Acoustic with Thermal, All-in-One

FA Series

Acoustic & Thermal Imaging Camera

Introduction

The FA Series Acoustic & Thermal Imaging Camera deeply integrates acoustic imaging and thermal imaging technologies. It is equipped with 128 high-precision microphones, a 640×512 infrared detector, ultra-large 10.1-inch touchscreen, and the internal and external battery solution. The FA Series is capable of quickly detecting temperature anomalies, locating gas leaks and identifying Partial Discharge, offering efficient and detection solutions for industries such as power, manufacturing, and petrochemicals.

Features

- **High-precision acoustics**: 128 MEMS microphones in a spiral array, accurately capturing sound sources up to 130m
- **Accurate temperature measurement**: 640×512 thermal detector, visualized temperature measurement with professional analysis functions.
- **Touch to control**: 10.1-inch capacitive touchscreen, 1920×1200 resolution, comfortable viewing and easy operation.
- **Modular design**: Hot-swappable modules of laser rangefinder, thermal prime lens, and auto-focus lens, for multiple scenarios.
- **Intelligent diagnosis**: Built-in professional Partial Discharge and leakage detection modes, automatic fault area focusing to enhance detection efficiency.
- **Uninterruptible power**: 4 hours of continuous operation, the dual internal and external battery solution supports battery replacement without powering off.

Applications

Power industry

Petrochemical industry

www.gim-thermal.com   gim-mkt@guideir.com   Supports OEM/ODM Customized Services

Specifications

Product model	FA611 (Laser Rangefinder)	FA611 (Focus-free Thermal)	FA611 (Autofocus Thermal)
Acoustic Sensor			
Microphone array	128 low-noise MEMS microphones		
Bandwidth	0 kHz to 65 kHz, Adjustable range		
SPL range	0~120 dB		
Frame rate	30 Hz		
Detection mode	Partial Discharge / Gas Leak		
Thermal Sensor			
Detector type	/	VOx, 7.5 to 14µm	
Infrared resolution		640×512@12µm	
Super resolution		Yes, Upgrade to 1280×1024	
NETD		30mK	
Frame rate		50Hz/9Hz	
Focal length		13mm	Standard lens: 17.7mm; Medium Telephoto: 29mm; Telephoto: 62.9mm
Field of view		34°×27	Standard lens: 25°×19°; Medium Telephoto: 15°×11°; Telephoto: 7°×5°
IFOV		0.92mrad	Standard lens: 0.68mrad; Medium Telephoto: 0.41mrad; Telephoto: 0.19mrad
Min. object distance		4m	Standard lens: 0.15m; Medium Telephoto: 1m; Telephoto: 3m
Focusing mode		Focus-free	Automatic/Touch autofocus/ Continuous autofocus
Measurement range		Support auto-switching: -40°C to 150°C, 0°C to 650°C	
Measurement accuracy		±2°C or ±2%, whichever is greater	
Analyzed target		16 in total (Spot/Line/Area)	
Alarm		Full screen temperature threshold alarm (image, voice and flash)	
Image display			
Display screen	10.1'' LCD, touch screen, 1920×1200		
Digital camera	13MP	Visible camera (Acoustic): 13MP, Visible camera (Thermal): 13MP	
Digital zoom	1.1x~20x		
Image mode	AU	AU, IR, MIF, PIP	
Color palettes	12 types	Acoustic: 12 types; Thermal: 12 types, support color palette reversal and customization	
Functions			
Laser	Laser (Indication, Ranging 0.1m to 35m)		
Recording function	Photo and Video	Photo (image stitching) and Video (infrared & visible light)	
Cloud Services	Available		
OTA	Available		
Storage and transmission			
Storage media	External SD card (128 GB and up to 256 GB)		
Image storage	JPG	JPG with temp info	
Video storage	MP4	MP4 format (without temp info) can be used to record audio synchronously; Irgd (with temp info), up to 30 Hz (optional) for temperature analysis	
External interface	USB-C, SD card slot, Tripod socket		
WIFI	Yes, it can be connected to the mobile terminal for image and real-time video transmission		
Bluetooth	Bluetooth 5.0, support image transmission (only for Android)		
Power system			
Battery type	Lithium-ion rechargeable battery		
Operating time	Built-in battery + external battery: 4 hours		
Environmental parameters			
Working temperature	-20°C to 50°C		
IP rating	IP54		
Physical parameters			
Hardware	Illuminator, Microphone, Speaker, Electronic Compass, GPS		
Weight	1.7kg (with built-in battery)	1.8kg (with built-in battery)	2kg (with built-in battery)
Size	309mm×243.5mm×74mm		309mm×243.5mm×100mm
Software kit	PC: ThermoTools; Mobile: Thermography (iOS/Android)		
Standard	A device (acoustic with module optional), Customized battery×2, Desktop charger, Power Adapter, Adapter plug, USB-A to USB-C Cable, USB-C to USB-C Cable, Micro HDMI cable, RJ45 Ethernet Patch Cable, Docking station, SD card (128GB), Shoulder strap, Hand strap, Carrying case, Safety box, Quick Start Guide, Inspection report, Calibration certificate, Warranty card		
Options	Tripod, Bluetooth earphones, SD card reader, Optional module (Laser rangefinder, Focus-free Thermal, Autofocus thermal)		