Datasheet

Unity H6A and H6X Dome Cameras

Flexibility And Compliance At Your Fingertips

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 Al-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 bullet** form factor that's available on both camera lines.







AdaptAl Video Analytics

Be a step ahead of incidents with the camera's ability to flag unusual crowds or a person crawling along your perimeters. Classify more objects such as a van, pick-up truck or large truck with analytics event support.

Audio Analytics & Recording

Expand your awareness with alerts for 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.

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.

Outdoor Ready Design

Safeguard the outdoors with the bullet's exceptionally tough exterior that is rated IK10/11, IP66/67/68 and NEMA Type $4X^1$ to withstand impact, water, corrosion and more.

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.

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.

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



¹ Environmental ratings will vary by models.

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
	WDR Off	Up to 83 dB			
Dynamic Range	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/6 Mode ¹ , otherwise 25 fp	60 fps in High Frame Rate ps/30 fps	(50 Hz/60 Hz): 25 fps/30 f	fps
Bandwidth Management		HDSM SmartCodec tec	odec technology; Idle scene mode		
Signal-to-Noise Ra	Signal-to-Noise Ratio(SNR)				

^{*}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
	2 MP	(16:9) 27° – 119°	N/A	(16:9) 11° – 30°
Horizontal Angle of View Based on Aspect Ratio	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		

 $^{^{2}\,\}mathrm{IR}$ 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
Backlight Compensation	Adjustable
Image Rotation	0°, 90°, 180°, 270° including Corridor Mode
Privacy Zones	Up to 64 zones
Electronic Image Stabilization	Yes

Network					
Network 100BASE-TX for H6A, 1000BASE-T for H6X					
Cabling		CAT5e			
Connector		RJ-45			
ONVIF		ONVIF® compliance Profile S, Pro	file 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, 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			
Streaming Protoco	ls	RTP/UDP, RTP/UDP multicast, RT	P/RTSP/TCP, RTP/RTSP/HTTP/TCF	P, RTP/RTSP/HTTPS/TCP, HTTP, SRTP	
Device Managemen	nt 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.		<u></u>			
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 V	/DC 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 Dir	nensions (DxH)	N/A	219 mm x 115 mm; 8.62" x 4.52"	155 mm x 65 mm; 6.1" x 2.55"	
Weight	Indoor Dome	1.21 kg; 2.66 lbs	1.83 kg; 4.03 lbs	1.63 kg; 3.59 lbs	
Weight	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 2		25W (18W with no IR or IR disabled)			
Dawer Caures	PoE	IEEE 802.3af Class 3	EEE 802.3af Class 3		
Power Source	PoE+	IEEE 802.3at Class 4	EE 802.3at Class 4		
IR Illumination	PoE		lluminator will turn off if the temperature is 65°C (149°F) or higher. The illuminator will operate at 50% wer and 25% power if below -25°C (-13°F)		
Behavior	PoE+		Illuminator will turn off if the temperature is 65°C (149°F) or higher. The illuminator will operate at 50% wer 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 Batter	у	3V manganese lithium			
Memory		4GB RAM, 4GB Flash			
Redundant Power		Seamless failover between F	PoE and Aux and back without interrupt in camera operation (for H6X only)		
Environmental		Indoor Dome	Outdoor Dome		
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)		
Temperature	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	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)		
Temperature	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 7		4 °C (165 °F) per NEMA TS2 (Temp.) para 2.2.7.2 - 2.2.7.7			
Storage Temperatu	ire	-10°C to +70°C (14°F to 158°F)			
Humidity		0 - 95% non-condensing			
Certifications					
Certifications/Appr	Certifications/Approvals		UL, cUL, CE, ROHS, RCM, UKCA, NOM, KC, BIS		
Safety Standards		UL 62368-1, CSA 62368-	UL 62368-1, CSA 62368-1, IEC/EN 62368-1, IEC 62471, UL 2043 Plenum (in-ceiling only)		
Environmental	Indoor Dome	IEC 60529 IP54, IEC/EN 62262 IK11 (IK10 Surface Mount w/IR)			
Standards/Ratings	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		61000-3-3,	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 55035, EN 61000-6-1, EN 50121-4, EN 50130-4		
Warranty		Limited 5 Year Warranty (avigilon.com/warranty)			

Analytics Specifications

Supported Analytics Even	nts
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 de	etection range, may vary by camera line. Please consult the Avigilon Self-Learning Video Analytics Design Guide for details.
Supported Classified Obje	ect 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

Supported Audio Analytics Events		
Scream	Up to 15 meters	
Glass Break	Up to 15 meters	
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	

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

²The 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.		

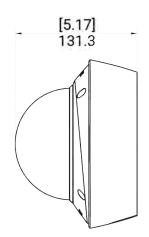
7

Outline Dimensions

H6A Dome Camera with Surface Mount

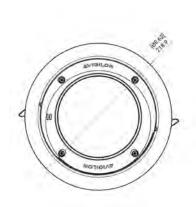
[X.XX]	INCHES
X.X	MM

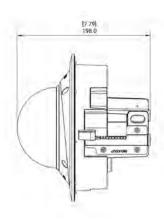




H6A Dome Camera with In-Ceiling Mount (CLADP-1001)

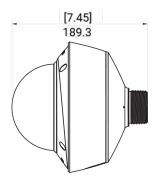
[X.XX]	INCHES
X.X	MM





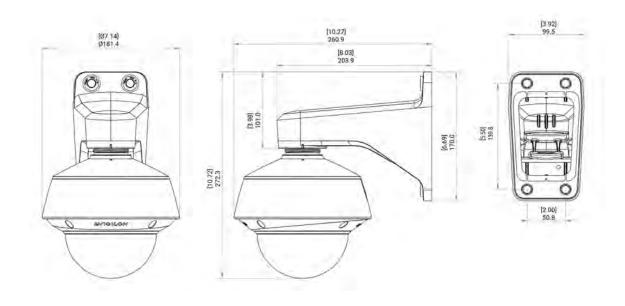
[X.XX]	INCHES
X.X	MM





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

[X.XX]	INCHES
X.X	MM



Ordering Information

Mounting Scenario		Ordering information
Pendant Wall Mount	directo	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	AVIOILON	Order one of: • Indoor or outdoor surface mount camera • H6A-MT-NPTA1
Surface Mount	AVIGILON	Order one of: Indoor or outdoor surface mount camera Optional: DMSLD-1001 (weathershield)
In-Ceiling Mount	AVIGILON	Order one of: Indoor or outdoor in-ceiling mount camera CLADP-1001 Optional: CLPNL-1011 (metal ceiling panel)



H6A Outdoor Dome Camera Models

Models	MP	WDR	Lightcatcher Technology	Lens	IR	Analytics	HDSM SmartCodec	Microphone	Seamless Failover
2.0C-H6A-D01	2.0	✓	✓	2.8 - 12 mm		✓	√	√	
2.0C-H6A-D02	2.0	✓	√	10.9 - 29 mm		✓	√	√	
2.0C-H6A-D01-IR	2.0	✓	✓	2.8 - 12 mm	✓	✓	√	√	
2.0C-H6A-D02-IR	2.0	✓	√	10.9 - 29 mm	✓	✓	√	√	
4.0C-H6A-D01	4.0	✓	✓	4.4 - 9.3 mm		✓	√	√	
4.0C-H6A-D02	4.0	✓	✓	10.9 - 29 mm		✓	√	√	
4.0C-H6A-D01-IR	4.0	✓	✓	4.4 - 9.3 mm	✓	✓	√	√	
4.0C-H6A-D02-IR	4.0	✓	✓	10.9 - 29 mm	✓	✓	√	√	
6.0C-H6A-D01	6.0	✓	✓	4.4 - 9.3 mm		✓	√	√	
6.0C-H6A-D02	6.0	✓	✓	10.9 - 29 mm		✓	√	√	
6.0C-H6A-D01-IR	6.0	✓	✓	4.4 - 9.3 mm	✓	✓	√	√	
6.0C-H6A-D02-IR	6.0	✓	✓	10.9 - 29 mm	✓	✓	√	√	
8.0C-H6A-D01	8.0	✓	✓	4.4 - 9.3 mm		✓	√	√	
8.0C-H6A-D02	8.0	✓	✓	10.9 - 29 mm		√	√	√	
8.0C-H6A-D01-IR	8.0	✓	✓	4.4 - 9.3 mm	√	√	√	√	
8.0C-H6A-D02-IR	8.0	√	✓	10.9 - 29 mm	√	√	✓	✓	

H6X Outdoor Dome Camera Models

Models	MP	WDR	Lightcatcher Technology		IR		HDSM SmartCodec	Microphone	Seamless Failover
4.0C-H6X-D01-IR	4.0	√	✓	4.4 - 9.3 mm	✓	✓	√		✓
4.0C-H6X-D02-IR	4.0	√	✓	10.9 - 29 mm	✓	✓	√		✓
8.0C-H6X-D01-IR	8.0	√	✓	4.4 - 9.3 mm	✓	✓	√		✓
8.0C-H6X-D02-IR	8.0	√	√	10.9 - 29 mm	√	✓	✓		✓



H6A Indoor Dome Camera Models

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



Camera Accessories

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: avigilon.com



