COG-2MP-THERM-BUL
THERMAL NETWORK BULLET CAMERA



- 256x192 VOx uncooled thermal sensor technology
- Athermalized lens (thermal camera), focus-free
- 1/2.8” 2 Megapixel progressive scan CMOS
- Supports ROI, motion detection, colour palettes
- Supports temperature measurement
- Supports fire detection & alarm
- Built-in 2/2 alarm in/out
- Micro SD memory, IP67, PoE, ePOE



System Overview

Featuring a dual lens, fixed bullet camera, this series provides an all-in-one solution for capturing video surveillance for indoor and outdoor applications. Together with Thermal and Visible Technology, the camera is the perfect solution for dark, small area monitoring applications. The series combines one thermal camera for monitoring in total darkness and one visible camera with Smart IR for confirming details.

Functions

Uncooled Vox Technology
These thermal cameras use uncooled Vox sensor technology . Because of the small size and high performance, it’s a cost-effective solution for thermal security.

High Sensitivity
High thermal sensitivity(<50mK) makes cameras capture more image details and temperature difference information.

Fire Detection & Alarm
With a built-in fire detect function, the camera has the ability to detect fire in a long distance. The thermal camera is sensitive to temperature, so the accuracy of fire detection will be higher than a visible camera.

Temperature Measurement
These thermal cameras provide remote temperature monitoring functionality with the ability to set temperature threshold alarms. Object temperatures can be monitored in daytime or at night,making them ideal for usage in power plant or oil extraction applications where overheating can be dangerous. When the temperature exceeds the set threshold, an alarm is triggered. The temperature range is between -20 °C to 550 °C (-4°F to 1022 °F).

Intelligent Video System (IVS)
With built-in intelligent video analytics, the camera has the ability to detect and analyze moving objects for improved video surveillance. The camera provides optional standard intelligence at the edge allowing detection of multiple object behaviors such as abandoned or missing objects. IVS also supports Tripwire analytics, allowing the camera to detect when a pre-determined line has been crossed.

Smoking Detection
Smoking detection is a built-in video analytics algorithm that combines with thermal imaging and visible light technology, based on the deep-learning AI algorithm that automatically detects if there is someone smoking in a detection area and to trigger an alarm.
Value: This thermal camera can provide a real-time monitoring, in the use of AI technology, to automatically detect people’s smoking behavior and provide intelligent voice and light warning (Loudspeaker and white light, etc.) in an effort to dissuade or correct, and avoid potential risk and loss

Environmental
With a temperature range of-30 °C to +60 °C (-22 °F to +140 °F), the camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications.

Protection
Supporting ±15% input voltage tolerance, this camera suits even the most unstable conditions for outdoor applications. Its 6KV lightning rating provides protection against the camera and its structure from the effects of lightning.

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Technical Specification

Structure	Multi-sensor bullet camera

Thermal

Detector Type	Vanadium oxide uncooled focal plane detector
Effective Pixels	256x192
Pixel Pitch	12μm
Spectral Range	8μm–14μm
Thermal Sensitivity (NETD)	≤50mK
Focal Length	3.5mm; 7mm
Field of View	3.5mm: horizontal: 50.6° ; vertical: 37.8° 7mm: horizontal: 24° ; vertical: 18°
Focus Mode	3.5mm/7mm: focus free and athermalized
Aperture	F1.0
Detection Distance	3.5mm: vehicle: 389m (1276ft); human: 146m (479ft) 7mm: vehicle: 778m (2552ft); human: 292m (958ft)
Recognition Distance	3.5mm: vehicle: 97m (318ft); human: 38m (125ft) 7mm: vehicle: 194m (636ft); human: 75m (246ft)
Identification Distance	3.5mm: vehicle: 49m (161ft); human: 19m (62ft) 7mm: vehicle: 97m (318ft); human: 38m (125ft)
Digital Detail Enhancement (DDE)	Yes
AGC	Auto; manual
Noise Reduction	2D NR; 3D NR
Colour Palettes	18 colour modes selectable such as Whitehot/ Blackhot/Ironrow/Icefire.
Temperature Measurement Range	Low temperature mode: -20°C (-4°F) to +150°C (302°F) High temperature mode: 0°C (34°F) to +550°C (1022°F)
Temperature Accuracy	Max (±5°C, ±5%) Operating temperature: -10°C (14°F) to +50°C (122°F)
Temperature Mode	Spot: 12 Line: 12 Area: 12 Support 12 rules simultaneously

Visible

Image Sensor	1/2.8 inch CMOS
Effective Pixels	1920x1080
Max. Resolution	2MP
Horizontal Definition	≥1100TVL
Min. Illumination	Colour: 0.005Lux Black & white: 0.0005Lux IR light (on): 0Lux
AGC	Auto; manual
Noise Reduction	2D NR; 3D NR
S/N Ratio	>56dB
White Balance	Auto/indoor/outdoor/tracking/manual/sodium lamp/ natural/street light
Electronic Defog	Yes
Electronic Image Stabilization (EIS)	Yes
Electronic Shutter Speed	1/3s–1/100000s (auto or manual)
BLC	Yes
WDR	DWDR
HLC	Yes
Day/Night	Auto (ICR); colour/B/W
Focus Mode	Manual
Focal Length	4mm; 8mm
Field of View	4mm: horizontal: 84°; vertical: 45°; diagonal: 99° 8mm: horizontal: 40°; vertical: 22°; diagonal: 46°

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	4mm	55m (180ft)	22m (72ft)	11m (36ft)	5.5m (18ft)
	8mm	110m (361ft)	44m (144ft)	22m (72ft)	11m (36ft)

Close Focus Distance	0.2m
Aperture	4mm: F2.0 8mm: F1.9
IR On/Off control	Auto; manual
IR Distance	4mm: 35m (115ft) 8mm: 50m (164ft)

Audio and Video

Video Compression	H.265; H.264M; H.264H; H.264B; MJEPG
Resolution	Thermal: (1280×960) (default value)/XVGA (1024×768)/VGA (640×480)/(256×192) Visual: 1080P (1920×1080) (default value)/720P (1280×720)/ D1 (704× 576/704×480)/CIF (352×288/352×240)
Video Frame Rate	Thermal: 50Hz: Main stream (1280×960@25fps/1024×768@25fps/640×480@25fps/256×192@25fps), sub stream (640×480@25fps/256×192@25fps) 60Hz: Main stream (1280×960@30fps/1024×768@30fps/640×480@25fps/256×192@25fps), sub stream (640×480@30fps/256×192@30fps) Visual: 50Hz: Main stream (1920×1080@25fps/1280×720@25fps/704×576@25fps), sub stream (704×576@25fps/352×288@25fps) 60Hz: Main stream (1920×1080@30fps/1280×720@30fps/704×480@30fps), sub stream (704×480@30fps/352×240@30fps)
Audio Compression	G.711a; G.711mu; AAC; PCM
Image Encoding Format	JPEG

General Function

Two-way Talk	Yes

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Network Protocol	HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPOE; IPv4/v6; SNMP; QoS; UPnP; NTP
Region of Interest (ROI)	Yes
Edge Storage	FTP; Micro SD card (256G, hot plug)
Browser	IE: IE8 and the later, and explorer with IE core Google: 42 and the earlier Firefox: 42 and the earlier Safari: 10 and the earlier
User/Host	20 channels at most (the total bandwidth 64M)
Security	Authorized username and password; attached MAC address; encrypted HTTPS; IEEE 802.1x; controlled network access
User Management	Support 20 users at most and users are classified as two groups--administrator group and user group.
Malfunction Detection	Network disconnection; IP addresses conflict; SD card error (status or storage space)

Smart Event

General IVS Analytics	Tripwire/intrusion

Professional and Intelligent

Fire Detection	Yes
Cold/Hot Spot Trace	Auto tracking of the hottest spot and the coldest spot in the thermal image
IVS Analytics	Tripwire/intrusion
Network	1 10M/100M Ethernet port (RJ-45)
Alarm Input	2 channels
Alarm Output	2 channels
Audio Input	1 channel
Audio Output	1 channel
RS-485	1 channel

Power

Power Supply	12V±20% DC, POE (802.3af), ePOE
Power Consumption	<5.0W (12V DC) (basic power consumption) <12W (12V DC, without power adaptor) (maximum power consumption)

Environment

Operating Temperature	-30℃ (-22°F) to +60℃ (140°F)
Operating Humidity	≤95%
Self-Adaptive	Auto heating to protect the chip under the cold environment

Physical Characteristics

Protection Grade	IP67, anti-surge 6KV, anti-elctrostatic 8KV (touched by objects), anti-elctrostatic 15KV (air)
Dimensions	279.9mm (11.02")×103.8mm (4.09")×95.8mm (3.77") (lengthxwidthxheight)
Packaging Dimensions	Camera with package: 365mm (14.4"")×175mm (6.9"")×176mm (6.9"") (lengthxwidthxheight) Deliveray box: 902mm (35.5"")×380mm (15"")×380mm (15"") (widthxlengthxheight)
Net Weight	≤1.4kg (3lb)
Gross Weight	≤1.9kg (4.2lb)
Installation Mode	Wall mount/pole mount/corner mount
Lens	Contained
Bracket	Contained

Certification

Certifications	CE (EN 60950:2000); FCC (FCC Part 15 SubpartB)

Dimensions (mm/inch)

