8 MP   12 MP

AVIGILON™
Unity H6A Fisheye

One camera, complete security coverage

Experience up to 360° views and follow event paths without blind spots. The Avigilon Unity H6A Fisheye camera is ideal for mid-size open areas with easy installation. With 8 & 12 MP options, the proactive video and audio analytics work to ensure accuracy and enhance security.

360° & 180° Panoramic views
Maximize visibility in mid-size spaces with panoramic views. Deliver complete coverage without blind spots, reduce camera count and save on install costs.
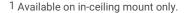
AI-powered video analytics
Elevate safety with AI object classification, anomaly detection, tailored rules and more. Experience constant tracking that overcomes the usual fisheye blind spot directly below the lens.[2]

Secure & compliant
Trust that your data is well-protected with advanced cybersecurity features such as an onboard FIPS 140-3 Level 3 with onboard TPM and Secure Boot.

Low-profile & easy-to-install
Install effortlessly with a paintable front plate[1] that seamlessly blends into your decor, ensuring your security is as invisible as it is effective.

Audio analytics & Recording
Harness cutting-edge technology to actively detect and analyze distinct sounds, instantly flagging critical incidents. Manually activate optional recording[3] for a complete security overview.

ONVIF® conformant
Integrate with existing ONVIF systems via Profile S and T, search and retrieve edge recordings with Profile G, and enable cross-functionality with third-party analytics using Profile M.

[1] Available on in-ceiling mount only.

[2]To be available post-launch.

[3]Microphone is turned off by default and can be manually enabled.

Specifications

IMAGE PERFORMANCE		8.0 MP	12.0 MP
Image Sensor		1/1.8" progressive scan CMOS	1/1.6" progressive scan CMOS
180° Video Streaming Resolutions	Primary Stream	3840 x 2160	3520 x 1920
	Secondary Stream	1280 x 720; 640 x 360	704 x 384; 512 x 280
	Tertiary Stream	640 x 360	512 x 280
360° Video Streaming Resolutions	Primary Stream	2048 x 2048	3520 x 3520
	Secondary Stream	720 x 720; 512 x 512; 384 x 384	720 x 720; 512 x 512; 384 x 384
	Tertiary Stream	320 x 320	320 x 320
Dewarped 180° Video Streaming Resolutions	Primary Stream	2304 x 1296	3072 x 1216
	Secondary Stream	576 x 320	768 x 304
Dewarped 360° Video Streaming Resolutions	Primary Stream	180x2: 2304 x 928 120x3: 1536 x 928 90x4: 1152 x 928	180x2: 3072 x 1248 120x3: 2048 x 1248 90x4: 1536 x 1248
	Secondary Stream	180x2: 768 x 312 120x3: 512 x 312 90x4: 384 x 312	180x2: 768 x 312 120x3: 512 x 312 90x4: 384 x 312
Horizontal Angle of View (HFOV)	180°	188°	188°
	360°	182°	182°
Vertical Angle of View (VFOV)	180°	104°	104°
	360°	182°	182°
Max Image Rate*‡	Full feature	25fps/30fps	25fps/30fps
	No Video Analytics	25fps/30fps	25fps/30fps
	Dewarp video	25fps/30fps	25fps/30fps
	High Framerate 180°	33fps/40fps	N/A
	High Framerate 360°	50fps/60fps	N/A
Dynamic Range	WDR Off:	Up to 83 dB	
	WDR On:	Up to 120 dB	
Camera Operating Mode		Full feature No Video Analytics (full feature with video analytics disabled) High Framerate (video analytics disabled) Dewarp video	Full feature No Video Analytics (full feature with video analytics disabled) Dewarp video
Bandwidth Management		HDSM SmartCodec technology; Idle scene mode	
3D Noise Reduction Filter		Yes	

* Wide Dynamic Range (WDR) needs to be turned off to achieve an image rate above 30fps.

‡The max image rates listed in the table can only be achieved when using H.264 or H.265 encoding.

LENS AND IR ILLUMINATION		8.0 MP	12.0 MP
Lens	180°	1.74 mm	N/A
	360°	1.4 mm	1.74 mm
IR Illumination Max Distance (high power 850 nm LEDs)		17 m	22 m
Minimum Illumination	With IR	0 lux	0 lux
	Without IR	0.1 lux in monochrome, 0.2 lux in colour mode	0.19 lux in monochrome, 0.38 lux in colour mode
Max Aperture		F2.0	

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 and classified object detection
Tamper Detection	Yes
Electronic Shutter Control	Automatic, Manual (1/6 to 1/8000 sec)
Iris Control	Fixed
Day/Night Control	Automatic, Manual
Flicker Control	60 Hz, 50 Hz
White Balance	Automatic, Manual
Backlight Compensation	Adjustable
Privacy Zones	Up to 64 zones
Adjustable IR LEDs	Yes

NETWORK	
Network	100BASE-TX, RJ45 Connector, CAT5e Cabling
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 140-3 level 3 with onboard TPM, Signed and encrypted firmware
Protocols	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMPv3, ICMP, DHCP, Zeroconf, HSTS, DSCP
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
Secure Boot	Yes

PERIPHERALS

Onboard Storage	2 x microSD/microSDHC/microSDXCslots – video speed class card required. Class V10 or better recommended. Supports SD card encryption.

AUXILIARY I/O

Audio Compression Method	Opus, G.711 PCM 8 kHz
Audio Input/Output	Line level I/O and built-in microphone (can be disabled with a hardware switch)
External I/O Terminals	Alarm In, Alarm Out

MECHANICAL		SURFACE MOUNT	IN-CEILING MOUNT
Dimensions (LxWxH)	Camera	145.5 mm x 145.5 mm x 71.3 mm; 5.72" x 5.72" x 2.81"	200.6 mm x 200.6 mm x 18.4 mm; 7.9" x 7.9" x 0.72"
	With Mounting Plate	145.5 mm x 145.5 mm x 71.3 mm; 5.72" x 5.72" x 2.81"	N/A
	With NPT Adapter	158 mm x 158 mm x 112.3 mm; 6.2" x 6.2" x 4.4"	N/A
Weight	Camera	0.832 kg (1.83 lb)	0.907 kg (2.0 lb)
	With Mounting Plate	0.917 kg (2.02 lb)	N/A
	With NPT Adapter	1.15 kg (2.54 lb)	N/A
Max. Ceiling Thickness		N/A	31.75 mm; 1.25"
Dome Bubble		Polycarbonate, clear	N/A
Body		Aluminum	Polycarbonate
Housing		Aluminum	Polycarbonate
Finish		Cast, powder coated, close to RAL 9002	Plastic, injection molded, close to RAL 9002

ELECTRICAL	SURFACE MOUNT	IN-CEILING MOUNT
Power Consumption	With IR: 26 W Without IR: 12 W	12 W
Power Source	VDC: 12V+/-10%, 26 W min PoE: IEEE 802.3af Class 3 PoE+: IEEE 802.3at Class 4	VDC: 12V+/-10%, 12 W min PoE: IEEE 802.3af Class 3
Power Connector	2-pin terminal block	
RTC Battery Backup	3V manganese lithium	
Memory	4 GB RAM, 4 GB Flash	

ENVIRONMENTAL	SURFACE MOUNT	IN-CEILING MOUNT
Operating Temperature	-40°C to +60°C (-40°F to 140°F)	-10°C to +60°C (14°F to 140°F)

ENVIRONMENTAL		SURFACE MOUNT	IN-CEILING MOUNT
IR Illuminator Behavior	PoE	IR illuminator will turn off if the temperature is higher than 55°C (131°F) or below -30°C (-22°F). The illuminator will operate at 33% power if below 10°C (50°F)	
	PoE+	IR illuminator will turn off if the temperature is higher than 55°C (131°F). The illuminator will operate at 66% power if above 30C. The illuminator will operate at 75% power and 66% power, if below 10°C (50°F).	
Storage Temperature		-10°C to +70°C (14°F to 158°F)	
Humidity		0 - 100% non-condensing	0 - 95% non-condensing

CERTIFICATIONS	SURFACE MOUNT	IN-CEILING MOUNT
Certifications/Approvals	UL, cUL, CE, ROHS, RCM, UKCA, KC, BIS, NOM	
Safety Standards	UL/CSA/IEC/EN 62368-1 (3rd edition), IEC/EN 62471, IC ICES-003	
Environmental Standards/Ratings	IK10 Impact Rating[1], NEMA 4X, IP66 & IP67 Ingress Rating	IP54 Ingress Rating
Electromagnetic Emissions Standards	FCC Title 47 CFR Part 15, SubPart B	
Electromagnetic Immunity Standards	EN 55032, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 55035, EN 61000-6-1, EN IEC 63000	

[1]Outdoor modes only.

Analytics Specifications

SUPPORTED ANALYTICS EVENTS[2]	
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.

SUPPORTED ANALYTICS EVENTS[2]	
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	The event is triggered when a crowd grows unexpectedly.
Unusual Crowd Size	The event is triggered when an unusual crowd size is detected.

[2]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[3]	Vehicle, sub-types: Car, Pickup Truck, Large Truck, Van, Bicycle, Motorcycle, Bus Person
Object Types in Indoor Mode	Person

[3]In-ceiling mode does not support object types, e.g., vehicles.

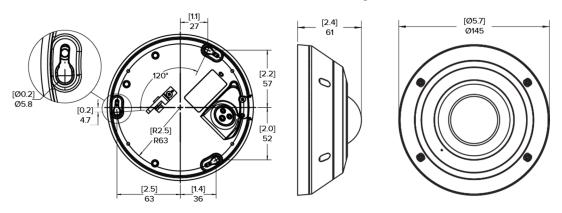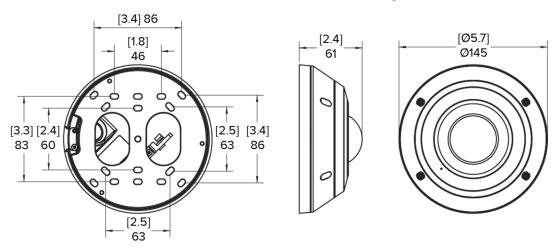| SUPPORTED AUDIO ANALYTICS EVENTS	
Gunshot[4]	Up to 100 meters
Scream	Up to 15 meters
Glass Break	Up to 15 meters
Car Alarm	Up to 30 meters
Smoke Alarm	Up to 15 meters
Dog Bark	Up to 15 meters
Tire Screech[5]	Up to 15 meters
Loud Noise	Up to 40 meters
Ultrasonic Panic Alarm[6]	Up to 40 meters

[4]Optional add-on license required.

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

[6]The detection range is influenced by the quality and power of the device used to create the panic alarm.
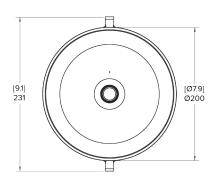
AVIGILON CONTROL CENTER (ACC) VERSIONS SUPPORTED FEATURES	
ACC Version 7.12.4 or higher	All supported analytic events with people as classified objects. H.265 supported. Fisheye dewarping is not supported on ACC versions earlier than 7.12.2.
ACC Version 6.14.24 or higher	H.265 supported. Fisheye dewarping is not supported on ACC versions earlier than 6.14.24. Analytics are only supported on ACC 7 systems.

Outline Dimensions

[X.XX]	INCHES
X.X	MM

Surface Mount Camera with Mounting Plate

[Ø0.2] Ø5.8
[1.1] 27
[2.4] 61
[Ø5.7] Ø145
120°
[0.2] 4.7
[2.2] 57
[R2.5] R63
[2.0] 52
[2.5] 63
[1.4] 36

Surface Mount Camera without Mounting Plate

[3.4] 86
[1.8] 46
[2.4] 61
[Ø5.7] Ø145
[3.3] 83
[2.4] 60
[2.5] 63
[3.4] 86
[2.5] 63

In-Ceiling Mount Camera

[3.9] 99
[9.1] 231
[Ø7.9] Ø200
[Ø6.7] Ø170
[Ø6.8] Ø173
[4.5] 113

Pendant Mount Camera

1.5" NPT

[4.4]
112

[Ø6.2]
Ø157

Wedge Mount Camera

[6.01]
152.7

[4.80]
121.8

[5.28]
134.0

[2.61]
66.4

[2.37]
60.3

[2.61]
66.4

[3.28]
83.3

[1.81]
46.0

Metal Ceiling Panel

[0.06]
1.5

0

[0.39]
10.0

[23.79]
604.3

[23.00]
584.2

[23.79]
604.3

[23.02]
584.7

[6.87]
Ø 174.6

Ordering Information

Surface Mount Camera

PART NUMBER	MP	WDR	ANALYTICS	LENS	IR	IP66/IP67
8.0C-H6A-FE-180-DO2	8.0	✓	✓	1.74 mm		✓
8.0C-H6A-FE-180-DO2-IR	8.0	✓	✓	1.74 mm	✓	✓
8.0C-H6A-FE-360-DO1	8.0	✓	✓	1.4 mm		✓
8.0C-H6A-FE-360-DO1-IR	8.0	✓	✓	1.4 mm	✓	✓
12.0C-H6A-FE-360-DO1	12.0	✓	✓	1.74 mm		✓
12.0C-H6A-FE-360-DO1-IR	12.0	✓	✓	1.74 mm	✓	✓

In-Ceiling Mount Camera

PART NUMBER	MP	WDR	ANALYTICS	LENS	IR	IP66/IP67
8.0C-H6A-FE-DC1	8.0	✓	✓	1.4 mm		✓
12.0C-H6A-FE-DC1	12.0	✓	✓	1.74 mm		✓

Optional Camera Licenses and Accessories

ACCESSORY PART NUMBER	DESCRIPTION
180-FE-WG-MT	Wedge wall mount for 180 Fisheye
AVO-FE-ACC-KIT	Install Accessory Kit for Fisheye Dome
MSI-FE-DC-KIT	Install Accessory Kit for Fisheye In-Ceiling
AVO-FE-NPT-ADPT	NPT Adapter For Fisheye Dome
MSI-FE-CPNL	Ceiling Panel for Fisheye In-Ceiling
WLMT-1021	Pendant wall mount, compatible with H5A-FE-MT-NPTA1
PLMT-1001	Pole mount, compatible with WLMT-1021
CRNMT-1001	Aluminum corner mounting bracket, compatible with WLMT-1021
CAM-FIPS	Camera license to enable FIPS Level 1 cryptographic mode on any H5A camera

Support

For product support, visit: avigilon.com or sales@avigilon.com

To learn more, visit: avigilon.com

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