Dahua TECHNOLOGY

DH-SD65F233XA-HNR
2MP 33x Starlight+ WizMind Network PTZ Camera

WizMind

- 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

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 perfor-mance, 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 rat-ing 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 de-tection 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 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° Tilt: -20°–+90°
Manual Control Speed	Pan: 0.1°/s–300°/s Tilt: 0.1°/s–150°/s
Preset Speed	Pan: 600°/s 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 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) Sub stream 1: D1/CIF (1–25/30fps) 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 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 Chrome 42 and older versions Firefox 52 and older versions Safari
Management Software	Smart Player; Smart PSS; DSS; Easy4ip
Mobile Phone	IOS/Android

Power

Power Supply	AC24V/3A±25% PoE+ (802.3at)
Power Consumption	20W 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)

Ordering Information

Type	Model	Description
2MP WizMind PTZ Camera	DH-SD65F233XA-HNR	2MP 33x Starlight+ WizMind Network PTZ Camera, WDR, PAL
	DH-SD65F233XAN-HNR	2MP 33x Starlight+ WizMind Network PTZ Camera, WDR, NTSC
	SD65F233XA-HNR	2MP 33x Starlight+ WizMind Network PTZ Camera, WDR, PAL
	SD65F233XAN-HNR	2MP 33x Starlight+ WizMind Network PTZ Camera, WDR, NTSC

Accessories	PFB303W	Wall Mount Bracket
	PFA111	Mount Adapter
	AC24V/3A	Power Adapter
	PFA140	Power Box
	PFB300C	Ceiling Mount Bracket
	PFA120	Junction Box
	PFA150	Pole Mount Bracket
	PFA151	Corner Mount Bracket
	PFB303S	Parapet Mount Bracket

Accessories

Included:

PFB303W
Wall Mount Bracket

PFA111
Mount Adapter

AC24V/3A
Power Adapter

Optional:

PFA140
Power Box

PFB300C
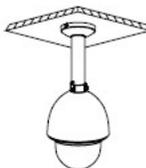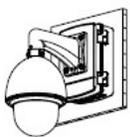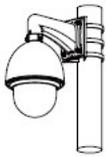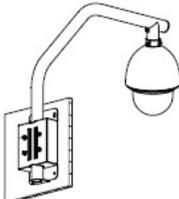Ceiling Mount Bracket

PFA120
Junction Box

PFA150
Pole Mount Bracket

PFA151
Corner Mount Bracket

PFB303S
Parapet Mount Bracket

Ceiling Mount	Junction Mount
PFA111 + PFB300C	PFA111 + PFB303W + PFA120
Power Box Mount	**Pole Mount**
PFA111 + PFB303W + PFA140	PFA111 + PFB303W + PFA150
Corner Mount	**Parapet Mount**
PFA111 + PFB303W + PFA151	PFA111+ PFB303S

Dimensions (mm[inch])

Φ46.7 [1.84]

341.0 [13.43]

Φ178.4 [7.02]

Φ242.0 [9.53]