H6XP Short Bullet Camera

4 MP   8 MP

Combine multiple use cases into one with the Avigilon H6XP Short Bullet Camera, empowering you to do more with less. It includes an IoT hub that provides compatibility with Z-Wave devices, such as panic buttons and sensors, making the camera more powerful and reducing ownership costs.

Features

Z-Wave Compatible
Connect with Z-Wave compatible devices to enhance control and integrate with existing systems. Expand the camera's intelligence to cover multiple use cases, all while reducing costs.

Audio Analytics & Recording
Stay alert with real-time notifications for gunshots[1], breaking glass, screaming and more. Quickly review video from the triggering camera and choose to record audio as needed.

Dynamic Privacy Masking
Preserve people's privacy by tracking and blurring people and vehicles appearing on camera, with the flexibility for authorized personnel to lift it during investigations.

AI-powered Video Analytics
Be proactive with advanced analytics that detect unusual crowds or people crawling near your perimeter. Classify more objects with event support, including vans and various trucks.

Low-Light Clarity
Capture clear images even in total darkness with our IR cameras. Both camera forms offer low-light visibility, minimizing maintenance while ensuring consistent performance in all conditions.

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.

[1] Separate license required.

MOTOROLA SOLUTIONS

AVIGILON

Specifications

Image Performance		4.0 MP	8.0 MP (4K Ultra HD)
Image Sensor		1/1.8" progressive scan CMOS	
Max Resolution (H x V) and Aspect Ratio	Primary	(16:9) 2688 x 1520, 2560 x 1440, 1920 x 1080 (4:3) 1984 x 1488	(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) 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) 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 (4:3) 1280 x 960, 800 x 600, 640 x 480, 512 x 384, 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 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 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[1]		(50 Hz/60 Hz): 50 fps/60 fps in High Frame Rate Mode[2], 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 15 fps when classified object privacy masking is enabled.

[2] 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		
IR Illumination Max Distance[1] (high power 850 nm LEDs)		70 m (229 ft), full tele 30 m (131 ft), full wide
Minimum Illumination	4 MP	With IR: 0 lux in monochrome mode Without IR: 0.003 lux in monochrome mode; 0.008 lux in color mode
	8 MP	With IR: 0 lux in monochrome mode Without IR: 0.006 lux in monochrome mode; 0.02 lux in color mode
Horizontal Angle of View Based on Aspect Ratio	4 MP	(16:9) 47° - 111° (4:3) 35° - 78°
	8 MP	(16:9) 47° - 109° (4:3) 35° - 78°
Vertical Angle of View Based on Aspect Ratio	4 MP & 8 MP	(16:9) 26° - 57° (4:3) 26° - 57°
Max Aperture		F1.3
Control		Remote Zoom and Focus, Autofocus, IR Cut Filter

[1] 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)

Image Control

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, 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, 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 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[2]	Two microSD/microSDHC/microSDXC slots - video speed class card required. Class V10 or better recommended.

[2] 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

Dimensions (LxWxH)		311 mm x 133 mm x 133 mm; 12.23" x 5.23" x 5.23"
Weight	Camera	2.11 kg; 4.65 lbs
	Wall Plate	0.15 kg; 0.33 lbs
Body		Polycarbonate and aluminum
Housing		Backbox Mount
Finish		High polished plastic injection mold; Powdercoat grey, pantone 427C
Adjustment Range		Hinge +/- 90°, Rotation +/- 175°

Electrical

Power Consumption		25W Max
Power Source	PoE	IEEE 802.3af Class 3
	PoE+	IEEE 802.3at Class 4

Electrical

IR Illuminator Behavior	PoE	Above 60 °C (140 °F), IR will be disabled. Between -5 °C (23 °F) and 55 °C (131 °F), IR operates at 30% power. Below -20 °C (-4 °F), IR operates at 10% power. Hysteresis at 5 °C (9 °F).
	PoE+ or Aux Power	Above 60 °C (140 °F), IR will be disabled. Between 50 °C (122 °F) and 60 °C (140 °F), IR operates at 50% power. Below -20 °C (-4 °F), IR operates at 50% power. Hysteresis at 5 °C (9 °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

Environmental

Operating Temperature	-50°C to +65°C (-58°F to 149°F)
Startup Temperature	-40°C to +65°C (-40°F to 149°F)
Absolute Maximum Temperature	74°C (165°F) per NEMA TS2 (Temp.) para 2.2.7.2 - 2.2.7.7
Storage Temperature	-10°C to +70°C (14°F to 158°F)
Humidity	0 - 100% non-condensing

Certifications

Certifications/Approvals	NA	UL, cUL, FCC, IC, Z-Wave
	EU	CE, UKCA, ROHS, Z-Wave
Safety Standards		UL 62368-1, CSA 62368-1, IEC/EN 62368-1, IEC 62471
Environmental Standards/Ratings		IEC 60529 IP66, IP67, IP68, IPX9K, NEMA 4X, IEC 60068-2 Shock & Vibration, NEMA TS2 Sec 2.2.7-2.2.9, IK10
Electromagnetic Emissions Standards	NA	FCC Part 15 Subpart B Class B, ICES-003 Class B
	EU	EN 55032 Class B, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 50121-4, EN 50130-4, ETSI EN 301 489-1, ETSI EN 301 489-3
Electromagnetic Immunity Standards	NA	N/A
	EU	EN 55035, EN 61000-6-1, EN 50121-4, EN 50130-4, ETSI EN 301 489-1, ETSI EN 301 489-3
Radio	NA	FCC Part 15 Subpart C, FCC KDB 447498, RSS-210, RSS-102
	EU	ETSI EN 300 220-1, ETSI EN 300 220-2, EN 62479
Warranty		Limited 5 Year Warranty (avigilon.com/warranty)

Analytics Specifications

Supported Analytics Events[1]	
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.
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.

[1] 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

Supported Audio Analytics Events	
Gunshot[2]	Up to 100 meters
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
Tire Screech[3]	Up to 15 meters
Loud Noise	Up to 40 meters
Ultrasonic Panic Alarm[4]	Up to 40 meters

[2] Optional add-on license required.

[3] The detection range is limited to up to 8 meters in loud environments.

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

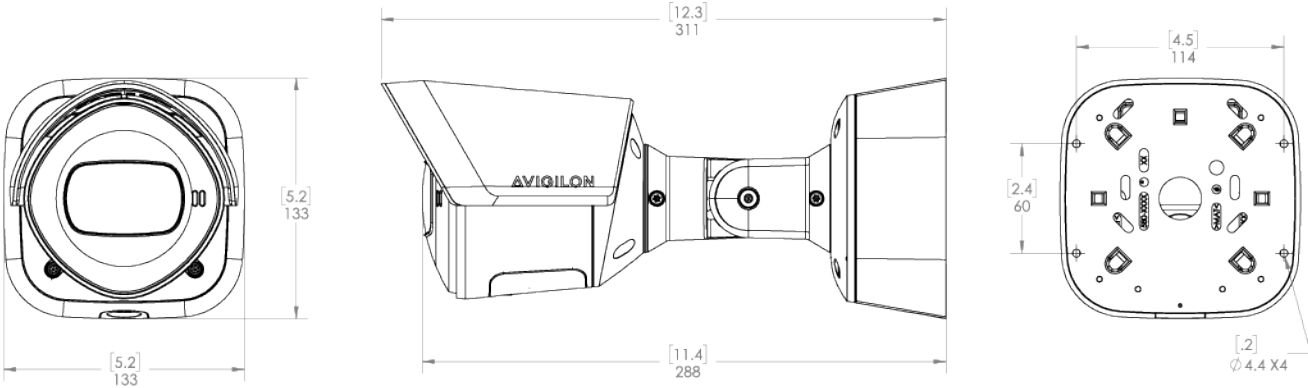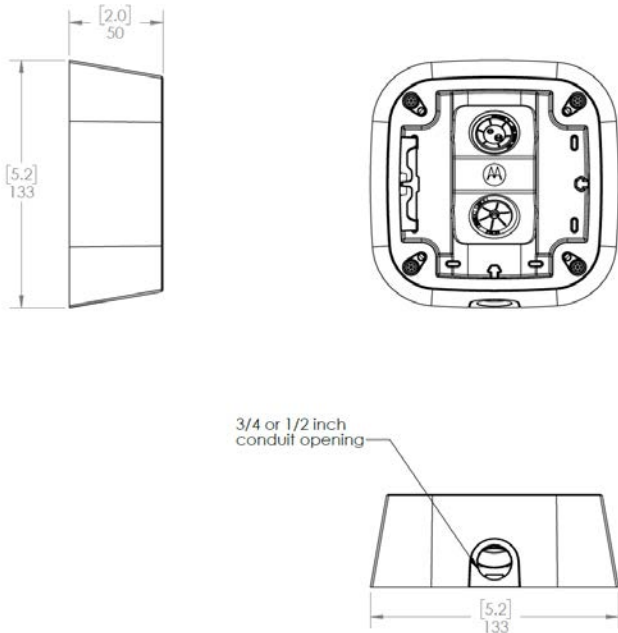| Avigilon Software Supported Features	
Avigilon Unity Video 8.4 or higher	All advanced Z-Wave compatibility features.
Avigilon Unity Video 8.0 or higher	All supported analytic events with people and vehicles and all vehicle sub-types as classified objects. Appearance search when paired with appropriate 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

[X.X]	INCHES
X	MM

Short Bullet Camera

(H6XP-BO1-IR)

Junction Box

3/4 or 1/2 inch conduit opening

Z-Wave Sensors

Z-Wave Door Contact Sensor (SM810)

LED

Tamper Switch
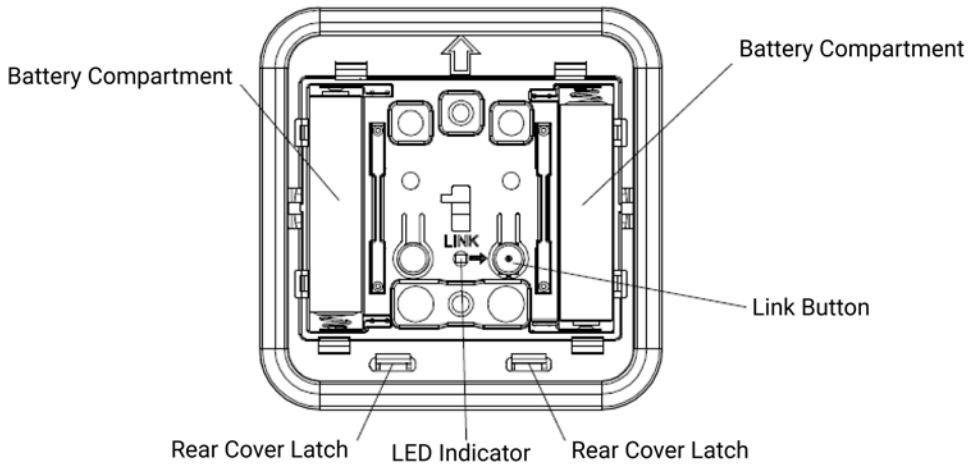
Battery

LITHIUM BATTERY
CR 2450
3V

Fixed Screw

Battery Mylar

Z-Wave Outdoor Motion Sensor (SP816)

Front Cover

Motion Sensor

LED indicator

Time-off /Lux Knob

Tamper Switch

Battery

Rear Cover
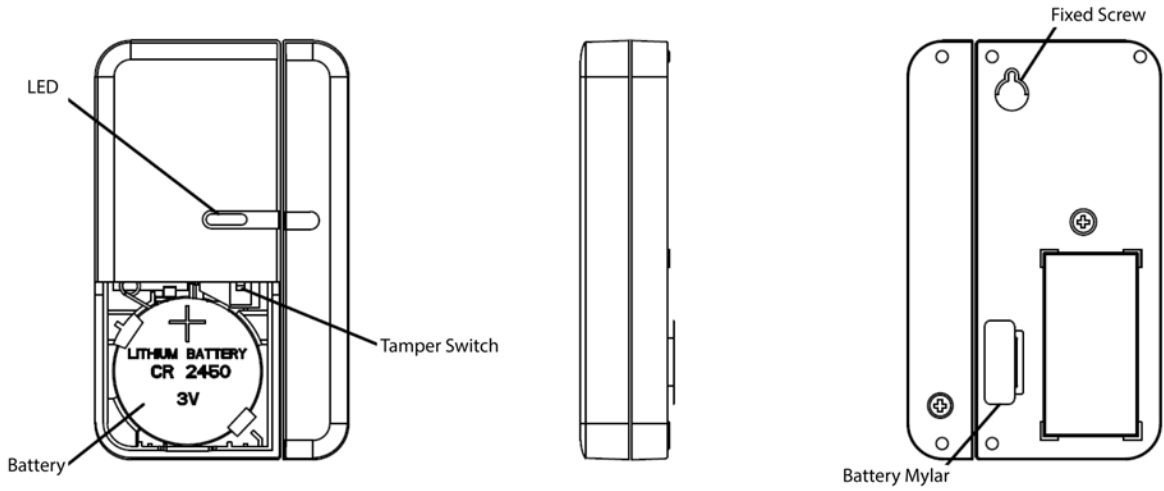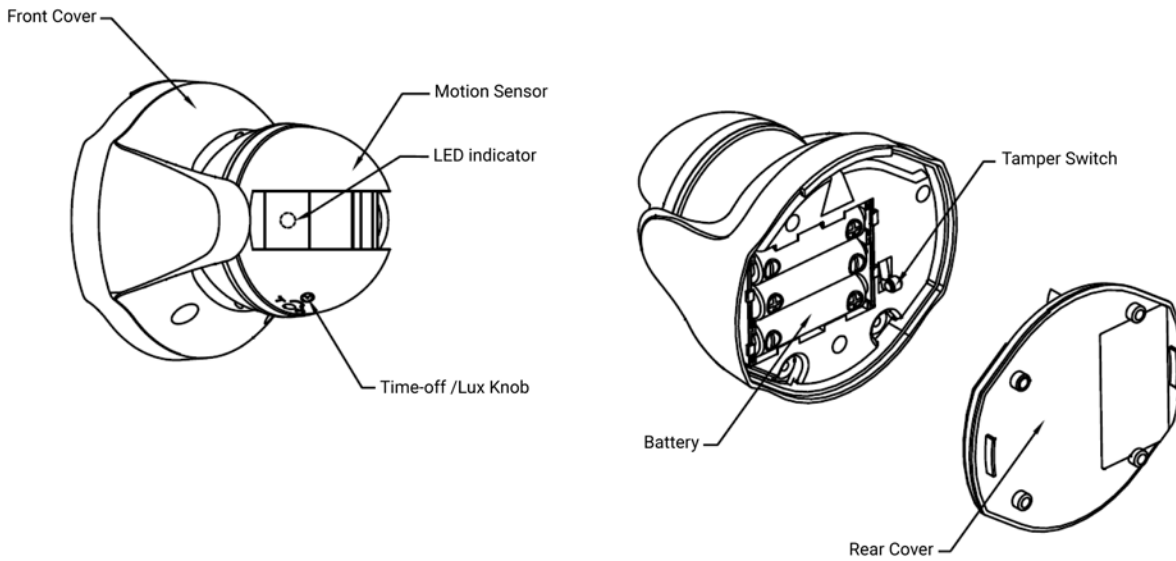
Z-Wave Indoor Motion Sensor (SP817)

61.62

87

PIR WINDOW

41.75

Z-Wave Panic Button (AC136)

Battery Compartment

Battery Compartment

LINK

Link Button

Rear Cover Latch   LED Indicator   Rear Cover Latch
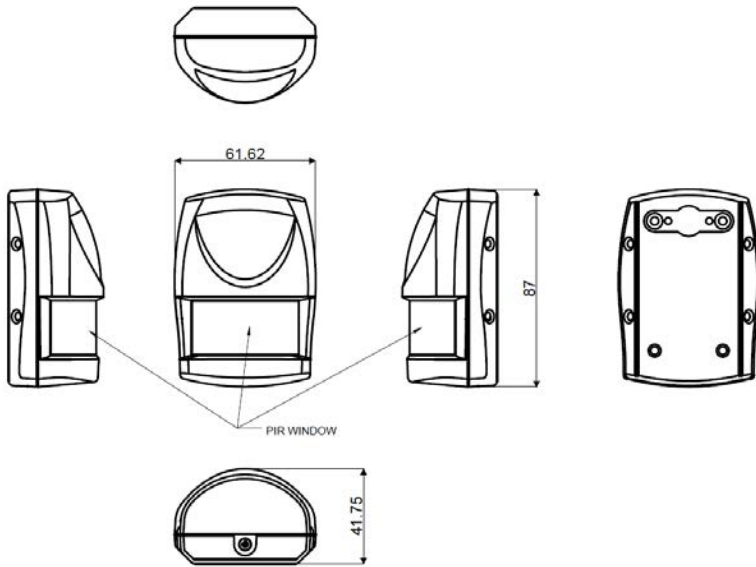
Ordering Information

Bullet Camera

Model	MP	WDR	Lightcatcher Technology	Lens	IR	Analytics	HDSM SmartCodec	Microphone	Z-Wave[1]
4.0C-H6XP-BO1-IR-NA	4.0	✓	✓	4.4 - 9.3 mm	✓	✓	✓	✓	✓
4.0C-H6XP-BO1-IR-EU	4.0	✓	✓	4.4 - 9.3 mm	✓	✓	✓	✓	✓
8.0C-H6XP-BO1-IR-NA	8.0	✓	✓	4.4 - 9.3 mm	✓	✓	✓	✓	✓
8.0C-H6XP-BO1-IR-EU	8.0	✓	✓	4.4 - 9.3 mm	✓	✓	✓	✓	✓

[1] Z-Wave devices use different frequencies depending on their region. Cameras ending in "NA" are designed for use in North America and use the 902-928 MHz frequency band. Cameras ending in "EU" are designed for use in Europe and use the 863-870 MHz frequency band.

Z-Wave Sensors

SM810-NA-AVO	Z-Wave door contact sensor (NA)
SM810-EU-AVO	Z-Wave door contact sensor (EU)
SP816-NA-AVO	Z-Wave outdoor motion sensor (NA)
SP816-EU-AVO	Z-Wave outdoor motion sensor (EU)
SP817-NA-AVO	Z-Wave indoor motion sensor (NA)
SP817-EU-AVO	Z-Wave indoor motion sensor (EU)
AC136-NA-AVO	Z-Wave panic button (NA)
AC136-EU-AVO	Z-Wave panic button (EU)

Bullet Camera Accessories

H6A-BO-SHLD1	Replacement BO1 bullet sunshield
CAM-AA-GUNSHOT	Avigilon Camera Gunshot Audio Analytics Channel, one per camera
CAM-AA-GUNSHOT-180D	Avigilon Camera Gunshot Audio Analytics Channel, 180 day demo license. Please contact Avigilon Technical Support.
CAM-FIPS	Camera license to enable FIPS cryptographic module.

Support

Learn more and find additional documentation at avigilon.com or email sales@avigilon.com for specific product support.

sales@avigilon.com | avigilon.com