

# IPOD-ELS51RZA-AI-EP

## IP Motorized Lens 5MP Dome



- 5MP 1/2.7" CMOS image sensor
- SMART H.264+/H.265+
- Supports SD card up to 256 GB
- IR Distance up to 131 Feet
- WDR & 3D DNR
- IP67 Protection

### System Overview

The IPOD-ELS51RZA-AI-EP is a 5MP Varifocal IP Turret Camera packed with new features you're going to want in your next system. Fully compatible with our latest AI line of NVRs get the latest in facial detection, perimeter protection, and people counting intelligence. The 5MP 2.7" 1/2.7" Progressive Scan CMOS paired with a 2.7-13.5mm motorized varifocal zoom lens will allow you to recognize individuals up to 140 feet away from the camera and even reliably identify people at up to 70 feet away.

### Features

#### Facial Attributes

Through the use of deep learning algorithms to analyze facial images, this camera can extract six facial attributes from each frame, including Age, Gender, Expression, Glasses, Facial Masks and Facial Hair. Customers can acquire data of interest via face attribute statistics.

#### Face Detection

Whether you wish to recognize, identify or verify a person, a camera with facial recognition software is an efficient solution. It can help you improve customer service and protect your assets by identifying important customers or potential perpetrators.

#### Perimeter Protection

Perimeter Protection functions significantly improve accuracy. Perimeter Protection reduces false alarms and decreases pixel count requirements for object detection. Perimeter Protection features custom tripwires based on object type for automation in limited access areas such as pedestrian or vehicle-only zones. This combination of advanced AI analytics and real-time alerts to a desktop or a mobile client reduces system requirements as well as resources, resulting in greater surveillance system efficiency.

#### Protection (IP67, wide voltage)

This camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with an IP67 ranking, making it suitable for indoor or outdoor environments. This camera allows  $\pm 30\%$  (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.



#### ePoE

The ePoE technology adopts advanced 2D-PAM3 coding modulation from physical layer, and realizes full duplex transmission over 800 meters at the speed of 10Mbps, or 300 meters at the speed of 100Mbps via Cat 5 or coaxial cable media. It supports PoE and PoC power supply technology which has greatly simplified construction and wiring. ePoE technology offers a new way to accomplish long distance transmission between IP camera and network switch. It allows more flexible surveillance system design, improves reliability and saves construction and wiring cost.

#### WDR

When part of an image is extremely dark but another part is so bright you can't see any details, that's dynamic range—the difference in lighting. Cameras with wide dynamic range (WDR) have special software that allows them to balance that lighting for one clear image. This makes them ideal for recording areas like store entrances where the contrast between the sunshine outside and the dim lighting inside can be extremely difficult to record.

#### 3D DNR

Have you ever taken a picture or video outside in the dark (without flash)? You've probably noticed that it can sometimes turn out to be very grainy. In technical terms, this is called noise. Noise is any unwanted interference in the signal. The latest form of Digital Noise Reduction is 3D-DNR. It compares every pixel with the pixels surrounding it in addition to every frame with the next. With 3D-DNR, a thorough processing of the image is applied, including the background. This results in a clearer image than traditional DNR and less space is taken on the hard disk drive.

#### People Counting

This feature counts the number of people that go in a specified region and the number of people that come out. This is perfect for businesses, banks and anybody who wants to monitor the amount of people coming and going.

## Technical Specification

### Camera

Image Sensor	1/2.7"5Megapixel progressive CMOS
Max. Resolution	2592 (H) × 1944 (V)
ROM	128 MB
RAM	1 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.005 Lux @F1.5
S/N Ratio	>56 dB
Illumination Distance	40 m (131.2 ft) (IR LED)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	2 (IR LED)
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

### Lens

Lens Type	Motorized vari-focal				
Mount Type	φ14				
Focal Length	2.7 mm-13.5 mm				
Max. Aperture	F1.5				
Field of View	2592 × 1944: Horizontal: 100°–28° Vertical: 72°–21° Diagonal: 133°–35° 2688 × 1520: Horizontal: 104°–29° Vertical: 55°–16° Diagonal: 125°–33°				
Iris Type	Auto				
Close Focus Distance	0.8 m (2.6 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	64 m (210.0 ft)	25.6 m (84.0 ft)	12.8 m (42.0 ft)	6.4 m (21.0 ft)
	T	212.0 m (695.5 ft)	84.8 m (278.2 ft)	42.4 m (139.1 ft)	21.2 m (69.6 ft)

### Smart Event

IVS	Abandoned object; missing object
Heat Map	Yes

### Professional, intelligent

IVS (Perimeter Protection)	Tripwire; intrusion; fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection; people gathering; parking detection
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Face Detection	Face detection; track; optimization; snapshot; report high quality picture; face enhancement; face exposure; face attribute extract, 6 attributes and 8 expressions: Gender, age, glasses, expressions (anger, calm, happiness, sadness, disgust, surprise, confusion and fear), mask, beard; face matting setting: face, single inch photo; three snapshot methods: real-time snapshot, optimization snapshot, quality priority; face angle filter; optimization time setting
People Counting	Support the counting of enter number, leave number, and pass number, and displaying and outputting yearly/monthly/weekly/daily reports. Support the counting of number in area, and 4 rules configuration. Count number of people or stay time and link alarm. Support queue management, and 4 rules configuration. Count number of people or stay time and link alarm
Intelligent Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos

### Video

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG (only supported by the sub stream)
Smart Codec	Smart H265+/H264+
Video Frame Rate	Main stream: 2592 × 1944 (1 fps–20 fps) 2688 × 1520 (1 fps–25/30 fps) 1920 × 1080 (1 fps–50/60 fps) Sub stream:D1 (1 fps–50/60 fps) Third stream: 1080p (1 fps–25/30 fps)
Stream Capability	3 streams
Resolution	2592×1944; 2688 × 1520; 2560 × 1440; 2304 × 1296; 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 kbps–8192 kbps H.265: 19 kbps–8192 kbps
Day/Night	Auto (ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
Scene Self-adaptation	Yes
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest (RoI)	Yes (4 areas)

## Technical Specification

Electronic Image Stabilization (EIS)	Yes
Smart Illumination	Yes
Defog	Yes
Image Rotation	0°/90°/180°/270° (Support with 2592×1944 resolution and lower)
Mirror	Yes
Privacy Masking	4 areas
<b>Audio</b>	
Built-in MIC	Yes
Audio Compression	G.711a; G.711Mu; G.726; AAC; G.723
<b>Alarm</b>	
Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; defocus detection; scene changing; tripwire; intrusion; abandoned object; missing object; fast moving; parking detection; loitering detection; people gathering; audio detection; people counting; face detection; voltage detection; people counting in area; stay alarm; people No. exception detection, queue management
<b>Network</b>	
Network	RJ-45 (10/100 Base-T)
SDK and API	Yes
Protocol	IPv4; IPv6; HTTP; HTTPS; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; 802.1x; SNMP
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; Milestone; Genetec; P2P
User/Host	20 (Total bandwidth: 80 M)
Storage	FTP; SFTP; Micro SD Card (support max. 256 G); Dahua Cloud; NAS
Browser	IE: IE8 and later Chrome Firefox Safari: Safari 12 and later
Management Software	Smart PSS; DSS; DMSS
Mobile Phone	IOS; Android
<b>Certification</b>	
Certification	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07
<b>Power</b>	
Power Supply	12V DC (±30%)/PoE (802.3af)
Power Consumption	< 7.7W

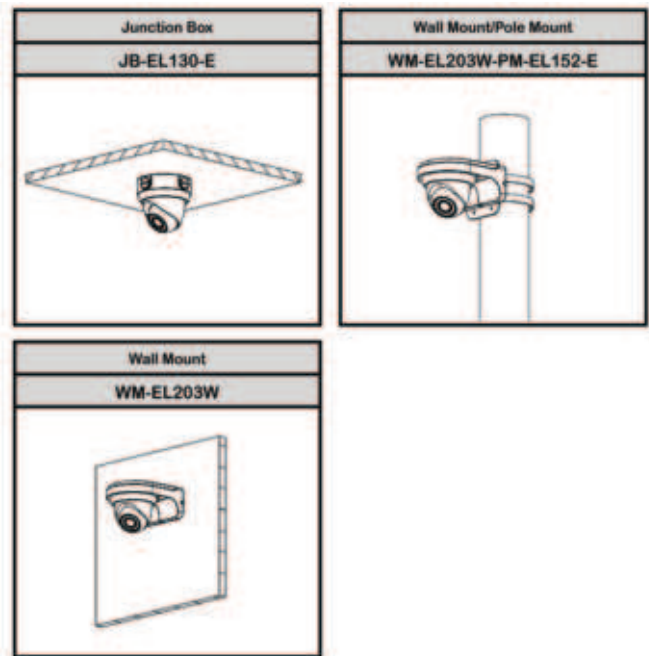
## Environment

Operating Conditions	-30°C to +60°C (-22°F to +140°F)/Less than 95% RH
Storage Conditions	-40°C to +60°C (-40°F to +140°F)
Protection Grade	IP67

## Structure

Casing	Inner core: Metal Cover: Metal Decoration ring: Plastic Decoration ring
Dimensions	Φ122.0 mm × 108.3 mm (Φ4.8" × 4.3")
Net Weight	740 g (1.6 lb)
Gross Weight	910 g (2.0 lb)

## Accessories



## Dimensions

