

AVIGILON™

H6A and H6X Dome Cameras

Flexibility And Compliance At Your Fingertips



Compliant with NDAA 2019
Section 889



The Avigilon **H6A camera line** elevates your situational awareness to new heights by combining onboard video analytics with audio analytics. It comes with a built-in mic to alert you of auditory disturbances, allowing you to not only see, but also hear what's happening. If you need to meet certain privacy and/or cybersecurity requirements, the AI-powered **H6X camera line** has been designed with no built-in mic nor wireless technology for easy compliance. See farther distances and secure more ground with the **dome** form factor that's available on both camera lines.



Secure & Compliant

Trust that your data is well-protected with advanced cybersecurity features such as an onboard FIPS 140-2 level 3 compliant TPM and Secure Boot.



Outdoor Ready Design

Safeguard the outdoors with the bullet's exceptionally tough exterior that is rated IK10/11, IP66/67/68 and NEMA Type 4X¹ to withstand impact, water, corrosion and more.



Audio Analytics & Recording

Expand your awareness with breaking glass, screaming and more. Review video from the triggering camera to investigate the sound. Have the option to record audio when you need it.



Low-Light Clarity

Never miss a moment in low-light or completely dark conditions with IR illumination built into the bullet camera. Achieve 24/7 visibility of your site at all times.



Dynamic Privacy Masking

Easily meet privacy requirements with the ability to track and blur people and vehicles appearing in video, but have the flexibility for authorized personnel to lift it during investigations.

¹Separate license required.

For more information, visit avigilon.com/security-cameras/h6a-dome or avigilon.com/security-cameras/h6x-dome.

Specifications

Image Performance		2.0 MP	4.0 MP	6.0 MP	8.0 MP (4K Ultra HD)
Image Sensor		1/2.8" progressive scan CMOS	1/1.8" progressive scan CMOS		
Max Resolution (H x V) and Aspect Ratio	Primary	(16:9) 1920 x 1080	(16:9) 2688 x 1520, 2560 x 1440, 1920 x 1080 (4:3) 1984 x 1488	(16:9) 3328 x 1872, 3200 x 1800, 2688 x 1520, 2560 x 1440, 1920 x 1080 (4:3) 2880 x 2160, 2304 x 1728, 2048 x 1536	(16:9) 3840 x 2160, 3328 x 1872, 3200 x 1800, 3072 x 1728 (4:3) 2880 x 2160, 2560 x 1920
	Secondary	(16:9) 1920 x 1080*, 1280 x 720, 768 x 432, 640 x 360, 512 x 288	(16:9) 2688 x 1520*, 1920 x 1080, 1280 x 720, 768 x 432, 640 x 360, 512 x 288 (4:3) 1984 x 1488*, 1920 x 1440, 1600 x 1200, 1280 x 960, 768 x 576, 640 x 480, 512 x 384, 384 x 288	(16:9) 3328 x 1872*, 1920 x 1080, 1280 x 720, 768 x 432, 640 x 360, 512 x 288 (4:3) 2880 x 2160*, 1920 x 1440, 1600 x 1200, 1280 x 960, 768 x 576, 640 x 480, 512 x 384, 384 x 288	(16:9) 3840 x 2160*, 2560 x 1440, 1920 x 1080, 1280 x 720, 768 x 432, 640 x 360, 512 x 288 (4:3) 2880 x 2160*, 2560 x 1920, 2304 x 1728, 1920 x 1440, 1600 x 1200, 1280 x 960, 768 x 576, 640 x 480, 512 x 384
	Tertiary	(16:9) 1280 x 720, 768 x 432, 640 x 360, 512 x 288, 384 x 216	(16:9) 1280 x 720, 768 x 432, 640 x 360, 512 x 288, 384 x 216 (4:3) 1280 x 960, 800 x 600, 640 x 480, 512 x 384, 368 x 264	(16:9) 1280 x 720, 768 x 432, 640 x 360, 512 x 288, 384 x 216 (4:3) 1280 x 960, 768 x 576, 640 x 480, 512 x 384, 384 x 288, 368 x 264	(16:9) 1920 x 1080 1280 x 720, 768 x 432, 640 x 360, 512 x 288, 384 x 216 (4:3) 1920 x 1440, 1600 x 1200, 1280 x 960, 800 x 600, 640 x 480, 512 x 384, 384 x 288, 368 x 264
Dynamic Range	WDR Off	Up to 83 dB			
	WDR On (IEC 62676)	Up to 126 dB (dual exposure, 30 fps) Up to 144 dB (triple exposure, 20 fps or less)	Up to 106dB (dual exposure, 30 fps) Up to 136dB (triple exposure, 20 fps or less)	Up to 130dB (dual exposure, 30 fps)	
	WDR On	Up to 130 dB (dual exposure, 30 fps) Up to 150 dB (triple exposure, 20 fps or less)	Up to 120dB (dual exposure, 30 fps) Up to 144dB (triple exposure, 20 fps or less)	Up to 144 dB (dual exposure, 20 fps or less)	
Max Image Rate		(50 Hz/60 Hz): 50 fps/60 fps in High Frame Rate Mode ¹ , otherwise 25 fps/30 fps		(50 Hz/60 Hz): 25 fps/30 fps	
Bandwidth Management		HDSM SmartCodec technology; Idle scene mode			
Signal-to-Noise Ratio(SNR)		> 50 dB			

*Only available at half frame rate of the primary stream.

¹ Max Frame Rate of 60 fps is only achievable with High Frame Rate mode enabled. High Frame Rate mode will disable analytics.



Lens and IR Illumination		2.8 - 12 mm	4.4 - 9.3 mm	10.9 - 29 mm
IR Illumination Max Distance ² (high power 850 nm LEDs)		50 m (164 ft) full tele 25 m (82 ft) full wide	50 m (164 ft) full tele 25 m (82 ft) full wide	70 m (230 ft) full tele 40 m (131 ft) full wide
Minimum Illumination	2 MP	With IR: 0 lux in monochrome mode Without IR: 0.003 lux in monochrome mode; 0.01 lux in color mode	N/A	With IR: 0 lux in monochrome mode Without IR: 0.004 lux in monochrome mode; 0.01 lux in color mode
	4 MP	N/A	With IR: 0 lux in monochrome mode Without IR: 0.003 lux in monochrome mode; 0.008 lux in color mode	With IR: 0 lux in monochrome mode Without IR: 0.004 lux in monochrome mode; 0.01 lux in color mode
	6 MP & 8 MP	N/A	With IR: 0 lux in monochrome mode Without IR: 0.006 lux in monochrome mode; 0.02 lux in color mode	With IR: 0 lux in monochrome mode Without IR: 0.008 lux in monochrome mode; 0.03 lux in color mode
Horizontal Angle of View Based on Aspect Ratio	2 MP	(16:9) 27° – 119°	N/A	(16:9) 11° – 30°
	4 MP	N/A	(16:9) 47° – 111° (4:3) 35° – 78°	(16:9) 15° – 42° (4:3) 11° – 31°
	6 MP & 8MP	N/A	(16:9) 47° – 109° (4:3) 35° – 78°	(16:9) 15° – 42° (4:3) 11° – 31°
Vertical Angle of View Based on Aspect Ratio	2 MP	(16:9) 15° – 64°	N/A	(16:9) 6° – 16.5°
	4 MP & 6 MP & 8 MP	N/A	(16:9) 26° – 57° (4:3) 26° – 57°	(16:9) 9° – 23° (4:3) 9° – 23°
Max Aperture		F1.4	F1.3	F1.7
Control		Remote Zoom and Focus, Autofocus, IR Cut Filter		

² IR illumination power may be reduced at higher operating temperatures.

Image Control	
Image Compression Method	H.264 HDSM SmartCodec, H.265 HDSM SmartCodec, Motion JPEG
Streaming	Multi-stream H.264, Multi-stream H.265, Motion JPEG
Motion Detection	Pixel motion: Selectable sensitivity and threshold. Classified object detection
Camera Tamper Detection	Yes
Electronic Shutter Control	Automatic, Manual (1/7.5 to 1/15000 sec)
Iris Control	Automatic, Open, Closed, P-iris
Day/Night Control	Automatic, Manual, External
Flicker Control	60 Hz, 50 Hz
White Balance	Automatic, Manual



Image Control			
Backlight Compensation	Adjustable		
Image Rotation	0°, 90°, 180°, 270° including Corridor Mode		
Privacy Zones	Up to 64 zones		
Electronic Image Stabilization	Yes		
Digital Defog	Adjustable/Off		
Network			
Network	100BASE-TX for H6A, 1000BASE-T for H6X		
Cabling	CAT5e or higher		
Connector	RJ-45		
ONVIF	ONVIF® compliance Profile S, Profile T, Profile M and Profile G (www.onvif.org)		
Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication, CC EAL6+, FIPS 140-2 L1 (with optional camera license), onboard FIPS 140-2 L3 certified TPM, Secure Boot, Signed and encrypted firmware		
Protocols	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMPv3, ICMP, DHCP, Zeroconf, HSTS, QoS, DSCP, FTP		
Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP, SRTP		
Device Management Protocols	SNMP v2c, SNMP v3		
Peripherals			
USB Port	USB 2.0		
Onboard Storage ³	Two microSD/microSDHC/microSDXC slots – video speed class card required. Class V10 or better recommended.		
³ Tested maximum capacity is 1.5TB.			
Auxiliary I/O			
Audio Compression Method	G.711 PCM 8 kHz, Opus		
Audio Input/Output	Line level input and output		
External I/O Terminals	1 x Relay In, 1 x Relay Out, 1 x 12 VDC out at 50 mA		
Microphone	Built-in microphone for audio analytics, for certain variants, with physical disable switch		
Mechanical	Surface Mount	In-Ceiling Mount	Pendant Mount
Dimensions (DxH)	182 mm x 132 mm; 7.16" x 5.19"	219 mm x 198 mm; 8.62" x 7.79"	182 mm x 190 mm; 7.16" x 7.48"
Accessory Only Dimensions (DxH)	N/A	219 mm x 115 mm; 8.62" x 4.52"	155 mm x 65 mm; 6.1" x 2.55"



Mechanical		Surface Mount	In-Ceiling Mount	Pendant Mount
Weight	Indoor Dome	1.21 kg; 2.66 lbs	1.83 kg; 4.03 lbs	1.63 kg; 3.59 lbs
	Outdoor Dome	1.59 kg; 3.5 lbs	1.99 kg; 4.38 lbs	2.01 kg; 4.43 lbs
Dome Bubble		Polycarbonate	Polycarbonate	Polycarbonate
Body		Polycarbonate and aluminum	Polycarbonate and aluminum	Polycarbonate and aluminum
Housing		Surface mount	Recessed mount	Pendant mount
Finish	Indoor Dome	Plastic injection mold grey (Pantone 427C)	Plastic injection mold grey (Pantone 427C) & Powdercoat black	Powdercoat grey & plastic injection mold grey (Pantone 427C)
	Outdoor Dome	Powdercoat grey (Pantone 427C)	Plastic injection mold grey (Pantone 427C) & Powdercoat black	Powdercoat grey (Pantone 427C)
Adjustment Range		Pan 360°, Azimuth 349°, Tilt 92°		
Electrical				
Power Consumption		25W (18W with no IR or IR disabled)		
Power Source	PoE	IEEE 802.3af Class 3		
	PoE+	IEEE 802.3at Class 4		
IR Illumination Behavior	PoE	IR illuminator will turn off if the temperature is 65°C (149°F) or higher. In this power mode, the illuminator operates at 50% power, reducing to 25% power if the temperature falls below -25°C (-13°F).		
	PoE+	IR illuminator will turn off if the temperature is 65°C (149°F) or higher. The illuminator will operate at 50% power if the temperature is between 55°C (131°F) and 65°C (149°F) and 50% power if below -25°C (-13°F).		
External Power		12-24 VDC +/-10%		
RTC Backup Battery		3V manganese lithium		
Memory		4GB RAM, 4GB Flash		
Redundant Power		Seamless failover between PoE and Aux and back without interrupt in camera operation (for H6X only)		
Environmental		Indoor Dome	Outdoor Dome	
Operating Temperature	PoE	-10°C to +55°C (-14°F to 131°F)	-30°C to +65°C (-22°F to 149°F) with IEEE 802.3af Class 3 (13W PoE)	
	With External Power or PoE+	-10°C to +55°C (-14°F to 131°F)	-50°C to +65°C (-58°F to 149°F) with external power or IEEE 802.3at Class 4 (25.5W PoE+)	
Startup Temperature	PoE	-10°C to +55°C (-14°F to 131°F)	-30°C to +65°C (-22°F to 149°F) with IEEE 802.3af Class 3 (13W PoE)	
	With External Power or PoE+	-10°C to +55°C (-14°F to 131°F)	-40°C to +65°C (-40°F to 149°F) with external power or IEEE 802.3at Class 4 (25.5W PoE+)	
Absolute Maximum Temperature		74 °C (165 °F) per NEMA TS2 (Temp.) para 2.2.7.2 - 2.2.7.7		



Environmental		Indoor Dome	Outdoor Dome
Storage Temperature		-10°C to +70°C (14°F to 158°F)	
Humidity		0 - 95% condensing	
Certifications			
Certifications/Approvals		UL, cUL, CE, ROHS, RCM, UKCA, NOM, KC, BIS	
Safety Standards		UL 62368-1, CSA 62368-1, IEC/EN 62368-1, IEC 62471, UL 2043 Plenum (in-ceiling only)	
Environmental Standards/Ratings	Indoor Dome	IEC 60529 IP54, IEC/EN 62262 IK11 (IK10 Surface Mount w/IR)	
	Outdoor Dome	IEC 60529 IP66, IP67, IP68 (2m depth for 2 hours), IPX9K, NEMA 4X, IEC 60068-2 Shock & Vibration, NEMA TS2 Sec 2.2.7-2.2.9, IK11	
Electromagnetic Emissions Standards		FCC Part 15 Subpart B Class B, ICES-003 Class B, EN 55032 Class B, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 50121-4, EN 50130-4	
Electromagnetic Immunity Standards		EN 55035, EN 61000-6-1, EN 50121-4, EN 50130-4	
Warranty		Limited 5 Year Warranty (avigilon.com/warranty)	



Analytics Specifications

Supported Analytics Events

Objects in Area	The event is triggered when the selected object type moves into the region of interest. This event can be used to count objects.
Object Loitering	The event is triggered when the selected object type moves into the region of interest and then stays 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.
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 moves into a region of interest and then stops moving for the specified threshold time.
Object Too Close	The event is triggered when two objects are too close together, based on the specified distance set for the event.
Direction Violated	The event is triggered when an object moves in the prohibited direction of travel.
Smart Motion Rule	Events are sent for person (including crawling) and vehicle present, against default unchangeable parameters.
Tamper Detection	The event is triggered when the scene unexpectedly changes.
Crowd Size	This event is triggered when the number of people is exceeded over a configurable duration.
Unusual Crowd Growth	This event is triggered when a crowd size grows unexpectedly.
Unusual Crowd Size	This event is triggered when an unusual crowd size is detected.

Analytics capabilities, including detection range, may vary by camera line. Please consult the Avigilon Self-Learning Video Analytics Design Guide for details.

Supported Classified Object Types

Object Types in Outdoor Mode	Vehicle, sub-types: Car, Pickup Truck, Large Truck, Van, Bicycle, Motorcycle, Bus Person
Object Types in Indoor Mode	Person

Teach by Example

Teach By Example	Yes, when used with Avigilon Control Center™ or Avigilon Unity Video
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Supported Audio Analytics Events

Scream	Up to 15 meters
Glass Break	Up to 15 meters



Supported Audio Analytics Events

Car Alarm	Up to 30 meters
Smoke Alarm	Up to 15 meters
Dog Bark	Up to 15 meters
Metal Crash	Up to 15 meters
Tire Screech ¹	Up to 15 meters
Loud Noise	Up to 40 meters
Ultrasonic Panic Alarm ²	Up to 40 meters

¹ The detection range is limited to up to 8 meters in loud environments.

² The detection range is influenced by the quality and power of the device used to create the panic alarm.

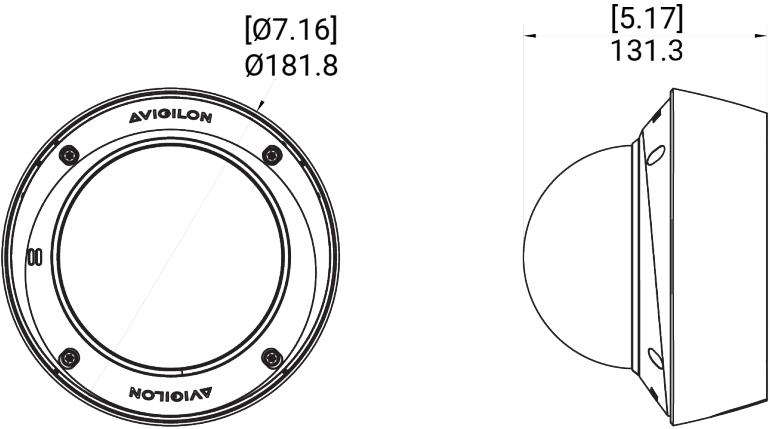
Avigilon Software Supported Features

Avigilon Unity Video 8.0 or higher	All supported analytic events with people and vehicles and all vehicle sub-types as classified objects. Appearance search when paired with appropriate server hardware. Unusual Activity Detection. H.265 supported. Audio analytics. Crowd analytics. Classified object privacy masking.
ACC Version 7.2 or higher	All supported analytic events with people and vehicles as classified objects. Appearance search when paired with appropriate server hardware. Unusual Activity Detection. H.265 supported.



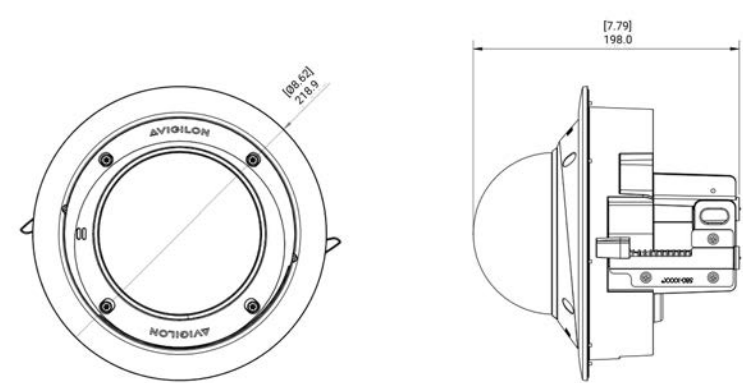
Outline Dimensions

H6A Dome Camera with Surface Mount



[X.X]	INCHES
X.X	MM

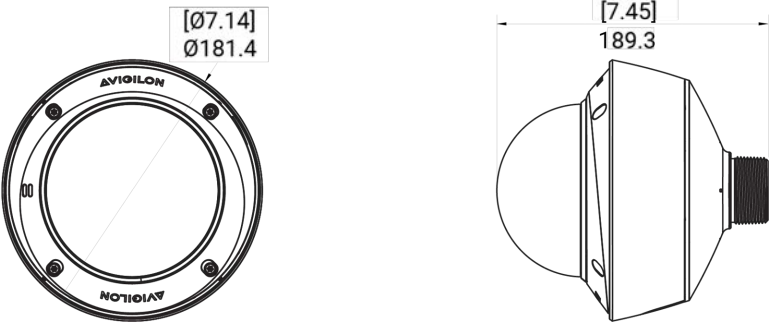
H6A Dome Camera with In-Ceiling Mount (CLADP-1001)



[X.X]	INCHES
X.X	MM

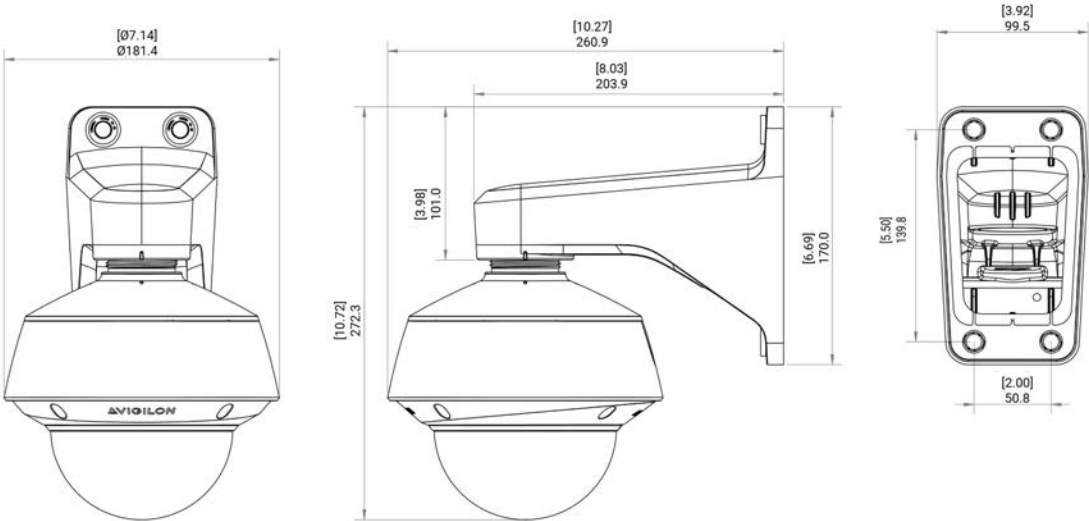


H6A Dome Camera with NPT Adapter (H6A-MT-NPTA1)



[X.X]	INCHES
X.X	MM

H6A Dome Camera with NPT Adapter (H6A-MT-NPTA1) and Pendant Wall Mount (WLMT-1021)



[X.X]	INCHES
X.X	MM



Ordering Information

Mounting Scenario		Ordering information
Pendant Wall Mount		Order one of: - Indoor or outdoor surface mount camera - H6A-MT-NPTA1 - WLMT-1021 Optional: - PLMT-1001 (Pole mount adapter) - CRNMT-1001 (Corner mount adapter)
Pendant NPT Mount		Order one of: - Indoor or outdoor surface mount camera - H6A-MT-NPTA1
Surface Mount		Order one of: - Indoor or outdoor surface mount camera Optional: - DMSLD-1001 (weathershield)
In-Ceiling Mount		Order one of: - Indoor or outdoor in-ceiling mount camera - CLADP-1001 Optional: - CLPNL-1011 (metal ceiling panel)



Models	MP	Lightcatcher Technology	Lens	IR	Analytics	HDSM SmartCodec	Microphone	Seamless Failover
2.0C-H6A-DO1	2.0	✓	2.8 - 12mm		✓	✓	✓	
2.0C-H6A-DO2	2.0	✓	10.9 - 29mm		✓	✓	✓	
2.0C-H6A-DO1-IR	2.0	✓	2.8 - 12mm	✓	✓	✓	✓	
2.0C-H6A-DO2-IR	2.0	✓	10.9 - 29mm	✓	✓	✓	✓	
4.0C-H6A-DO1	4.0	✓	4.4 - 9.3mm		✓	✓	✓	
4.0C-H6A-DO2	4.0	✓	10.9 - 29mm		✓	✓	✓	
4.0C-H6A-DO1-IR	4.0	✓	4.4 - 9.3mm	✓	✓	✓	✓	
4.0C-H6A-DO2-IR	4.0	✓	10.9 - 29mm	✓	✓	✓	✓	
6.0C-H6A-DO1	6.0	✓	4.4 - 9.3mm		✓	✓	✓	
6.0C-H6A-DO2	6.0	✓	10.9 - 29mm		✓	✓	✓	
6.0C-H6A-DO1-IR	6.0	✓	4.4 - 9.3mm	✓	✓	✓	✓	
6.0C-H6A-DO2-IR	6.0	✓	10.9 - 29mm	✓	✓	✓	✓	
8.0C-H6A-DO1	8.0	✓	4.4 - 9.3mm		✓	✓	✓	
8.0C-H6A-DO2	8.0	✓	10.9 - 29mm		✓	✓	✓	
8.0C-H6A-DO1-IR	8.0	✓	4.4 - 9.3mm	✓	✓	✓	✓	
8.0C-H6A-DO2-IR	8.0	✓	10.9 - 29mm	✓	✓	✓	✓	

Models	MP	Lightcatcher Technology	Lens	IR	Analytics	HDSM SmartCodec	Microphone	Seamless Failover
4.0C-H6X-DO1-IR	4.0	✓	4.4 - 9.3mm	✓	✓	✓		✓
4.0C-H6X-DO2-IR	4.0	✓	10.9 - 29mm	✓	✓	✓		✓
8.0C-H6X-DO1-IR	8.0	✓	4.4 - 9.3mm	✓	✓	✓		✓
8.0C-H6X-DO2-IR	8.0	✓	10.9 - 29mm	✓	✓	✓		✓



Models	MP	Lightcatcher Technology	Lens	IR	Analytics	HDSM SmartCodec	Microphone	Seamless Failover
2.0C-H6A-D1	2.0	✓	2.8 - 12mm		✓	✓	✓	
2.0C-H6A-D2	2.0	✓	10.9 - 29mm		✓	✓	✓	
2.0C-H6A-D1-IR	2.0	✓	2.8 - 12mm	✓	✓	✓	✓	
2.0C-H6A-D2-IR	2.0	✓	10.9 - 29mm	✓	✓	✓	✓	
4.0C-H6A-D1	4.0	✓	4.4 - 9.3mm		✓	✓	✓	
4.0C-H6A-D2	4.0	✓	10.9 - 29mm		✓	✓	✓	
4.0C-H6A-D1-IR	4.0	✓	4.4 - 9.3mm	✓	✓	✓	✓	
4.0C-H6A-D2-IR	4.0	✓	10.9 - 29mm	✓	✓	✓	✓	
6.0C-H6A-D1	6.0	✓	4.4 - 9.3mm		✓	✓	✓	
6.0C-H6A-D2	6.0	✓	10.9 - 29mm		✓	✓	✓	
6.0C-H6A-D1-IR	6.0	✓	4.4 - 9.3mm	✓	✓	✓	✓	
6.0C-H6A-D2-IR	6.0	✓	10.9 - 29mm	✓	✓	✓	✓	
8.0C-H6A-D1	8.0	✓	4.4 - 9.3mm		✓	✓	✓	
8.0C-H6A-D2	8.0	✓	10.9 - 29mm		✓	✓	✓	
8.0C-H6A-D1-IR	8.0	✓	4.4 - 9.3mm	✓	✓	✓	✓	
8.0C-H6A-D2-IR	8.0	✓	10.9 - 29mm	✓	✓	✓	✓	



Accessory Part Numbers	
H6A-MT-NPTA1	Pendant NPT adapter
WLMT-1021	Pendant wall arm, 1.5" NPT female, 20 cm (7.8") long
CLADP-1001	In-Ceiling adapter
CLPNL-1011	Metal ceiling panel for suspended ceiling installations
DMSLD-1001	Weathershield for dome cameras
DMBBL-1001	Replacement clear dome bubble
DMBBL-1011	Replacement IR dome bubble
DMSBL-1001	Optional smoked dome bubble, not compatible with the IR cameras
CBLKIT-1011	USB adapter cable, for use with USB-AC56 Wifi install kit
USB-AC56-NA-MSI	USB Wifi adapter install kit (North America)
USB-AC56-EU-MSI	USB Wifi adapter install kit (Europe)
GROM-1001	Camera sealing grommet, pack of 10
GROM-1011	Pipe sealing grommet, pack of 10
PLMT-1001	Pole mount adapter
CRNMT-1001	Corner mount adapter
CAM-FIPS	Camera license to enable FIPS cryptographic module.



Support

For product support, visit: avigilon.com or sales@avigilon.com.

To learn more, visit: www.avigilon.com



MOTOROLA SOLUTIONS

AVIGILON™

Motorola Solutions, Inc. 500 West Monroe Street, Chicago, IL 60661 U.S.A. motorolasolutions.com

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