

## Thermal PTZ/ Dual Sensor PTZ



### Product Features

- Integrated dual-sensor, Thermal imager and optical camera
- High definition visible camera, 2MP, 30x Zoom;
- Thermal imager, 640x480 pixels, up to 75mm lens;
- Pan and tilt range: 360° (Pan), -93° to 0° (Tilt)
- Waterproof, IP66/IP67.



# Thermal PTZ/ Dual Sensor PTZ

## DRI distance (Detection, Recognition & Identification) table PTZ/ Dual Sensor PTZ

In thermal system there are 3 levels of observation, namely: Detectable(D), Recognizable(R) and identifiable(I). The definition is stated as follows, by how many pixels the object image occupies on the sensor :

Detectable – 1 pixel

Recognizable – 4 pixels

Identifiable – 8 pixels

Assume that L is the height of object(m), S is the pixel pitch( $\mu\text{m}$ ), f is focus length(mm), thereafter, we can define the next measures:

Detect object distance =  $L \times f / S$

Recognition object distance =  $L \times f / (4 \times S)$

Identification object distance =  $L \times f / (8 \times S)$

Spatial resolution =  $S / f$  (in the unit of Mrad)

Observation object distance of 17 $\mu\text{m}$ sensor under different lens									
Detected object	Type	19mm thermal imaging lens	25mm thermal imaging lens	35mm thermal imaging lens	40mm thermal imaging lens	52mm thermal imaging lens	75mm thermal imaging lens	100mm thermal imaging lens	150mm thermal imaging lens
Spatial resolution in the unit of Mrad		0.89mrad	0.68mrad	0.48mrad	0.42mrad	0.33mrad	0.23mrad	0.17mrad	0.11mrad
FOV	M/F700C	19.5°x14.7°	14.9°x11.2°	10.4°x8°	9.2°x7°	7.2°x5.4°	5.0°x3.7°	3.7°x2.8°	2.5°x1.9°
	M/F500C	32.0°x24.2°	24.5°x18.5°	17.5°x13.1°	15.5°x11.6°	11.9°x9.0°	8.3°x6.2°	6.2°x4.7°	4.2°x3.1°
Human	Identification distance	65m	80m	126m	145m	190m	275m	360m	550m
	Recognition distance	130m	180m	252m	290m	380m	550m	720m	1100m
	Detect distance	550m	735m	1008m	1170m	1520m	2200m	2940m	4410m
Vehicle	Identification distance	320m	422m	590m	670m	875m	1240m	1690m	2530m
	Recognition distance	640m	845m	1180m	1350m	1750m	2500m	3380m	5070m
	Detect distance	2570m	3380m	4730m	5400m	7030m	10000m	13500m	20290m

## Multi-Sensor PTZ-Mobile Thermal PTZ



Model:SOAR971-TH

### Product Features

- Built-in high sensitivity infrared thermal camera and ultralow illumination integrated HD IPC, all have been carried over a 360° omnidirectional high-speed PTZ. It provides you the advantage of fast near range search and monitoring.
- Powerful embedded intelligent analysis algorithm makes motion detection, region intrusion detection, line crossing detection, moving path tracking, target enhancement and other intelligent analysis functions done in the device.
- Leading thermal imaging procession algorithm: IDE (image details enhancement algorithm), HDR (high dynamic range algorithm: sea-sky mode, sky-earth mode).
- Embedded high temperature alarm module, it can accurately pre-alarm the fire source in time based on the leading temperature alarming algorithm; the prealarming grades are adjustable, applicable for the need of fire pre-alarming in different scenes.
- Applicable under extreme bad weather (including complete darkness, rain, snow, smog and etc.).
- Powered by complete functions and interfaces; standardized security interface design; ONVIF and GB28281 compliant, easily access to the platform.
- Impressive appearance, integrated structural design, easy for installation and maintenance;

# SOAR971 Thermal PTZ Camera

Model	SOAR971-TH3230	SOAR971-TH6430
<b>Optical Camera</b>		
Image Sensor	1/2.8" Progressive Scan CMOS, 2MP	
Resolution	1920(H) x 1080(V), 2 Megapixels	
Scanning System	Progressive	
Minimum Illumination	Color: 0.005Lux@F1.6; 0.005Lux@F1.6 (IR on)	
Shutter Speed	1/3s~1/30,000Rate	
Lens	4.5mm~135mm	
Field of View	Horizontal FOV:67.8°~2.77°	
Zoom	30x	
Auto-Focus	Focus Control Auto/Manual	
<b>Thermal Camera</b>		
Detector	Uncooled amorphous silicon FPA	
Picture Elements	384x288 Pixels	640x480 Pixels
Pixel Pitch	17μm	
Lens	40mm	
Field of View	9.3°x 7°	
Mirror image	Horizontal/vertical	
Digital Zoom	X2,X4	
Spectral Range	8-14μm	
Polarity	White Hot/black hot	
<b>PTZ</b>		
Pan Range	360°endless	
Pan Speed	0.05°~80°	
Tilt Range	-25°~90°;	
Tilt Speed	0.05°~60°	
Number of Preset	255	
Patrol	6 patrols, up to 18 presets per patrol	
Pattern	4 , with the total recording time not less than 10 mins	
Power loss recovery	Support	
<b>SYSTEM Characteristic</b>		
Power	DC 12~24V, Power consumption:≤10w;	
COM/Protocol	RS 485, RJ45	
Video Output	Thermal Imaging Video, Network Video	
	Optical Camera Video, Network Video	
Working temperature	-40 ℃~+60℃	
Humidity	90% or less	
Protection level	IP66,TVS 4000V Lightning protection, surge protection	
Mount option	Vehicle Mounting, Mast Mounting	
Dimensions	Φ147(mm)×247(mm)	

## Vehicle Mounted Multi-Sensor PTZ



Model:SOAR970-TH



### Product Features

Aluminum PTZ case with high strength;

Powerful aux IR system, range up to 150 m;

IP index up to IP67, full weather proof;

PTZ positioning precision up to  $\pm 0.05^\circ$ ;

Wide Voltage Range - Perfect for Mobile applications (12-24V DC )

Optional wiper ; shock absorber, anti-shock;Built-in

high sensitivity infrared thermal camera and ultralow illumination integrated HD IPC, all have been  
Leading thermal imaging procession algorithm: IDE (image details enhancement algorithm), HDR (high  
Dynamic range algorithm: sea-sky mode, sky-earth mode).

Applicable under extreme bad weather (including complete darkness, rain, snow, smog and etc.).

Powered by complete functions and interfaces;standardized security interface design;

ONVIF and GB28281 compliant, easily access to the platform.

Impressive appearance, integrated structural design, easy for installation and maintenance;

# SOAR970 Multi-Sensor PTZ Camera

Model	SOAR970-TH32	SOAR970-TH64
<b>Optical Camera</b>		
Image Sensor	1/2.8" Progressive Scan CMOS, 2MP	
Resolution	1920(H) x 1080(V), 2 Megapixels	
Scanning System	Progressive	
Minimum Illumination	Color: 0.005Lux@F1.6; 0.005Lux@F1.6 (IR on)	
Shutter Speed	1/3s~1/30,000Rate	
Lens	4.5mm~135mm	
Field of View	Horizontal FOV:67.8°~2.77°	
Zoom	30x	
Auto-Focus	Focus Control Auto/Manual	
<b>Thermal Camera</b>		
Detector	Uncooled amorphous silicon FPA	
Picture Elements	384x288 Pixels	640x480 Pixels
Pixel Pitch	17μm	
Lens	40mm	
Field of View	9.3°x 7°	
Mirror image	Horizontal/vertical	
Digital Zoom	X2,X4	
Spectral Range	8-14μm	
Polarity	White Hot/black hot	
<b>PTZ</b>		
Pan Range	360°endless	
Pan Speed	0.05°~80°	
Tilt Range	-20°~90°; -30°~40°;	
Tilt Speed	0.05°~60°	
Number of Preset	255	
Patrol	6 patrols, up to 18 presets per patrol	
Pattern	4, with the total recording time not less than 10 mins	
Power loss recovery	Support	
<b>SYSTEM Characteristic</b>		
Power	DC 12~24V, Power consumption:≤36w;	
COM/Protocol	RS 485, RJ45	
Video Output	Thermal Imaging Video, CVBS	
	Optical Camera Video, Network Video	
Working temperature	-40 ℃-60℃	
Humidity	90% or less	
Protection level	IP67, TVS 4000V Lightning protection, surge protection	
Mount option	Vehicle Mounting, Mast Mounting	
Dimensions	Φ 210(mm)×310(mm)	

# Multi-Sensor Long Range PTZ CAMERA



## Product Features

Aluminum PTZ case with high strength; Optional wiper.

IP index up to IP66, internal defog system;

PTZ positioning precision up to  $\pm 0.05^\circ$ ;

Max load 5kg;

Built-in wipers, fan, heater

Dual sensor in one system;

Leading thermal imaging procession algorithm:

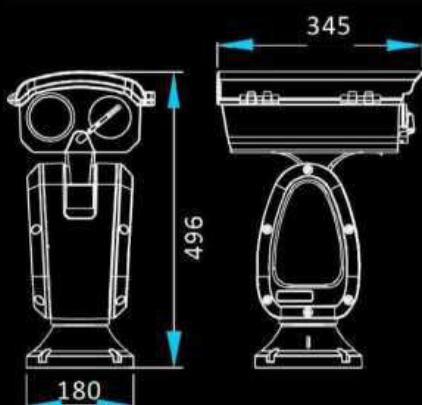
IDE (image de tails enhancement algorithm), HDR (high dynamic range algorithm: sea-sky mode, sky-earth mode).

Embedded high temperature alarm module;

Applicable under extreme bad weather, including complete darkness, rain, snow, smog and etc;

ONVIF and GB28281 protocol, easily access to the platform.

## Product Size



# SOAR800 Multi-Sensor PTZ Camera

Model	SOAR800-TH32	SOAR800-TH64
<b>Optical Camera</b>		
Image Sensor	1/2.8" Progressive Scan CMOS, 2MP	
Resolution	1920(H) x 1080(V), 2 Megapixels	
Scanning System	Progressive	
Minimum Illumination	Color: 0.005Lux@F1.6; 0.005Lux@F1.6 (IR on)	
Shutter Speed	1/3s~1/30,000Rate	
Lens	4.5mm~135mm	
Field of View	Horizontal FOV:67.8°~2.77°	
Zoom	30x	
Auto-Focus	Focus Control Auto/Manual	
<b>Thermal Camera</b>		
Detector	Uncooled amorphous silicon FPA	
Picture Elements	384x288 Pixels	640x480 Pixels
Pixel Pitch	17μm	
Lens	Standard 75mm, Optional 50mm, 40mm	
Field of View	7.3°x 5.5°	
Mirror image	Horizontal/vertical	
Digital Zoom	Electromotion focus	
Spectral Range	8-14μm	
Polarity	White Hot/black hot	
<b>PTZ</b>		
Pan Range	360°endless	
Pan Speed	0.05°~80°	
Tilt Range	-90°~50°	
Tilt Speed	0. 1°~20°( Belt drive); 0. 1°~9°(Worm Gear drive);	
Number of Preset	255	
Patrol	6 patrols, up to 18 presets per patrol	
Pattern	4 , with the total recording time not less than 10 minutes	
Power loss recovery	Support	
<b>SYSTEM Charteristic</b>		
Power	AC 24V, Power consumption:≤72w;	
COM/Protocol	Rj45	
Video Output	Thermal Imaging Video, Network Video Optical Camera Video, Network Video	
Working temperature	-40 ℃-60℃	
Humidity	90% or less	
Protection level	Ip66, TVS 6000V Lightning protection, surge protection	
Mount option	Mast Mounting	
Dimensions		



## Multi-Sensor PTZ



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- Leading thermal imaging procession algorithm: IDE (image details enhancement algorithm), HDR (high dynamic range algorithm: sea-sky mode, sky-earth mode).
- Embedded high temperature alarm module, it can accurately pre-alarm the fire source in time based on the leading temperature alarming algorithm; the prealarming grades are adjustable, applicable for the need of fire pre-alarming in different scenes.
- Applicable under extreme bad weather (including complete darkness, rain, snow, smog and etc.).
- Powered by complete functions and interfaces; standardized security interface design; ONVIF and GB28281 compliant, easily access to the platform.
- Impressive appearance, integrated structural design, easy for installation and maintenance;

# SOAR911 Multi-Sensor PTZ Camera

Model	SOAR911-TH32	SOAR911-TH64
<b>Optical Camera</b>		
Image Sensor	1/2.8" Progressive Scan CMOS, 2MP	
Resolution	1920(H) x 1080(V), 2 Megapixels	
Scanning System	Progressive	
Minimum Illumination	Color: 0.005Lux@F1.6; 0.005Lux@F1.6 (IR on)	
Shutter Speed	1/3s~1/30,000Rate	
Lens	4.5mm~135mm	
Field of View	Horizontal FOV:67.8°~2.77°	
Zoom	30x	
Auto-Focus	Focus Control Auto/Manual	
<b>Thermal Camera</b>		
Detector	Uncooled amorphous silicon FPA	
Picture Elements	384x288 Pixels	640x480 Pixels
Pixel Pitch	17μm	
Lens	19mm, 25mm & 40mm fixed lens options available	
Field of View	19.5°x14.7°, 14.9°x11.7°, 9.3°x7°	
Mirror image	Horizontal/vertical	
Digital Zoom	X2, X4	
Spectral Range	8-14μm	
Polarity	White Hot/black hot	
High temperature alarm	High-temperature tracking, Over-temperature alarm	
<b>PTZ</b>		
Pan Range	360°endless	
Pan Speed	0.05°~200°	
Tilt Range	-3°~93°	
Tilt Speed	0.05°~200°	
Number of Preset	255	
Patrol	6 patrols, up to 18 presets per patrol	
Pattern	4, with the total recording time not less than 10 minutes	
Power loss recovery	Support	
<b>SYSTEM Characteristic</b>		
Power	AC 24V, Power consumption: ≤45w;	
COM/Protocol	RS 485, Rj45	
Video Output	Thermal Imaging Video, CVBS Optical Camera Video, Network Video	
Working temperature	-40 °C-60°C	
Humidity	90% or less	
Protection level	IP66, TVS 4000V Lightning protection, surge protection	
Mount option	Wall Mounting, Host Monuting	
Dimensions	Φ 210(mm)×310(mm)	