

# DH-PSD81602-A360

8x2MP Multi-Sensor Panoramic Network Camera+PTZ Camera



## System Overview

The Dahua PSD81602-A360 Panoramic Multi-Sensor plus PTZ camera combines eight (8) 2MP sensors working in tandem and a high-speed PTZ camera to create a comprehensive 360° view. With its all-in-one design, the camera provides a 360° panorama and provides region of interest details at the same time. In addition, the PSD81602-A360 offers the Intelligent Video System (IVS), a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations, intrusion detection and smart tracking. A camera with IVS quickly and accurately responds to monitoring events in a specific area. The PSD81602-A360 camera can replace multiple single-sensor cameras providing a higher return on investment.

## Functions

### Panoramic

Panoramic cameras provide 180°, 360° full range of video scene, bringing people a new sense of real live and interactive experience. Dahua provides two kinds of panoramic camera, single sensor fisheye camera and multi-sensor camera, both of them can offer 180-degree & 360-degree panoramic image. Through working together with PTZ camera which offer whole scene and region details at same time. It provided new surveillance experience to end user and improved the surveillance quality.

### True Day/Night

A day/night mechanical IR cut filter makes this camera ideal for applications with fluctuating lighting conditions, delivering color images during the day and automatically switching to monochrome as the scene darkens.

### Starlight Technology

Featured with Dahua Starlight Technology, the camera is ideal for applications with challenging light conditions. Its low light performance delivers usable video with minimal ambient light. Even in extreme low light conditions, Starlight Technology is capable of delivering color images in nearly complete darkness.

- Panoramic: Eight 1/1.8" 2Megapixel progressive scan CMOS
- PTZ: One 1/1.8" 2Megapixel progressive scan CMOS
- H.265/H.264 triple-stream encoding
- 2x25fps@4096x1800+50/60fps@1080P
- Support 360-degree panoramic view
- Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Smart tracking
- Intelligent Function
- Micro SD memory, IP67, IK10



### HEVC (H.265)

H.265 ITU-T VCEG is a new video coding standard. H.265 Following standard developed around the existing video coding standard H.264, some retain the original technology, while some of the relevant technology to improve the new technology uses advanced technology to improve the relationship between the code stream, encoding quality, and the delay between algorithm complexity, optimize settings specific contents include: Improve compression efficiency, improve the robustness and error recovery capabilities, real-time to reduce the delay, reduce channel acquisition time and a random access delay, reduce complexity, etc

### Smart H.265+

Deliver high quality video without straining the network, Smart H.265+ is the optimized implementation of H.265. The Smart H.265+ encoding technology includes a scene adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction, providing saving of up to 70% of bandwidth and storage when compared with standard H.265.

### Protection (IP67, IK10, wide voltage)

Supporting ±25% input voltage tolerance, this camera suits even the most unstable conditions for outdoor applications. Its 6KV lightning rating provides effective protection for both the camera and its structure against lightning. IP67 is supported by the camera, which makes it suitable for both indoor and outdoor environments. IK10 compliance enables the camera to sustain the equivalent of 55 kg (120lbs) force.

### Environmental

Standard Dahua camera can function from -30°C to +60°C (-22 °F to +140 °F) with 95% humidity, meanwhile some models support heater module optional which allows the camera to function from -40°C to +60°C (-40 °F to +140 °F). With a temperature range of -40 °C to +60 °C, the camera is designed for extreme temperature environments.

### Technical Specification

#### Panoramic Camera

|                          |  |
|--------------------------|--|
| Image Sensor             | Eight 1/1.8" 2Megapixel CMOS   |
| Effective Pixels         | 2x4096(H)x1800(V)  |
| Scanning System          | Progressive  |
| Electronic Shutter Speed | Auto/Manual, 1/3~1/100000s   |
| Minimum Illumination     | 0.005Lux/F2.2( Color,1/3s,30IRE)<br>0.03Lux/F2.2( Color,1/30s,30IRE)<br>0.003Lux/F2.2( B/W,1/3s,30IRE)<br>0.02Lux/F2.2( B/W,1/30s,30IRE) |
| S/N Ratio                | More than 50dB   |

#### Panoramic Lens

|               |                |           |           |          |
|---------------|----------------|-----------|-----------|----------|
| Lens Type     | Fixed          |           |           |          |
| Mount Type    | Board-in       |           |           |          |
| Focal Length  | 5mm            |           |           |          |
| Max. Aperture | F2.2           |           |           |          |
| Angle of View | H: 360°, V:80° |           |           |          |
| DORI Distance | Detect         | Observe   | Recognize | Identify |
|               | 53m(178ft)     | 21m(69ft) | 10m(33ft) | 5m(17ft) |

#### PTZ Camera

|                          |   |
|--------------------------|---|
| Image Sensor             | 1/1.8" 2Megapixel CMOS  |
| Effective Pixels         | 1920(H)x1080(V)   |
| RAM/ROM                  | 1024MB/128MB  |
| Scanning System          | Progressive   |
| Electronic Shutter Speed | Auto/Manual, 1~1/30000s   |
| Minimum Illumination     | 0.002Lux/F1.5( Color,1/3s,30IRE)<br>0.01Lux/F1.5( Color,1/30s,30IRE)<br>0.001Lux/F1.5( B/W,1/3s,30IRE)<br>0.008Lux/F1.5( B/W,1/30s,30IRE) |
| S/N Ratio                | More than 50dB  |

#### PTZ Lens

|               |                            |               |              |              |             |
|---------------|----------------------------|---------------|--------------|--------------|-------------|
| Lens Type     | Motorized /Auto Iris(HALL) |               |              |              |             |
| Mount Type    | Board-in                   |               |              |              |             |
| Focal Length  | 5.5mm~206mm                |               |              |              |             |
| Max. Aperture | F1.5                       |               |              |              |             |
| Angle of View | H: 65.8°~2.0°              |               |              |              |             |
| Optical Zoom  | 37x                        |               |              |              |             |
| Focus Control | Motorized                  |               |              |              |             |
| DORI Distance | Lens                       | Detect        | Observe      | Recognize    | Identify    |
|               | W                          | 70m(229ft)    | 28m(92ft)    | 14m(46ft)    | 7m(23ft)    |
|               | T                          | 2080m(6824ft) | 832m(2730ft) | 416m(1365ft) | 208m(682ft) |

#### PTZ

|                      |   |
|----------------------|---|
| Pan/Tilt Range       | Pan: 0° ~ 360° endless; Tilt: -20° ~ 90°, auto flip 180°                            |
| Manual Control Speed | Pan: 0.1° ~ 240° /s; Tilt: 0.1° ~ 120° /s   |
| Presets Speed        | Pan: 600° /s ; Tilt: 400° /s  |
| Presets              | 300   |
| PTZ Mode             | 5 Pattern, 8 Tour, Auto Pan ,Auto Scan  |
| Speed Setup          | Human-oriented focal Length/ speed adaptation                                       |
| Power up Action      | Auto restore to previous PTZ and lens status after power failure                    |
| Idle Motion          | Activate Preset/ Scan/ Tour/ Pattern if there is no command in the specified period |
| Protocol             | DH-SD, Pelco-P/D (Auto recognition)   |

#### Intelligence

|               |                     |
|---------------|---------------------|
| Auto Tracking | Support             |
| IVS           | Tripwire, Intrusion |

#### Video

|                                     |   |   |
|-------------------------------------|---|---|
| Compression                         | H.265+/H.265/H.264+/H.264               |   |
| Streaming Capability                | 3 Streams                               |   |
| Resolution                          | Panoramic Camera                        | 2x4096x1800/2x3840x1680/2x2880x1264/<br>/2x1920x832/2x1280x560/2x1024x452                         |
|                                     | PTZ Camera                              | 1080P(1920x1080)/ 1.3M(1280x960)/<br>720P(1280x720)/ D1(704x576/704x480)/<br>CIF(352x288/352x240) |
| Frame Rate                          | Panoramic Camera                        | Main Stream: 2x4096x1800(1~25fps)   |
|                                     |   | Sub Stream: 2x1024x452 (1 ~ 25/30fps)   |
|                                     |   | Third Stream: 2x1920x832 (1 ~ 25/30fps)   |
|                                     | PTZ Camera                              | Main Stream: 1080P(1~50/60fps)<br>Sub Stream: D1(1~50/60fps)<br>Third Stream: 1080P(1~50/60fps)   |
| Bit Rate Control                    | CBR/VBR                                 |   |
| Bit Rate                            | Panoramic Camera                        | H.265: 2x (14Kbps~ 8192Kbps)<br>H.264: 2x (24Kbps~ 8192Kbps)                                      |
|                                     | PTZ Camera                              | H.265: 4Kbps~ 8192Kbps<br>H.264: 8Kbps~ 7168Kbps  |
| Day/Night                           | Auto(ICR) / Color / B/W                 |   |
| BLC Mode                            | BLC / HLC / WDR(120dB)                  |   |
| White Balance                       | Auto/Natural/Street Lamp/Outdoor/Manual |   |
| Gain Control                        | Auto/Manual                             |   |
| Noise Reduction                     | 3D DNR                                  |   |
| Motion Detetion                     | Off / On (4 Zone, Rectangle)            |   |
| Region of Interest                  | Off / On (4 Zone)                       |   |
| Electronic Image Stabilization(EIS) | Support(For PTZ Camera only)            |   |
| Smart IR                            | N/A                                     |   |
| Defog                               | Support(For PTZ Camera only)            |   |

|                 |                  |                               |
|-----------------|------------------|-------------------------------|
| Digital Zoom    | 16x              |                               |
| Flip            | N/A              |                               |
| Mirror          | N/A              |                               |
| Privacy Masking | Panoramic Camera | Off / On (4 Area, Rectangle)  |
|                 | PTZ Camera       | Off / On (24 Area, Rectangle) |

Audio

|             |                           |
|-------------|---------------------------|
| Compression | G.711a/G.711Mu/AAC/ G.726 |
|-------------|---------------------------|

Network

|                     |  |
|---------------------|--|
| Ethernet            | RJ-45 (100/1000Base-T)<br>Fiber-FC (100/1000Base-FX) (Optional)  |
| Protocol            | HTTP;HTTPS;TCP;ARP;RTSP;RTP;UDP;SMTP;FTP;DHCP<br>;DNS;DDNS;PPPOE;IPv4/v6;QoS;UPnP;NTP;Bonjour;802.1x;Multicast;IGMP;SNMP |
| Interoperability    | ONVIF, PSIA, CGI   |
| Streaming Method    | Unicast / Multicast  |
| Max. User Access    | 10 Users/20 Users  |
| Edge Storage        | NAS<br>Local PC for instant recording<br>Mirco SD card 128GB   |
| Web Viewer          | IE, Chrome, Firefox, Safari  |
| Management Software | Smart PSS, DSS, Easy4ip  |
| Smart Phone         | IOS, Android   |

Certifications

|                |  |
|----------------|--|
| Certifications | CE (EN 60950:2000)<br>UL:UL60950-1<br>FCC: FCC Part 15 Subpart B |
|----------------|--|

Interface

|                 |  |
|-----------------|--|
| Video Interface | 1 Port(For PTZ Camera only)                                    |
| Audio Interface | 2/1 channel In/Out   |
| RS485           | 1 Port   |
| Alarm           | 7 channel In: 5mA 5VDC<br>2 channel Out: 1A 30VDC / 0.5A 50VAC |

Electrical

|                   |       |
|-------------------|-------|
| Power Supply      | DC36V |
| Power Consumption | <120W |

ENVIRONMENTAL

|                      |   |
|----------------------|---|
| Operating Conditions | -40° C ~ +60° C (-40° F ~ +140° F) / Less than 95% RH |
| Storage Conditions   | -40° C ~ +60° C (-40° F ~ +140° F) / Less than 95% RH |
| Ingress Protection   | IP67  |
| Vandal Resistance    | IK10  |

Construction

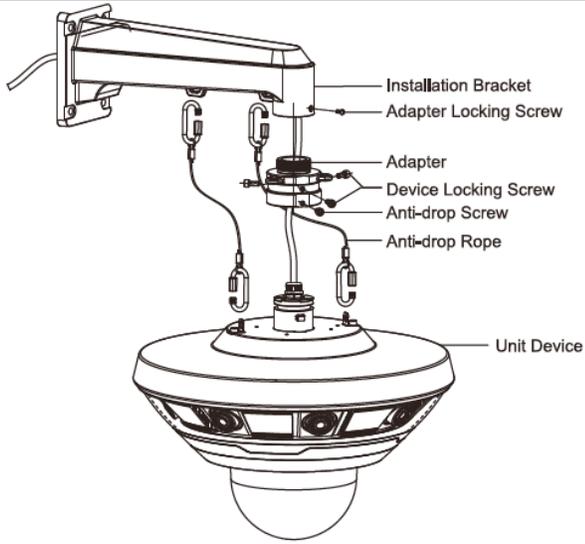
|              |                                 |
|--------------|---------------------------------|
| Casing       | Metal                           |
| Dimensions   | Φ449.5mm×342.5mm(Φ17.7"×13.48") |
| Net Weight   | 16kg(35.27lb)                   |
| Gross Weight | 25kg(55lb)                      |

Ordering Information

| Type                   | Part Number        | Description   |
|------------------------|--------------------|---|
| Panoramic+ PTZ camera  | DH-PSD81602P-A360  | 8x2MP Multi-Sensor Panoramic Network Camera+PTZ Camera, PAL |
|                        | DH-PSD81602N-A360  | 8x2MP Multi-Sensor Panoramic Network Camera+PTZ Camera,NTSC |
|                        | PSD81602P-A360     | 8x2MP Multi-Sensor Panoramic Network Camera+PTZ Camera, PAL |
|                        | PSD81602N-A360     | 8x2MP Multi-Sensor Panoramic Network Camera+PTZ Camera,NTSC |
| Accessories (included) | Mount Adapter      | Mount Adapter   |
|                        | Wall Mount Bracket | Wall Mount Bracket  |
|                        | DC36V/4.17A        | Power Supply  |



Accessories



Dimensions (mm/inch)

