

ZK-TH225-32A/70A/100A

5MP Dual-spectrum Thermal Bullet Camera



- Dual lens (Thermal + Visible Light)
- Vanadium oxide 12 micron uncooled focal plane detector
- Effective pixels: 256x192 ; NETD≤40mK
- ±2°C industrial temperature measurement accuracy
- IVA (Smart Function) Supported
- Built-in white light and speaker that produce light and sound alarms
- Multiple Web Browser Supported, IE/Safari/Chrome/Firefox
- IP67 Ingress Protection

Product Overview

TH225 series dual-spectrum Bullet network camera is a new type of dual-spectrum network camera which integrates infrared thermal imaging function and high-definition visible light function. The product integrates advanced passive infrared thermal imaging detector, with advanced industrial temperature analysis tools, pyrotechnic detection algorithm and dual spectral behavior analysis algorithm, with a variety of linkage alarm functions, truly achieve 24 hours security monitoring and fire warning. The products can be widely used in indoor and outdoor scene monitoring.

Functions

Vanadium oxide 12 micron uncooled focal plane detector

Using The latest generation of 12 micron uncooled infrared detectors integrates leading infrared image algorithms to image farther and clearer

Dual lens (Thermal + Visible Light)

Visible light and thermal imaging dual spectral imaging, to meet the 24-hour security monitoring needs

Accurate temperature measurement

±2°C industrial temperature measurement accuracy, The temperature measurement range is from -20° to +550°.

Docking platform

Provide supporting VMS software, support ONVIF protocol, GB28181 and other standard protocols, can provide secondary development SDK.

Alarm

It supports temperature alarm, fire alarm and equipment abnormal alarm etc.

IVA (Intelligent Video Analysis)

It supports intelligent behavior analysis functions such as area intrusion and trip wire intrusion based on dual-spectrum and neural network. Support sound and light alarms when alarm occurs

Technical Specification

Thermal Camera

| | | | |
|----------------------------------|--|--------------|---------------|
| Detector Type | ZK-TH225-32A | ZK-TH225-70A | ZK-TH225-100A |
| Spectral Range | 8~14μm | | |
| Thermal Sensitivity(NETD) | ≤40mK@25°C @F/1.0 | | |
| Effective Pixels | 256(H)×192(V) | | |
| Pixel Size | 12μm | | |
| Palette | 20 palettes available such as Whitehot/Blackhot/Rainbow. | | |
| Thermal Image Stabilization | N/A | | |
| Digital Detail Enhancement (DDE) | Supported | | |
| Digital Zoom | N/A | | |
| Thermal AGC | Supported | | |
| Thermal Noise Reduction | 2D,3D Denoising | | |

Thermal Lens

| | | | |
|----------------------|--------------------|-------------|-------------|
| Lens Type | uncool fixed focus | | |
| Focal Length | 3.2mm | 7mm | 10mm |
| FOV | 56.0°×42.2° | 24.8°×18.7° | 17.5°×11.3° |
| Max. Aperture | F1.1 | F1.0 | F1.0 |
| IFOV | 3.75mrad | 1.7mrad | 1.2mrad |
| Close Focus Distance | 0.3m | 0.5m | 0.5m |

Visible Camera

| | | | |
|-----------------------------------|---|--|--|
| Sensor | 5MP 1/2.8" Progressive Scan CMOS | | |
| Min. Illumination | Color:0.005Lux ,Black&white:0.0005Lux ,IR light on:0Lux | | |
| Day/Night Conversion | ICR auto conversion/ Electronic color to B/W | | |
| Filling Light | Infrared filling light | | |
| Illuminator On/Off Control | Auto/Manual | | |
| IR Number | 1 | | |
| IR Range | 30m | | |
| Max. Resolution | 2560(H)×1920(V) | | |
| Wide Dynamic | 120dB | | |
| Angle Adjustment for Installation | Pan: 0°~360° Tilt: 0°~90° Rotation: 0°~360° | | |
| Horizontal Definition | N/A | | |
| Visible AGC | Supported | | |
| S/N Ratio | 120dB | | |
| Defog | N/A | | |
| BLC | Supported | | |
| HLC | Supported | | |

Visible Camera

| | | | |
|----------------------|------------|---------|---------|
| Lens Type | Fixed Lens | | |
| Max. Aperture | F2.0 | | |
| Focal Length | 4mm | 8mm | 12mm |
| FOV | 82°×59° | 39°×29° | 25°×18° |
| Iris Type | Fixed | | |
| Close Focus Distance | 0.3m | | |

Dual-spectrum Parameters

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|---------------------------------|--|
| Dual-Spectrum Fusion | Support the thermal image to fuse visible image to improve the image details |
| Temperature Information Overlay | The camera displays a digital camera image with superimposed thermal imaging temperature measurement information |

Video and Audio

| | | | |
|----------------------|---|--|--|
| Video Compression | H.264/H.265 | | |
| Resolution | Visible: | 50Hz:25fps(2560×1920, 2560×1440, 1920×1080) 60Hz:30fps(2560×1920, 2560×1440, 1920×1080) | |
| | Thermal: | 50Hz:25fps(1280×960, 1024×768) 60Hz:30fps(1280×960, 1024×768) | |
| Noise Reduction | 3D NR | | |
| Image Format | JPEG | | |
| Max Video Frame Rate | Main Stream | Visible: | 50Hz:25fps(2560×1920, 2560×1440, 1920×1080) 60Hz:30fps(2560×1920, 2560×1440, 1920×1080) |
| | | Thermal: | 50Hz:25fps(1280×960, 1024×768) 60Hz:30fps(1280×960, 1024×768) |
| | Substream | Visible: | 50Hz:25fps(1920×1080, 1280×720, 704×576, 352×288) 60Hz:30fps(1920×1080, 1280×720, 704×480, 352×240) |
| | | Thermal: | 50Hz:25fps(640×480, 320×288) 60Hz:30fps(640×480, 320×240) |
| Audio Compression | G.711a/G.711u/AAC/PCM | | |
| Image Rotation | Flip Horizontal, Upside Down, 180° Flip | | |

Network

| | |
|---|---|
| Communication Interface | 1 RJ45 10M/100M adaptive Ethernet port |
| Network Protocol | IPv4,HTTP,HTTPS,FTP,SMTP,UPnP,DNS,DDNS,NT P,RTSP,RTCP,RTP,TCP,UDP,IGMP,ICMP,DHCP |
| Interoperability | ONVIF, GB28181, SDK |
| Number of Videos Previewed Simultaneously | Support up to 8 channels |
| User Management | Up to 32 users, divided into 3 levels: administrators, operators and users |
| On-Board Storage | Micro SD memory (maximum 256G) |
| Browser | Support browsers such as Google, Firefox, Edge (chrome kernel), Chinese and English are supported |

Temperature Measurement

| | |
|----------------------|---|
| Measuring Range | -20°C ~150°C , 0°C ~+550°C |
| Measuring Accuracy | ±2°C or ±2%(The larger value shall prevail) |
| Temperature Analysis | Support full frame, spot, line, region temperature measurement rules and linkage alarms |

Functions

| | |
|-----------------|---|
| Fire Warning | Support fire detection |
| Smart Video | Alarm trigger recording, disconnection trigger recording |
| Smart Alarming | Support triggering alarm and linkage alarm of network disconnection, IP address conflict, memory error, illegal access and burn alarm |
| Smart Detecting | Support event analysis functions such as area intrusion, tripwire intrusion, dynamic detection analysis, etc. |
| Voice Intercom | Support two-way voice intercom |
| Linkage Alarm | Video/image/mail/ alarm output / sound and light alarm (built-in) |

| | |
|---------------------------------|---|
| Region of Interest (RoI) | Yes |
| Security | Authorized username and password; attached MAC address; encrypted HTTPS; IEEE 802.1x; controlled network access |
| PIP | N/A |
| Port | |
| Audio Input | 1 channel |
| Audio Output | 1 channel |
| Alarm Input | 2 channel |
| Alarm output | 1 channel |
| Interface | |
| Reset Button | Support |
| ANR | N/A |
| USB | N/A |
| RS485 | 1 channel RS485 and support Pelco protocol |
| General | |
| Power | |
| Power Supply | DC 12V±25% / PoE(802.3af) |
| Operating Temperature& Humidity | -40°C ~+70°C ;<95%RH |
| Protection Level | IP67 |
| Power Consumption | Max.< 6W |
| Dimension (mm) | 265×99×87 (minimum length can be adjusted to 253mm) |
| Weight | 950g |
| Safety | CE-LVD; CE-EMC; FCC certification |

Ordering Information

| Type | Model | Description |
|--------------------|---------------|---|
| 5MP Thermal Camera | ZK-TH225-32A | 5MP Dual-spectrum Thermal Bullet Camera |
| 5MP Thermal Camera | ZK-TH225-70A | 5MP Dual-spectrum Thermal Bullet Camera |
| 5MP Thermal Camera | ZK-TH225-100A | 5MP Dual-spectrum Thermal Bullet Camera |

Dimensions (mm)

