

# DH-EPC245U-PTZ

## 2MP 45x Explosion-proof Network Positioning System



- 1/2.8" 2Megapixel STARVIS™ CMOS
- Powerful 45x optical zoom
- 316L stainless steel housing
- Starlight technology
- H.265/H.264 Triple-stream Encoding
- Max. 50/60fps@1080P
- IP68



### System Overview

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, this camera provides an all-in-one solution for capturing long distance video surveillance for outdoor applications. Together with infrared illumination and Starlight technology, the camera is the perfect solution for dark, lowlight applications. The series combines a day/night mechanical IR cut filter for the highest image quality in variable lighting conditions during the day, and True WDR for applications with direct sunlight or glare.

### Functions

#### Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

#### Wide Dynamic Range

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, True WDR (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

#### Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

#### Environmental

Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -40 °C to +60 °C (-40 °F to +140 °F) with 95% humidity. Subjected to rigorous dust and water immersion tests and certified to the IP68 Ingress Protection rating makes it suitable for demanding outdoor applications.

#### Protection

The camera allows input voltage tolerance, suitable for the unstable conditions for outdoor applications. Its 2KV lightning rating provides effective protection for both the camera and its structure against lightning.

#### Interoperability

The camera conforms to the ONVIF (Open Network Video Interface Forum) specifications, ensuring interoperability between network video products regardless of manufacturer.

## Technical Specification

### Camera

|                          |  |
|--------------------------|--|
| Image Sensor             | 1/2.8" STARVIS™ CMOS                       |
| Effective Pixels         | 1920(H) x 1080(V), 2 Megapixels            |
| RAM/ROM                  | 512M/128M                                  |
| Scanning System          | Progressive                                |
| Electronic Shutter Speed | 1/1s~1/30,000s                             |
| Minimum Illumination     | Color: 0.005Lux@F1.6; B/W: 0.0005Lux@F1.6; |
| IR Distance              | N/A  |
| IR On/Off Control        | N/A  |
| IR LEDs                  | N/A  |
| Wiper                    | Support                                    |

### Lens

|                      |                 |
|----------------------|-----------------|
| Focal Length         | 3.95mm~177.7mm  |
| Max. Aperture        | F1.6~ F4.95     |
| Angle of View        | H: 70.3° ~ 1.8° |
| Optical Zoom         | 45x             |
| Focus Control        | Auto/Manual     |
| Close Focus Distance | 100mm~ 1000mm   |

### DORI Distance

\*Note: The DORI distance is a "general proximity" of distance which makes it easy to pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specification and lab test result according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify respectively.

| Detect        | Observe      | Recognize    | Identify    |
|---------------|--------------|--------------|-------------|
| 2345m(7694ft) | 938m(3077ft) | 469m(1539ft) | 234m(768ft) |

### PTZ

|                      |  |
|----------------------|--|
| Pan/Tilt Range       | Pan: 0° ~ 360° endless; Tilt: -90° ~ 90°                                 |
| Manual Control Speed | Pan: 0.1° ~40° /s; Tilt: 0.1° ~40° /s                                    |
| Preset Speed         | Pan: 40° /s; Tilt: 40° /s  |
| Presets              | 256  |
| PTZ Mode             | 5 Scan, 8 Tour   |
| 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 if there is no command in the specified period |
| Protocol             | DH-SD, Pelco-P/D (Auto recognition)                                      |

### Video

|                                      |   |
|--------------------------------------|---|
| Compression                          | H.265+/H.265/H.264+/H.264   |
| Streaming Capability                 | 3 Streams   |
| Resolution                           | 1080P(1920×1080)/1.3M(1280×960)/720P(1280×720)/D1(704×576/704×480)/CIF(352×288/352×240)                                     |
| Frame Rate                           | Main stream: 1080P/1.3M/720P(1~50/60fps)<br>Sub stream1: D1/CIF(1 ~ 25/30fps)<br>Sub stream2: 1080P/1.3M/720P(1 ~ 25/30fps) |
| Bit Rate Control                     | CBR/VBR   |
| Bit Rate                             | H.265/H.264: 448K ~ 8192Kbps  |
| Day/Night                            | Auto(ICR) / Color / B/W   |
| Backlight Compensation               | BLC / HLC / WDR (120dB)   |
| White Balance                        | Auto, ATW, Indoor, Outdoor, Manual  |
| Gain Control                         | Auto / Manual   |
| Noise Reduction                      | Ultra DNR (2D/3D)   |
| Motion Detection                     | Support   |
| Region of Interest                   | Support   |
| Electronic Image Stabilization (EIS) | Support   |
| Defog                                | Support   |
| Digital Zoom                         | 16x   |
| Flip                                 | 180°  |

### Audio

|             |   |
|-------------|---|
| Compression | G.711a/G.711Mu/AAC/G.722/G.726/MPEG2-L2 |
|-------------|---|

### Network

|                     |  |
|---------------------|--|
| Ethernet            | RJ-45 (10Base-T/100Base-TX)  |
| Protocol            | IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS, Bonjour, 802.1x |
| Interoperability    | ONVIF Profile S&G, API   |
| Streaming Method    | Unicast / Multicast  |
| Max. User Access    | 20 users   |
| Edge Storage        | NAS (Network Attached Storage), Local PC for instant recording, Micro SD card 256GB  |
| Web Viewer          | IE, Chrome, Firefox, Safari  |
| Management Software | Smart PSS, DSS, DMSS   |
| Smart Phone         | iOS, Android   |

### Interface

|                 |                      |
|-----------------|----------------------|
| Video Interface | 1 coaxial cable(75Ω) |
| RS485           | 1                    |
| Audio I/O       | 1/1                  |
| Alarm I/O       | 2/1                  |

**Certifications**

|                         |   |
|-------------------------|---|
| Certifications          | ATEX: EN 60079-0/EN 60079-1/EN 60079-28/EN 60079-31<br>IECEX : IEC 60079-0/IEC 60079-1/EN 60079-28/IEC 60079-31 |
| Explosion-proof Marking | ATEX: II 2 G Ex db IIC T6 Gb, II 2 D Ex tb IIIC T80°C Db<br>IECEX : Ex db IIC T6 Gb, Ex tb IIIC T80°C Db        |

**Electrical**

|                   |                       |
|-------------------|-----------------------|
| Power Supply      | AC220V(AC100V ~ 240V) |
| Power Consumption | 35W, 60W (Heater On)  |

**Environmental**

|                      |  |
|----------------------|--|
| Operating Conditions | -40°C ~ 60°C (-40°F ~ +140°F) / Less than 95% RH |
| Storage Temperature  | -40°C ~ 65°C (-40°F ~ +149°F)                    |
| Ingress Protection   | IP68   |
| Vandal Resistance    | N/A  |

**Construction**

|              |                      |
|--------------|----------------------|
| Casing       | 316L Stainless Steel |
| Dimensions   | Φ334mm×402mm×301mm   |
| Net Weight   | 23.3kg(51.37lb)      |
| Gross Weight | 27.5kg(60.63lb)      |

**Ordering Information**

| Type           | Part Number     | Description   |
|----------------|-----------------|---|
| 2MP PTZ Camera | DH-EPC245U-PTZ  | 2MP 45x Explosion-proof PTZ Network Camera, WDR, PAL  |
|                | DH-EPC245UN-PTZ | 2MP 45x Explosion-proof PTZ Network Camera, WDR, NTSC |
| Accessories    | DH-ZAZ660B      | Wall Mount  |
|                | CZ300           | Junction Box (ATEX/IECEX)                             |
|                | ZAEX02          | Connector (ATEX/IECEX)                                |
|                | ZANXG           | Flexible Tube (ATEX/IECEX)                            |

**Accessories**

Optional :



DH-ZAZ660B  
Wall Mount



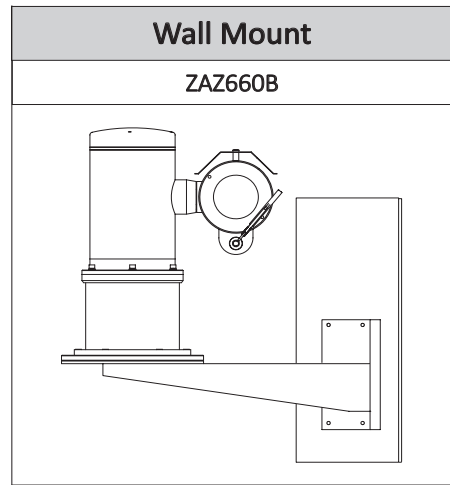
CZ300  
Junction Box  
(ATEX/IECEX)



ZAEX02  
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ZANXG  
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**Dimensions (mm)**

