

TSIR136

Handheld Acoustic Thermal Imager

The TSIR136 is a handheld industrial acoustic-thermal imaging camera that converts invisible ultrasonic signals into visualized voiceprint cloud while simultaneously displaying high-precision infrared thermal fields. By enabling dual-mode detection within a single device, it comprehensively resolves three core pain points in industrial inspections—partial discharge, gas leaks, and thermal anomalies—thereby significantly enhancing inspection efficiency and accuracy while reducing operation and maintenance costs.

Features

640×480 Pixel High-Resolution Uncooled Infrared Focal Plane Detector

Precisely capture sound waves and clearly pinpoint fault locations: Featuring a spiral array of 136 digital microphones, it covers a full frequency range of 2 kHz to 100 kHz, offering an ultra-long-range acoustic detection distance of 0 to 130 m.

Multiple Focusing Modes: Millisecond-fast focusing, supporting Laser, Button, Touchscreen, Manual, and Continuous focusing modes.

Multiple Imaging Modes: Supports modes such as Infrared, Visible Light, PIP, DSX, Fusion, Windowing, and Acoustic.

180° Infrared Rotation + 90° Acoustic Rotation
Freely rotatable with a wide FOV, clearly capturing every detail.

Laser Ranging, Precise Positioning

Application

Power Equipment Detection

Gas Leak Detection

Industrial Noise Analysis

Machinery and Equipment Fault Diagnosis



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Technical Specifications

Model		TSIR136
Infrared Detector	Detector Type	Uncooled Focal Plane Infrared Detector
	Infrared Resolution	640*480
	NETD	≤25mk@25°C (25°lens)
	Wavelength Range	7.5~14μm
Microphone Sequence	Acoustic Sensor	136 High-Sensitivity Digital MEMS Microphones
	Detection Range	0.3m-130m
	Test SPL Range	20dB-120dB
	Acoustic Frequency Range	2kHz-100kHz
	Acoustic Sampling Rate	200k
Imaging Performance	IR FOV	24.6°×18.5°/12.3°×9.3° dual FOV
	IFOV	0.68mrad/0.34 mrad
	Super-pixel	1280*960
	Frame Rate	25Hz
	Focus	Manual / Automatic / Laser / Touchscreen / Continuous
	LCD Screen	5" AMOLED 1280×720 Pixel Touchscreen
	Image Display	IR、Visible Light、PIP、DSX、Fusion、Windowing、Acoustic
	Color Palette	13 Options Available
	Visible Light	13 Megapixels × 2
	Digital Zoom	1-35X
	Acoustic FOV	62°*47°
Temperature Measure	Temp Measure Range	-20-600°C (Extendable up to 1700°C)
	Temp Measure Accuracy	±1°C (0-100°C), ±2% (> +100°C), ±2°C (-40-0°C)
	Temp Measure Mode	20 spot measure, 20 line measure, 10 area measure, 20 cycle measure
Acoustic Measurement	Acoustic Measure Mode	Single Source, Multiple Sources, Global, Windowing
	Acoustic Positioning Deviation	≤1°
	Acoustic Detection Modes	Partial Discharge Mode, Gas Leak Detection Mode, Industrial Abnormal Noise Detection Mode, Full-Frequency Detection Mode
	Response	Integration, Transient, High Sensitivity
Peripherals and Communications	Mobile Data	4G Option
	WI-FI	Support
	Bluetooth	Support
	Hotspot	Support
	USB	Support
	HDMI	Support
	Bluetooth	Support
	PC Analysis	Support
	Laser Ranging	Support
	Position	Support
	Electronic Compass	Support
	Speaker	Support
	Screen Brightness Sensor	Support
Storage	Microphone	Support
	Picture	JPEG
Power supply	Recording	MP4
	Battery	Rechargeable lithium battery, 2 hours of continuous operation.
Physical Parameters	Dimension	<1.5kg (with battery)
	Weight	270*162*82
Environmental Requirements	Ingress Protection	IP54
	Operating Temperature	(-20-50) °C
	Relative Humidity	≤95%RH