# WizMind

**dahua** TECHNOLOGY

# VKD MES233DS

## 2MP 33x Starlight+ WizMind Network PTZ Camera

- 1/1.8" 2Megapixel CMOS
- Powerful 33x optical zoom
- Starlight+ technology
- Max. 50/60fps@1080P
- Deep-learning-based auto tracking and perimeter protection
- Support POE+
- SMD PLUS
- IP67, IK10

| False Alarm Filter | WDR | 0.001Lux | ICR D/N | IP67 | PoE+ | Vandal-proof |

*WizMind*

Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

## 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 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 0.001 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.

### Perimeter Protection
Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improving alarm accuracy.

### Environmental
Dahua cameras operate in extreme temperature environments, rated for use in temperatures from-40 °C to +70 °C (-40 °F to +158 °F) with 95% humidity. The camera complies with the IK10 Vandal Resistance impact rating. Subjected to rigorous dust and water immersion tests and certified to the IP67 Ingress Protection rating makes it suitable for demanding outdoor applications.

### Protection
The camera allows for ±25% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 8KV 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.

### SMD PLUS
With Deep-Learning Algorithm, Dahua SMD PLUS filters the motion detection alarm triggered by non-concerned target and recognizes human and vehicle effectively, sending alarms when human and vehicle intrude.

ONVIF

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/1.8" CMOS |
| Pixel | 2MP |
| Max. Resolution | 1920 (H) x 1080 (V) |
| ROM | 4GB |
| RAM | 1GB |
| Electronic Shutter Speed | 1–1/30000 s |
| Scanning System | Progressive |
| Min. Illumination | Color: 0.001Lux@F1.5<br>B/W: 0.0001Lux@F1.5 |
| Illumination Distance | NA |
| Illuminator On/Off Control | NA |
| Illuminator Number | NA |

### Lens

| | | | | |
|---|---|---|---|---|
| Focal Length | 5.8 mm–191.4 mm | | | |
| Max. Aperture | F1.5–F4.8 | | | |
| Field of View | H: 60.1°–3.2°; V: 35.3°–1.8°; D: 67.9°–3.7° | | | |
| Optical Zoom | 33x | | | |
| Focus Control | Auto/Semi-Auto/Manual | | | |
| Close Focus Distance | 0.1 m–1 m (0.33 ft–3.28 ft) | | | |
| Iris Control | Auto/Manual | | | |
| DORI Distance | Detect | Observe | Recognize | Identify |
| | 1655 m (5429.80 ft) | 622 m (2040.68 ft) | 331 m (1085.96 ft) | 165 m (541.34 ft) |

### PTZ

| | |
|---|---|
| Pan/Tilt Range | Pan: 0°–360°<br>Tilt: -20°–+90° |
| Manual Control Speed | Pan: 0.1°/s–300°/s<br>Tilt: 0.1°/s–150°/s |
| Preset Speed | Pan: 600°/s<br>Tilt: 500°/s |
| Presets | 300 |
| Tour | 8 (up to 32 presets per tour) |
| Pattern | 5 |
| Scan | 5 |
| Speed Adjustment | Support |
| Power-off Memory | Support |
| Idle Motion | Preset/Tour/Pattern/Scanning |
| Protocol | DH-SD<br>Pelco-P/D (auto recognition) |

### General Intelligence

| | |
|---|---|
| Event Trigger | Motion detection, video tampering, scene changing, network disconnection, IP address conflict, illegal access, and storage anomaly. |

| | |
|---|---|
| IVS | Object Abandoned/Missing |

### Artificial Intelligence

| | |
|---|---|
| Smart Capture | Support human, motor vehicle and non-motor vehicle image capture. |
| Perimeter Protection | Tripwire and intrusion. Support alarm triggering by target types (human and vehicle). Support filtering false alarms caused by animals, rustling leaves, bright lights, etc. |
| SMD PLUS | Support |
| Auto Tracking | Support |
| Face Detection | Support |

### Video

| | |
|---|---|
| Compression | H.265/H.265+/H.264+/H.264/MJPEG (sub stream) |
| 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 stream 1: D1/CIF (1–25/30fps)<br>Sub stream 2: 1080P/1.3M/720P/D1/CIF (1–25/30fps) |
| Bit Rate Control | Variable Bit Rate/Constant Bit Rate |
| Bit Rate | H.265/H.264: 3 kbps–20480 kbps |
| Day/Night | Auto (ICR)/Color/B/W |
| BLC | Support |
| WDR | 120 dB |
| HLC | Support |
| White Balance | Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/Natural light/Street lamp |
| Gain Control | Auto/Manual |
| Noise Reduction | 2D/3D |
| Motion Detection | Support |
| Region of Interest | Support |
| Image Stabilization | Electronic |
| Defog | Support |
| Digital Zoom | 16x |
| Flip | 0°/180° |
| Privacy Masking | Up to 24 areas |

### Audio

| | |
|---|---|
| Compression | G.711A; G.711Mu; G.726; AAC; G.722.1; G.723; G.729; PCM; MPEG2-Layer2 |

### Certification

| | |
|---|---|
| Certifications | CE: EN55032/EN55024/EN50130-4<br>FCC: Part15 subpartB,ANSI C63.4-2014 |

### Port

| | |
|---|---|
| Audio Input | 1 (LINE IN; bare wire) |
| Audio Out | 1 (LINE OUT; bare wire) |

| Alarm I/O | 7/2 |
|---|---|

## Network

| Ethernet | RJ-45 (10/100Base-T) |
|---|---|
| Protocol | IPv4; IPv6; HTTP; HTTPS; 802.1x; Qos; FTP; SMTP; UPnP; SNMPv1/v2c/v3(MIB-2); DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; RTCP |
| Interoperability | ONVIF Profile S&G&T; CGI |
| Streaming Method | Unicast/Multicast |
| User/Host | 20 (Total bandwidth 48M) |
| Storage | FTP; Micro SD card (256G); P2P |
| Browser | IE7 and newer versions<br>Chrome 42 and older versions<br>Firefox 52 and older versions<br>Safari |
| Management Software | Smart Player; Smart PSS; DSS; Easy4ip |
| Mobile Phone | IOS/Android |

## Power

| Power Supply | AC24V/3A±25%<br>PoE+ (802.3at) |
|---|---|
| Power Consumption | 20W<br>34W (heater on) |

## Environment

| Operating Temperature | −40°C to +70°C (−40°F to +158°F) |
|---|---|
| Operating Humidity | ≤95%RH |
| Protection | IP67; IK10; TVS 8000V lightning proof; surge protection |

## Structure

| Casing | Metal |
|---|---|
| Dimensions | Φ242 mm x 341 mm (9.53" × 13.43") |
| Net Weight | 4.5 kg (9.92 lb) |
| Gross Weight | 9.75 kg (21.50 lb) |

| Accessories | Wall Mount Bracket |
|---|---|
| | Mount Adapter |
| | Power Adapter |
| | Power Box |
| | Ceiling Mount Bracket |
| | Junction Box |
| | Pole Mount Bracket |
| | Corner Mount Bracket |
| | Parapet Mount Bracket |

## Accessories

### Included:



SFS01W
Wall Mount Bracket

SFS11AF
Mount Adapter
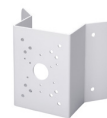
AC24V/3A
Power Adapter

### Optional:



SFS04AJ
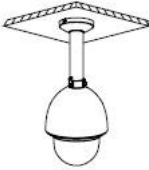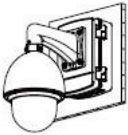Power Box

SFP00C
Ceiling Mount Bracket

SFS00AJ
Junction Box
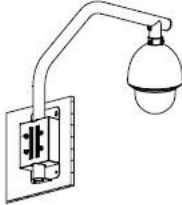
SFS00AP
Pole Mount Bracket

SFS00AC
Corner Mount
Bracket

PFB303S
Parapet Mount
Bracket

![logo](Wiz Mind)

| Ceiling Mount | Junction Mount |
|---|---|
| | |

| Power Box Mount | Pole Mount |
|---|---|
| | |

| Corner Mount | Parapet Mount |
|---|---|
| | |

**Dimensions (mm[inch])**

Φ46.7 [1.84]

341.0 [13.43]

Φ178.4 [7.02]

Φ242.0 [9.53]