

# H5A PTZ Camera

8 MP

The Avigilon H5A Pan-Tilt-Zoom (PTZ) camera brings wide area coverage, high-speed movement and long range, evidentiary detail for security operators to monitor large areas with ease. As an Avigilon H5A platform camera, the H5A-PTZ camera is embedded with Next-Generation Video Analytics for enhanced object detection and classification, Unusual Activity Detection (UAD), along with support for Facial Recognition technology and Avigilon Appearance Search™ technology to help ensure critical events do not go unnoticed.



## Features



### Next-Generation Video Analytics with Auto-tracking

Detects more objects with expanded object classifications and automatically tracks objects in zone for faster, decisive responses.



### 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.



### Lightcatcher™ Technology

Offers exceptional detail in areas with low lighting.



### ONVIF® Compliant

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



### Easy Transition From H4 PTZ To H5A-PTZ

Field-replaceable parts allow for an easy transition from H4 PTZ cameras to H5A-PTZ cameras.



### Long Range Detail

8 MP with 36x zooming capabilities sets a new standard for high-performance 36x PTZ cameras with greater evidentiary detail.



### Water, Impact and Enclosure Rated

IP66/67 rating for water resistance, IK10 impact rating for vandal resistance and NEMA 4X enclosure rating for windblown dust, water (e.g. rain, hose-directed water), and corrosion resistance.



### Wide Dynamic Range

Captures details in scenes with both very bright and dark areas.



### FIPS 140-2 Compliant

Brings increased data security with FIPS-compliant cryptography enabled on cameras<sup>1</sup>.



### Wide Area Coverage

Provides 360° zoomable views in high-resolution to monitor large areas with ease

ONVIF is a trademark of Onvif, Inc.

<sup>1</sup> Optional purchase of FIPS Level 1 camera license.

# Specifications

| Image Performance                 |                                                               |
|-----------------------------------|---------------------------------------------------------------|
| Image Sensor                      | 1/2.5" Type "Exmor R" CMOS Sensor                             |
| Active Pixels (H x V)             | 3840 (H) x 2160 (V)                                           |
| Imaging Area (H x V)              | 6.22 mm x 3.50 mm; 0.245" x 0.137"                            |
| Minimum Illumination              | 0.3 lux (F/2.0) in color mode; 0.09 lux (F/2.0) in monochrome |
| Dynamic Range                     | 100 dB                                                        |
| Image Rate                        | Up to 30 fps                                                  |
| Aspect Ratio (Resolution Scaling) | Down to (16:9) 384x216 or (5:4) 320x256                       |
| 3D Noise Reduction Filter         | Yes                                                           |

| Lens          |                                                                       |              |
|---------------|-----------------------------------------------------------------------|--------------|
| Lens          | 4.4 mm to 88 mm, F/2.0 - F/3.8                                        |              |
| Angle of View | Horizontal                                                            | 69.7° - 2.2° |
|               | Vertical                                                              | 42.8° - 1.3° |
| Zoom          | 36x (with image stabilization off), 30x (with image stabilization on) |              |

| Image Control                  |                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------|
| Video Compression              | 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: Selectable sensitivity and threshold. Classified object detection |
| Electronic Shutter Control     | Automatic, Manual (1/1 to 1/10,000 sec)                                         |
| Iris Control                   | Automatic, Open, Closed                                                         |
| Day/Night Control              | Automatic, Manual                                                               |
| Flicker Control                | 60 Hz, 50 Hz                                                                    |
| White Balance                  | Automatic, Manual                                                               |
| Backlight Compensation         | On/Off                                                                          |
| Privacy Zones                  | 3D, up to 64 zones                                                              |
| Presets                        | 500 named presets                                                               |
| Tours                          | 10 named tours                                                                  |
| Audio Compression Method       | G.711, Opus                                                                     |
| Digital Zoom                   | Up to 100x when used with ACC™ Client                                           |
| Electronic Image Stabilization | Yes                                                                             |
| Digital Defog                  | Adjustable/Off                                                                  |

| Network      |                                                                                                                                                                                                                                                          |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network      | 100BASE-TX                                                                                                                                                                                                                                               |
| Cabling Type | CAT5e                                                                                                                                                                                                                                                    |
| Connector    | RJ-45                                                                                                                                                                                                                                                    |
| 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    | IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMPv2, ICMP, DHCP, Zeroconf, HSTS, QoS, DSCP, NTCIP                                                                                                                                 |

| Network                     |                                                                                              |
|-----------------------------|----------------------------------------------------------------------------------------------|
| Streaming Protocols         | RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP, SRTSP |
| Device Management Protocols | SNMP v2c, SNMP v3                                                                            |

| Peripherals            |                                                                                                          |
|------------------------|----------------------------------------------------------------------------------------------------------|
| Audio Input/Output     | Line level input and output                                                                              |
| External I/O Terminals | 2 Alarm In, 2 Alarm Out                                                                                  |
| Onboard Storage        | 2 × microSD/microSDHC/microSDXC slot - video speed class card required. Class V10 or better recommended. |

| Mechanical       | In-Ceiling Mount                      | Pendant Mount                 |
|------------------|---------------------------------------|-------------------------------|
| Dimensions (Ø×H) | 228 mm × 252 mm; 9.0" × 9.9"          | 242 mm × 347 mm; 9.5" × 13.7" |
| Weight           | 3.4 kg; 7.5 lbs                       | 3.7 kg; 8.2 lbs               |
| Dome Bubble      | Polycarbonate                         |                               |
| Body             | Aluminum                              |                               |
| Housing          | Recessed mount                        | Pendant mount                 |
| Finish           | Cast, powder coated, close to RAL9002 |                               |
| Tilt             | -10° to 90°, e-Flip, 300°/second      |                               |
| Pan              | 360°, endless, 300°/second            |                               |

| Electrical         |                                                                                                                  |                                                                                                                                          |
|--------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Power Consumption  | 51 W max with 24 VDC aux power, 75 VA with 24 VAC aux power, 51 W max with 60 W PoE++, 25.5 W max with 30 W PoE+ |                                                                                                                                          |
| Power Source       | External Power                                                                                                   | 24 VDC ±10%; 24 VAC rms ±10%, 50 or 60 Hz                                                                                                |
|                    | PoE*                                                                                                             | 60 W PoE: IEEE 802.3bt Class 6 PoE++, 60 W Cisco UPoE, Microsemi 60 W or higher midspans<br>30 W PoE: IEEE 802.3bt, 802.3at Class 4 PoE+ |
| Power Connector    | Red and Black input wires                                                                                        |                                                                                                                                          |
| RTC Battery Backup | 3V manganese lithium                                                                                             |                                                                                                                                          |
| Memory             | 2 GB RAM, 512 MB Flash                                                                                           |                                                                                                                                          |

\*60W PoE may not be compatible with switches and injectors not listed here. Contact Avigilon sales or Avigilon technical support for more information.

| Environmental         | In-Ceiling Mount                                                                                                                      | Pendant Mount                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Operating Temperature | -30 °C to +60 °C (-22 °F to 140 °F) with external power or 60 W PoE<br>-10 °C to +60 °C (14 °F to 140 °F) with IEEE 802.3at 30 W PoE+ | -40 °C to +60 °C (-40 °F to 140 °F) with external power or 60 W PoE<br>-10 °C to +60 °C (14 °F to 140 °F) with IEEE 802.3at 30 W PoE+ |
| Storage Temperature   | -10 °C to +70 °C (14 °F to 158 °F)                                                                                                    |                                                                                                                                       |
| Humidity              | 0 - 95% non-condensing                                                                                                                |                                                                                                                                       |

| Certifications            |                                                                                                                                          |                                                                                                    |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Certifications/Approvals  | UL, cUL, CE, ROHS, RCM, EAC, KC, BIS, UKCA, NOM                                                                                          |                                                                                                    |
| Safety                    | UL 62368-1, CSA 62368-1, IEC/EN 62368-1                                                                                                  |                                                                                                    |
| Environmental             | In-Ceiling                                                                                                                               | IEC 62262 IK10 Impact Rating, UL 2043                                                              |
|                           | Pendant                                                                                                                                  | IEC 62262 IK10 Impact Rating, UL/CSA/IEC 60950-22, IEC 60529 IP66 and IP67 Weather Rating, NEMA 4X |
| Electromagnetic Emissions | FCC Part 15 Subpart B Class B, IC ICES-003 Class B, EN 55032 Class B, EN 61000-6-3, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3, EN 50121-4 |                                                                                                    |
| Electromagnetic Immunity  | EN 55035, EN 61000-6-1, EN 50121-4                                                                                                       |                                                                                                    |

# Analytics Specifications

## Supported Analytics Events At Home Position

|                               |                                                                                                                                                                                                    |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.                                                                                                                                        |

## Auto-track Objects in Area

|                            |                                                                                                                                                                                                                                               |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Auto-track Objects in Area | The event is triggered when the selected object type moves into the region of interest defined at the home position. The camera will automatically reposition to track the object, returning to the preset home position once object is lost. |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 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

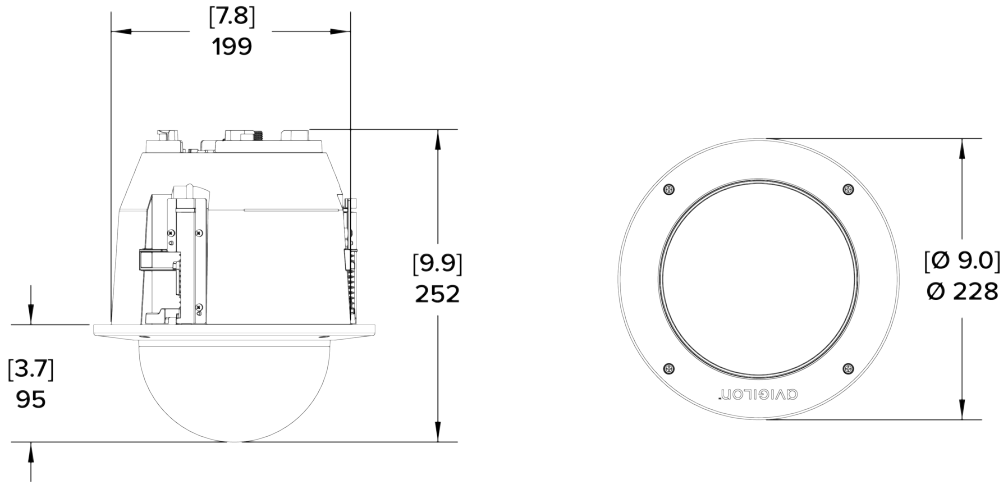
|                               |                                                                                                                                                                                                         |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACC Version 6.14.12 or higher | All supported analytic events with two types of classified objects: person or vehicle. Appearance search when paired with appropriate server hardware. Auto-tracking is not supported. H.265 supported. |
| ACC 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.                |

\* Auto-tracking requires ACC 7.14.14 or higher to configure.

# Outline Dimensions

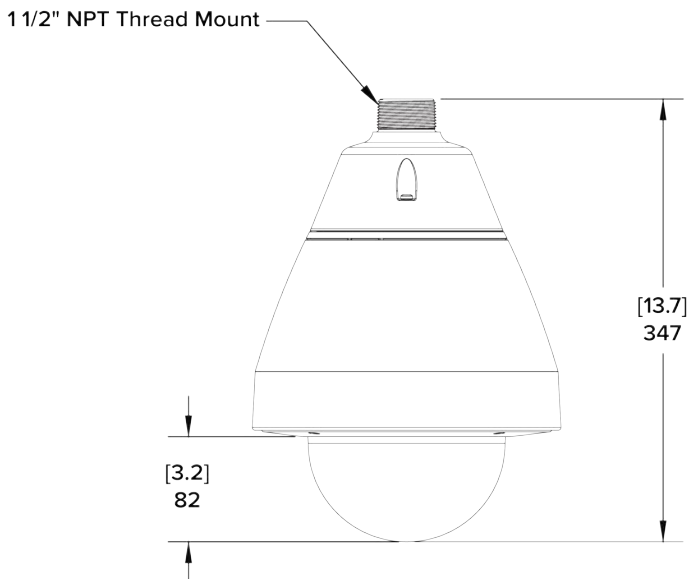
## In-Ceiling PTZ Dome Camera (H5A-PTZ-DC)

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



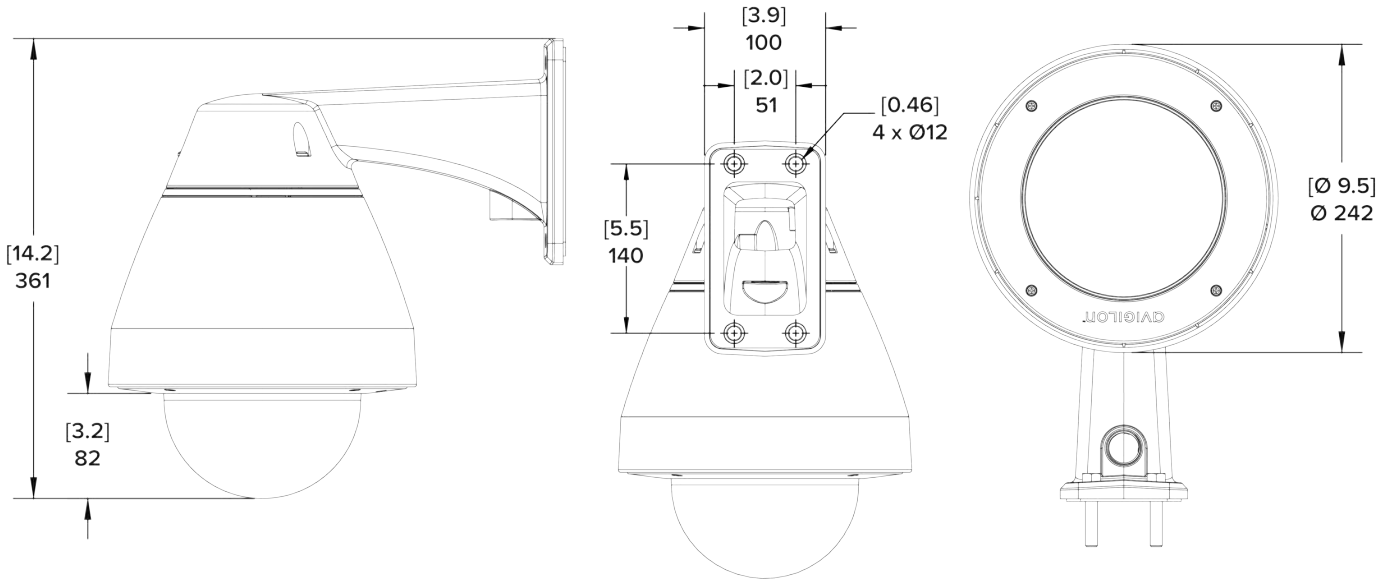
## Pendant PTZ Dome Camera (H5A-PTZ-DP) WITH NPT MOUNT

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



(H5A-PTZ-DP) WITH WALL ARM

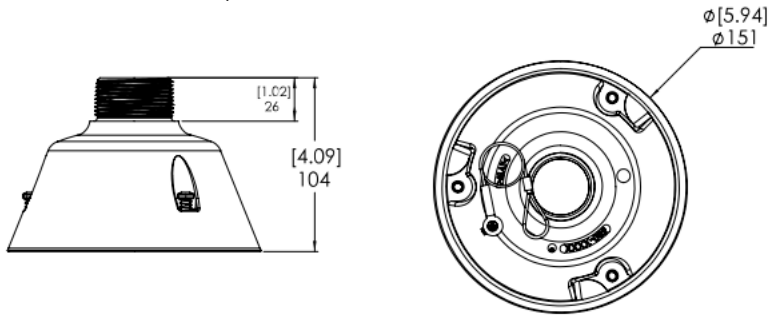
|       |        |
|-------|--------|
| [X.X] | INCHES |
| X     | MM     |



NPT Mount

(IRPTZ-MNT-NPTA1)

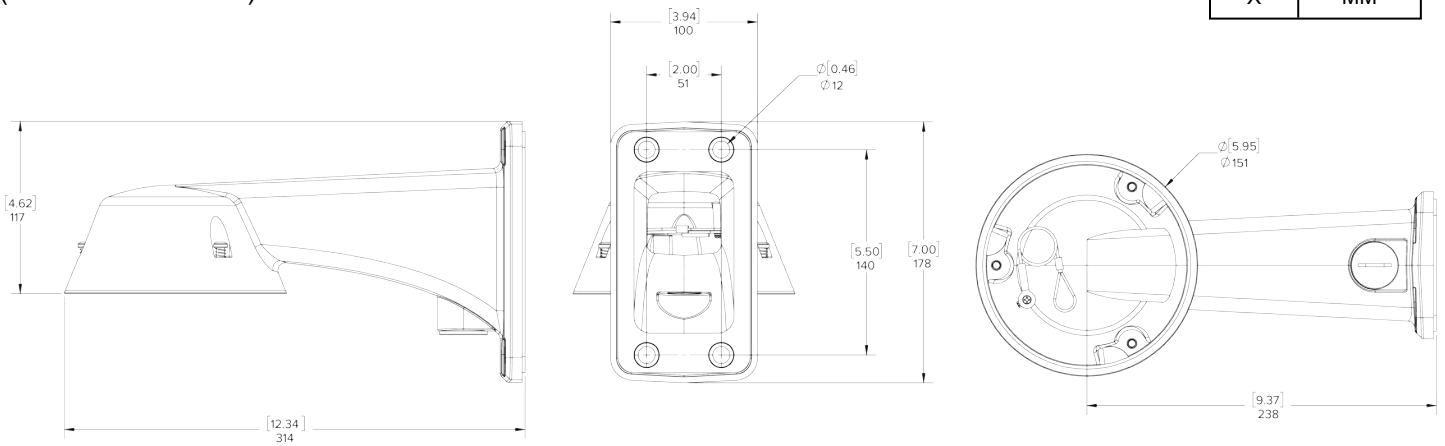
|       |        |
|-------|--------|
| [X.X] | INCHES |
| X     | MM     |



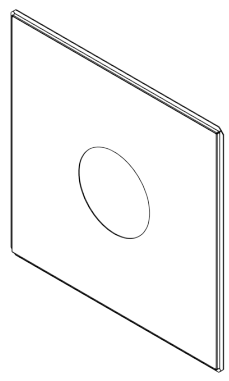
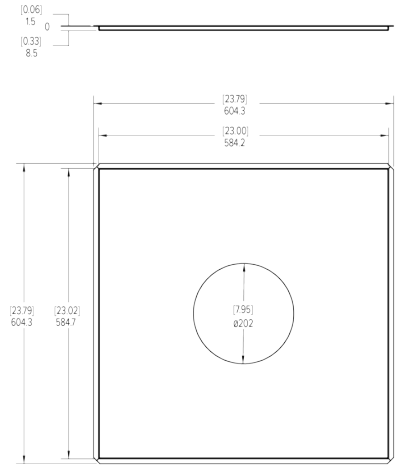
Wall Mount

(IRPTZ-MNT-WALL1)

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



# Metal Ceiling Panel (PTZMH-DC-CPNL1)



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

# Ordering Information

## PTZ Dome Cameras

| Part Number       | MP  | WDR | Lightcatcher Technology | Analytics at Home Position | Lens        | Zoom | IP66/IP67 | HDSM Smartcodec |
|-------------------|-----|-----|-------------------------|----------------------------|-------------|------|-----------|-----------------|
| 8.0C-H5A-PTZ-DP36 | 8.0 | ✓   | ✓                       | ✓                          | 4.4 - 88 mm | 36x* | ✓         | ✓               |
| 8.0C-H5A-PTZ-DC36 | 8.0 | ✓   | ✓                       | ✓                          | 4.4 - 88 mm | 36x* |           | ✓               |

\*Up to 36x zoom is achieved with Image Stabilization off. Image Stabilization set to on will provide 30x zoom.

## PTZ Camera Accessories

| Part Number            | Pendant PTZ | In-Ceiling PTZ | Description                                                                                                              |
|------------------------|-------------|----------------|--------------------------------------------------------------------------------------------------------------------------|
| IRPTZ-MNT-NPTA1        | ✓           |                | NPT Pendant Adapter                                                                                                      |
| IRPTZ-MNT-WALL1        | ✓           |                | Wall Arm Mount                                                                                                           |
| PLMT-1001              | ✓           |                | Pole Mounting Bracket, compatible with IRPTZ-MNT-WALL1                                                                   |
| CRNMT-1001             | ✓           |                | Corner Mounting Bracket, compatible with IRPTZ-MNT-WALL1                                                                 |
| PTZMH-DC-CPNL1         |             | ✓              | Metal Ceiling Panel for In-Ceiling Installation                                                                          |
| PTZH5A-CLER1           | ✓           | ✓              | Clear Bubble Assembly - Replacement                                                                                      |
| PTZH5A-SMOK1           | ✓           | ✓              | Smoked Bubble Assembly - Replacement                                                                                     |
| POE60U-1BTE            | ✓           | ✓              | Gigabit 802.3bt 60W PoE Injector, single port                                                                            |
| PD-9001GR/AT/AC-NA-MSI | ✓           | ✓              | 30W PoE+ Injector. Injector operational temperature range is -20°C (-4°F) to 40°C (104°F). NA/EU/UK/AU options available |
| PTZ-ACCS-IC-RETRO      |             | ✓              | H4 In-Ceiling PTZ audio retrofit kit                                                                                     |
| H5PTZ-ACCS-CABL1       | ✓           |                | Cable gland nut kit, pack of 10                                                                                          |

## Optional Camera Licenses and Accessories

|          |                                                                            |
|----------|----------------------------------------------------------------------------|
| CAM-FIPS | Camera license to enable FIPS Level 1 cryptographic mode on any H5A camera |
|----------|----------------------------------------------------------------------------|

## Support

Learn more and find additional documentation at [avigilon.com](https://www.avigilon.com) or email [sales@avigilon.com](mailto:sales@avigilon.com) for specific product support.



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