# DH-SD52C232GB-HNR

## 2MP 32x In-ceiling WizSense Network PTZ Camera



- 1/2.8" 2Megapixel STARVIS™ CMOS.
- 32× optical zoom.
- Starlight technology.
- Max. 50/60 fps@2 MP.
- Auto-tracking 3.0.
- Perimeter protection.
- Face detection.
- SMD 4.0.
- IK10.




Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

## System Overview

With its powerful optical zoom, and accurate pan and tilt capabilities, the PTZ camera provides an all-in-one solution for large-scale monitoring. It harnesses the latest starlight technology, allowing it to produce highly detailed images even in low light conditions. The camera offers smooth control and high-grade protection that enable it to meet the requirements of video surveillance in small and medium-sized scenes.

## Functions

**Starlight Technology**

With advanced image processing technology and optical technology, Dahua Starlight technology can provide clear colorful video in the environment of low illuminance. It widely applies to various environments of low illuminance.

**Wide Dynamic Range**

The camera produces vivid images, even in high-contrast lighting conditions, by using industry-leading wide dynamic range (WDR) technology. For scenes that quickly alternate between bright and low lighting, WDR adjusts to fully capture both the bright and dark areas of a scene, producing superior quality videos.

**Perimeter Protection**

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, and more, and uses secondary recognition during target detection to improve alarm accuracy.

**Auto-tracking**

This feature controls the pan/tilt/zoom actions of the camera to automatically track an object in motion and to keep it in the scene. The tracking action can be triggered manually or automatically by defined rules. Once a rule is triggered, the camera can zoom in and track the defined target automatically.

**Protection (±25%, 6 kV)**

Designed with ±25% input voltage tolerance, the camera is suitable for even the most unstable outdoor conditions. Its 6 kV lightning rating ensures protection against lightning for both the camera and its structure.

**SMD 4.0**

Dahua Smart Motion Detection technology works with intelligent algorithms to classify targets that trigger motion detection alarms. It filters out objects that are not targets, such as small and large animals, to avoid triggering false alarms. With an AI NVR, Quick Pick technology becomes available, allowing you to easily search for and pick out human and vehicle targets from SMD event videos, prioritizing the highest matches.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/2.8" STARVIS™ CMOS |
| Pixel | 2 MP |
| Max. Resolution | 1920 (H) × 1080 (V) |
| ROM | 4 GB |
| RAM | 1 GB |
| Electronic Shutter Speed | 1/1–1/30000 s |
| Scanning System | Progressive |
| Min. Illumination | Color: 0.005Lux@F1.6<br>B/W: 0.0005Lux@F1.6 |

### Lens

| | | | | |
|---|---|---|---|---|
| Focal Length | 4.5 mm–144 mm | | | |
| Max. Aperture | F1.6–F4.0 | | | |
| Field of View | H: 58.4°–3.0°; V: 33.4°–1.7°; D: 66.4°–3.4° | | | |
| Optical Zoom | 32× | | | |
| Focus Control | Auto; Semi-auto; manual | | | |
| Close Focus Distance | 0.1 m–1.5 m ( 0.33 ft–4.92 ft) | | | |
| Iris Control | Auto; Manual | | | |
| DORI Distance | Detect | Observe | Recognize | Identify |
| | 1,986 m (6,915.75 ft) | 785 m (2,575.46 ft) | 398 m (1,305.77 ft) | 198 m (649.61 ft) |
| | *DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool. | | | |

### PTZ

| | |
|---|---|
| Pan/Tilt Range | Tilt: 0° to +90°, auto flip 180<br>Pan: 0° to 360° endless |
| Manual Control Speed | Pan: 0.1°/s–350°/s; Tilt: 0.1°/s–250°/s |
| Preset Speed | Pan: 500°/s; Tilt: 500°/s |
| Preset | 300 |
| Tour | 8 (up to 32 presets per tour) |
| Pattern | 5 |
| Scan | 5 |
| Power-off Memory | Yes |
| Idle Motion | Pattern; Preset; Scan; Tour |
| PTZ Protocol | DH-SD |

### Intelligence

| | |
|---|---|
| Video Metadata | Detects motor and non-motor vehicles, faces and human bodies. It also performs tracking, takes snapshots, uploads high-quality face images and optimizes images. It extracts attributes from motor vehicles, detecting up to 10 attributes for them |
| IVS (Perimeter Protection) | Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; Vehicle/Human Alarm Classification; linkage tracking |
| Face Detection | Supports face detection, optimization, tracking, capturing pictures, uploading high-quality face snapshots, and face enhancement; Supports attributes extraction. 6 attributes and 8 expressions: Gender, age, glasses, expressions (angry, sad, hate, scary, surprise, calm, happy and confused), mask, mustache; Supports face cutout: Face, one-inch photo. Capturing strategies include real-time capturing, optimization, and quality first |
| People Counting | Supports tripwire for people counting at entrances and exits, counting the number of people staying in an area and queuing in an area, and displaying and exporting reports based on the day, week and month |
| Auto Tracking | Yes |
| SMD | SMD 4.0 |
| AcuPick | Uses deep learning algorithms and works with back-end devices to accurately match targets, such as people and motor vehicles, and search through live and recorded videos to quickly locate targets |
| Auto Patrol | It triggers the IVS rule when a target is detected and makes the camera link with the PTZ to rotate to the position of the target and patrol based on its presets |

### Video

| | |
|---|---|
| Video Compression | H.264H; H.264B; Smart H.265+; H.264; H.265; MJPEG (Sub Stream1); Smart H.264+ |
| Streaming Capability | 3 streams |
| Resolution | 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240) |
| Video Frame Rate | Main stream: 1080p/1.3M/720p@(1-50/60 fps)<br>Sub stream 1: D1/VGA/CIF@(1-25/30 fps)<br>Sub stream 2: 1080p/1.3M/720p@(1-25/30 fps) |
| Bit Rate Control | CBR/VBR |
| Video Bit Rate | H.265/H.264: 3 kbps–20480 kbps |
| Day/Night | Auto (ICR)/Color/B/W |
| BLC | Yes |
| WDR | 120 dB |
| HLC | Yes |
| White Balance | Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp |
| Gain Control | Auto; manual |
| Noise Reduction | 2D; 3D |
| Motion Detection | Yes |
| Region of Interest (RoI) | Yes |
| Image Stabilization | Electronic Image Stabilization (EIS) |
| Defog | Yes |
| Digital Zoom | 16× |
| Image Rotation | 180° |
| Privacy Masking | Up to 24 areas can be set, with up to 8 areas in the same view |
| S/N Ratio | ≥ 55 dB |

## Audio

| | |
|---|---|
| Audio Compression | G.711a; G.711Mu; G.722.1; G.726; MPEG2-Layer2; G.729; G.723; PCM |

## Network

| | |
|---|---|
| Network Port | RJ-45 (10/100Base-T) |
| Network Protocol | FTP; RTMP; IPv6; Bonjour; IPv4; DNS; RTCP; PPPoE; NTP; RTP; 802.1x; HTTPS; SNMP; TCP/IP; DDNS; UPnP; NFS; ICMP; UDP; IGMP; HTTP; SSL; DHCP; SMTP; Qos; RTSP; ARP |
| Interoperability | CGI; SDK; ONVIF (Profile S&G&T); P2P |
| Streaming Method | Unicast/Multicast |
| User/Host | 20 (total bandwidth: 64 M) |
| Storage | Micro SD card (512 GB); FTP/SFTP; NAS |
| Browser | IE 9 and later versions<br>Chrome 42 and later versions<br>Firefox 50 and later versions<br>Safari 10 and later versions |
| Management Software | DSS Pro; DMSS |
| Mobile Client | iOS; Android |

## Certification

| | |
|---|---|
| Certifications | CE: EN55032/EN55024/EN50130-4<br>FCC: Part15 subpartB, ANSI C63.4-2014<br>UL: UL62368-1+CAN/CSA C22.2,No. 62368-1 |

## Port

| | |
|---|---|
| Audio Input | 1 channel (LINE IN, bare wire) |
| Audio Output | 1 channel (LINE OUT,bare wire) |
| Alarm Linkage | Capture; preset; tour; pattern; recording; alarm digital input; audio; send email |
| Alarm Event | Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection |
| Alarm I/O | 2/1 |
| Audio I/O | 1/1 |

## Power

| | |
|---|---|
| Power Supply | 24 VDC/2.5 A ± 25% (Included)<br>PoE+ (802.3at) |
| Power Consumption | Basic: 12.8 W<br>Max: 16 W |

## Environment

| | |
|---|---|
| Operating Temperature | –30°C to +60°C (–22°F to +140°F) |
| Operating Humidity | ≤ 95% (RH) |
| Protection | IK10; 6000V lightning proof; surge protection; voltage transient protection |

## Structure

| | |
|---|---|
| Product Dimensions | 176.6 mm × Φ198.0 mm (6.95" × Φ7.80") |
| Net Weight | 2.2 kg (4.85 lb) |
| Gross Weight | 3.7 kg (8.16 lb) |

When the vertical field of view is between 0° and 7°, the image might present different degrees of ghosting.

## Ordering Information

| Type | Model | Description |
|---|---|---|
| 2MP WizSense PTZ Camera | DH-SD52C232GB-HNR | 2MP 32x In-ceiling WizSense Network PTZ Camera |
| | SD52C232GB-HNR | 2MP 32x In-ceiling WizSense Network PTZ Camera |
| Accessories | DC 24 V/2.5 A | Power Adapter |
| | TF-P100 | MicroSD Memory Card |
| | PFM900-E | Integrated Mount Tester |

## Accessories

Included:



DC24V/2.5A
Power Adapter

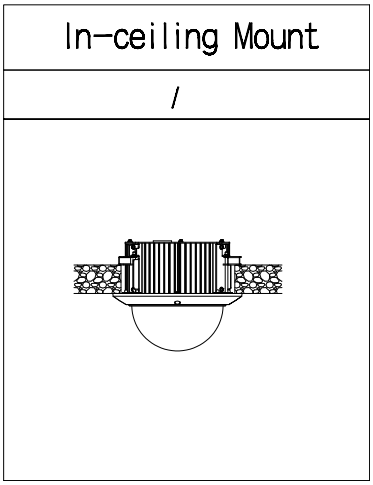
Optional:



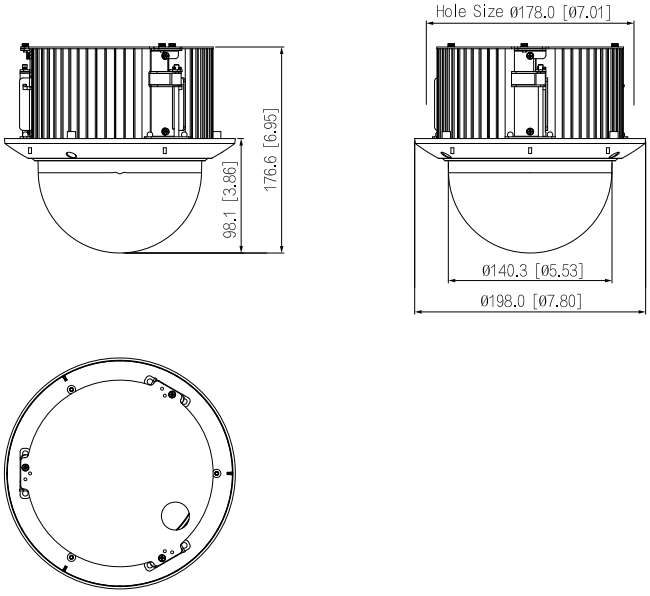
TF-P100
MicroSD Memory Card



PFM900-E
Integrated Mount Tester



## Dimensions (mm[inch])




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