

# Unity H5A Modular Camera

3 MP

5 MP



Compliant with NDAA 2019  
Section 889

The Avigilon H5A Modular Camera is designed for areas with limited space or that require a discreet and unobtrusive monitoring solution, such as ATMs, police interview rooms, retail checkout counters, building entrances and more. The camera's flexible imager modules can easily be positioned in different orientations to help capture the most optimal view of people or scenes of interest for investigations. It comes equipped with Next-Generation Video Analytics for enhanced object detection and classification, Unusual Activity Detection, and supports Facial Recognition and Avigilon Appearance Search technologies to expedite response times for critical events.



## Features



### Next-Generation Video Analytics

Detects more objects with expanded object classifications and greater accuracy for faster responses, even in crowded scenes.



### Flexible Installation

Detachable cables with multiple length options are available to help reduce installation times and enable flexible positioning of the imager modules for ideal scene coverage.



### 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.



### Dust & Water Resistance<sup>1</sup>

IP66 rating for resistance from dust and water.



### FIPS 140-2 Compliant<sup>2</sup>

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



### Small & Discreet Form Factors

Lightweight form factors allow for easy installation in practically any environment, including tight spaces and discreet applications, such as behind false walls or ceilings.



### ONVIF® Compliant

ONVIF Profile S, T, G, and M compliance allows easy integration with existing ONVIF infrastructures.



### Customizable Design

A modular design offers you the ability to mix and match different resolutions and/or form factors to suit your site's coverage needs.



### Wide Dynamic Range

Captures high-quality image details in scenes with strong backlight.



### Seamless Connectivity with Avigilon Control Center (ACC)

Connects with ACC™ software to bring you the right information to take action with a full suite of AI-powered capabilities at your fingertips.

ONVIF is a trademark of Onvif, Inc.

<sup>1</sup>Available on Micro Bullet Imager Module only.

<sup>2</sup> Optional purchase of FIPS Level 1 camera license or CRYPTR microSD hardware-based encryption and key management for FIPS Level 3 support and certification.

# Specifications - Main Unit

| Image Control and Performance                                                   |                                        |                                                                                                   |
|---------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------|
| Image Compression Method                                                        |                                        | H.264 HDSM SmartCodec, H.265 HDSM SmartCodec, Motion JPEG                                         |
| Bandwidth Management                                                            |                                        | HDSM SmartCodec technology; Idle scene mode                                                       |
| Streaming                                                                       |                                        | Multi-stream H.264, Multi-stream H.265, Motion JPEG                                               |
| Max Image Rate<br>(Based on<br>combined<br>resolution of one<br>or two imagers) | High Frame Rate:<br>(50 Hz/60 Hz)      | (≤ 6 MP) 25 fps/30 fps<br>(8 MP) 25 fps/24 fps<br>(10 MP) 20 fps/24 fps                           |
|                                                                                 | Full Feature<br>Mode:<br>(50 Hz/60 Hz) | (≤ 5 MP) 25 fps/30 fps<br>(6 MP) 25 fps/24 fps<br>(8 MP) 20 fps/20 fps<br>(10 MP) 12.5 fps/15 fps |
| Dynamic Range                                                                   |                                        | Up to 120 dB                                                                                      |
| Motion Detection                                                                |                                        | Pixel motion; Selectable sensitivity and threshold. Classified object detection                   |
| Tamper Detection                                                                |                                        | Yes                                                                                               |
| Electronic Shutter Control                                                      |                                        | Automatic, Manual (1/7.5 to 1/8000 sec)                                                           |
| Flicker Control                                                                 |                                        | 60 Hz, 50 Hz                                                                                      |
| White Balance                                                                   |                                        | Automatic, Manual                                                                                 |
| Backlight Compensation                                                          |                                        | Adjustable                                                                                        |
| Privacy Zones                                                                   |                                        | Up to 64 zones                                                                                    |

| Auxiliary                |                             |
|--------------------------|-----------------------------|
| Audio Compression Method | G.711 PCM 8 kHz, Opus       |
| Audio Input/Output       | Line level input and output |
| External I/O Terminals   | Alarm In, Alarm Out         |

| Network                     |                                                                                                                                                                                                                                                          |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network                     | 100BASE-TX                                                                                                                                                                                                                                               |
| Cabling Type                | CAT5E cabling for PoE<br>Coaxial cabling for imager modules                                                                                                                                                                                              |
| Connector                   | RJ-45 for PoE<br>HD BNC for imager modules                                                                                                                                                                                                               |
| ONVIF                       | ONVIF compliance Profile S, Profile T, Profile G, and Profile M ( <a href="http://www.onvif.org">www.onvif.org</a> )                                                                                                                                     |
| 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                   | IPv4, IPv6, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMPv2, ICMP, DHCP, Zeroconf, QoS, 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                                                                                                                                                                                                                                        |

| Peripherals     |                                                                                                                                                                          |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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. |

| Mechanical            |                               |                                                      |
|-----------------------|-------------------------------|------------------------------------------------------|
| Dimensions<br>(LxWxH) | Body Only                     | 105 mm x 123 mm x 34 mm;<br>4.13 " x 4.84 " x 1.34 " |
|                       | Including HD<br>BNC Connector | 114 mm x 123 mm x 34 mm;<br>4.50 " x 4.84 " x 1.34 " |

| Mechanical |                           |
|------------|---------------------------|
| Weight     | 0.517 kg (1.14 lbs)       |
| Body       | Aluminum                  |
| Housing    | Stainless steel (bracket) |
| Finish     | Black                     |

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

| Environmental         |                                    |
|-----------------------|------------------------------------|
| Operating Temperature | -10 °C to +60 °C (14 °F to 140 °F) |
| Storage Temperature   | -10 °C to +70 °C (14 °F to 158 °F) |
| Humidity              | 0 - 100% RH                        |

| 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                                                                        |
| Environmental             | IEC 60068-2-27, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-1, IEC 60068-2-2                   |
| Warranty                  | 5-year limited warranty. Extended warranty not available.                                     |

# Specifications - Imager

| Image Performance         |                   | 3.0 MP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5.0 MP                                                                                                                                                                                                                                                |
|---------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Image Sensor              |                   | 1/2.7 " Progressive Scan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 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:   | Right Angle:<br>2128 x 1368, 1920 x 1080, 1360 x 2128, 1088 x 1920<br><br>Micro Bullet:<br>2128 x 1536, 1920 x 1080, 1536 x 2128, 1088 x 1920                                                                                                                                                                                                                                                                                                                                                                     | Micro Bullet:<br>2688 x 1944, 2128 x 1536, 2560 x 1440, 1920 x 1080, 1952 x 2688, 1536 x 2128, 1440 x 2560, 1088 x 1920                                                                                                                               |
|                           | Secondary Stream: | Right Angle:<br>1248 x 800, 832 x 536, 672 x 432, 528 x 336, 400 x 256<br>1280 x 720, 720 x 480, 640 x 360, 512 x 288, 384 x 216<br>800 x 1248, 528 x 832, 432 x 672, 336 x 528, 256 x 400<br>720 x 1280, 480 x 720, 368 x 640, 288 x 512, 240 x 424<br><br>Micro Bullet:<br>1248 x 904, 832 x 600, 672 x 480, 528 x 384, 400 x 288<br>1280 x 720, 720 x 480, 640 x 360, 512 x 288, 384 x 216<br>912 x 1248, 608 x 832, 480 x 672, 384 x 528, 288 x 400<br>720 x 1280, 480 x 720, 368 x 640, 288 x 512, 240 x 424 | Micro Bullet:<br>1248 x 904, 832 x 600, 672 x 480, 528 x 384, 400 x 288<br>1280 x 720, 720 x 480, 640 x 360, 512 x 288, 384 x 216<br>912 x 1248, 608 x 832, 480 x 672, 384 x 528, 288 x 400<br>720 x 1280, 480 x 720, 368 x 640, 288 x 512, 240 x 424 |
| Dynamic Range             | WDR Off:          | Up to 82 dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |
|                           | WDR On:           | Up to 120 dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                       |
| 3D Noise Reduction Filter |                   | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                       |

| Lens                            | Right Angle                   | Micro Bullet |
|---------------------------------|-------------------------------|--------------|
| Lens                            | 3.7 mm fixed pinhole aperture | 2.8 mm fixed |
| Minimum Illumination            | 0.1 lux                       |              |
| Horizontal Angle of View (HFOV) | 92 °                          | 110 °        |
| Vertical Angle of View (VFOV)   | 53 °                          | 80 °         |
| Max Aperture                    | F2.5                          | F2.0         |
| Control                         | Fixed                         |              |

| Image Control              |                                         |
|----------------------------|-----------------------------------------|
| 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    |               |
|--------------|---------------|
| Cabling Type | Coaxial cable |
| Connector    | HD BNC        |

| Mechanical            |                               | Right Angle                                        | Micro Bullet                                        |
|-----------------------|-------------------------------|----------------------------------------------------|-----------------------------------------------------|
| Dimensions<br>(LxWxH) | Imager Module<br>Body Only    | 45 mm x 25 mm x 20 mm;<br>1.77 " x 0.98 " x 0.79 " | 42 mm x 30 mm diameter;<br>1.65 " x 1.18 " diameter |
|                       | Including HD<br>BNC Connector | 54 mm x 25 mm x 20 mm;<br>2.13 " x 0.98 " x 0.79 " | 50 mm x 30 mm diameter;<br>1.97 " x 1.18 " diameter |
| Weight                |                               | 0.028 kg (0.06 lbs)                                | 0.043 kg (0.09 lbs)                                 |
| Body                  |                               | Aluminum                                           |                                                     |
| Housing               |                               | Plastic                                            |                                                     |
| Finish                |                               | Black                                              |                                                     |

| Environmental         |  | Right Angle                         | Micro Bullet |
|-----------------------|--|-------------------------------------|--------------|
| Operating Temperature |  | -30 °C to +60 °C (-22 °F to 140 °F) |              |
| Storage Temperature   |  | -10 °C to +70 °C (14 °F to 158 °F)  |              |
| Humidity              |  | 0 - 100% RH                         |              |
| Environmental         |  | N/A                                 | IP66 Rating  |

# Analytics Specifications

## 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 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    | 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.                                                                                       |
| 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.                                                                                                                                        |

## Supported Classified Object Types

|                              |                                                                    |
|------------------------------|--------------------------------------------------------------------|
| Object Types in Outdoor Mode | Vehicle, sub-types: Car, Truck, Bicycle, Motorcycle, Bus<br>Person |
| Object Types in Indoor Mode  | Person                                                             |

## Teach by Example

|                  |                                              |
|------------------|----------------------------------------------|
| Teach By Example | Yes, when used with Avigilon Control Center™ |
|------------------|----------------------------------------------|

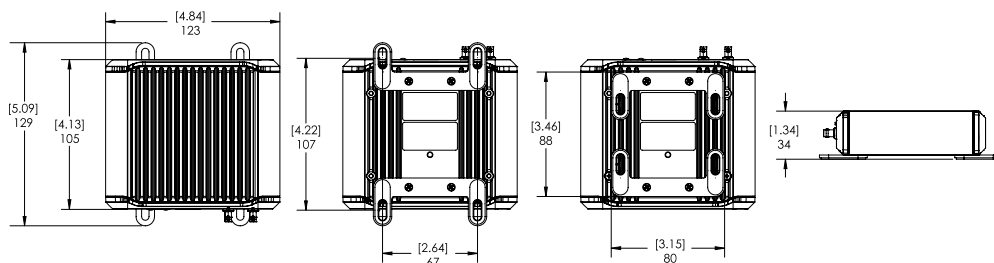
## Avigilon Control Center (ACC) Versions Supported Features\*

|                               |                                                                                                                                                                                             |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACC Version 6.14.26 or higher | All supported analytic events with two types of classified objects: person or vehicle. Appearance search when paired with appropriate server hardware.<br>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.<br>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.

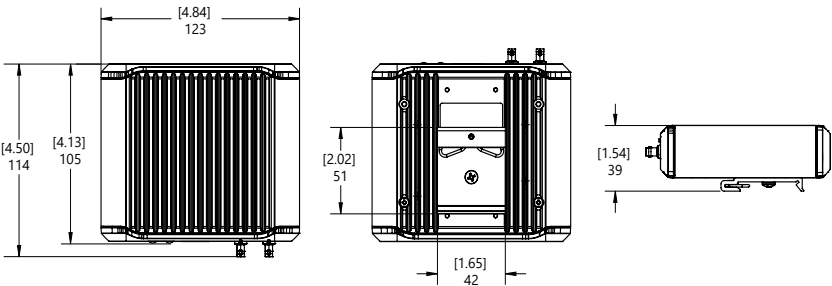
## Outline Dimensions

### Main Unit with Bracket

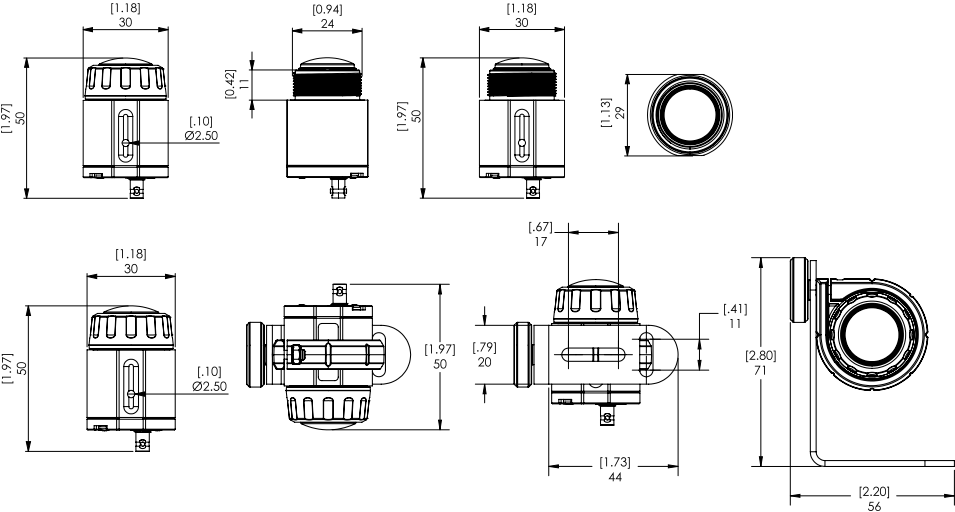


|       |        |
|-------|--------|
| [X.X] | INCHES |
| X.X   | MM     |

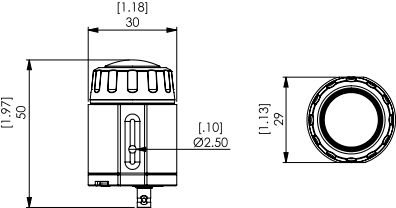
Main Unit with Din Rail Mount (Optional)



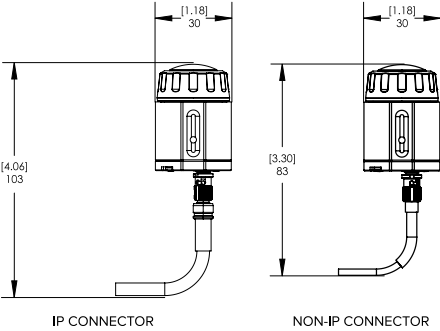
Micro Bullet Imager with Bracket



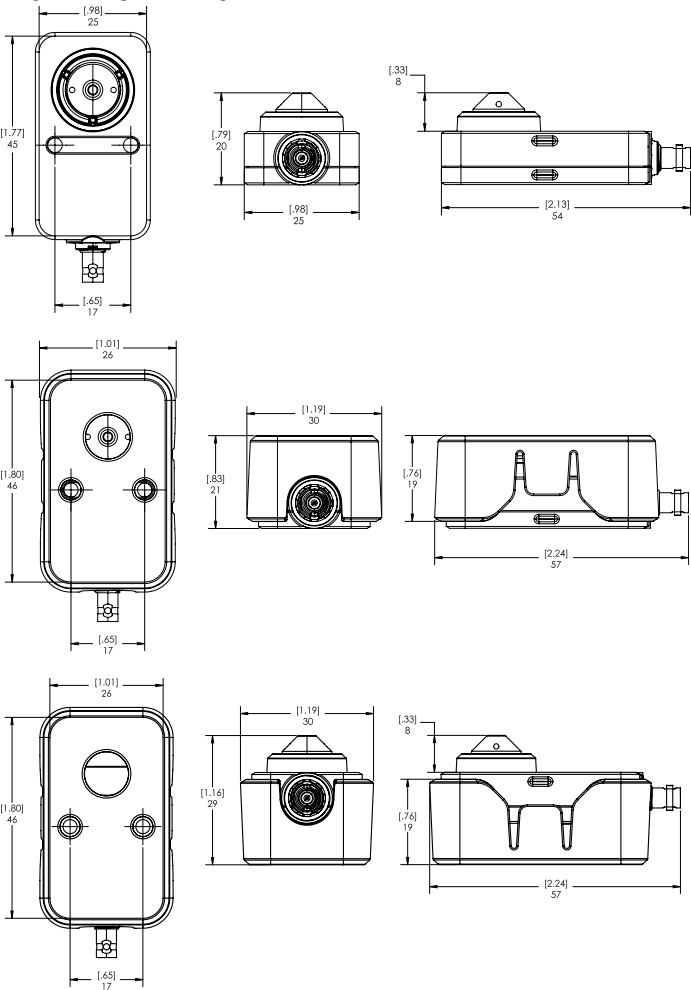
Micro Bullet Imager with Side Rail Mount



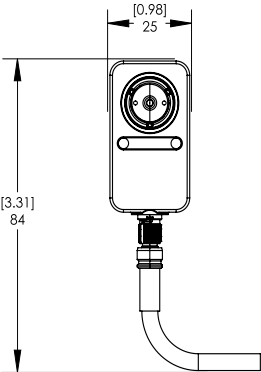
Micro Bullet Imager with Min. Cable Length



Right Angle Imager with Bracket



Right Angle Imager with Min. Cable Length





## Ordering Information

The variety of mounting options for the H5A Modular provides maximum flexibility to combine different imager modules and cable configurations.

| Main Unit                                                                                                                              | Imager Modules                                                                                                                                                                                                                                                                                                                                                           | Required Accessories                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>H5A Modular Camera Main Unit<br/>(H5A-MOD-2P)</p> | <p>Order up to two imager modules per Main Unit, any combination of the following:</p> <div>   </div> <p>H5A Right Angle Imager<br/>(3C-H5MOD-RP4)      H5A Micro Bullet Imager<br/>(xC-H5MOD-MB2)</p> | <p>Order one cable for each imager module:</p> <ul style="list-style-type: none"> <li>• CBL2M-1001 (2 m)</li> <li>• CBL5M-1001 (5 m)</li> </ul> |

With the modular design of the H5A Modular, either camera module can be connected to the H5A Modular Camera Main Unit for maximum versatility and optimal installation.

|              | FORM FACTOR  | MP  | WDR | Analytics | Lens                  | IP66 | HDSM Smartcodec | Lightcatcher Technology |
|--------------|--------------|-----|-----|-----------|-----------------------|------|-----------------|-------------------------|
| 3C-H5MOD-RP4 | Right Angle  | 3.0 | ✓   | ✓         | 3.7 mm, Fixed Pinhole |      | ✓               | ✓                       |
| 3C-H5MOD-MB2 | Micro Bullet | 3.0 | ✓   | ✓         | 2.8 mm, Fixed         | ✓    | ✓               | ✓                       |
| 5C-H5MOD-MB2 | Micro Bullet | 5.0 | ✓   | ✓         | 2.8 mm, Fixed         | ✓    | ✓               | ✓                       |

| Display Part Number | Description                  |
|---------------------|------------------------------|
| H5A-MOD-2P          | H5A Modular Camera Main Unit |

| Display Part Number | Description                                       |
|---------------------|---------------------------------------------------|
| 3C-H5MOD-RP4        | 3 MP Pinhole Right Angle Imager (H5A Modular)     |
| 3C-H5MOD-MB2        | 3 MP Fixed Lens Micro Bullet Imager (H5A Modular) |
| 5C-H5MOD-MB2        | 5 MP Fixed Lens Micro Bullet Imager (H5A Modular) |

| Display Part Number | Description                                            |
|---------------------|--------------------------------------------------------|
| CBL2M-1001          | 2 m (6 ft) HD BNC Cable for H5A Modular Camera Imager  |
| CBL5M-1001          | 5 m (16 ft) HD BNC Cable for H5A Modular Camera Imager |

| Display Part Number | Description                                                      |
|---------------------|------------------------------------------------------------------|
| BRKTMD-1001         | Din rail mount for H5A Modular Camera Main Unit                  |
| BRKTMD-1011         | Replacement L Bracket for Micro Bullet Imager H5A Modular        |
| BRKTMD-1021         | Replacement Flat Bracket for Right Angle Imager H5A Modular      |
| BRKTMD-1031         | Replacement Trimring Bracket for Micro Bullet Imager H5A Modular |

| Display Part Number | 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 |

\*Only one license required per main unit whether one or two imagers are connected.

# Support

For product support, visit: [avigilon.com](https://avigilon.com) or [sales@avigilon.com](mailto:sales@avigilon.com)



**MOTOROLA SOLUTIONS**

**AVIGILON™**

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