



Explosion Proof Fixed Type Camera

Model No. SE-02-023EX



Product Description:

The SE-02-023EX, a product by SharpEagle, is a reliable and durable explosion-proof and corrosion-proof camera that comes with ATEX and IECEx certifications. It is highly versatile and can be easily integrated with various camera systems. This camera is specifically designed for hazardous areas in Zone 1 and Zone 2, where there is a possibility of explosive mixtures of group IIA, IIB, IIC, T1~T6 gases, vapors, and air. It is also suitable for use in Zone 21 and Zone 22 hazardous areas where explosive dust may be present. Industries such as refining, oil extraction, gas extraction, chemical facilities, and petrol stations can greatly benefit from this product.

Product Features:

- ☐ ATEX, IECEx certified
- ☐ Application: Gas zone 1 and zone 2; Dust zone 21 and zone 22
- ☐ Ex db IIC T6 Gb/ Ex tb IIIC T80°C Db
- ☐ Stainless steel 304/316L
- ☐ Optional electropolished or corrosion resistant paint finish
- ☐ Enclosure Protection: IP66 IP68 (2m 2h) IP69
- ☐ Motorized vari-focal lens 2.7 ~ 13.5mm
- ☐ 2MP (1920*1080) @(1-25/30 fps)
- ☐ 1/2.8" progressive scan, CMOS
- ☐ 12 VDC/PoE power supply, easy for installation
- ☐ H.265 codec, high compression rate, ultra-low bit rate
- ☐ Built-in IR LED, and the max. illumination distance is 60 m
- ☐ ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments
- ☐ Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking
- ☐ Intelligent monitoring: Intrusion, tripwire
- ☐ Abnormality detection: Motion detection, video tampering, audio detection

Product Specifications

Mechanical Features

Image Sensor	1/2.8" CMOS
Max. Resolution	1920 (H) × 1080 (V)
ROM	128 MB
RAM	128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.002 lux@F1.5 (Color, 30 IRE) 0.0002 lux@F1.5 (B/W, 30 IRE) 0 lux (Illuminator on) S/N Ratio >56 dB
Illumination Distance	Up to 60 m (196.85 ft) (IR LED)
Illuminator On/Off Control	Auto; Manual
Illuminator Number	4 (IR LED)

Lens

Lens Type	Motorized vari-focal				
Lens Mount	φ14				
Focal Length	2.7 mm–13.5 mm				
Max. Aperture	F1.5				
Field of View	H: 108°–30°; V: 56°–17°; D: 131°–35°				
Iris Control	Fixed				
Close Focus Distance	0.8 m (2.62 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	44.1 m	17.7 m	8.8 m	4.4 m
		(144.69 ft)	(58.07 ft)	(28.87 ft)	(14.44 ft)
	T	144.8 m	57.9	29.0 m	14.5 m
		(475.07 ft)	(189.96 ft)	(96.14 ft)	(47.56 ft)

Intelligence

IVS (Perimeter Protection)	Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human)
Smart 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 H.265+; Smart H.264+
Video Frame Rate	Main stream: 1920 × 1080@(1–25/30 fps) Sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps) *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected to the total encoding capacity

Stream Capability	2 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)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 kbps–6144 kbps H.265: 12 kbps–6144 kbps
Day/Night	Auto(ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
White Balance	Auto; natural; street lamp; outdoor; manual; regional custom
Gain Control	Manual;Auto
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest	(RoI) Yes (4 areas)
Smart Illumination	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 1080p resolution and lower)
Mirror	Yes
Privacy Masking	4 areas

Audio

Built-in MIC	Yes
Audio Compression	G.711a; G.711Mu; G.726; PCM

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; voltage detection; defocus detection; external alarm (Only- ZAS supports); SMD; security exception
-------------	--

Network

Network Port	RJ-45 (10/100 Base-T)
SDK and API	Yes
Network Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; NTP; Multicast; ICMP; IGMP; P2P
Interoperability	ONVIF (Profile S/Profile T); CGI
User/Host	6 (Total bandwidth: 36 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB)
Browser	IE Chrome Firefox
Management Software	SmartPSS Lite; DSS; DMSS

Mobile Client	iOS; Android
Cyber Security	Video encryption; Configuration encryption; Digest; WSSE; Account lockout; Security logs; IP/MAC filtering; Generation and importing of X.509 certification; syslog; HTTPS; 802.1x; Trusted boot; Trusted execution; Trusted upgrade

Certification

Certifications	ATEX, IECEx certified
Explosion proof certification	DNV 22 ATEX 51565X IECEx DNV 22.0097X
ATEX Explosion proof marking	CE Ex II 2 G Ex db IIC T6 Gb Ex II 2 D Ex tb IIIC T80°C Db
IECEx Explosion proof marking	Ex db IIC T6 Gb/Ex tb IIIC T80°C Db

Port (Optional)

Audio Input	1 channel (RCA port) (Only- ZAS supports)
Audio Output	1 channel (RCA port) (Only- ZAS supports)
Alarm Input	1 channel in: 5mA 3V-5V DC (Only- ZAS supports)
Alarm Output	1 channel out: 300mA 12V DC

Power

Power Supply	12 VDC/PoE (802.3af)
Power Consumption	-ZS: Basic: 2W (12 VDC); 2.6 W (PoE) Max. (H.265+intelligence on +WDR +IR on): 8.5 W (12 VDC); 9.8 W (PoE) -ZAS: Basic: 2W (12 VDC); 2.6 W (PoE) Max. (H.265+intelligence on +WDR +IR on): 8.6 W (12 VDC); 9.9 W (PoE)

Environment

Operating Temperature	-40°C ~ 60°C (-40°F ~ 140°F)
Operating Humidity	≤95%
Storage Temperature	-40°C to +60°C (-40°F to +140°F)

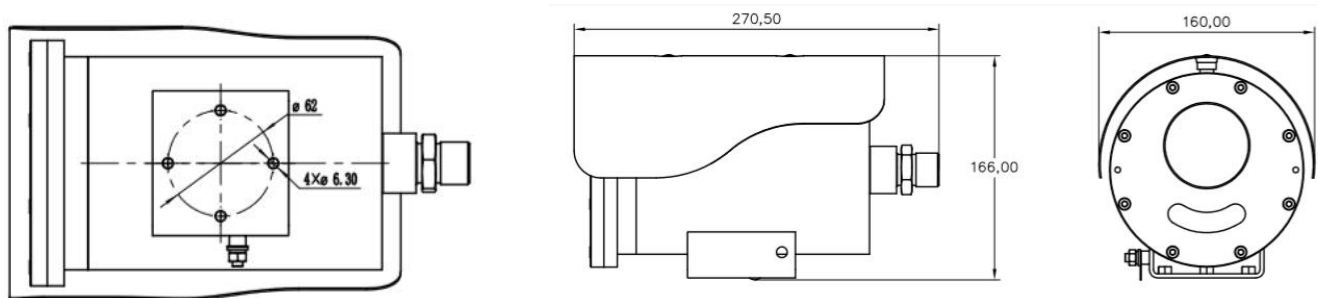
Structure

Casing Material	Stainless steel 304/316L
Product Dimensions (L × W × H)	270.50mm × 166.00mm × 160.00mm (10.6" × 6.5" × 6.3")
Net Weight	5.6 kg (12.34 lb)
Gross Weight	6.5 kg (14.33 lb)
Pigtail Cable	2meters standard combined cable (power+UTP)
Ingress Protection	IP66, IP68 (2m 2h), IP69
Bracket	ZAZ100B Wall bracket with adaptor

General

Material	Stainless steel 304 or 316L
Max Loading	20kg
Gross Weight	2.5 kg

Drawings



Dimension

