

MOTOROLA SOLUTIONS

CONCEALED WEAPONS DETECTION (CWD)

Motorola Solutions Concealed Weapons Detection (CWD) powered by Evolv Technology is designed to address the active shooter epidemic by taking a proactive approach to keeping people and assets safe. Using advanced sensors and artificial intelligence to detect a wide range of concealed weapons and threats, it is the world's first and only touchless security screening solution that is conducive to supporting post-pandemic security screening requirements. CWD integrates Evolv's capabilities with Avigilon Control Center (ACC™) software, Motorola Solutions' AI-powered video management software, to help security screeners see, understand, and act on threats with more speed and accuracy than ever before, making it possible to deliver unprecedented safety while also enhancing the visitor experience. Once a threat is detected and confirmed by a security screener, alarms are sent directly to ACC. Avigilon H5A Modular cameras on board the towers then stream live video to ACC, which gets recorded alongside the fixed video security feeds that are installed at the venue.



FEATURES

SMART, AI-BASED SENSOR PLATFORM



Evolv Express seamlessly screens up to 3,600 people per hour (60 per minute), eliminating any bottlenecks at points of entry. Unlike legacy metal detectors, wands, and pat downs, the system can intelligently distinguish between threats and everyday items like a cellphone, coins or keys.

EASY TO OPERATE



Helping security teams to see, understand, and act on potential threats with more speed and accuracy than ever before, CWD provides a simple, targeted solution. Security personnel can see in real-time where the potential threat is on a person's body or in their bag reducing the amount of physical contact. If an object is detected, the individual will be sent to secondary for further investigation.

RESPECTFUL, HASSLE-FREE EXPERIENCE



A quick, unobtrusive workflow with no stopping required, as individuals are not required to empty their pockets or place their bags in another area for inspection. Visitors and employees can walk naturally side-by-side or in groups through multi-lane entrances without any pause, based on the site's pre-defined procedures.

FLEXIBLE DEPLOYMENT OPTIONS



CWD is easy to set up and move and can be used both indoors and outdoors. This flexibility enables the system to be used at different entrances and for special events. Choose from five different sensitivity settings to optimize for different threat levels.

BUILT-IN AVIGILON H5A MODULAR CAMERA



Featuring two 3 MP Micro Bullet imager modules installed on the front and back, operators can see what's happening at the tower in high-resolution. The imager modules' Wide Dynamic Range provides clear image details in varying lighting conditions, including areas with strong backlight, which can be common at entrances. Its seamless connectivity with ACC software brings a suite of AI-powered capabilities such as Avigilon Appearance Search™ technology and Facial Recognition for operators to proactively safeguard their facility.

SPECIFICATIONS

EXPRESS

PHYSICAL			
Dimensions	Dual Lane	Depth	40.3in (102.4cm)
		Width	130.6in (331.7cm)
		Length	74in (188cm)
	Single Lane	Depth	40.3in (102.4cm)
		Width	73.8in (187.5cm)
		Length	74in (188cm)
Mat	Lip		0.184in (0.47cm)
	Height		0.89in (2.3cm)
Weight	Dual Lane		352 lbs (159.7kg)
	Single Lane		281 lbs (127.5kg)
Lane Opening			Each 39.8in (101.1cm)

ENVIRONMENTAL	
Operating Temperature	Min: -20C, Max: +55C
Storage Temperature	Min: -40C, Max: +70C
Relative Humidity	Up to 95% ¹
Ingress Rating	Standard IP54; Outdoor IP56 ²

¹ Outdoor rated unit is Condensing

² Power and data connectors are IP67, resisting water ingress up to 6"

ELECTRICAL	
Power	100VAC - 240VAC (+/-10%); single phase; with power cord supplied
Power Consumption	200W max power consumption

COMPONENTS	
Cameras	2 situational awareness cameras (front and rear) ³
Tablet Display	15.6inch display (39.6cm) , 2 per lane (1 Floor and 1 Desktop Stand)
	Standard or Outdoor tablets based on optional Outdoor unit

³ Camera ports are isolated from Express internal and external networks

NETWORK	
Network	100BASE-TX, RJ45 Connector, CAT5e Cabling

PERIPHERALS	
USB Port	USB 2.0
Ethernet Port	Ethernet (RJ45) for Tablet

CERTIFICATIONS)	
Certifications/Directives	CE RCM
Safety	EN/IEC 61010-1
	U.S. Americans with Disabilities Act Compliant Access
EMC	FCC Part 15 Subpart B, Class A, ICES-003 Class A, EN 55011

SITUATIONAL CAMERAS

HUB AND IMAGERS (ONE FORWARD-FACING, ONE REAR-FACING)⁴

MECHANICAL		HUB	IMAGER
Dimensions (LxWxH)	Body Only	105 mm x 123 mm x 34 mm; 4.13 " x 4.84 " x 1.34 "	42 mm x 30 mm diameter; 1.65 " x 1.18 " diameter
	Including HD BNC Connector	114 mm x 123 mm x 34 mm; 4.50 " x 4.84 " x 1.34 "	50 mm x 30 mm diameter; 1.97 " x 1.18 " diameter
Weight		0.517 kg (1.14 lbs)	0.043 kg (0.09 lbs)
Body		Aluminum	Aluminum
Housing		Stainless steel (bracket)	Plastic
Finish		Black	Black

⁴ Hub and imager units are in the middle tower of a dual lane system, or the main tower of a single lane system

ENVIRONMENTAL		HUB	IMAGER
Operating Temperature		-10 °C to +60 °C (14 °F to 140 °F)	-30 °C to +60 °C (-22 °F to 140 °F)
Storage Temperature		-10 °C to +70 °C (14 °F to 158 °F)	-10 °C to +70 °C (14 °F to 158 °F)
Humidity		0 - 100% RH	0 - 100% RH
Environmental			IP66 Rating

ELECTRICAL		HUB
Power Consumption		13 W Max
Power Source		VDC: 12 V +/-10%, 11.5 W min PoE: IEEE 802.3af Class 3 compliant
Power Connector		2-pin terminal block
RTC Battery Backup		3V manganese lithium

NETWORK (CAMERA HUB UNIT)		HUB
Network		100BASE-TX
Cabling Type		CAT5E cabling for PoE Coaxial cabling for imager modules
Connector		RJ-45 for PoE HD BNC for imager modules
ONVIF		ONVIF compliance Profile S, Profile T, and Profile G (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		IPv4, IPv6, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMPv2, 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

PERIPHERALS		HUB
Onboard Storage		2 x microSD/microSDHC/microSDXC slots - video speed class card required. Class V10 or better recommended. One of the two SD card slots is available for onboard storage.

CERTIFICATIONS	
Certifications/Directives	UL, cUL, CE, UKCA, ROHS, RCM
Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1
Electromagnetic Emissions	FCC Part 15 Subpart B Class A, ICES-003 Class A, EN 55032 Class A, EN 61000-3-2, EN 61000-3-3
Electromagnetic Immunity	EN 55035, EN 61000-6-1
Warranty	5-year limited warranty. Extended warranty not available.

IMAGE PERFORMANCE		3.0 MP IMAGER
Image Sensor		1/2.7 " Progressive Scan
Imaging Area (H x V)		5.4 mm x 3.9 mm; 0.213 " x 0.154 "
Max Image Rate		(50 Hz/60 Hz): 25 fps/30 fps
Streaming Resolutions	Primary Stream:	2128 x 1536; 1920 x 1080
	Secondary Stream:	1248 x 904; 832 x 600; 672 x 480; 528 x 384; 400 x 288; 1280 x 720; 720 x 480; 640 x 360; 512 x 288; 384 x 216
Dynamic Range	WDR Off:	Up to 82 dB
	WDR On:	Up to 120 dB
3D Noise Reduction Filter		Yes

LENS		3.0 MP IMAGER
Lens		2.8 mm fixed
Minimum Illumination		0.1 lux
Horizontal Angle of View (HFOV)		110 °
Vertical Angle of View (VFOV)		80 °
Max Aperture		F2.0
Control		Fixed

IMAGE CONTROL		3.0 MP IMAGER
Electronic Shutter Control		Automatic, Manual (1/7.5 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

CONNECTOR (IMAGER UNIT)		3.0 MP IMAGER
Cabling Type		Coaxial cable
Connector		HD BNC

ANALYTICS SPECIFICATIONS



CLASSIFIED OBJECT DETECTION™ (COD)

Detects and classifies people to help operators respond faster.



AVIGILON APPEARANCE SEARCH™ (AS)

Quickly locates a specific person or vehicle of interest across an entire site using a sophisticated deep learning AI search engine.



FACE RECOGNITION (FR)

Detects matches from managed watchlists to alert operators of people of interest. Requires Appearance Search and an additional license.

ACC Enterprise required

ACC7-FACE license required



NO FACE MASK DETECTION

Determines whether a person is not wearing a face mask to help prevent community transmission.

ACC Enterprise required



UNUSUAL ACTIVITY DETECTION (UAD)

Automatically detects atypical behavior of learned objects.

ACC7-VAC license required

SUPPORTED RULE BASED VIDEO ANALYTIC EVENTS (PER IMAGER)

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 stays within the region of interest for an extended amount of time.
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	This 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 left 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 in a region of interest stops moving for the specified threshold time.
Tamper Detection	The event is triggered when the scene unexpectedly changes.

SUPPORTED CLASSIFIED OBJECT TYPES

Object Types in Indoor Mode	Person
-----------------------------	--------

AVIGILON CONTROL CENTER (ACC) VERSIONS SUPPORTED FEATURES*

ACC Version 6.14.26 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 7.14.6 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.

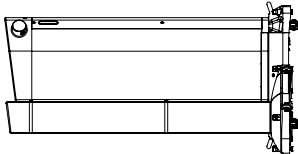
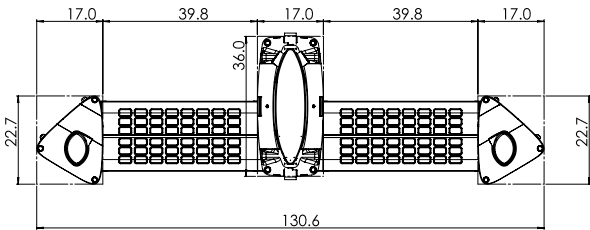
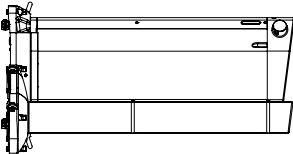
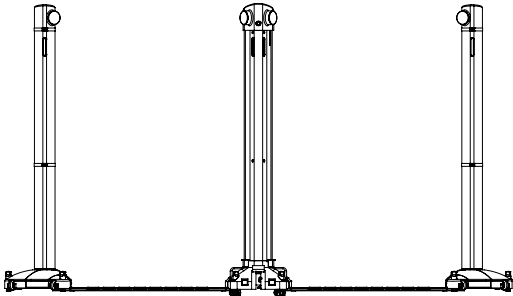
*Indoor Close-up analytic mode is only supported on ACC 7.14.12 and later. Each main unit consumes only one ACC channel license whether one or two imagers are connected.

OUTLINE DIMENSIONS

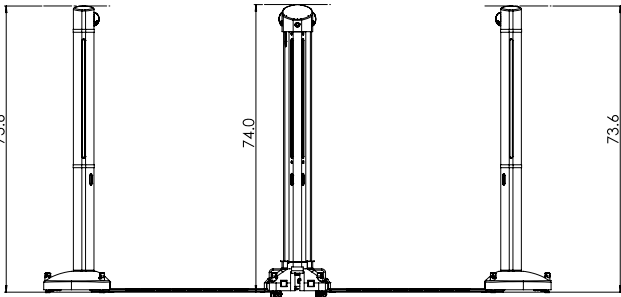
DUAL LANE

[X.X]	INCHES
X	MM

Rear View (from guard's persepective)

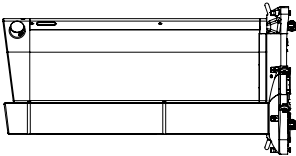
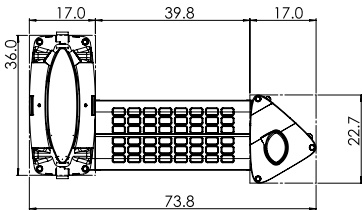
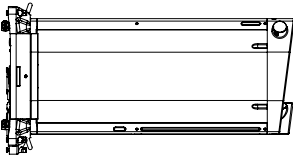
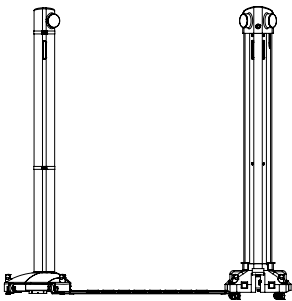


Front View (as people enter)

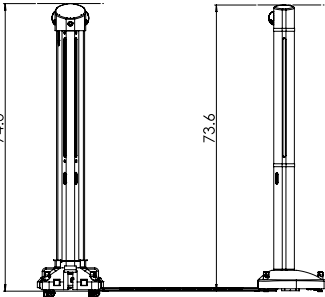


SINGLE LANE—LEFT

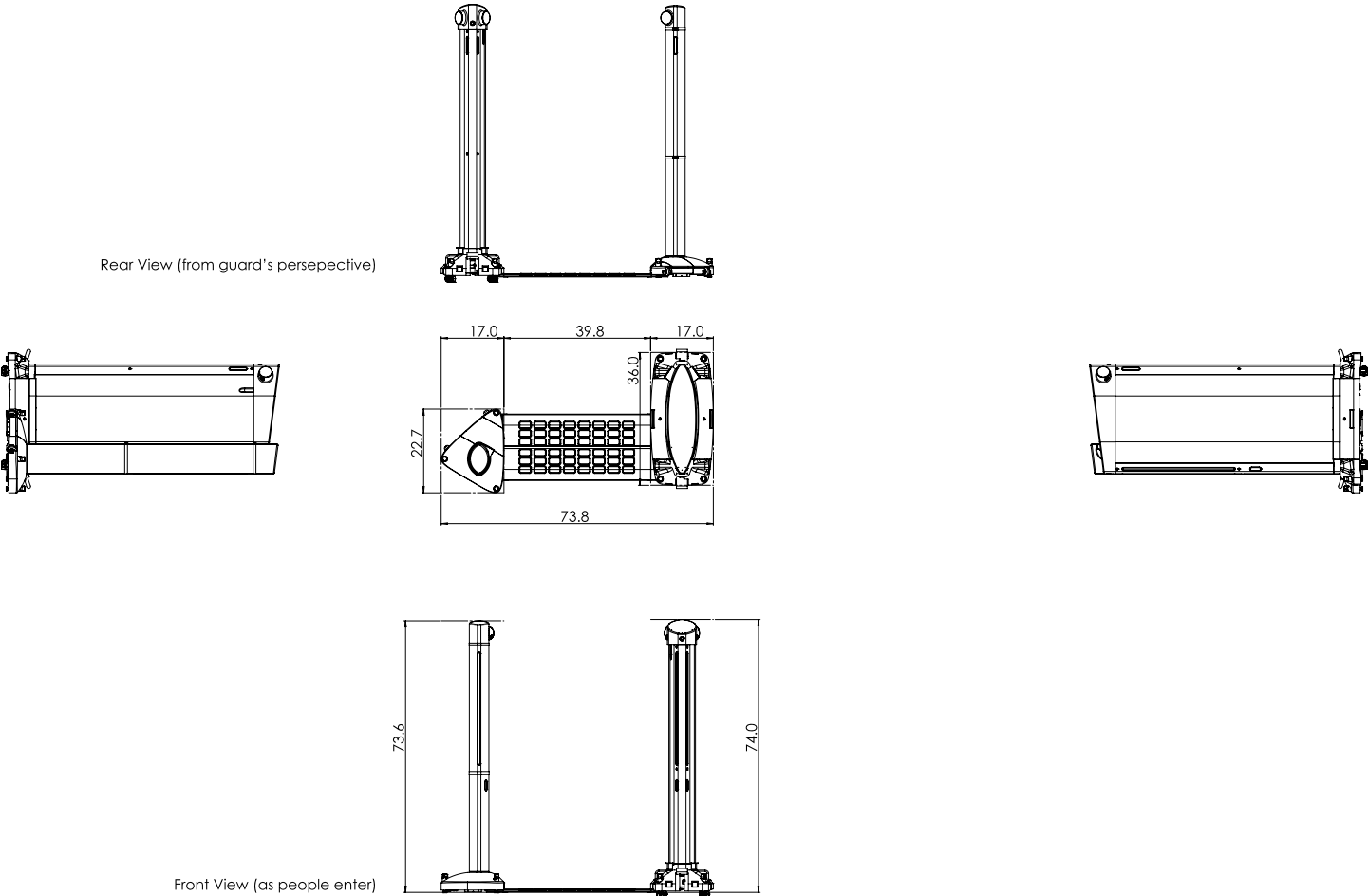
Rear View (from guard's perspective)



Front View (as people enter)



SINGLE LANE—RIGHT



PHYSICAL CONFIGURATIONS

CONFIGURATION	DESCRIPTION
2 lane	From the perspective of the security operator watching people exit the towers, the receiver towers are on both sides of the center transmitter tower.
1 lane, Right Side	From the perspective of the security operator watching people exit the towers, the receiver tower is on the right side of the transmitter tower.
1 lane, Left Side	From the perspective of the security operator watching people exit the towers, the receiver tower is on the left side of the transmitter tower.

ORDERING INFORMATION

To place an order for this solution, please contact your [Avigilon Sales Representative](#) for assistance.

SUPPORT

Learn more and find additional documentation at or email for specific product support.

