# H4 THERMAL CAMERA LINE

VGA **QVGA**

The Avigilon H4 Thermal camera is embedded with our self-learning video analytics to provide long-range perimeter protection and leverages thermal technology to operate under challenging conditions while minimizing false alarms.

It is designed to detect the presence and movement of people and vehicles in areas with poor visibility, including partly camouflaged scenes, low lighting and even absolute darkness, without the need for additional light sources.
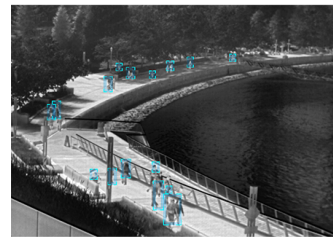
Scenes captured with H4 Thermal VGA camera.

FEATURES

SELF-LEARNING VIDEO ANALYTICS
Detect and classify objects in challenging lighting/darkness or extreme environments such as weather, dust, debris, smoke or foliage.

HDSM SMARTCODECTM TECHNOLOGY
Optimizes compression levels for regions in a scene to help maximize bandwidth savings, helping to keep internet connectivity costs down.

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

MULTIPLE LENS OPTIONS
Choose from three athermalized lens variants to optimize on-site coverage requirements.

RELAY I/O CONNECTIONS
Configure input/output actions and alarms for fast event response.

ONVIF is a trademark of Onvif, Inc.

MOTOROLA SOLUTIONS

avigilon™

SPECIFICATIONS

IMAGE PERFORMANCE	QVGA	VGA
Image Sensor	320x256 Uncooled VOx Microbolometer	640x512 Uncooled VOx Microbolometer
Pixel Pitch	12µm	
Spectral Range	8µm to 14µm	
Aspect Ratio	5:4	
Imaging Rate	8.6 fps	
Dynamic Range	-40 °C to 225 °C (-40 °F to 437 °F) [may vary based on operating temperature]	
Resolution Scaling	320x256, can be scaled up to 640x512	640x512, can be scaled down to 320x256
3D Noise Reduction Filter	Yes	
Sensitivity	NETD <60mK	
Image Uniformity Optimization	Automatic Flat Field Correction (FFC) - Thermal and Temporal	

LENS						
Lens	4.3 mm, F1.0, Athermalized	9.1 mm, F1.0, Athermalized	18.0 mm, F1.0, Athermalized	8.7 mm, F1.0, Athermalized	18.0 mm, F1.0, Athermalized	36.0 mm, F1.0, Athermalized
Angle of View (H x V)	45.9° x 36.5°	21.6° x 17.0°	10.8° x 8.4°	50.7° x 40.4°	24.3° x 19.3°	12.2° x 9.7°

IMAGE CONTROL		
Image Compression Method	H.264 (MPEG-4 Part 10/AVC), Motion JPEG	
Streaming	Multi-stream H.264 & MJPEG	
Bandwidth Management	Idle Scene Mode, HDSM SmartCodec Technology	
Motion Detection	Pixel and Classified Objects	
Tamper Detection	Yes	N/A
Privacy Zones	Up to 64 Zones	
Audio Compression Method	G.711 PCM 8kHz	

NETWORK		
Network	100BASE-TX	
Cabling Type	CAT5	
Connector	RJ-45	
ONVIF	ONVIF® compliant with Profile S, Profile T, and Profile G (www.onvif.org)	ONVIF® compliant with Profile S and Profile G (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, 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	
USB Port	USB 2.0
Onboard Storage	SD/SDHC/SDXC slot – video speed class card required. Class V10 or better recommended.
External I/O Terminals	Alarm In, Alarm Out
Audio Input/Output	Line level input and output

MECHANICAL		QVGA;	VGA
Dimensions (LxWxH)		335 mm x 126 mm x 91 mm; 13.18" x 4.97" x 3.58" (including mounting bracket and fully extended sunshield overhang)	
Weight	Camera	1.72 kg (3.79 lbs) Applicable to both 640S-H4A-THC-BO24 and 640S-H4A-THC-BO50.	1.92 kg (4.23 lbs) Applicable to 640S-H4A-THC-BO12 only.
	Mounting Bracket	0.21 kg (0.46 lbs)	
Body		Aluminium	
Housing		Surface mount, tamper resistant	
Finish		Cast, powder coated, close to RAL 9003	
Adjustment Range		±175° pan, ±90° tilt, ±175° azimuth	

ELECTRICAL		
Power Consumption	8W	9W
Power Source	VDC: 12V +/- 10%, 8W min. VAC: 24V +/- 10%, 15VA min. PoE: IEEE802.3af Class 3 compliant	VDC: 12V +/- 10%, 9W min. VAC: 24V +/- 10%, 15VA min. PoE: IEEE802.3af Class 3 compliant
RTC Backup Battery	3V manganese lithium	

ENVIRONMENTAL	
Operating Temperature	-40 °C to +65 °C (-40 °F to 149 °F)
Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)
Humidity	0 - 93% non-condensing

CERTIFICATIONS		
Certifications/Directives	UL, cUL, CE, UKCA, ROHS, Reach (SVHC), WEEE, RCM, EAC, NOM	
Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1	
Environmental	UL/CSA/IEC 60950-22, IEC 60529 IP66 Weather Rating, IK10 Impact Rating (including window)	UL/CSA/IEC 60950-22, IEC 60529 IP66 and IP67 Weather Rating, IK10 Impact Rating (enclosure only)
Electromagnetic Emissions	FCC Part 15 Subpart B Class B, IC ICES-003 Class B, EN 55032 Class B, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3	
Electromagnetic Immunity	EN 55024, EN 61000-6-1, EN 50130-4	EN 55024, EN 61000-6-1

ANALYTICS SPECIFICATIONS

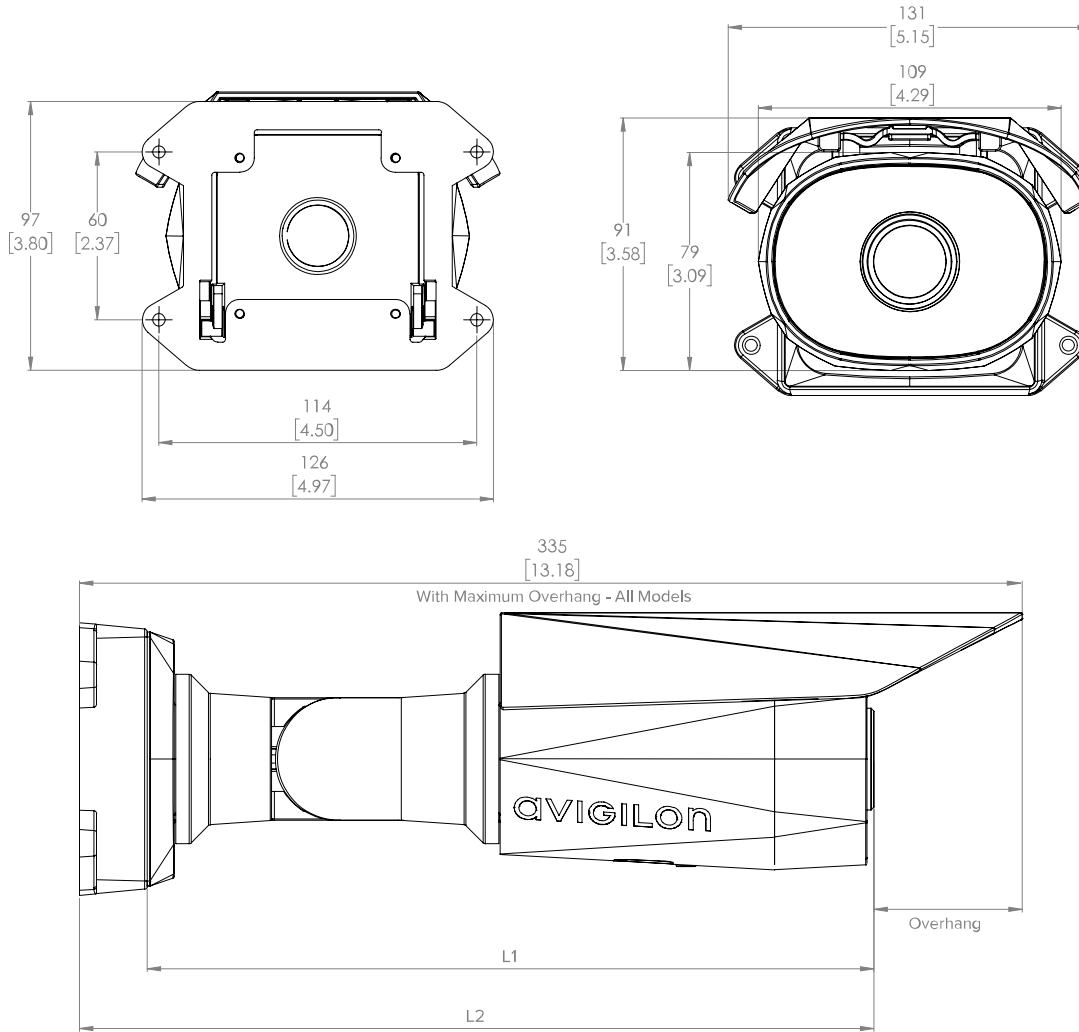| SUPPORTED VIDEO ANALYTIC EVENTS	
Objects in Area	The event is triggered when the selected object type moves into the region of interest.
Object Loitering	The event is triggered when the selected object type moves into the region of interest and then stays for an extended amount of time.
Objects Crossing 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	The event is triggered when the scene unexpectedly changes.

CLASSIFIED OBJECT DETECTION RANGE	RESOLUTION	VIEWING ANGLE (H X V)	HUMAN	VEHICLE
4.3 mm	320 x 256	45.9° x 36.5°	68m (224')	80m (263')
9.1 mm	320 x 256	21.6° x 17.0°	150m (493')	160m (525')
18 mm	320 x 256	10.8° x 8.4°	220m (722')	225m (739')
8.7 mm	640 x 512	50.7° x 40.4°	120m (394')	142m (466')
18 mm	640 x 512	24.3° x 19.3°	210m (689')	225m (739')
36 mm	640 x 512	12.2° x 9.7°	310m (1017')	319m (1047')

The detection ranges may vary in different weather conditions.
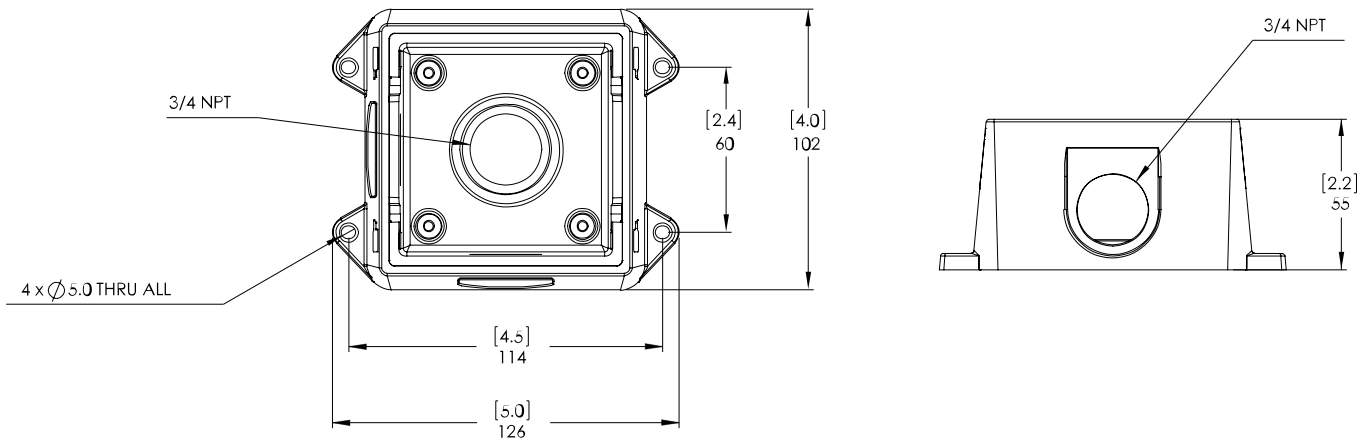
OUTLINE DIMENSIONS

CAMERA

[X.X]	INCHES
X	MM

131 [5.15]

109 [4.29]

97 [3.80]

60 [2.37]

91 [3.58]

79 [3.09]

114 [4.50]

126 [4.97]

335 [13.18]

With Maximum Overhang - All Models

Overhang

L1

L2

CAMERA	L1	L2
640S-H4A-THC-BO12	276 mm (10.87″)	300 mm (11.81″)
All other models	257 mm (10.14″)	281 mm (11.08″)

JUNCTION BOX

[X.X]	INCHES
X	MM

ORDERING INFORMATION

	RESOLUTION	NETD	LENS	HDSM SMARTCODEC
320S-H4A-THC-BO50	320 x 256	<60 mK	4.3 mm	✓
320S-H4A-THC-BO24	320 x 256	<60 mK	9.1 mm	✓
320S-H4A-THC-BO12	320 x 256	<60 mK	18 mm	✓
640S-H4A-THC-BO50	640 x 512	<60 mK	8.7 mm	✓
640S-H4A-THC-BO24	640 x 512	<60 mK	18 mm	✓
640S-H4A-THC-BO12	640 x 512	<60 mK	36 mm	✓

H4-BO-JBOX1	Junction box for H4 HD Bullet Cameras
H4-MT-POLE1	Aluminum pole mounting bracket for bullet cameras, compatible with H4-BO-JBOX1
H4-MT-CRNR1	Aluminum corner mounting bracket for bullet cameras, compatible with H4-BO-JBOX1
H4-AC-WIFI2-NA	USB Wifi Adapter
H4-AC-WIFI2-EU	USB Wifi Adapter

SUPPORT

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

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Sep 2021 | Rev 6