

# H4 Bullet Camera with Self-Learning Video Analytics

The H4 Bullet camera from Avigilon is ideal for seeing objects and activity in complete darkness. Embedded with self-learning video analytics, the H4 cameras seamlessly integrate with Avigilon Control Center (ACC) video management software, allowing security personnel to respond proactively and mitigate an incident before damage is done.



With unique adaptive infrared (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 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 region of interest encoding to save bandwidth and storage requirements while maintaining image quality.

## KEY FEATURES

Available in 1–8 MP (4K Ultra HD) resolutions
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
Support for camera configuration with WiFi
Avigilon LightCatcher technology provides exceptional image quality in low light environments
Triple exposure ultra wide dynamic range (1–3 MP models)
Integrated IR 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 to 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 1.02, 2.00, Profile S, Profile T, and Profile G
Full Feature or High Framerate camera operating modes (4K Ultra HD model)

ONVIF is a trademark of Onvif, Inc.

# Specifications

		1.0 MP	2.0 MP	3.0 MP	5.0 MP	8.0 MP (4K ULTRA HD)	
<b>IMAGE PERFORMANCE</b>	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 2.7 mm; 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						

		1.0 MP	2.0 MP	3.0 MP	5.0 MP	8.0 MP (4K ULTRA HD)
<b>LENS</b>	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

<b>IMAGE CONTROL</b>	Video Compression	H.264 (MPEG-4 Part 10/AVC), Motion JPEG, HDSM SmartCodec Technology
	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
	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

<b>NETWORK</b>	Network	100BASE-TX
	Cabling Type	CAT5
	Connector	RJ-45
	ONVIF	ONVIF compliance version 1.02, 2.00, Profile S, Profile T, Profile G ( <a href="http://www.onvif.org">www.onvif.org</a> )
	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

<b>MECHANICAL</b>	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		

<b>ELECTRICAL</b>	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		

<b>ENVIRONMENTAL</b>	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		

<b>CERTIFICATIONS</b>	Certifications/Directives	UL	cUL	CE	ROHS	WEEE	RCM	EAC	KC	BIS	
	Safety	UL 60950-1		CSA 60950-1	IEC 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
	Electromagnetic Immunity	EN 50121-4		EN 55024	EN 61000-6-1						

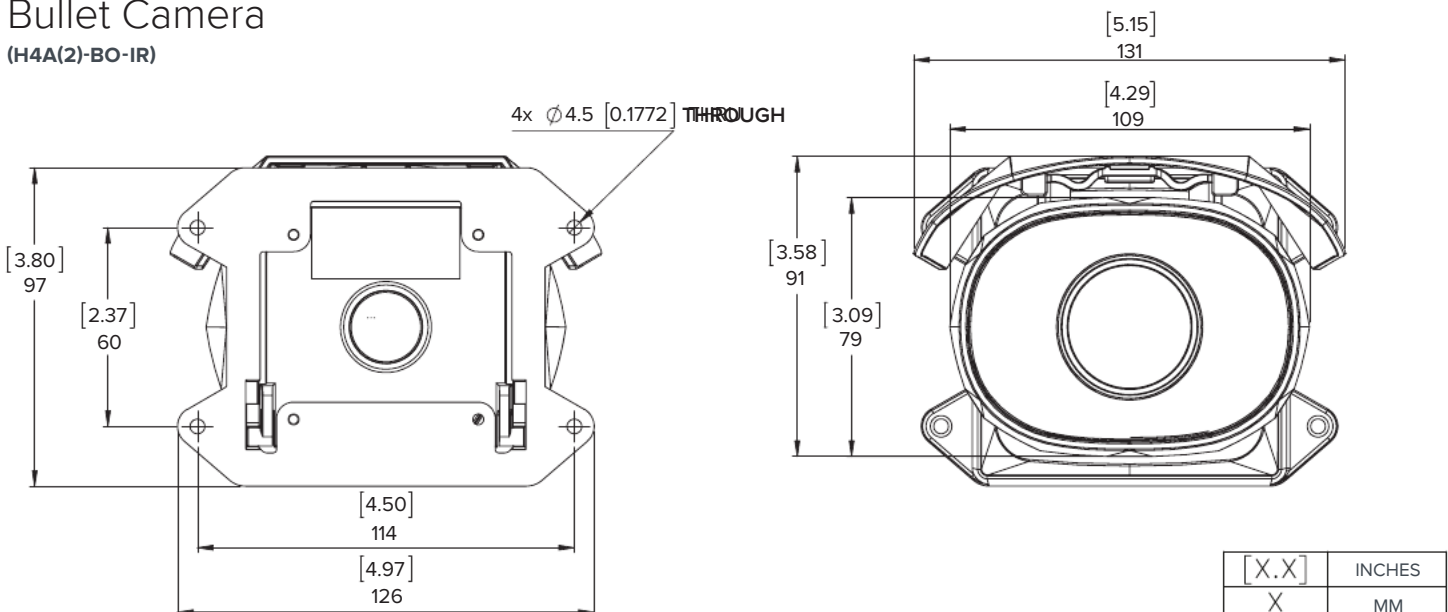
<b>SUPPORTED RULE BASED VIDEO ANALYTICS EVENTS**</b>	Objects in Area	The event is triggered when the selected object type moves into the region of interest.
	Object Loitering	The event is triggered when the selected object type stays within the region of interest for an extended amount of time.
	Objects 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.

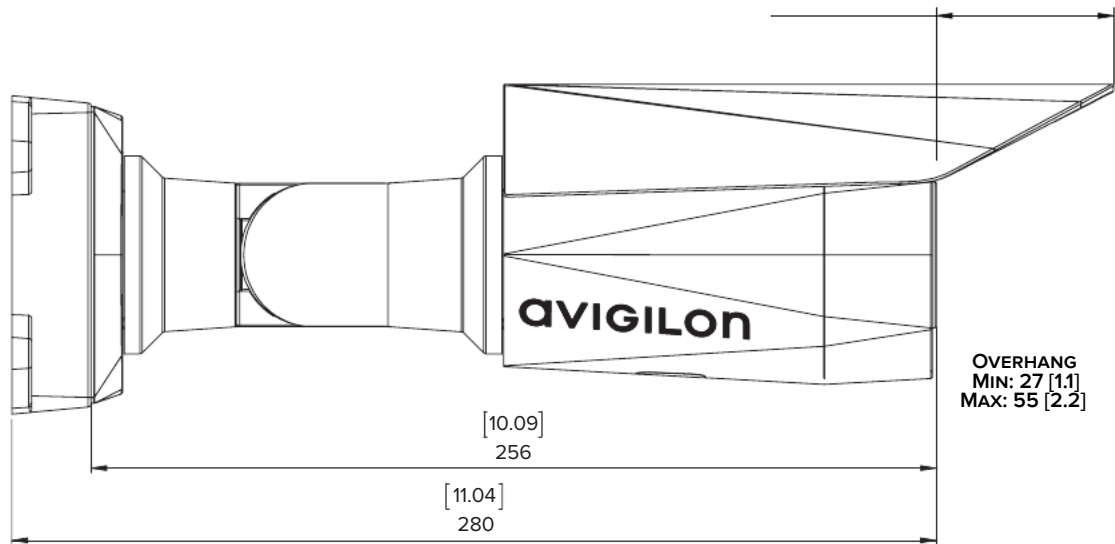
\*\* Rule based and UMD Analytics cannot operate at the same time .

<b>SUPPORTED VIDEO ANALYTICS EVENTS</b>	Unusual Motion Detection (UMD)	Detects and tags recorded video based on unusual speed, direction, and location of motion.
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## Outline Dimensions

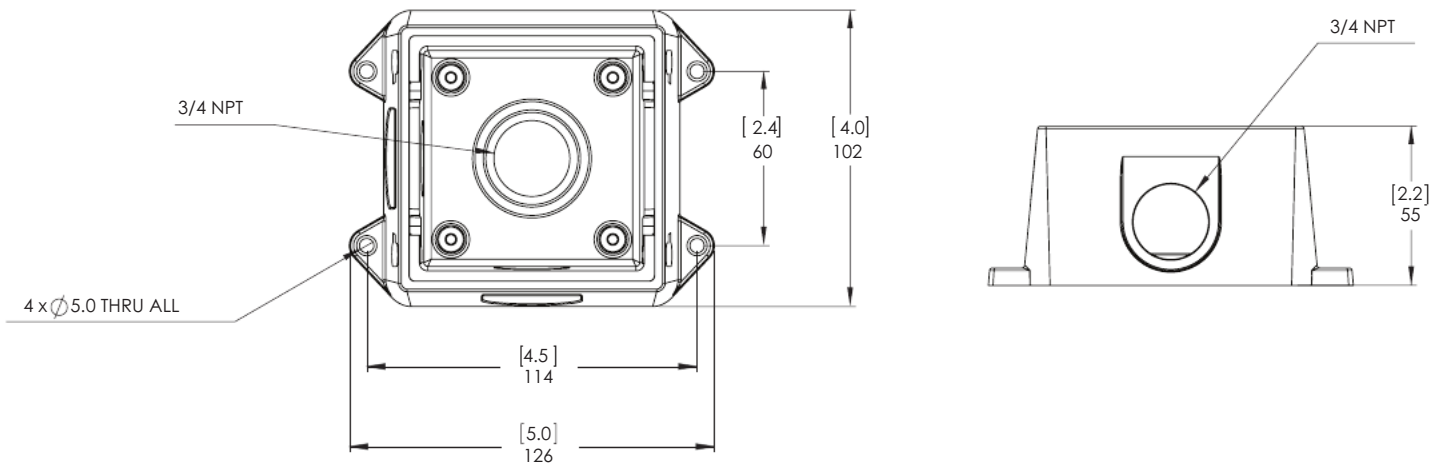
### Bullet Camera (H4A(2)-BO-IR)





## HD Bullet Camera Junction Box

(H4-BO-JBOX1)



## Ordering Information

	MP	WDR	LightCatcher Technology	Analytics	Lens	IR	HDSM SmartCodec
1.0C-H4A-BO1-IR(-B)*	1.0	✓	✓	✓	3 - 9 mm	✓	✓
1.0C-H4A-BO2-IR(-B)*	1.0	✓	✓	✓	9 - 22 mm	✓	✓
2.0C-H4A-BO1-IR(-B)*	2.0	✓	✓	✓	3 - 9 mm	✓	✓
2.0C-H4A-BO2-IR(-B)*	2.0	✓	✓	✓	9 - 22 mm	✓	✓
3.0C-H4A-BO1-IR(-B)*	3.0	✓	✓	✓	3 - 9 mm	✓	✓
3.0C-H4A-BO2-IR(-B)*	3.0	✓	✓	✓	9 - 22 mm	✓	✓
5.0L-H4A-BO1-IR(-B)*	5.0		✓	✓	4.3 - 8 mm	✓	✓
5.0L-H4A-BO2-IR(-B)*	5.0		✓	✓	9 - 22mm	✓	✓
8.0-H4A-BO1-IR(-B)*	8.0			✓	4.3 - 8 mm	✓	✓

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

H4-BO-JBOX1	Junction box for H4A(2)-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