

# IPVD-ELS5IRZA-AI-EP

## 5MP Starlight Vandal Dome



- 1/2.7" 5Megapixel progressive scan CMOS
- H.265 & H.264 triple-stream encoding
- 20 fps@2592 × 1944, 50/60 fps@1080P (1920 × 1080)
- WDR (120 dB), Day/Night (ICR), 3D DNR, AWB, AGC, BLC
- 2.7 mm–13.5 mm motorized lens
- 1/1 Alarm in/out, 1/1 audio in/out

### System Overview

The IPVD-ELS5IRZA-AI-EP is a feature-packed camera for customers who are looking for the latest and greatest of what our Elite series cameras have to offer. Powered by deep-learning Artificial Intelligence algorithms, you can take advantage of facial recognition to create whitelist and blacklist entries to help manage personnel, customers and restricted-access areas. Advanced perimeter protection now includes the ability to discern between pedestrian and vehicular traffic, loitering, parking detection and more with notifications in real-time. Take advantage of people counting and heat-mapping to help drive analytics at your place of business.

### Features

#### 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.

#### Facial Attribute Detection

Through the use of deep learning algorithms to analyze facial images, this camera can extract six facial attributes from each frame, including Age, Gender, Expressions, Glasses, Mouth Mask, and Facial hair. This allows you to acquire data of interest via face attributes statistics.

#### Perimeter Protection

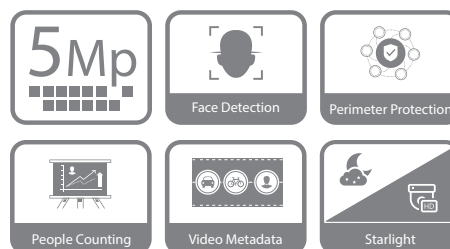
Perimeter Protection functions significantly improve accuracy. Perimeter Protection reduces false alarms and decreases pixel count requirements for object detection. Perimeter Protection features custom tripwires based on object type for automation in limited access areas such as pedestrian or vehicle-only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

#### 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.

#### Starlight Technology

The starlight standard sensor is just like the retina of your eyes which is sensitive to its ambient light, and the image quality is determined by how much light the sensor could use, together with the camera lens. The starlight camera technology uses larger and highly sensitive sensors, wider aperture and reduces the shutter speed to collect enough light for sharp monochrome/color images, even when human eyes couldn't identify a thing. So the starlight camera can see right through the darkness, even when it is challenging for your eyes.



#### ePoE technology

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.

#### Protection (IP67&IK10)

IP67 refers to camera enclosures that have obtained the a rating from the International Electrotechnical Commission's (IEC) international standard 60529 rating board that declares the cameras to be: Offering full protection from dust and solid matter larger than dust and Safe for immersion in water up to 1 meter up to 30 minutes. IK10 cameras are Protected against a 5 Kg object dropped from 40 cm in height.

#### 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.

#### 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.

## Technical Specification

### Camera

Image Sensor	1/2.7" 5Megapixel progressive scan CMOS
Effective Pixels	2592 (H) × 1944 (V)
RAM/ROM	1 GB/128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual, 1/3 s–1/100000 s
Minimum Illumination	0.005 Lux@F1.5
IR Distance	Distance up to 40 m (131 ft)
IR On/Off Control	Auto/Manual
IR LEDs	3

### Lens

Lens Type	Motorized vari-focal				
Mount Type	Board-in				
Focal Length	2.7 mm–13.5 mm				
Max. Aperture	F1.5				
Angle of View	H: 100°–28°, V: 72°–21° (2592 × 1944) H: 104°–29°, V: 55°–16° (2688 × 1520)				
Aperture Type	Auto				
Close Focus Distance	0.8 m (2.62 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	64m(210ft)	26m(85ft)	13m(43ft)	6m(20ft)
	T	212m(696ft)	85m(279ft)	42m(138ft)	21m(69ft)

### Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan: 0°–355°; Tilt: 0°–65°; Rotation: 0°–355°
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### Artificial Intelligence

Face Detection	Support face image capture
Face Attributes	Support 6 kinds of face attributes extraction: Age, Gender, Expression (Jolly, Surprise, Normal, Rage, Sad, Disgusted, Confused, Frightened), Glasses, Mouth Mask, Moustache & Beard
Perimeter Protection	Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering
People Counting	Support Line crossing/Region/Queueing people counting; Support 4 accesses independent detection, 4 areas independent detection

### General Intelligence

Event Trigger	Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly
General Intelligence	Object Abandoned/Missing
Heat Map	Yes

### Video

Compression	H.265, H.264, H.264B, H.264H, MJPEG (sub stream)
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Smart Codec	Yes
Streaming 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)
Frame Rate	Main Stream: 2592 × 1944 (1 fps–20 fps) 2560 × 1440 (1 fps–25/30 fps) 1920 × 1080 (1 fps–50/60 fps) Sub Stream: D1 (1 fps–20/30 fps) D1 (1 fps–50 fps) Third Stream: 1080P (1 fps–17 fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 32 Kbps–8192 Kbps H.265: 19 Kbps–8192 Kbps
Day/Night	Auto(ICR)/Color/B/W
BLC Mode	BLC/HLC/WDR (120 dB)
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detection	Off/On (4 Zone, Rectangle)
Region of Interest	Off/On (4 Zone)
Electronic Image Stabilization (EIS)	Yes
Smart IR	Yes
Defog	Yes
Flip	0°/90°/180°/270°
Mirror	Off/On
Privacy Masking	Off/On (4 Area, Rectangle)

### Audio

Compression	G.711a, G.711Mu, G.726, AAC, G.723
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### Network

Ethernet	RJ-45 (10/100 Base-T)
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; PPPoE; 802.1x; SNMP
Interoperability	ONVIF (Profile S/Profile G/Profile T), CGI, Milestone, Genetec, P2P
Streaming Method	Unicast/Multicast
Max. User Access	20 Users
Edge Storage	NAS; FTP; SFTP Micro SD card 256 GB
Web Viewer	IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12)
Management Software	Smart PSS, DSS, DMSS
Smart Phone	iOS, Android

### Certifications

## Dimensions

