H4 HD Indoor 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 indoor dome cameras are just one way Avigilon can help provide effective monitoring and protection.

The H4 HD indoor dome cameras are a great solution for monitoring both daytime and nighttime activities. 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's indoor dome cameras are equipped with new Triple Exposure Ultra-Wide Dynamic Range (WDR) and patented LightCatcher™ technology, ensuring you receive 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.

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
Wi-Fi camera configuration support
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
Zoom and content adaptive integrated IR (Infared) 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 (1-5 MP models)
Triple Exposure Ultra Wide Dynamic Range (1-3 MP models)
ONVIF compliant with version 2.2.0 of the Analytics Service Specification
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)
Vandal resistant construction

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 (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	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	

	1.0 MP	2.0 MP / 3.0 MP	5.0 MP	4K ULTRA HD
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

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/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

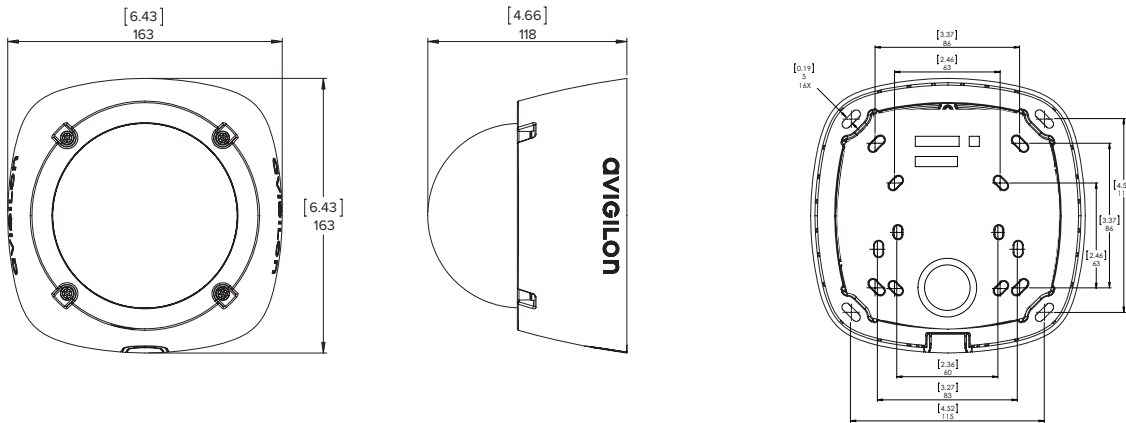|	
Network	100BASE-TX
Cabling Type	CAT5
Connector	RJ-45
ONVIF	ONVIF compliant with version 1.02, 2.00, Profile S and 2.2.0 of the Analytics Service Specification (*bounding boxes and scene descriptions not available with third-party VMS)
Security	Password protection, HTTPS encryption, digest authentication, 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

	SURFACE MOUNT INDOOR DOME CAMERA	IN-CEILING DOME CAMERA
Dimensions (LxWxH)	163 mm x 163 mm x 118 mm (6.4" x 6.4" x 4.7")	181 mm x 181 mm x 164 mm (7.1" x 7.1" x 6.5")
Weight	0.95 kg (2.09 lbs)	1.6 kg (3.5 lbs)
Dome Bubble	Polycarbonate, clear	
Body	Plastic, Aluminum	Plastic, Aluminum
Housing	Surface mount, tamper resistant	Recessed mount, tamper resistant
Finish	Plastic, gray	Plastic, gray; Aluminum, powder coat, black
Adjustment Range	360° pan, 9° - 95° tilt (30° - 95° tilt 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	Certifications	UL	cUL	CE	ROHS	WEEE	RCM	KC	EAC
	Safety	UL 60950-1		CSA 60950-1		IEC/EN 60950-1		IEC 62471 (for -IR option)	
	Environmental	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 KN 32	
	Electromagnetic Immunity	EN 55024				EN 61000-6-1		KN 35	

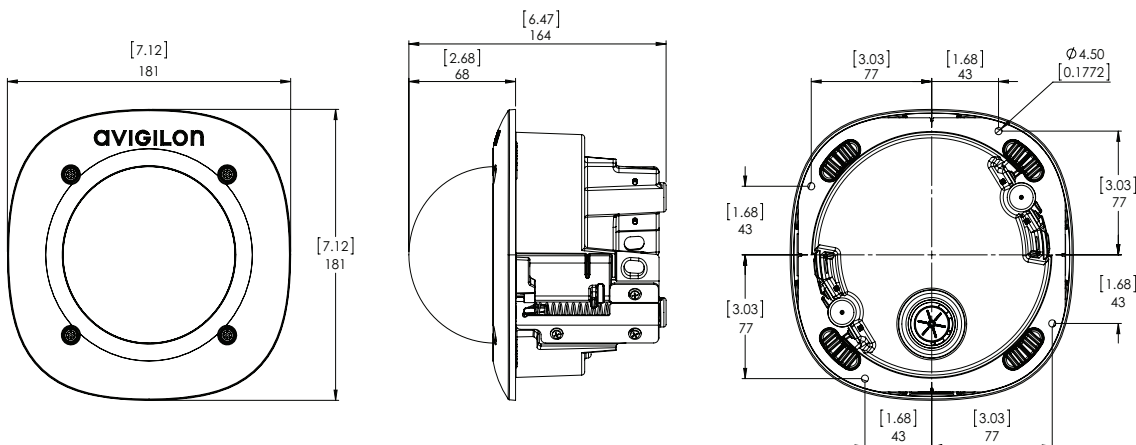| SUPPORTED VIDEO ANALYTICS EVENTS	Objects in Area	The event is triggered when the selected object type moves into the region of interest.
	Object Loitering	The event is triggered when the selected object type stays within the region of interest for an extended amount of time.
	Objects Crossing Beam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

Surface Mount Dome Camera
(H4A-D)

[X.X]	INCHES
X	MM

In-Ceiling Dome Camera
(H4A-DC)

Ordering Information

SURFACE MOUNT INDOOR DOME CAMERAS	MP	WDR	LightCatcher Technology	Analytics	Lens	IR	HDSM SmartCodec
1.0C-H4A-D1	1.0	✓	✓	✓	3 - 9 mm		✓
1.0C-H4A-D1-IR	1.0	✓	✓	✓	3 - 9 mm	✓	✓
1.0C-H4A-D2	1.0	✓	✓	✓	9 - 22 mm		✓
2.0C-H4A-D1	2.0	✓	✓	✓	3 - 9 mm		✓
2.0C-H4A-D1-IR	2.0	✓	✓	✓	3 - 9 mm	✓	✓
2.0C-H4A-D2	2.0	✓	✓	✓	9 - 22 mm		✓
3.0C-H4A-D1	3.0	✓	✓	✓	3 - 9 mm		✓
3.0C-H4A-D1-IR	3.0	✓	✓	✓	3 - 9 mm	✓	✓
3.0C-H4A-D2	3.0	✓	✓	✓	9 - 22 mm		✓
5.0L-H4A-D1	5.0		✓	✓	4.3 - 8 mm		✓
5.0L-H4A-D2	5.0		✓	✓	9 - 22 mm		✓
5.0L-H4A-D1-IR	5.0		✓	✓	4.3 - 8 mm	✓	✓
8.0-H4A-D1	8.0			✓	4.3 - 8 mm		✓
8.0-H4A-D1-IR	8.0			✓	4.3 - 8 mm	✓	✓
H4A-DD-SMOK1	Indoor Dome Camera Cover with Smoked Bubble						
H4A-DD-CLER1	Indoor Dome Camera Cover with Clear Bubble						
H4A-DD-SMOK1-BL	Black Indoor Dome Camera Cover with Smoked Bubble						
H4A-DD-CLER1-BL	Black Indoor Dome Camera Cover with Clear Bubble						
H4A-DD-SDWL1	Indoor Dome Camera Sidewall Knockout Plug, Pack of 5						
H4A-DD-SDWL1-BL	Indoor Black Dome Camera Sidewall Knockout Plug, Pack of 5						
H4A-AC-GROM1	Camera Sealing Grommet, Pack of 10						
H4-AC-WIFI1-NA	USB Wi-Fi Adapter						
H4-AC-WIFI2-EU	USB Wi-Fi Adapter						
CM-AC-AVIO1	3.5 mm Jack with 1.8 m Fly Wires						

IN-CEILING DOME CAMERAS	MP	WDR	LightCatcher Technology	Analytics	Lens	HDSM SmartCodec
1.0C-H4A-DC1	1.0	✓	✓	✓	3 - 9 mm	✓
1.0C-H4A-DC2	1.0	✓	✓	✓	9 - 22 mm	✓
2.0C-H4A-DC1	2.0	✓	✓	✓	3 - 9 mm	✓
2.0C-H4A-DC2	2.0	✓	✓	✓	9 - 22 mm	✓
3.0C-H4A-DC1	3.0	✓	✓	✓	3 - 9 mm	✓
3.0C-H4A-DC2	3.0	✓	✓	✓	9 - 22 mm	✓
5.0L-H4A-DC1	5.0		✓	✓	4.3 - 8 mm	✓
5.0L-H4A-DC2	5.0		✓	✓	9 - 22 mm	✓
8.0-H4A-DC1	8.0			✓	4.3 - 8 mm	✓
H4A-DC-SMOK1	In-Ceiling Dome Camera Cover with Smoked Bubble					
H4A-DC-CLER1	In-Ceiling Dome Camera Cover with Clear Bubble					
H4A-DC-SMOK1-BL	Black In-Ceiling Dome Camera Cover with Smoked Bubble					
H4A-DC-CLER1-BL	Black In-Ceiling Dome Camera Cover with Clear Bubble					
H4-DC-CPNL1	Metal Ceiling Panel					
H4A-AC-GROM1	Camera Sealing Grommet, Pack of 10					
H4-AC-WIFI1-NA	USB Wi-Fi Adapter					
H4-AC-WIFI2-EU	USB Wi-Fi Adapter					
CM-AC-AVIO1	3.5 mm Jack with 1.8 m Fly Wires					