X6781-Z37

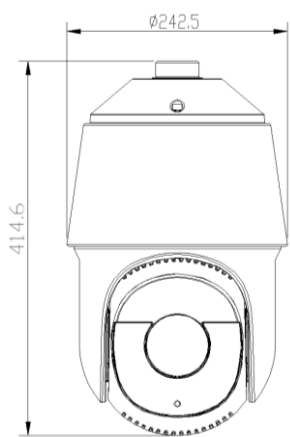## 8MP Starlight Infrared PTZ Dome Camera

Features

- 1/1.8" progressive scan CMOS image sensor
- Up to -20° tilt angle, enlarged field of view, applicable to surveillance of complex terrains
- Built-in NPU neural network engine, greatly improving the performance of deep learning algorithms
- Software-defined camera, supporting online loading and upgrade of algorithms
- AI-based scene adaptation. The camera can detect scenarios in real time and make targeted setting optimization to improve imaging quality.
- Intelligent object detection algorithms. The camera can detect 50 objects at a time, including motor vehicles, non-motor vehicles, and pedestrians.
- Crowd density analysis and queue length detection based on deep learning
- Area cropping, viewing fine details through limited bandwidth
- Stream smoothing, meeting various requirements for video quality and fluency
- Traffic shaping, enabling precise control over instantaneous burst of video streams and delivering smooth video without packet loss
- TCP acceleration, enabling the network to carry video streams of higher quality
- Built-in electronic compass and accelerometer, reflecting the PTZ direction and tilt range in real time
- 200 m infrared radiation distance, with efficient IR illuminator group and long service life
- Built-in defogging filter, improving image clarity in foggy conditions
- Independent temperature control unit, reliable boot in low-temperature environment
- Ultra wide operating temperature range: –40℃ to +60℃
- IP66-rated ingress protection

Dimensions   Unit: mm

Optional Accessories

Wall mount

Indoor pendant mount

Pole mount

Corner mount

Technical Specifications

Product Model	X6781-Z37
Camera	
Image sensor	1/1.8" 8.0-megapixel progressive scan CMOS
Effective pixels	3840 x 2160
Minimum illumination	Color: 0.01 lux; B/W: 0.001 lux, 0lux (IR enabled)
Day/Night mode	Auto, color, or B/W
Electronic shutter speed	1/3s to 1/68250s
WDR	120 dB
White balance	Auto/Auto tracking/Manual
Highlight compensation (HLC)	Supported
Optical defogging	Auto/Manual
Image stabilization	Supported
Infrared radiation distance	200 m
Signal System	NTSC
Lens	
Focal length and aperture	5.6-208 mm; maximum aperture: F1.5
Zoom	37x optical zoom and 16x digital zoom
Angle of view	W ≥: horizontal 61.1°
Iris type	P-iris
Defogging filter	Supported
Glass window	High-permeability glass with self-cleaning coat
PTZ	
Rotation angle	Pan: 0° to 360°; Tilt: −20° to +90°
Pan speed	Speed for going to the preset position: 240°/s at the maximum; manual speed: 0.1°/s to 240°/s;
Tilt speed	Speed for going to the preset position: 200°/s at the maximum; manual speed: 0.1°/s to 200°/s;
Preset position	256
Scan	8 tour scan paths (each of up to 32 preset positions) and 5 pattern scans paths
Functions	
Video compression format	H.265/H.264/MJPEG
Maximum resolution	3840 x 2160
Frame rate	30 fps, 25 fps, 1-20 fps
Multiple streams	Five streams, supporting 1080p encoding for secondary streams
Area cropping encoding	4-stream encoding (secondary streams)
Intelligent encoding	Extra265/Extra264, ROI, TCP intelligent acceleration, stream smoothing, and traffic shaping
Audio encoding format	G.711a/G.711u/G.726/OPUS
Voice communication	Voice intercom and broadcast, channel-associated voice
PU access protocol	ONVIF Profile S/G/T, GB/T 28181-2016, HUAWEI SDK
Network protocol	TCP, UDP, IPv4, IPv6, DHCP, DHCPv6, DNS, ICMP, ICMPv6, IGMP, HTTP/HTTPS, FTP, SFTP, RTP, RTSP, RTCP, SIP, ARP, SSL, NTP, SNMP, 802.1X, QoS, DDNS, SMTP, SSH, TLS, and UPnP
Security mode	User name and password authentication, 802.1X, and HTTPS digital certificate
Media security	KMC key encryption, AES256-based stream encryption, and digital watermark
Alarm linkage	Alarm source: motion detection, blocking detection, Boolean value input, intelligent analysis; Alarm linkage: Boolean value output, preset position, scan, SD card recording, snapshot taking
Intelligent functions	
Behavior analysis	Fast movement, abandoned object, removed object, tripwire crossing, intrusion, area enter/exit, loitering, crowd gathering, head counting, and parking detection
Abnormality detection	Video quality diagnosis, audio detection, volume surge and decrease detection, scene change detection, and defocus detection
Intelligent tracking	Panoramic automatic tracking, event linkage tracking, and manual tracking
Scene adaptation	Real-time identification of the surveillance scene, targeted enhancement on imaging algorithms
Intelligent analysis	
Object detection	Classification of motor vehicles, non-motor vehicles, and pedestrians
Personal attribute recognition	Facial recognition and motion detection. Seven attributes, including the gender, age, and dressing style
Crowd density detection	Support for head counting by area in a large surveillance scene. Users can set the maximum number of persons allowed in an area and the alarm threshold.
Queue length detection	Support for the collection of statistics like queuer count, queue length, and waiting time
Ports	
Network port	One RJ45 100M Ethernet port, supporting auto-sensing of 10 Mbit/s and 100 Mbit/s
Communication serial port	One RS-485 port
Alarm port	4 alarm input ports, 2 alarm output ports
Audio port	1 audio input port, 1 audio output port
Storage port	One Micro SD card slot that supports SDHC or SDXC cards (maximum capacity: 256 GB)
General specifications	
Power supply	AC24V PoE++(IEEE 802.3bt)
Power consumption	Maximum: 55 W; typical: 20W
Operating temperature	−40℃ to +60℃
Operating humidity	5% to 95% (non-condensing)
Operating System	Linux
Lightening protection level	6 kV surge protection
Ingress protection rating	IP66
Impact protection rating	IK10 (except the window)
Weight	Net: 7.50 kg; gross: 9.00 kg
Dimensions	Device: Φ 243 x 415 mm; packing: 362 x 362 x 538 mm