H5A Explosion-Protected Bullet Camera

2 MP

Avigilon H5A Explosion-Protected cameras are certified for explosion-rated environments according to international standards. They are designed to offer an efficient video security solution for hazardous environments that face the risk of explosions due to the presence of flammable gases or dust, including oil and gas, marine, industrial and food production sites.

The cameras feature exceptional imaging that works in conditions with poor lighting, and include next generation video analytics to offer enhanced object detection, tracking and classification.

Features

NEXT-GENERATION VIDEO ANALYTICS
Expanded object classifications and more accurate detection in crowded scenes so you can detect and act faster.

EXPLOSION PROTECTION
Heavy-duty housing custom-built for H5A cameras.

H.265 WITH HDSM SMARTCODEC™ TECHNOLOGY
Optimizes compression levels for regions in a scene to help maximize bandwidth savings, helping to keep internet connectivity costs down.

AUTOMATIC IR CUT FILTER
Exceptional imaging performance in low-light situations.

WIDE DYNAMIC RANGE
Capture details in scenes with both very bright and dark areas.

LIGHTCATCHER™ TECHNOLOGY
Offers exceptional detail in areas with low lighting.

ONVIF® COMPLIANT
Built on an open platform to allow integration with other security solutions.

HIGH TEMPERATURE RANGE
Optimized to operate reliably even at increased temperature variances.

ONVIF is a trademark of Onvif, Inc.

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Specifications

IMAGE PERFORMANCE	Resolution		2.0 MP
	Image Sensor		1/2.8" progressive scan CMOS
	Max Resolution (H × V) and Aspect Ratio		(16:9) 1920 × 1080
	Dynamic Range	WDR Off	83 dB
		WDR On	120 dB
	Max Image Rate		60 fps
	3D Noise Reduction Filter		Yes

LENS	Lens	4.3-129 mm (30x zoom)
	Minimum Illumination	0.1 lux (F/1.6) in color mode; 0.03 lux (F/1.6) in monochrome mode
	Horizontal Angle of View Based on Aspect Ratio	(16:9) 3.1°-64°
	Vertical Angle of View Based on Aspect Ratio	(16:9) 1.7°-38°
	Max Aperture	F1.6
	Control	P-Iris, remote focus and zoom

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, video analytics based	
	Electronic Shutter Control	Automatic, Manual (1/1 to 1/30,000 sec)	
	Iris Control	Automatic, Open, Closed	
	Day/Night Control	Automatic, Manual	
	Flicker Control	60 Hz, 50 Hz	
	White Balance	Automatic, Manual	
	Backlight Compensation	On/Off	
	Privacy Zones	Up to 64 zones	
	Digital Zoom	Up to 100x when used with ACC™ Client for Windows	
	Electronic Image Stabilization	On/Off	
	Digital Defog	Adjustable/Off	

NETWORK	Network	100BASE-TX, RJ45 Connector (CAT5E cabling)
	ONVIF	ONVIF compliance version 1.02, 2.00, Profile S, Profile T (www.onvif.org)
	Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication
	Protocols	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

MECHANICAL	Dimensions (LxWxH)	ø155.5 mm × 264 mm; ø6.12" × 10.4" (dimensions without sunshield)
	Weight	With 4m cable: 8.5 kg; 18.7 lbs With 10m cable: 12.0 kg; 26.5 lbs
	Body	AISI 316L stainless steel
	Finish	Electro-polished surface
	Wiper	Yes
	Cable Entry	3/4" NPT
	Cable Gland	Ex db 3/4" NPT and preinstalled armored cable or with tail cable
	Armored Cable Option	External diameter: 20.00 mm (0.79") ± 0.50 mm (0.20") Diameter under armature: 15.20 mm (0.60") Color: black RAL 9005 Composition: 3 × 2.5 mm² (13 AWG), 7 × 0.34 mm² (22 AWG), 4 × 2 × 0.22 mm² (24 AWG) (cat. 5E)
	Cable Tail Option	3 × 2.5 mm² (13 AWG), external diameter 8.7 mm (0.34") 7 × 0.34 mm² (22 AWG), external diameter 6.4 mm (0.25") 4 × 2 × 0.21 mm² (24 AWG) (cat. 5E), external diameter 6.7 mm (0.26")

ELECTRICAL	Power Consumption	53 W
	External Power	VDC: 12 V ± 5% (3.5A), VDC: 24 V ± 5% (2.2A), VAC: 24 V ± 10% (2.2A) at 50/60 Hz

ENVIRONMENTAL	Operating Temperature	-50 °C to +60 °C (-58 °F to 140 °F)
	Storage Temperature	-40 °C to +55 °C (-40 °F to 131 °F)
	Humidity	10% - 95% non-condensing
	Cold Start	Up to 2 hour startup delay at temperature lower than -10 °C (14 °F)

AUXILIARY I/O	Alarm Inputs	1
	Alarm Outputs	1 (1A, 30 VAC/60 VDC max)

Certifications/Directives	UL, cUL, CE, RCM
Safety	UL/CSA 62368-1, EN/IEC 62368-1
Environmental	EN/IEC 60529: IP66, IP67, IP68, IP69 EN 60068-2-52: salt spray UL50E: 4X, 6P
Electromagnetic Emissions	FCC Part 15 Subpart B Class A, IC ICES-003 Class A, EN 55032 Class A, EN 61000-6-4
Electromagnetic Immunity	EN 50130-4

Explosion Protected	ATEX	EN 60079-0, EN 60079-1, EN 60079-31
	IECEx	IEC 60079-0, IEC 60079-1, IEC 60079-31
	EAC Ex	ГОСТ IEC 60079-0, ГОСТ IEC 60079-1, ГОСТ IEC 60079-31
	INMETRO	ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31
	KCS	Employment and Labor Department 2016-54
	Haz Loc for USA	UL 60079-0, UL 60079-1, UL 60079-31
	Haz Loc for Canada	CSA C22.2 No. 60079-0, CSA C22.2 No. 60079-1, CSA C22.2 No. 60079-31

Camera certified by Videotec S.P.A., model MVX.

Analytics Specifications

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 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. 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 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.
Tamper Detection	The event is triggered when the scene unexpectedly changes.

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

Teach By Example	Yes, when used with Avigilon Control Center™ software

ACC Version 6.14.10 or higher	All supported analytic events with two types of classified objects: person or vehicle. Appearance search when paired with appropriate server hardware. H.265 supported.
ACC Version 7.2 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. H.265 supported.

Explosion-Protected Certifications
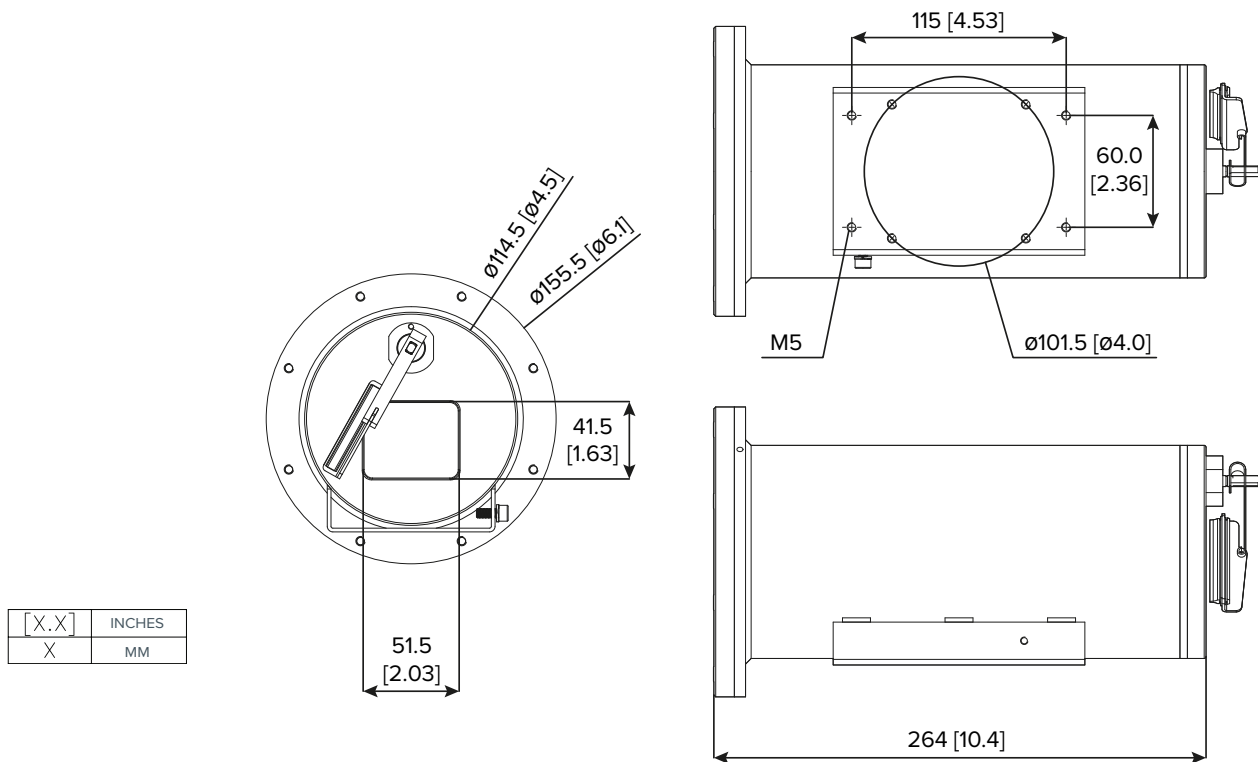## With armored cable option

Certification	Marking	Ambient Temperature
ATEX	⟨Ex⟩II 2 G Ex db IIC T5 Gb ⟨Ex⟩II 2 D Ex tb IIIC T100°C Db IP66/IP68	-60°C ≤ Ta ≤ +65°C
	⟨Ex⟩II 2 G Ex db IIC T6 Gb ⟨Ex⟩II 2 D Ex tb IIIC T85°C Db IP66/IP68	-60°C ≤ Ta ≤ +55°C
IECEx	Ex db IIC T5 Gb Ex tb IIIC T100°C Db IP66/IP68	-60°C ≤ Ta ≤ +65°C
	Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP66/IP68	-60°C ≤ Ta ≤ +55°C
INMETRO	Ex db IIC T5 Gb Ex tb IIIC T100°C Db IP66/IP68	-60°C ≤ Ta ≤ +65°C
	Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP66/IP68	-60°C ≤ Ta ≤ +55°C
EAC Ex	1 Ex d IIC T5 Gb X Ex tb IIIC T100°C Db X	-60°C ≤ Ta ≤ +65°C
	1 Ex d IIC T6 Gb X Ex tb IIIC T85°C Db X	-60°C ≤ Ta ≤ +55°C

Explosion-Protected Certifications
With cable tail option, for installation with conduit

Certification	Marking	Ambient Temperature
ATEX	⟨Ex⟩ II 2 G Ex db IIC T5 Gb ⟨Ex⟩ II 2 D Ex tb IIIC T100°C Db IP66/IP68	-50°C ≤ Ta ≤ +65°C
	⟨Ex⟩ II 2 G Ex db IIC T6 Gb ⟨Ex⟩ II 2 D Ex tb IIIC T85°C Db IP66/IP68	-50°C ≤ Ta ≤ +55°C
IECEx	Ex db IIC T5 Gb Ex tb IIIC T100°C Db IP66/IP68	-50°C ≤ Ta ≤ +65°C
	Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP66/IP68	-50°C ≤ Ta ≤ +55°C
INMETRO	Ex db IIC T5 Gb Ex tb IIIC T100°C Db IP66/IP68	-50°C ≤ Ta ≤ +65°C
	Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP66/IP68	-50°C ≤ Ta ≤ +55°C
KCs	Ex d IIC T5 Ex tb IIIC T100°C	-50°C ≤ Ta ≤ +65°C
	Ex d IIC T6 Ex tb IIIC T85°C	-50°C ≤ Ta ≤ +55°C
EAC Ex	1 Ex d IIC T5 Gb X Ex tb IIIC T100°C Db X	-50°C ≤ Ta ≤ +65°C
	1 Ex d IIC T6 Gb X Ex tb IIIC T85°C Db X	-50°C ≤ Ta ≤ +55°C
Hazardous Location America (All versions)	Class I, Zone 1, AEx db IIC T5 Gb Class I, Div 2, Group A, B, C, and D, T5 Zone 21, AEx tb IIIC T100°C Db Class II, Div 2, Group E, F and G, T100°C	-50°C ≤ Ta ≤ +65°C
	Class I, Zone 1, AEx db IIC T6 Gb Class I, Div 2, Group A, B, C, and D, T6 Zone 21, AEx tb IIIC T85°C Db Class II, Div 2, Group E, F and G, T85°C	-50°C ≤ Ta ≤ +55°C
Hazardous Location Canada (All versions)	Ex db IIC T5 Gb Class I, Div 2, Group A, B, C, and D, T5 Ex tb IIIC T100°C Db Class II, Div 2, Group E, F and G, T100°C	-50°C ≤ Ta ≤ +65°C
	Ex db IIC T6 Gb Class I, Div 2, Group A, B, C, and D, T6 Ex tb IIIC T85°C Db Class II, Div 2, Group E, F and G, T85°C	-50°C ≤ Ta ≤ +55°C

Outline Dimensions

115 [4.53]

60.0 [2.36]

M5   ø101.5 [ø4.0]

ø114.5 [ø4.5]

ø155.5 [ø6.1]

41.5 [1.63]

[X.X]	INCHES
X	MM

51.5 [2.03]

264 [10.4]

Ordering Information

	MP	Cable Type	Cable Length	Temperature Option	Lens	Analytics	HDSM SmartCodec
2.0C-H5EX-A0-BO1	2.0	Cable gland and armored cable	4m	T5: -50 °C to 65 °C	4.3 - 129 mm	✓	✓
2.0C-H5EX-A2-BO1	2.0		4m	T6: -50 °C to 55 °C	4.3 - 129 mm	✓	✓
2.0C-H5EX-B0-BO1	2.0		10m	T5: -50 °C to 65 °C	4.3 - 129 mm	✓	✓
2.0C-H5EX-B2-BO1	2.0		10m	T6: -50 °C to 55 °C	4.3 - 129 mm	✓	✓
2.0C-H5EX-F1-BO1	2.0	Tail cable. For installation with conduit (conduit sealing and conduit not included)	4m	T5: -50 °C to 65 °C	4.3 - 129 mm	✓	✓
2.0C-H5EX-F3-BO1	2.0		4m	T6: -50 °C to 55 °C	4.3 - 129 mm	✓	✓
2.0C-H5EX-G1-BO1	2.0		10m	T5: -50 °C to 65 °C	4.3 - 129 mm	✓	✓
2.0C-H5EX-G3-BO1	2.0		10m	T6: -50 °C to 55 °C	4.3 - 129 mm	✓	✓

Accessories

AVGEX-NXWBS1		Wall bracket for use with H5EX-BO cameras. AISI 316L stainless steel.
AVGEX-MHXWFWCA		Parapet mounting bracket for use with H5EX-BO cameras. AISI 316L stainless steel.
AVGEX-NXFWBT		Vertical riser, 124 mm (4.9"), for use with H5EX-BO cameras. AISI 316L stainless steel.
AVGEX-NXWTU		Wall adapter module, for use with AVGEX-NXWBS1. AISI 316L stainless steel.
AVGEX-NXCOL		Pole mount adapter for use with H5EX-BO cameras or explosion protected washers. For pole diameters from 110 mm (4.3") to 150 mm (5.9"). Max load 50 kg (110 lb). AISI 316L stainless steel.
AVGEX-NXCW		Corner mount adapter for use with H5EX-BO cameras or explosion protected washers. Max load 50 kg (110 lb). AISI 316L stainless steel.
AVGEX-OCTEXP3/4C		Conduit cable gland, nickel-plated brass, 3/4" NPT, IECEX - ATEX - c CSA us - EAC Ex (operating temperature from -60 °C up to +80 °C).

Explosion-Proof Communication Box

Communication boxes include a 3-port RJ45 and 1 SFP port Ethernet switch and 24 VAC output for powering up to:
- 2x H5EX compact bullet cameras
- 2x H5EX bullet cameras with 2x washer pump
- 1x H5EX PTZ camera with 1x washer pump

AVGEX-MBA1S5A		Aluminum housing, 230 VAC input.
AVGEX-MBA2S5A		Aluminum housing, 24 VAC input.
AVGEX-MBA3S5A		Aluminum housing, 120 VAC input.
AVGEX-MBX1MAA		AISI 316L stainless steel housing, 230 VAC input.
AVGEX-MBX2MAA		AISI 316L stainless steel housing, 24 VAC input.
AVGEX-MBX3MAA		AISI 316L stainless steel housing, 120 VAC input.
AVGEX-MBXMP		Adapter plate for communication box to AVGEX-MPXCOL or AVGEX-MPXCW mounts. AISI 316L stainless steel housing.
AVGEX-MBXWRE		Wrench for opening communication boxes, AVGEX-MBX.
AVGEX-MPXCOL		Pole mount adapter for use with AVGEX-MBXMP or H5EX PTZ cameras. For pole diameters from 110 mm (4.3") to 150 mm (5.9"). Max load 50 kg (110 lb). AISI 316L stainless steel.
AVGEX-MPXCW		Corner mount adapter for use with AVGEX-MBXMP or H5EX PTZ cameras. Max load 50 kg (110 lb). AISI 316L stainless steel.

Explosion-Proof Washer

A 10L (2.6 gal) tank with integrated manual pump and delivery up to 20m (66 ft), 24 VAC/VDC input.

AVGEX-WASEX2T4AT		ATEX certified solenoid valve.
AVGEX-WASEX2T4IN		INMETRO certified solenoid valve.
AVGEX-WASEX2T4KC		KCS certified solenoid valve.
AVGEX-WASEX2T4GOR		EAC Ex certified solenoid valve.