



Thermal

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

- **APEXVISION:** Next-gen infrared imaging system for ultra-clarity & precision
- **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:** 5 hours of continuous operation, the dual internal and external battery solution supports battery replacement without powering off.

Applications



Power industry



Industrial manufacturing



Petrochemical industry

Specifications

Product model	FA611S
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 (Thermal module required)	
Core technology	Equipped with full ApexVision S1 system architecture: Detector ApexCore S1 + Platform Nexus 1.0 + Algorithm SharpIR 2.0
Detector type	VOx, 7.5 to 14μm
Infrared resolution	640×512@12μm
Super resolution	Yes, Upgrade to 1280×1024
NETD	15mK
Frame rate	50Hz/9Hz
Focal length	13mm/17.7mm
Measurement range	Support auto-switching: -40°C to 150°C, 0°C to 650°C
Measurement accuracy	±2°C or ±2%, whichever is greater
Image display	
Display screen	10.1" LCD, touch screen, 1920×1200
Digital camera	13MP
Digital zoom	1.1x~20x
Image mode	AU, IR, MIF, PIP
Functions	
Laser	Support laser indication, laser ranging range of 0.1m to 35m
Recording function	Photo and Video
Cloud Services	Available
OTA	Available
Storage and transmission	
Storage media	External SD card (128 GB and up to 256 GB)
Image storage	JPG with temp info
Video storage	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: 5 hours
Environmental parameters	
Working temperature	-20°C to 50°C
IP rating	IP54
Physical parameters	
Hardware	Wi-Fi, Illuminator, Microphone, Speaker, Electronic Compass, GPS
Weight	Acoustic Laser Rangefinder Version: 1.88kg; Acoustic Focus-free Thermal Version: 1.97kg; Acoustic Autofocus Thermal Version: 2.18kg
Size	309×243.5×74mm/309×243.5×100mm
Software kit	PC: ThermoTools; Mobile: FocusIR (iOS/Android)
Package Contents	Device (acoustic, module optional), Customized Batteries ×2, Desktop Charger, Power Adapter with Plugs, USB-A to USB-C Cable, USB-C to USB-C Cable, Micro HDMI to 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
Optional Items	Tripod, Bluetooth Earphones, Optional module (Laser Rangefinder, Focus-free Thermal, Autofocus Thermal)

* Product performance is based on testing in a controlled laboratory environment. Your test results may vary due to several external and environmental factors. All specifications are subject to the actual product. The manufacturer reserves the right to modify technical specifications without notice or liability to you.