

Avigilon Unity H5 Pro Camera



The new Avigilon H5 Pro camera captures the best-in-class image details over vast areas, providing maximum coverage options through our most powerful and innovative high resolution camera yet. Up to 10K HD, it delivers stunning image detail, simultaneously providing maximum scene coverage, while minimizing bandwidth and storage consumption through our patented High Definition Stream Management™(HDSM) 2.0 technology. Built with large spaces in mind, its improved frame rate and low light performance allows for sites to be equipped with fewer cameras, while still having the ability to capture high quality live and recorded footage..



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.



FIPS 140-2 Compliant

Secure Brings increased data security with FIPS-compliant cryptography enabled on cameras².



Focus of Attention with ACC7™

Leverages AI and video analytics technologies to determine what information is important and should be presented to security operators.



True Wide Dynamic Range

Available in all resolutions, capture details in scenes with both very bright and dark areas.



H.264 and H.265 with HDSM SmartCodec™ Technology

Identify Optimizes compression levels for regions in a scene to help maximize bandwidth savings and keep internet connectivity costs down.



Lightcatcher™ Technology

Offers excellent image detail in low-light settings.



MOTOROLA SOLUTIONS



Compliant with NDAA 2019
Section 889

Specifications

Image Performance		8.0 MP (4K ULTRA HD)	16 MP	26 MP	40 MP	61 MP
Image Sensor		27.2 mm (Type 1.8) progressive scan CMOS			43.3 mm (Type 2.7) progressive scan CMOS	
Max Resolution (H x V) and Aspect Ratio		(16:9) 3840 x 2160	(16:9) 5344 x 3008 (3:2) 4944 x 3296	(16:9) 6240 x 3512 (3:2) 6240 x 4160	(16:9) 8448 x 4752 (3:2) 7776 x 5184	(16:9) 9568 x 5384 (3:2) 9568 x 6376
Minimum Illumination		0.004 lux (at F1.4)				
Dynamic Range	WDR Off	70 dB				
	WDR On	120 dB				
Max Image Rate	WDR Off	(50 Hz/60 Hz) 25 fps/24 fps	(50 Hz/60 Hz) 25 fps/24 fps	16:9: (50 Hz/60 Hz) 16.7 fps/17.1 fps 3:2: (50 Hz/60 Hz) 14.3 fps/15 fps	10 fps	3:2: 7 fps 16:9: (50 Hz/60 Hz) 8.3 fps/8.6 fps
	WDR On	(50 Hz/60 Hz) 16.7 fps/17.1 fps	(50 Hz/60 Hz) 16.7 fps/17.1 fps	16:9: (50 Hz/60 Hz) 16.7 fps/17.1 fps 3:2: (50 Hz/60 Hz) 14.3 fps/15 fps	(50 Hz/60 Hz) 8.3 fps/8.6 fps	3:2: 7 fps 16:9: (50 Hz/60 Hz) 8.3 fps/8.6 fps
Analytics		Yes		Yes, in Full Feature Mode	Yes	Not supported
Camera Operating Mode		N/A		Full Feature = Camera will prioritize analytics over other features. H.265 will be disabled.	N/A	
3D Noise Reduction Filter		Yes				

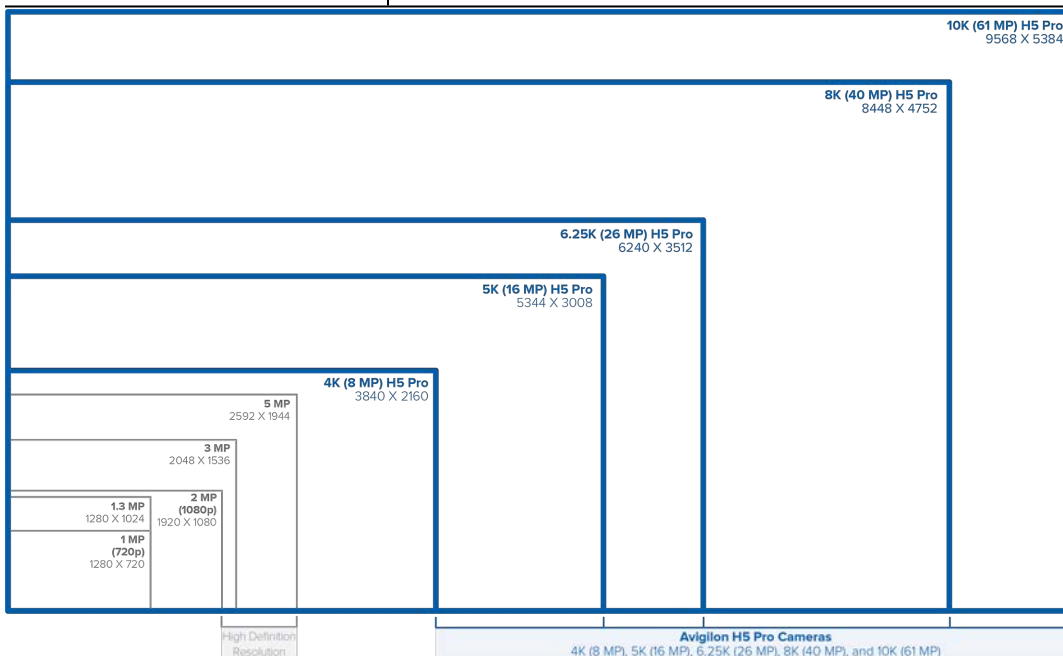


Image Control	
Video Compression	H.264 HDSM SmartCodec, H.265 HDSM SmartCodec, Motion JPEG ¹
Streaming	Multi-stream H.264, Multi-stream H.265, Motion JPEG
Bandwidth Management	HDSM SmartCodec technology; Idle scene mode
Motion Detection	Pixel and Unusual Activity Detection (UAD)
Electronic Shutter Control	Automatic, Manual (1/7.5 to 1/8000 sec)
Iris Control	² Automatic, Open, Closed
Flicker Control	60 Hz, 50 Hz
White Balance	Automatic, Manual
Backlight Compensation	Adjustable
Privacy Zones	Up to 64 zones
Audio Compression Method	Opus, G.711 PCM 8 kHz

¹ Motion JPEG steaming is limited to 16 MP resolution.

² Dependant on selected lens capability.

Peripherals	
Onboard Storage	2 x microSD/microSDHC/microSDXC slot – video speed class card required. Class V10 or better recommended. Currently one of the two microSD card slots is available for onboard storage.
Audio Input/Output	Line level input and output, A/V mini-jack (3.5 mm)
External I/O Terminals	Alarm In, Alarm Out

Network	
Network	1000-BASE-T / 100-BASE-TX or 1000-BASE-SX / 1000-BASE-LX via SFP
Cabling Type	CAT5e Cabling or Optical Fiber ³
Connector	RJ-45 or SFP ³
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), Signed and encrypted firmware
Protocols	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMPv2, ICMP, DHCP, Zeroconf, HSTS
Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP
ONVIF ⁴	ONVIF compliance Profile S, T, G, and M (www.onvif.org)
Device Management Protocols	SNMP v2c, SNMP v3



³ Camera supports one network connection at a time, either RJ-45 (CAT5e) or SFP (optical fiber).

⁴ 40 and 61 MP cameras can enable ONVIF compatibility, which will provide a single 32 MP primary stream that is compatible with 3rd party VMS integration. The 61 MP camera does not support ONVIF profile T.

Mechanical	
Dimensions (LxWxH)	142 mm x 87 mm x 82 mm; 5.6" x 3.4" x 3.2"
Weight	0.50 kg (1.1 lbs)
Body	Aluminum
Finish	Black, powder coat
Mount	1/4"-20 UNC (top and bottom)

Electrical	
Power Consumption	18 W max (camera only)
Power Source	VDC: 12 V ± 10%, 18 W VAC: 24 V ± 10%, 21 VA PoE: IEEE802.3at Class 4 compliant
Power Connector	2-pin terminal block
RTC Backup Battery	3V manganese lithium

Environmental	
Operating Temperature	-25 °C to +60 °C (-13 °F to 140 °F)
Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)
Humidity	0 - 95% non-condensing

Certifications	
Certifications/Directives	UL, cUL, CE, ROHS, WEEE, RCM, EAC, BIS, KC, UKCA, NOM
Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1, IEC 62471
Electromagnetic Emissions	FCC Part 15 Subpart B Class B, IC ICES-003 Class B, EN 55032 Class B, EN 61000-6-3
Electromagnetic Immunity	EN 55035, EN 61000-6-1



Analytics Specifications

Supported Analytics Events	
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 ¹	The event is triggered when the scene unexpectedly changes.

¹ The 61 MP camera does not support tamper detection.

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

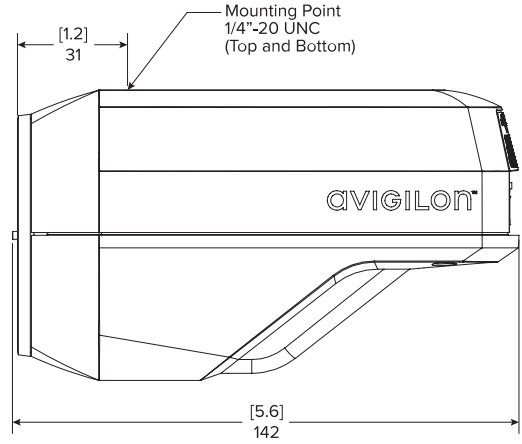
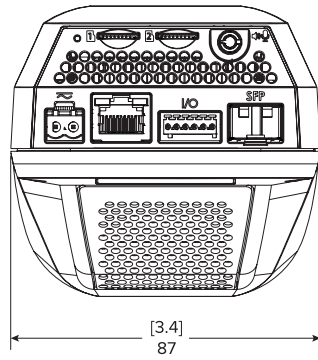
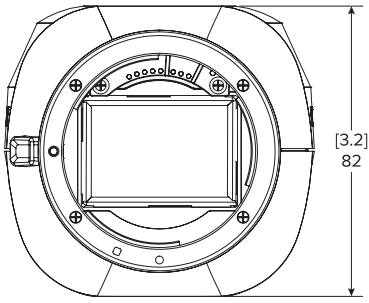
Teach by Example	
Teach By Example	Yes, when used with Avigilon Control Center™ or Avigilon Unity Video

Avigilon Control Center (ACC) Versions Supported Features	
ACC Enterprise Edition 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. H.265 supported.
ACC Enterprise Edition 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.
ACC Enterprise Edition Version 7.10.4 or higher	Improved support for decoding performance for multiple H5 Pro cameras on the ACC Client.



Outline Dimensions

[X.X]	INCHES
X.X	MM



Ordering Information

Part Number	MP	WDR	Lightcatcher Technology	HDSM SmartCodec
8C-H5PRO-B	8.0	✓	✓	✓
16C-H5PRO-B	16.0	✓	✓	✓
26C-H5PRO-B	26.0	✓	✓	✓
40C-H5PRO-B	40.0	✓	✓	✓
61C-H5PRO-B	61.0	✓	✓	✓

Lens Compatibility

Part Number	Description	Horizontal Field of View		ES-HD-HWS-LG	ES-HD-CWS-LG	ES-HD-HS-XL
		8 - 26 mp	40 - 61 mp			
LEF2814SI	Sigma 28mm f/1.4	45.7°	65.3°	✓	✓	○
LEF3514TA	Tamron 35mm f/1.4	37.3°	54.3°	✓	✓	○
LEF5014SI	Sigma 50mm f/1.4	28.6°	39.5°	✓	✓	○
LEF163528CA2	Canon 16-35mm f/2.8	37.3° - 72.8°	54.3° - 96.6°	✓ *	✓ *	○ *
LEFS183518SI	Sigma 18-35mm f/1.8	37.3° - 66.5°	N/A	✓	✓	○
LEF247028TA2	Tamron 24-70mm f/2.8 VC	19.1° - 52.4°	28.8° - 73.6°	✓ *	✓ *	○
LEF7020028TA	Tamron 70-200mm f/2.8 VC	6.8° - 19.1°	10.3° - 28.8°	✓	✓	✓
LEF1506005TA	Tamron 150-600mm f/5-6.3 VC	2.2° - 9.0°	3.4° - 13.7°			✓

* Partial occlusion may be present at wide angles on the 40 MP and 61 MP H5 Pro camera variants.

○ : Compatible

✓ : Recommended



Enclosures

Part Number	Description	Operating Temperature Range	Cold Start
ES-HD-HWS-LG	IP66-rated large housing with heater and wall arm	-40 °C to +55 °C (-40 °F to 131 °F)	Startup delay at temperatures lower than -10 °C (14 °F)
ES-HD-CWS-LG	Large housing with cooling fan and wall arm	-25 °C to +60 °C (-13 °F to 140 °F)	N/A
ES-HD-HS-XL	IP66-rated extra large housing with heater. Wall arm sold separately	-40 °C to +60 °C (-40 °F to 140 °F)	Startup delay at temperatures lower than -10 °C (14 °F)
ES-HD-IPM ¹	PoE+ input power module kit for ES-HD-HWS-LG and ES-HD-CWS-LG camera enclosures	-20 °C to +37 °C (-4 °F to 98.6 °F) external ambient temperature with ES-HD-HWS-LG. -10 °C to +48°C (14 °F to 118 °F) external ambient temperature with ES-HD-CWS-LG.	Startup delay at temperatures lower than 0 °C (32 °F)

¹ The ES-HD-IPM PoE power module can only be used to power the enclosure. The H5 Pro camera must be powered by its own power source and cannot be powered by the ES-HD-IPM module.

Optional Camera Licenses and Accessories

License	Description
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 ²

² Excludes H5A Explosion-Protected camera line.



To learn more, visit: www.avigilon.com



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