

ES-855P31T-S8-MI-S-HL | ZKBio Sense Series

5 MP Smart Hybrid Light Fixed Lens Eyeball IP Camera



Human | Vehicle



Perimeter Protection



Smart Hybrid Light



True WDR



IP67 Water Proof

- 1/2.7" 5 MP CMOS Sensor
- H.265 Dual streams encoding
- High-quality optical lens: 2.8 mm
- 40 m IR / 30 m white light effective range
- Smart hybrid light (white light & IR integrated light)
- 120 dB True WDR
- Built-in PoE & Microphone
- Built-in micro-SD card slot (support max. 256 GB)
- Embedded intelligent classification algorithm based on computer vision technology
- Multiple intelligent video analytic features supported
- Support multiple browsers web client
- Remote viewing with mobile application compatible with ZKBio CVSecurity
- Lightning protection up to 6 kV
- Metal casing design and reached IP67 protection rating standard for waterproof and dust proof

Product Overview

ZKBio Sense series smart hybrid light IP cameras are the front-end cameras of intelligent video surveillance solution released by ZKTeco based on the Deep-Learning algorithm and Computer Vision technology.

By using advanced and powerful CPU, coupled with the embedded intelligent classification algorithm, ZKBio Sense series smart hybrid light IP cameras can accurately detect and recognize 3 key types of targets: human, vehicles and objects. Meanwhile, they can effectively filter out other useless objects to avoid false alarms, such as animals, leaves, shadows, and rain, etc.

ZKBio Sense series smart hybrid light IP cameras greatly improve the efficiency and safety of the entire video surveillance system, which can be widely used in different scenarios such as smart school, office, industrial park, community, public security, etc.

Core Features

Smart Hybrid Light

ZKBio Sense series smart hybrid light IP cameras effectively improve the security at night by integrating ZKTeco's latest Smart Hybrid Light design and intelligent perimeter protection functions. The built-in hybrid integrated optical coupler and intelligent switching logic can greatly reduce unnecessary light pollution in the environment, which is more green and energy-saving.

When no human or vehicle triggers the alarm event, this series of IP cameras operate in IR light mode. Once the alarm is triggered, the cameras will automatically switch to white light to capture color images and videos, and effectively deter intruders. Therefore, the design of smart hybrid light brings more user-friendly and flexible functions to meet different needs in various scenarios.

H.265 HEVC

H.265 is an evolutionary optimization of the traditional H.264, it includes a series of encoding strategy such as ROI, smart 2D / 3D noise reduction, etc. Delivering high quality video with up to 70% lower bandwidth.

IVA (Intelligent Video Analytics)

ZKBio Sense series smart hybrid light IP cameras support multiple intelligent video analytic functions: Line Crossing, Area Detection, and Smart Motion Detection, which are based on human and vehicle targets classification.

True WDR

Powered by ZKTeco's powerful ISP algorithm and high-quality sensor, ZKBio Sense series smart hybrid light IP cameras are built-in with true WDR feature, which can present excellent picture images in extreme contrast lighting environments.

ANR

While the connection lost between IPC and NVR, the video will be saved in SD card. The saved video will be auto replenished to NVR when network recovers to avoid any video lost.

Protection

With precise mechanical and rugged metal casing design, the ZKBio Sense Series IP Cameras with IP67 water proof and dust resistant protection rating, and support to work at variety of harsh outdoor environments such as a wide temperature range from -30 °C to +60 °C, etc.

Technical Specification

Camera

Model	ES-855P31T-S8-MI-S-HL
Image Sensor	1/2.7" 5 MP CMOS Sensor
Max. Resolution	2592 (H) × 1944 (V)
ROM	128 MB
RAM	256 MB
Scanning System	Progressive Scan
Electronic Shutter Speed	1/5 s to 1/100,000 s
Min. Illumination	0.001 Lux @ F1.3 (AGC on, Color) 0 lux (IR on, B & W)
S/N Ratio	> 52 dB
IR Range	40 m
White Light Range	30 m
Illuminator On / Off Control	Auto / Manual
Illuminator Number	2 × IR / White Light integrated LED
Smart IR	Support
Angle Adjustment for Installation	Pan: 0° to 360° Tilt: 0° to 90° Rotation: 0° to 360°
TV System	PAL / NTSC
Image Settings	Trigger mode, Brightness, Contrast, Saturation, Hue, Sharpness, AGC, White balance, Gamma, Backlight mode, adjustable by platform software or web browser
Software Reset Default	Support
General Function	Heartbeat, Mirror, Privacy mask, Log, Password reset

Lens

Lens Type	Fixed Lens
Lens Mount	M12
Mount Type	Board-in
Focal Length	2.8 mm
Max. Aperture	F1.3

Field of View	FOV: 110° Horizontal: 113° Vertical: 60° Diagonal: 130°				
Iris Control Type	Fixed				
Close Focus Distance	1.5 m				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	43.0 m	16.0 m	9.0 m	4.0 m

Video

Video Compression	H.265 / H.264				
Resolution	5 MP (2592 × 1944) / 4 MP (2560 × 1440) / 2 MP (1920 × 1080) / 1.3 MP (1280 × 960) / 720 P (1280 × 720)				
Max. Video Frame Rate	Main stream:	50 Hz (PAL): 25 fps (2592 × 1944, 2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720) 60 Hz (NTSC): 30 fps (2592 × 1944, 2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720)			
	Sub stream:	50 Hz (PAL): 25 fps (704 × 576, 640 × 480, 640 × 360) 60 Hz (NTSC): 30 fps (704 × 576, 640 × 480, 640 × 360)			
	Third stream:	N/A			
Video Stream Capability	Dual streams				
Bit Rate Control	CBR / VBR				
Video Bit Rate	H.264: 896 Kbps to 8 Mbps H.265: 1024 Kbps to 8 Mbps				
Day / Night	Auto (ICR) / Color / B & W				
BLC	Support				
HLC	Support				
WDR	120 dB True WDR				
Scene Self-adaptation	Support				
White Balance	Auto, Custom, Locked, Incandescent lamp, Warm light, Natural light, Fluorescent lamp				
Gain Control	Low, Mid low, Mid, Mid high, High				
Noise Reduction	2D / 3D NR				
Motion Detection	Smart / Ordinary (4 areas)				
Region of Interest (ROI)	Support (4 areas, Level 1 to 6)				
Defog	N/A				
Mirror	Support				
Image Rotation	0° / 90° / 180° / 270° / Horizontal / Vertical				
Privacy Masking	4 areas				
Corridor Mode	Support				
Digital Zoom	Support				
Anti-flicker	N/A				

Audio

Built-in MIC	Support
Speaker	N/A
Audio Compression	G.711 ulaw
Environment Noise Filtering	Support
Audio Sampling Rate	8 kHz / 16 kHz / 32 kHz / 44.1 kHz / 48 kHz
Audio Bit Rate	64 Kbps (G.711 ulaw)

Intelligent Video Analytics

IVA (Perimeter Protection)	Target Count, Object Lost / Left, Line Crossing, Area Detection, Smart Motion Detection (human and vehicle targets classification)
Intelligent Search	Support fast retrieval by human and vehicle targets classification
Intelligent Video	Support fast retrieval by human and vehicle targets classification, playback and backup

Face Detection

Face Templates	N/A
Face Quality Filtering	N/A
Face Detected Per Frame	N/A
Detection Area	N/A
Detected Face Size	N/A
Capture Response	N/A

Alarm

Basic Alarm Event	Network disconnection, IP conflict, Illegal access, Motion detection, Video tampering, External alarm
Smart Alarm Event	Target Count, Object Lost / Left, Line Crossing, Area Detection, Smart Motion Detection (human and vehicle targets classification)
Alarm Linkage Actions	Notify surveillance center, trigger recording, trigger capture, send email

Network

Simultaneous Live View	Up to 15 channels
Network	1 RJ45 10 M / 100 M self-adaptive Ethernet port
SDK and API	Support SDK, API and ONVIF
Cyber Security	Video encryption; firmware encryption; configuration encryption; account lockout; security logs; IP filtering; trusted boot; trusted execution; trusted upgrade; password protection; complicated password; basic and digest authentication for HTTP / HTTPS; TLS; IP address filter; Security Audit Log
Protocol	TCP / IP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTSP, NTP, UPnP, SMTP, IPv4, UDP, SSL / TLS, PPPoE, SNMP, WebSocket
Interoperability	ONVIF Profile S / T / G
User / Host	Up to 256 users can be added. 3 user levels: admin, operator and guest
Network Storage	FTP
Web Browser	IE / Edge / Firefox / Chrome / Safari
Management Software	AntarVis 2.0 / ZKBioSecurity IVS / ZKBioAccess IVS / ZKBio CVSecurity / ZKBio CVAccess
Mobile Application	AntarView Pro+ (iOS & Android)
On-Board Storage	Micro-SD card slot (support max. 256 GB)
Operation System	Windows
P2P Cloud Service	Support

Port

Audio Input	N/A
Audio Output	N/A
Alarm Input	N/A
Alarm Output	N/A

Interface

Reset Button	Support
ANR	Support
USB	N/A
RS485	N/A

General

Power

Power Supply	PoE (IEEE802.3af, Class 3), DC 12 V ± 10% reverse polarity protection
Power Consumption	Basic ≤ 3 W (12 VDC); 4.5 W (PoE)
Power Interface	Ø 5.5 mm coaxial power plug

Structure

Casing Material	Aluminium Alloy
Dimensions	Φ97.00 x 88.50 (mm)
Net Weight	0.42 KG
Gross Weight	0.60 KG

Environment

Operating Conditions	-30 °C to +60 °C (-22 °F to +140 °F) / Humidity 95% or less (non-condensing)
Storage Conditions	-30 °C to +60 °C (-22 °F to +140 °F) / Humidity 95% or less (non-condensing)
Ingress Protection Rating	IP67 (waterproof and dustproof)

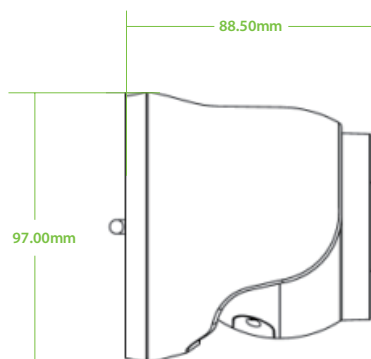
Certifications

Certificate	ISO9001, ISO14001, CE, FCC
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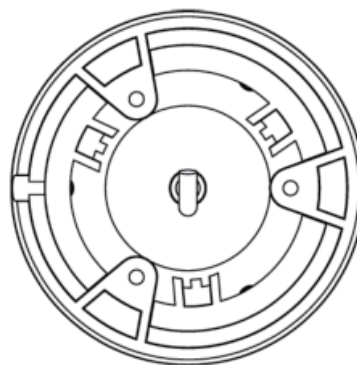
Ordering Information

Type	Model	Description
5 MP IP Camera	ES-855P31T-S8-MI-S-HL	5 MP Smart Hybrid Light Fixed Lens Eyeball IP Camera

Dimension (mm)



Side View



Bottom View

Accessories

Optional	Junction Box	Junction Box with Straight Bracket	Junction Box with Bent Bracket	Corner Mount Bracket	Pole Mount Bracket
Model	GB01	GB02	GB03	MT03	MT04
Picture	