Saitell®

Thermal Network Hybrid Speed Dome Camera

- · 400x300 VOx uncooled thermal sensor technology
- · Athermalized Lens(thermal), Focus-free
- · 1/2.8" 2Megapixel progressive scan CMOS
- · Powerful 45X optical zoom
- · Support fire detection & alarm
- · Max 240°/s pan speed, 360° endless pan rotation
- · Up to 300 presets, 5 auto scan, 8 tour, 5 pattern
- · 7/2 alarm in/out
- · Micro SD memory, IP66

| Ultra Series | 40mK °C | Fire Detection | Analysis | AC 24V | IP66 |

System Overview

Featuring a dual lens speed dome camera, this series provides an all-in-one solution that is especially beneficial for long distance video surveillance in outdoor applications. Together with The Thermal and Starlight technology, the camera's long range capabilities are able to be utilized even at night. The series combines one thermal camera for monitoring in total darkness and one camera with Starlight functionality and a motorized lens for confirming details up close.

Functions

Uncooled Vox Technology

The thermal cameras use uncooled Vox sensor technology. Their small size and better performance make them a cost-effective solution for thermal security.

High Sensitivity

High thermal sensitivity (<40mK) allows cameras to capture more image details and temperature difference information.

Fire Detection & Alarm

With built-in fire detection functionality, the camera has the ability to detect fires from long range. Because thermal cameras are sensitive to temperature, they provide higher fire detection accuracy than standard cameras, making them particularly fit for applications such as forest fire prevention.

Intelligent Video System (IVS)

IVS is a built-in video analytics algorithm that delivers intelligent functions to monitor a scene for tripwire violations, intrusion detection, and abandoned or missing objects. A camera with IVS quickly and accurately responds to monitoring events in a specific area.

Environmental

With a temperature range of-40 °C to +60 °C (-40 °F to +140 °F), the camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP66 rating makes it suitable for demanding outdoor applications. For enviorments with rain, sleet, snow and fog, an integrated wiper provides users with clear visibility at all times.

Protection

The camera allows for ±15% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 6 kV lightning rating provides effective protection for both the camera and its structure against lightning.

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Technical Specification

Thermal Camera

Image Sensor	Uncooled VOx Microbolometer
Effective Pixels	400(H)x300(V)
Pixel Size	17um
Thermal Sensitivity(NETD)	<40mK
Spectral Range	8~14um
Image Setting	Brightness/Sharpness/ROI/AGC/FFC/3D DNR
Color Palettes	18(Whitehot/Blackhot/Ironrow/Icefire/ Fusion/Rainbow/Globow/Iconbow1/ Iconbow2 .etc)

Thermal Lens

Lens Type	Fixed/F1.0		
Focus Control	Athermalized, Focus-free		
Focal Length	25mm	35mm	50mm
Angle of View	H:15.5°, V:11.6°	H:11.1°, V:8.3°	H:7.8°, V:5.8°
Effective Distance① Man(1.8m*0.5m)	D②:735m R③:189m I④:95m	D:1030m R:265m I:132m	D:1471m R:378m I:189m
Effective Distance Vehicle(4m*1.4m)	D:1634m R:420m I:210m	D:2288m R:588m I:294m	D:3268m R:840m I:420m

Visible Camera

Image Sensor	1/2.8" CMOS
Effective Pixels	1920(H)x1080(V)
Electronic Shutter Speed	1/1 ~ 1/30,000s
Min. Illumination	0.005Lux@F1.6(Color), 0.0005Lux@F1.6(B/W)
S/N Ratio	More than 55dB
IR Distance	100m (328ft)
IR On/Off Control	Auto / Manual
IR LEDs	4

Visible Lens

Focal Length	3.95mm~177.7mm
Max Aperture	F1.6 ~ F4.95
Angle of View	H: 70.3° ~ 1.8°
Optical Zoom	45X
Focus Control	Auto / Manual
Close Focus Distance	100mm~ 1000mm (0.33ft~3.28ft)

PTZ

Pan/Tilt Range	Pan: 0° ~ 360° endless;Tilt:-10° ~ 90°
Manual Control Speed	Pan: 0.1° ~200° /s; Tilt: 0.1° ~120° /s
Preset Speed	Pan: 0.1° ~240° /s ;Tilt: 0.1° ~200° /s
Preset	300
PTZ Mode	5 Auto Scan, 8 Tour, 5 Pattern, Auto Pan
Speed Setup	Human-oriented focal length/ speed adaptation
Power Up Action	Auto restore to previous PTZ and lens status after power failure
Idle Motion	Activate Preset/ Scan/ Tour/ Pattern if there is no command in the specified period
Protocol	SD, Pelco-P/D (Auto recognition)

Video

Compression	H.265 / H.264 / MJPEG
Frame Rate	Main Stream: Thermal: 1280x1024 / 720P / 400x300 @25/30fps Visible: 1080P / 720P / D1 @25/30fps Sub Stream: Thermal: 640x512 / 400x300 @25/30fps Visible: D1 / CIF @25/30fps
Bit Rate Control	CBR / VBR
Bit Rate	H.264: 640 ~8192Kbps
Day/Night	Auto(ICR) / Color / B/W
BLC Mode	BLC / HLC / DWDR
White Balance	Auto / ATW / Indoor / Outdoor / Manual
Noise Reduction	2D/3D DNR
Motion Detetion	Off / On (4 zone, Rectangle)
Region of Interest	Off / On (4 zone)
Electronic Image Stabilization (EIS)	Off / On
Defog	Off / On
Digital Zoom	4x(19 levels)
Flip	180°
Mirror	Off / On
Privacy Masking	Off / On (4 area, Rectangle)

Audio

Compression	G.711A / G.711Mu / AAC / PCM

Intelligence

IVS	Tripwire, Intrusion
Advanced Intelligent Functions	Fire detection & alarm, Cold/Hot spot trace, Human/Vehicle classification, Auto Tracking
Tracking Trigger Mode	Manual / Auto (alarm triggered)
Tracking Trigger Event	Targeting, Tracking, Recording, Snapshot, Alarm, etc.

Thermal Hybrid PTZ Camera

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Network

Ethernet	RJ-45 (10/100Base-T)
Protocol	IPv4/IPv6, HTTP, HTTPS, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, ICMP, DHCP, PPPoE, ONVIF
Interoperability	ONVIF Profile S&G, API
Streaming Method	Unicast / Multicast
Max. User Access	10 Users / 20 Users
Edge Storage	Micro SD (256GB) Memory status display (Normal / Error / Active / Formatting / Lock), NAS (Network Attached Storage), Local PC for instant recording
Web Viewer	>IE8, <Chrome42, <Firefox42
Management Software	CMS, UNISIGHT VMS
Smart Phone	Android, iOS

Certifications

Certification	CE (EN 60950:2000) FCC (FCC Part 15 SubpartB)

Interface

Video Interface	1 Port (CVBS/BNC)
Audio Interface	1/1 In/Out
RS485	Support
Alarm	7/2 In/Out

Electrical

Power Supply	AC 24V/3A±15%
Power Consumption	17W, Max. 38W (Heater, LEDs on)

Environmental

Operating Conditions	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 95% RH * Start up should be done at above-40°C (-40°F)
Storage Conditions	-40°C ~ +70°C (-40°F ~ +158°F)) / Less than 95% RH
Ingress Protection	IP66

Construction

Casing	Metal
Dimensions	Φ240mm x 382mm (Φ9.45" x 15.04")
Net Weight	6.8Kg (14.99 lb)
Gross Weight	9.5Kg (20.94 lb)

Note:
① Effective distance values shown are nominal values and should be used as estimates only. Exact value calculations depend on a wide variety of conditions.
② D:Detection Distance
③ R: Recognition Distance
④ I : Identification Distance

Ordering Information

Type	Part Number	Description
Thermal PTZ Camera	TM-O2TDPT-IZ45F25D-A	Thermal: 400x300 25mm lens Visible: 2MP 45X
	TM-O2TDPT-IZ45F35D-A	Thermal: 400x300 35mm lens Visible: 2MP 45X
	TM-O2TDPT-IZ45F50D-A	Thermal: 400x300 50mm lens Visible: 2MP 45X

Accessories

Included:

PFA111
Mount Adapter

AC24V/3A
Power Supply

PFB303W
Wall Mount

Optional：

PFA140
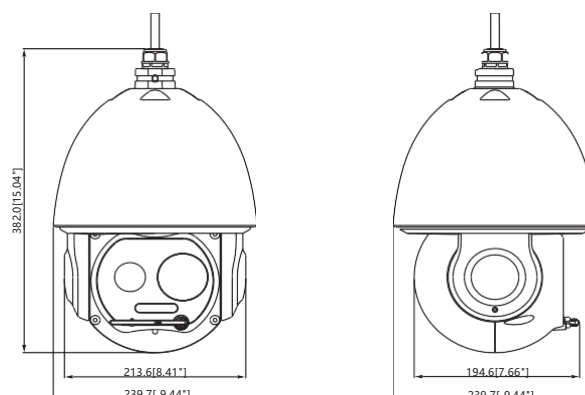Power box

PFB300C
Ceiling Mount
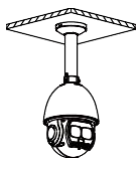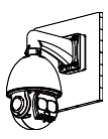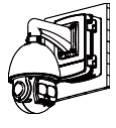
PFA120
Junction Box

PFA150
Pole Mount
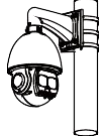
PFA151
Corner Mount

Dimensions (mm)

382.0[15.04"]

213.6[8.41"]
239.7[9.44"]

194.6[7.66"]
239.7[9.44"]

Mounting Type

Ceiling Mount	Junction Mount
PFA111 + PFB300C	PFA111 + PFB303W + PFA120
Power Box Mount	**Pole Mount**
PFA111 + PFB303W + PFA140	PFA111 + PFB303W + PFA150
Corner Mount	**Parapet Mount**
PFA111 + PFB303W + PFA151	PFA111+ PFB303S