H4 HD Outdoor Dome 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 innovative H4 HD outdoor dome cameras are just one way Avigilon can help provide effective monitoring and protection.

The H4 HD outdoor dome cameras are a great solution for monitoring both daytime and nighttime activities, with peace of mind due to their vandal resistant construction. 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. They feature an integrated lens for remote focus and zoom control and are ONVIF® compliant for easy integration.

Avigilon outdoor dome cameras are equipped with Triple Exposure Ultra-Wide Dynamic Range (WDR) and patented LightCatcher™ technology, ensuring you receive the excellent image detail. P-Iris control also allows the cameras to automatically set their iris position to enhance image quality in all lighting conditions, while onboard storage capabilities let you manage storage directly on the cameras 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.

ONVIF is a trademark of Onvif, Inc.

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
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 technology provides exceptional image quality in low light environments
Triple Exposure Ultra Wide Dynamic Range (1-3 MP models)
ONVIF compliant with version 1.02, 2.00, Profile S, Profile T, and Profile G
Vandal resistant construction and IP66 compliant
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
Full Feature or High Framerate camera operating modes (4K Ultra HD model)

Specifications

	1.0 MP	2.0 MP	3.0 MP	5.0 MP	4K ULTRA HD (8.0 MP)
IMAGE PERFORMANCE					
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 Option (high power 850 nm LEDs)	30 m (98 ft) max. distance at 0 lux				15 m (50 ft) max distance at 0 lux
Minimum Illumination — 3 -9 mm lens:	0.04 lux (F1.3) in color mode; 0.008 lux (F1.3) in monochrome mode			N/A	N/A
Minimum Illumination — 4.3 - 8 mm lens:	N/A			0.033 lux (F1.8) in color mode; 0.0066 lux (F1.8) in monochrome mode	0.29 lux (F1.8) in color mode; 0.058 lux (F1.8) in monochrome mode
Minimum Illumination — 9 - 22 mm lens:	0.08 lux (F1.6) in color mode; 0.016 lux (F1.6) in monochrome mode			0.026 lux (F1.6) in color mode; 0.005 lux (F1.6) in monochrome mode	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	
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				
Lens — 4.3 - 8 mm lens:	F1.8, P-Iris, remote focus and zoom				
Lens — 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	
Angle of View — 4.3 - 8 mm lens:	N/A		N/A	46° – 86°	44° – 81°
Angle of View — 9 - 22 mm lens:	14° – 29°		15° – 31°	18° – 41°	N/A
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	(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, 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				
NETWORK					
Network	100BASE-TX				
Cabling Type	CAT5				
Connector	RJ-45				
ONVIF	ONVIF compliance version 1.02, 2.00, Profile S, Profile T, Profile G (www.onvif.org)				
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				

	PENDANT DOME CAMERA			SURFACE MOUNT OUTDOOR DOME CAMERA	
MECHANICAL					
Dimensions (LxWxH)	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")				
	with NPT mount (H4-MT-NPTA1): 172 mm x 172 mm x 172.3 mm (6.8" x 6.8" x 6.8")				
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				
Onboard Storage	SD/SDHC/SDXC slot – minimum class 4; class 6 or better recommended				
ELECTRICAL					
Power Consumption	7 W (9 W for -IR option)				
Power Source	VDC: 12 V +/- 10%, 7 W min (9 W min with -IR option) VAC: 24 V +/- 10%, 10 VA min (13 VA min with -IR option)			PoE: IEEE802.3af Class 3 compliant	
Power Connector	2-pin terminal block				
RTC Backup Battery	3V manganese lithium				
ENVIRONMENTAL					
Operating Temperature	-40 °C to +60 °C (-40 °F to 140 °F) (8.0 MP only) -40 °C to +50 °C (-40 °F to 122°F)				
Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)				
Humidity	0 - 95% non-condensing				

Certifications/Directives	UL	cUL	CE	ROHS	WEEE	RCM	EAC	KC	BIS
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	EN 55011
Electromagnetic Immunity	EN 55024				EN 61000-6-1				

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.

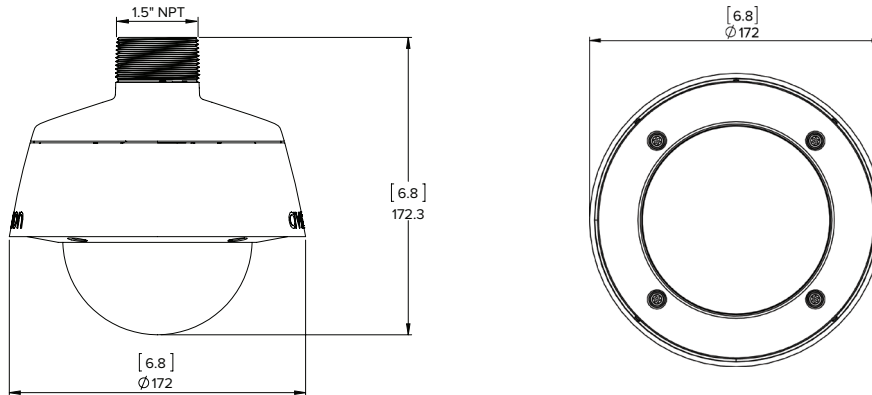** Rule based and UMD Analytics cannot operate at the same time .

SUPPORTED VIDEO ANALYTICS EVENTS

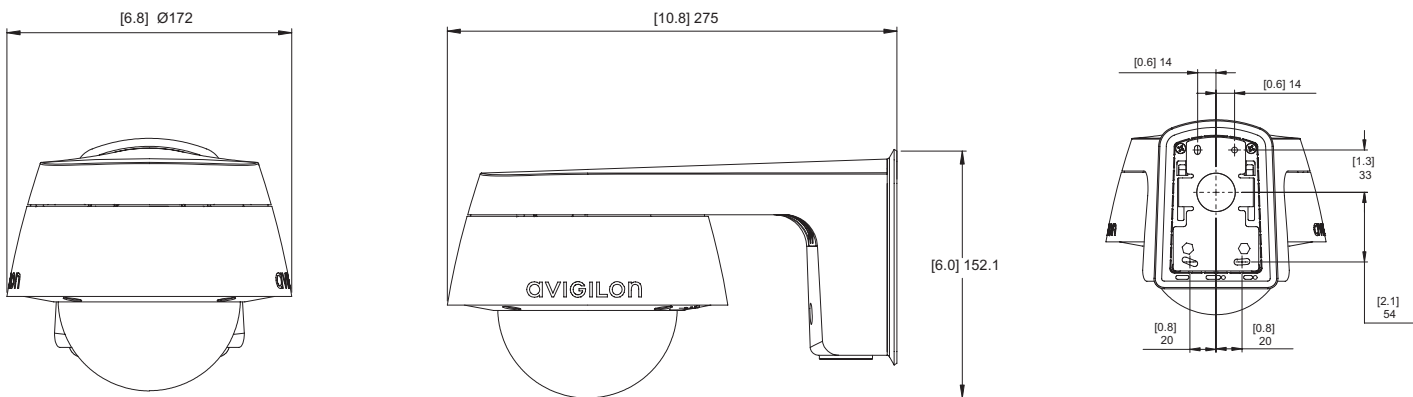| Unusual Motion Detection (UMD)	Detects and tags recorded video based on unusual speed, direction, and location of motion.

Outline Dimensions
Pendant Dome Camera

WITH NPT MOUNT (H4A-MT-NPTA1)

1.5" NPT

[6.8] 172.3
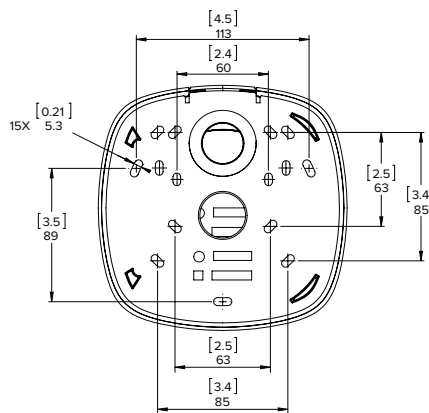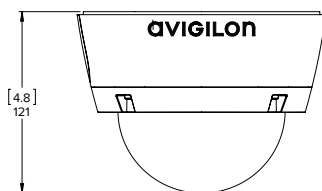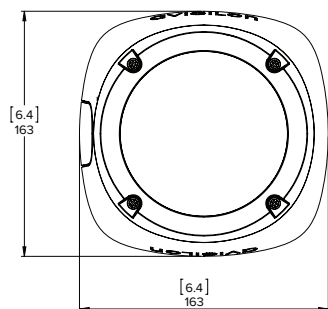
[6.8] ∅172

[6.8] ∅172

[X.X]	INCHES
X	MM

WITH WALL MOUNT (H4A-MT-WALL1)

[6.8] ∅172

[10.8] 275

[6.0] 152.1

[0.6] 14

[0.6] 14

[1.3] 33

[0.8] 20

[0.8] 20

[2.1] 54

Surface Mount Outdoor Dome Camera
(H4A-DO)

Ordering Information

PENDANT DOME CAMERAS	MP	WDR	LightCatcher Technology	Analytics	Lens	IR	HDSM SmartCodec
1.0C-H4A-DP1(-B)*	1.0	✓	✓	✓	3 - 9 mm		✓
1.0C-H4A-DP1-IR(-B)*	1.0	✓	✓	✓	3 - 9 mm	✓	✓
1.0C-H4A-DP2(-B)*	1.0	✓	✓	✓	9 - 22 mm		✓
2.0C-H4A-DP1(-B)*	2.0	✓	✓	✓	3 - 9 mm		✓
2.0C-H4A-DP1-IR(-B)*	2.0	✓	✓	✓	3 - 9 mm	✓	✓
2.0C-H4A-DP2(-B)*	2.0	✓	✓	✓	9 - 22 mm		✓
3.0C-H4A-DP1(-B)*	3.0	✓	✓	✓	3 - 9 mm		✓
3.0C-H4A-DP1-IR(-B)*	3.0	✓	✓	✓	3 - 9 mm	✓	✓
3.0C-H4A-DP2(-B)*	3.0	✓	✓	✓	9 - 22 mm		✓
5.0L-H4A-DP1(-B)*	5.0		✓	✓	4.3 - 8 mm		✓
5.0L-H4A-DP1-IR(-B)*	5.0		✓	✓	4.3 - 8 mm	✓	✓
5.0L-H4A-DP2(-B)*	5.0		✓	✓	9 - 22 mm		✓
8.0-H4A-DP1(-B)*	8.0			✓	4.3 - 8 mm		✓
8.0-H4A-DP1-IR(-B)*	8.0			✓	4.3 - 8 mm	✓	✓

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

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 / 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 Technology	Analytics	Lens	IR	HDSM SmartCodec
1.0C-H4A-DO1(-B)*	1.0	✓	✓	✓	3 - 9 mm		✓
1.0C-H4A-DO1-IR(-B)*	1.0	✓	✓	✓	3 - 9 mm	✓	✓
1.0C-H4A-DO2(-B)*	1.0	✓	✓	✓	9 - 22 mm		✓
2.0C-H4A-DO1(-B)*	2.0	✓	✓	✓	3 - 9 mm		✓
2.0C-H4A-DO1-IR(-B)*	2.0	✓	✓	✓	3 - 9 mm	✓	✓
2.0C-H4A-DO2(-B)*	2.0	✓	✓	✓	9 - 22 mm		✓
3.0C-H4A-DO1(-B)*	3.0	✓	✓	✓	3 - 9 mm		✓
3.0C-H4A-DO1-IR(-B)*	3.0	✓	✓	✓	3 - 9 mm	✓	✓
3.0C-H4A-DO2(-B)*	3.0	✓	✓	✓	9 - 22 mm		✓
5.0L-H4A-DO1(-B)*	5.0		✓	✓	4.3 - 8 mm		✓
5.0L-H4A-DO1-IR(-B)*	5.0		✓	✓	4.3 - 8 mm	✓	✓
5.0L-H4A-DO2(-B)*	5.0		✓	✓	9 - 22 mm		✓
8.0-H4A-DO1(-B)*	8.0			✓	4.3 - 8 mm		✓
8.0-H4A-DO1-IR(-B)*	8.0			✓	4.3 - 8 mm	✓	✓

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

H4A-DO-SMOK1	Outdoor Dome Camera Cover with Smoked Bubble
H4A-DO-CLER1	Outdoor Dome Camera Cover with Clear Bubble
H4-AC-WIFI2-NA / 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