H5A RUGGED PTZ CAMERA

2 MP   **4 MP**   **8 MP**

The Avigilon H5A Rugged Pan-Tilt-Zoom (PTZ) Camera performs continuously and reliably in the harshest environments and is built to last for mission-critical applications. This camera combines high-resolution imaging, 360° views, and up to a powerful 36x zoom with an extremely robust design that's guaranteed by industry-leading protection ratings. The optional IR and white light illuminators provide ideal brightness in low-light scenes. Together, the H5A Rugged PTZ can take on the most challenging outdoor deployments in city security, critical infrastructure, transportation, manufacturing and ports.

FEATURES

EXCEPTIONAL STRENGTH & DURABILITY
Tested to MIL-STD-167-1A and 810G for extreme shock and vibration tolerance. Rated IK10 for impact resistance.

HIGH WIND RESISTANCE
Resists wind speeds up to 230 kph (143 mph) with PTZ moving at maximum speed.

FLEXIBLE INSTALLATION
Comes with many accessory options to take on the most demanding installations such as mounting brackets, power supplies, water pumps, IR and white light illuminators.

WIDE TEMPERATURE RANGE
Records continuously between -40 °C to +65 °C (-40 °F to +149 °F).

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

WATER, CORROSION & DUST PROTECTION
Rated Type 4X/6P and IP66/67/68 for optimal protection from water, corrosion and dust.

OPERATIONAL RELIABILITY FOR TRAFFIC MONITORING
Meets NEMA TS2 environmental requirements for deployment in traffic monitoring applications.

NEXT-GENERATION VIDEO ANALYTICS WITH AUTO-TRACKING
Detects more objects with expanded object classifications and automatically tracks objects in zone for faster, decisive responses.

FIPS 140-2 COMPLIANT
Brings increased data security with FIPS-compliant cryptography enabled on cameras[1].

H.264 AND H.265 WITH HDSM SMARTCODEC™ TECHNOLOGY
Optimizes compression levels for regions in a scene to help maximize bandwidth savings and keep internet connectivity costs down.

ONVIF is a trademark of Onvif, Inc.

[1]Optional purchase of FIPS Level 1 camera license or CRYPTR microSD hardware-based encryption and key management for FIPS Level 3 support and certification.

MOTOROLA *SOLUTIONS*

AVIGILON

SPECIFICATIONS

IMAGE PERFORMANCE	2.0 MP	4.0 MP	8.0 MP
Image Sensor	1/2.8" progressive scan CMOS	1/2.5" Type "Exmor R" CMOS sensor	
Active Pixels (H x V)	1937 (H) × 1097 (V)	2688 (H) × 1512 (V)	3840 (H) × 2160 (V)
Imaging Area (H x V)	4.8 mm (H) × 2.7 mm (V); 0.189" (H) × 0.106" (V)	6.22 mm (H) × 3.50 mm (V); 0.245" (H) × 0.137" (V)	
IR Illumination Max Distance — AVUEI8AA	100 m (328 ft)	30 m (98 ft)	
IR Illumination Max Distance — AVUEI8AAP	200 m (656 ft)	75 m (246 ft)	
IR Illumination Max Distance — AVUEI9AA	75 m (246 ft)	20 m (66 ft)	
IR Illumination Max Distance — AVUEIWAA	150 m (492 ft)	50 m (164 ft)	
IR Illumination Max Distance — AVUEIWAAP	200 m (656 ft)	100 m (328 ft)	
Minimum Illumination	0.03 lux (F/1.6) in color mode; 0.02 lux (F/1.6) in monochrome	0.3 lux (F/2.0) in color mode; 0.09 lux (F/2.0) in monochrome	
Dynamic Range	120+ dB	100 dB	
Image Rate	Up to 60 fps	Up to 30 fps	
Aspect Ratio (Resolution Scaling)	Down to (16:9) 384×216 or (5:4) 320×256		
3D Noise Reduction Filter	Yes		

LENS	2.0 MP	4.0 MP	8.0 MP
Lens	4.25 to 170 mm, F/1.6 - F/4.95, autofocus	4.4 to 88 mm, F/2.0 - F/3.8, autofocus	
Angle of View — Horizontal	66.35° - 1.9°	69.7° - 2.2°	
Angle of View — Vertical	38.5° − 1.1°	42.8° − 1.3°	
Zoom	40x	36x[1]	

[1] Maximum zoom (up to 36x) is achieved with Image Stabilization off. Image Stabilization set to on will provide 30x zoom.

IMAGE CONTROL	2.0 MP	4.0 MP	8.0 MP
Video Compression	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		
Electronic Shutter Control	Automatic, Manual (1/1 to 1/10,000 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	3D, up to 64 zones		
Presets	500 named presets		
Tours	10 named tours		
Digital Zoom	Up to 100x when used with ACC™ Client for Windows		
Electronic Image Stabilization	No	Yes	
Digital Defog	Adjustable/Off		

NETWORK			
Network	100BASE-TX		

NETWORK

Cabling Type	CAT5e/CAT6 shielded (STP) Ethernet cable is required to fully comply with EMC regulatory standards
Connector	RJ-45
ONVIF	ONVIF compliance Profile S, Profile T, Profile G, and Profile M (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), FIPS 140-2 L3 (with optional accessory)
Protocols	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMPv2, ICMP, DHCP, Zeroconf, ARP, HSTS
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

PERIPHERALS

Audio Input/Output	None
External I/O Terminals	2 Alarm In, 2 Alarm Out
Onboard Storage	MicroSD/microSDHC/microSDXC slot – video speed class card required. Class V10 or better recommended.

MECHANICAL

Dimensions (Ø×H)		Ø240 mm × 406 mm; Ø9.45" × 16.0"
Weight	Camera	7.1 kg; 15.6 lbs
	Camera with LED illuminator	7.4 kg; 16.3 lbs
Glass Window		6 mm thick (0.24")
Body		Aluminum and technopolymer
Housing		Pendant and pedestal mount
Finish		Epoxy-polyester powder painted, close to RAL9002
Tilt		Upright: -90° to +90°; Inverted: -40° to +90° Up to 250°/second
Pan		360°, endless, up to 250°/second

ELECTRICAL

Power Consumption		71 W max with 24 VDC aux power supply or 90 W PoE, 100 VA with 24 VAC aux power. UL rating as specified on the product label = 5A max.
Power Source	External Power	24 VDC ±10% or 24 VAC rms ±10%, 50 or 60 Hz
	PoE*	90 W PoE: Phihong POE90U-1BT6-A-RC (Avigilon part number POE-INJ-BT-90W-NA)
Power Connector		2-wire terminal block, 18 AWG to 13 AWG
RTC Battery Backup		None

* High power PoE is only guaranteed with the Phihong POE90U-1BT6-A-RC (Avigilon part number POE-INJ-BT-90W-NA). Contact Avigilon sales or Avigilon technical support for more information.

ENVIRONMENTAL

Operating Temperature	Continuous operation from -40 °C to +65 °C (-40 °F to 149 °F)
Storage Temperature	-40 °C to +70 °C (-40 °F to 158 °F)
Humidity	5% - 95% non-condensing
Cold Start	Up to 135 minute startup delay at temperature lower than -10 °C (14 °F)
Wind Resistance	Sustained 230 km/h (143 mph)

CERTIFICATIONS

Certifications/Directives	UL, cUL, CE, UKCA, ROHS, RCM, NOM, KC, BIS
Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1, IEC/EN 62471
Environmental and Performance	UL/CSA/IEC 60950-22, IEC 62262 IK10 Impact Rating (enclosure only), IEC 60529 IP66, IP67, IP68 Weather Rating, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-30,

CERTIFICATIONS	
	NEMA TS 2 para 2.2.7 - 2.2.9, Type 4X and 6P, Salt Spray ASTM B117, ISO 14993, MIL-STD-810-H, MIL-STD-167-1A
Electromagnetic Emissions	FCC Part 15 Subpart B Class A, IC ICES-003 Class A, EN 55032 Class A, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3, EN 50121-4
Electromagnetic Immunity	EN 55035, EN 50130-4, EN 50121-4
Warranty	5-year limited warranty. Extended warranty not available.

ANALYTICS SPECIFICATIONS

SUPPORTED ANALYTICS EVENTS AT HOME POSITION	
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.

AUTO-TRACK OBJECTS IN AREA	
Auto-track Objects in Area	The event is triggered when the selected object type moves into the region of interest defined at the home position. The camera will automatically reposition to track the object, returning to the preset home position once object is lost.

SUPPORTED CLASSIFIED OBJECT TYPES	
Object Types in Outdoor Mode	Vehicle, sub-types: Car, Truck, Bicycle, Motorcycle, Bus Person
Object Types in Indoor Mode	Person

TEACH BY EXAMPLE	
Teach By Example	Yes, when used with Avigilon Control Center™

AVIGILON CONTROL CENTER (ACC) VERSIONS SUPPORTED FEATURES	
ACC Version 6.14.12 or higher*	All supported analytic events with two types of classified objects: person or vehicle. Appearance search when paired with appropriate server hardware. Auto-tracking is not supported. H.265 supported.
ACC Version 7.14.0 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. H.265 supported.

* ACC 6.14.12 or higher will not support configuration of the IR and white light illuminator accessories. Use ACC 7.14.0 or the camera's web interface to configure an illuminator accessory.
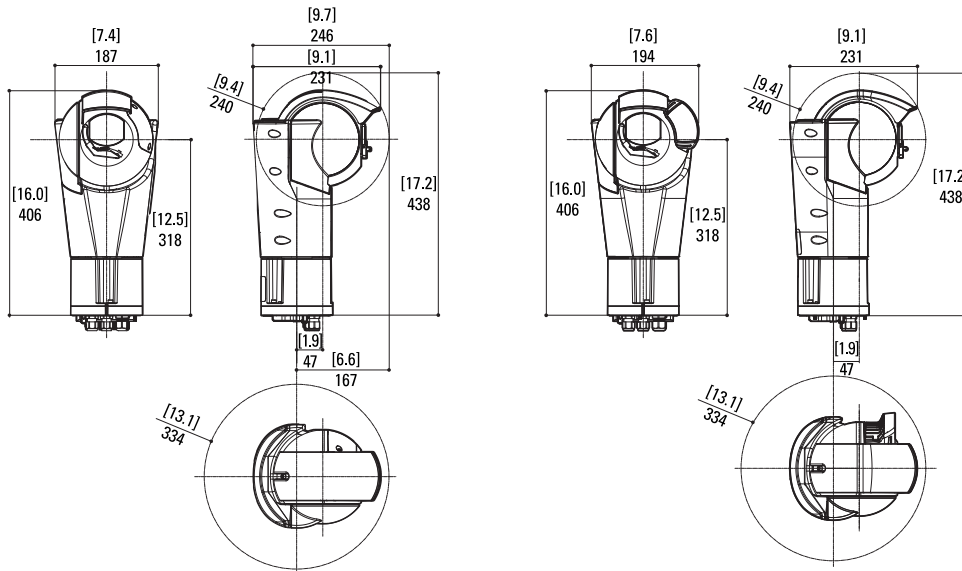
** Auto-tracking requires ACC 7.14.14 or higher to configure.

OUTLINE DIMENSIONS

RUGGED PTZ PENDANT CAMERA
(H5A-RGDPTZ-DP)

[X.X]	INCHES
X	MM

ORDERING INFORMATION

PTZ CAMERAS

	MP	WDR	LIGHTCATCHER TECHNOLOGY	ANALYTICS AT HOME POSITION	LENS	ZOOM	IP66/67/68	HDSM SMARTCODEC
2.0C-H5A-RGDPTZ-DP36-B	2.0	✓	✓	✓	4.25 – 170 mm	40x*	✓	✓
4.0C-H5A-RGDPTZ-DP36	4.0	✓	✓	✓	4.4 – 88 mm	36x*	✓	✓
8.0C-H5A-RGDPTZ-DP36	8.0	✓	✓	✓	4.4 – 88 mm	36x*	✓	✓

*Maximum zoom (up to 40x or 36x depending on the model) is achieved with Image Stabilization off. Image Stabilization set to on will provide 30x zoom.

PTZ CAMERA ACCESSORIES

ACCESSORY	DESCRIPTION
POE-INJ-BT-90W-NA	Gigabit 802.3bt 90W PoE Injector, single port
AVUEI8AA	IR illuminator, 850nm, compatible with H5A Rugged PTZ, close to RAL9002
AVUEI8AAP	Long distance IR illuminator, 850nm, compatible with H5A Rugged PTZ, close to RAL9002
AVUEI9AA	IR illuminator, 940nm, compatible with H5A Rugged PTZ, close to RAL9002
AVUEIWAA	White light illuminator, compatible with H5A Rugged PTZ, close to RAL9002
AVUEIWAAP	Long distance white light illuminator, compatible with H5A Rugged PTZ, close to RAL9002
AVUEBWAA	Wall arm mount, compatible with H5A Rugged PTZ, close to RAL9002
AVUEBP0AA	Parapet mounting bracket, internal cable channel, compatible with H5A Rugged PTZ, close to RAL9002
AVUEBP4AA	Parapet mounting bracket with quick connectors, RJ45 (Ethernet & PoE) and 4 poles with screw terminal (power & I/O), compatible with H5A Rugged PTZ, close to RAL9002
AVUEBP7AA	Parapet mounting bracket with quick connectors, RJ45 (Ethernet & PoE) and 7 poles to weld (power & I/O), compatible with H5A Rugged PTZ, close to RAL9002

ACCESSORY	DESCRIPTION
AVUEAP	Pole mount adapter, stainless steel AISI 316L, compatible with AVUEBWAA wall arm mount
AVUEAC	Corner mount adapter, stainless steel AISI 316L, compatible with AVUEBWAA wall arm mount
AVUEAW	Parapet plate mount adapter, stainless steel AISI 316L, compatible with parapet mounting brackets
AVWASPT0V5L5M00	Washer pump, 5 L water tank, pump up to 5m (16.4 ft), 230VAC / 24VAC / 120VAC input, compatible with H5A Rugged PTZ
AVWASPT0V23L11M00	Washer pump, 23 L water tank, pump up to 11m (36 ft), 230VAC / 24VAC / 120VAC input, compatible with H5A Rugged PTZ
AVWASPT1V23L30M00	Washer pump, 23 L water tank, pump up to 30m (98 ft), 230VAC input, compatible with H5A Rugged PTZ
AVWASPT3V23L30M00	Washer pump, 23 L water tank, pump up to 30m (98 ft), 120VAC input, compatible with H5A Rugged PTZ
AVCOMB100A	Communication box with power supply and switch, 220-230VAC, polycarbonate, compatible with H5A Rugged PTZ
AVCOMB200A	Communication box with power supply and switch, 24VAC, polycarbonate, compatible with H5A Rugged PTZ
AVCOMB300A	Communication box with power supply and switch, 120-127VAC, polycarbonate, compatible with H5A Rugged PTZ
AVSURGEPR	Surge protector for the Ethernet line
AVOUEWIPER	Spare wiper blade
AVOUEMAN	Camera maintenance kit (includes 1 x power connector, 1 x I/O connector, 1 x safety chain coupling plate, 2 x M16 cable glands, 1 x M20 cable gland, 1 x reduction gasket for M20 cable gland, 1 x reduction gasket for M16 cable gland, 1 x base gasket, 1 x Allen wrench, 1 x 2.5A fuse)

OPTIONAL CAMERA LICENSES AND ACCESSORIES

CAM-FIPS	Camera license to enable FIPS Level 1 cryptographic mode on any H5A camera
CAM-FIPS-CRYPTR-L3	MSI CRYPTR SD with camera license to enable FIPS Level 3 cryptographic mode on H5A cameras[1]

[1] Excludes H5A Explosion-Protected camera line.

SUPPORT

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

MOTOROLA SOLUTIONS

AVIGILON

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