	✓	4.3 - 8 mm	✓	✓
5.0L-H4A-BO2-IR	5.0		✓	✓	9 - 22mm	✓	✓
8.0-H4A-BO1-IR	8.0			✓	4.3 - 8 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-WIFI2-NA	USB Wifi Adapter						
H4-AC-WIFI2-EU	USB Wifi Adapter						