

Product Datasheet - Technical Specifications



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Ultimate Professional Smart Acoustic Inspection

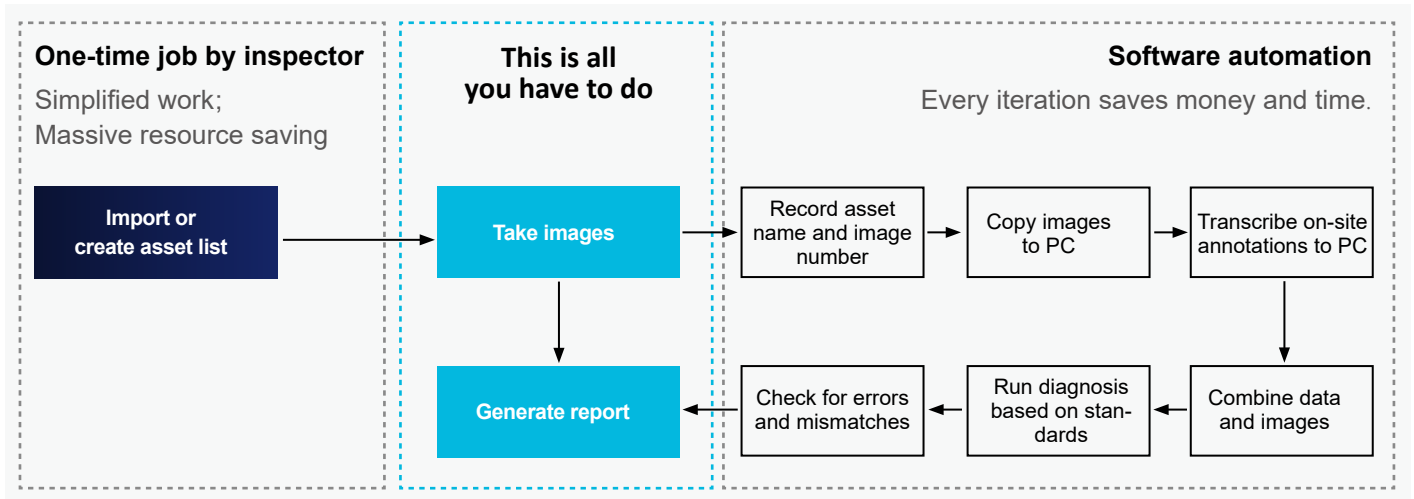
Powerful Upgrade | Long-range Detection



FOTRIC H7
Acoustic Imaging Cameras

NaviPdM[®] Venus Smart Inspection Assistant

FOTRIC H7 Acoustic Imaging Camera combined with NaviPdM[®] Venus enables a fully digitalized workflow from data acquisition to management, helping enterprises improve operational efficiency and safety.

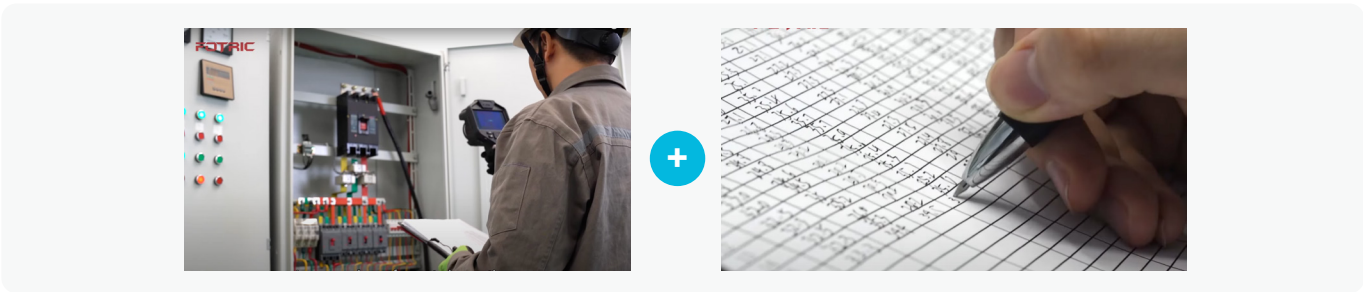


Application Scenarios

- Equipment maintenance & overhaul: Record equipment status regularly, provide early warnings of potential faults, and reduce downtime.
- Quality control: Capture key acoustic imaging data during production to ensure product consistency.
- Project management: Supply detailed acoustic imaging records to support planning and execution during equipment relocation or new project implementation.



Quick Asset Creation



Traditional Method

Method 1: Create asset with QR code

First time scan to register assets

Following inspection data collection

Method 2: Create assets manually

Location: 12kV Substation > Asset: Dock 1 Power >

Inspection point: Unmarked Panel M > Diagnostic criteria: Delta T >

QR code: Please input QR code > Description: Please input description

NaviPdM® Asset Creation

Automatic Report Generation

PD Diagnosis Report

Location	Asset	Inspection Point	Comment	Diagnosis
12kV Substation	Switchgear Room	Switch Blade	Repair recommended. No	Severe defect
12kV Substation	Switchgear Room	Disconnect	Immediate action: Clean polluted surface.	Severe defect
12kV Substation	Dock 1 Power	Unmarked Panel M	Closer inspection may be needed.	Unknown
12kV Substation	Dock 1 Power	Unmarked Panel R	Visual inspection and clean up.	Severe defect
12kV Substation	Dock 1 Power	Unmarked Panel L	Take action immediately. Repair or	Severe defect

Severity: Unmarked. Suspect to be partial discharge. Cannot be determined. Recommendation: Closer manual inspection may be needed.

PD activity: Other 99%

Leak Evaluation Report

Location	Asset	Tag	Comment	Leak Rate	Cost
YFR 404	Pad	East 1	2020010902	Worn Pipe	3.22 L/min 1002.74
YFR 404	Pad	East 1	2020010903	Loose Valve	1.41 L/min 437.15
YFR 404	Pad	East 2	2020010903	Flange Issue	2.59 L/min 807.07
YFR 404	Pad	East 3	2020010904	Flanged Pipe	5.02 L/min 1559.88
YFR 404	Pad	East 4	2020010905	Loose Valve	1.64 L/min 508.93
				Cost:	4315.77

Description: This is a description. Recommendation:

Ultra-Compact Microphone Array

- Spiral topology-optimized array with 345 MEMS digital microphones
- Ultra-high channel count enables wider sound field coverage and finer acoustic mapping, greatly improving inspection efficiency and diagnostic accuracy
- Ultra-long listening range: operational distance from 0.3m to 300m
- Lightweight yet rugged ergonomic design ensures comfortable grip and easy portability



Wide FOV · Industrial-Grade Imaging

- Acoustic image FOV: $66^{\circ} \times 52^{\circ}$
- Industrial digital camera: 13 MP resolution
- Dual LED light source design for superior illumination

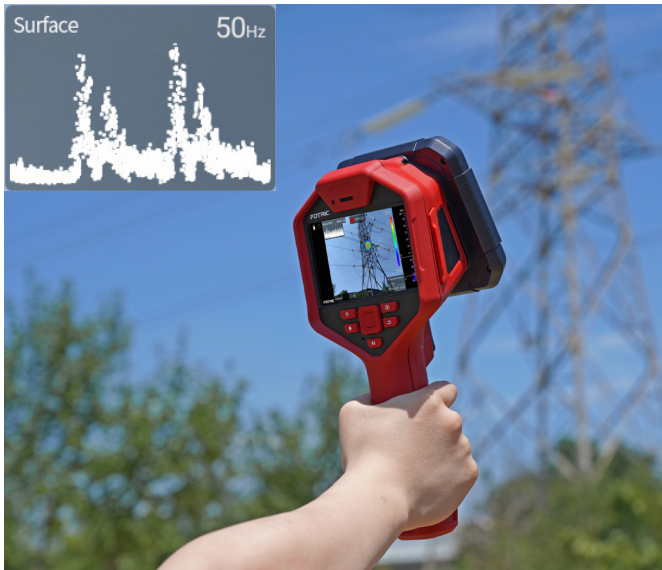
Detachable Battery · Extended Endurance

- Removable lithium batteries, with two packs, continuous runtime exceeds 6 hours, meeting full-day inspection needs

Rugged & Reliable · Advanced Protection

- IP54-rated durability

Smart Diagnosis



AI PD Defect Diagnosis



Smart Leak Cost Evaluation

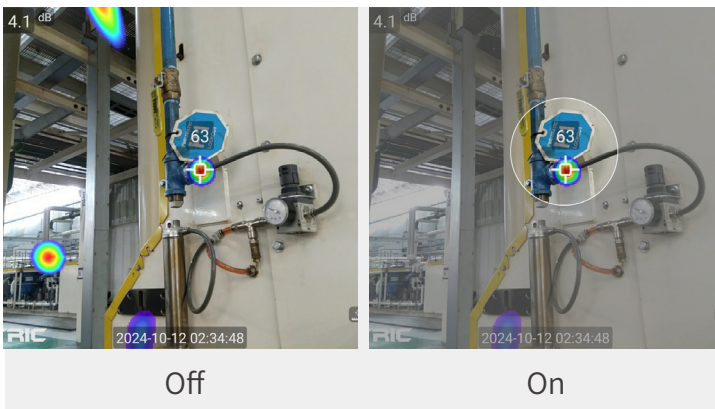
Smart Inspection



Acoustic Image Delay (T-FFTD®)

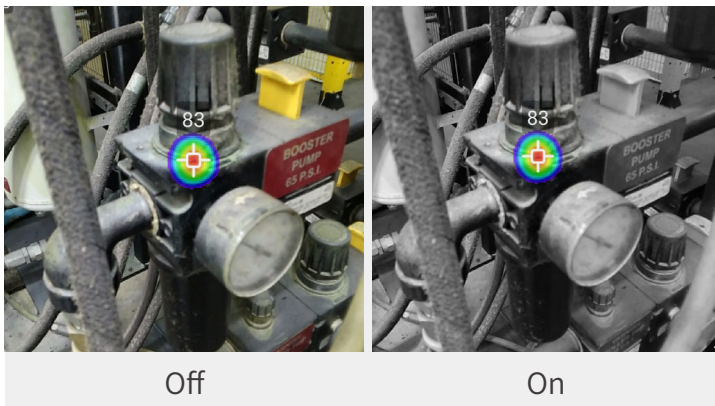
Utilizes a multi-modal transient acoustic matrix to enhance microsecond-level acoustic event retention.

Boost signal retention and enhance inspection efficiency for intermittent sound sources.



Acoustic Image Focus

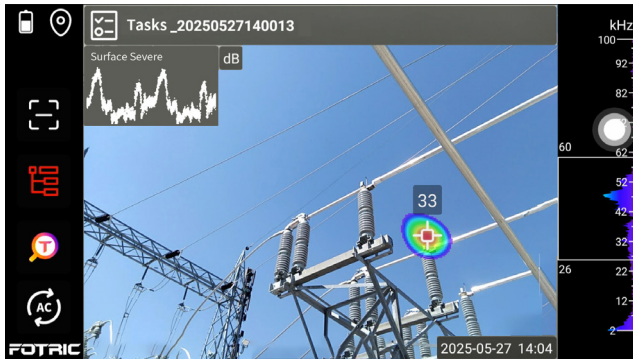
Combines adaptive dynamic noise reduction algorithms to achieve focused localization of sound sources.



Gray Scale Background

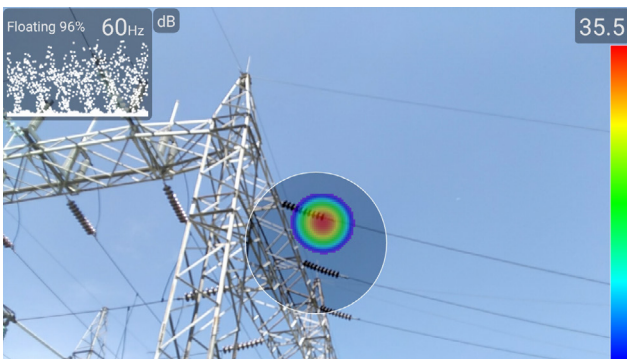
Under an industrial-grade gray-scale background, sound signals displays are more prominent.

Smart Inspection



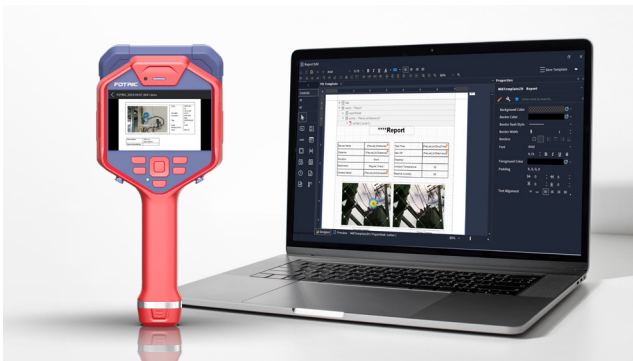
NaviPdM® Venus

Innovative Acoustic Data Management System, enables full-process digitalization from data acquisition to management.



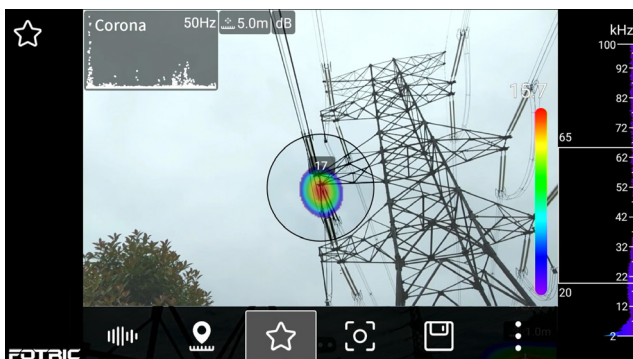
Partial Discharge · Automated Diagnosis

AI identifies surface discharge, floating discharge, corona discharge, and evaluates severity levels



Fast Reporting · On-Device Generation

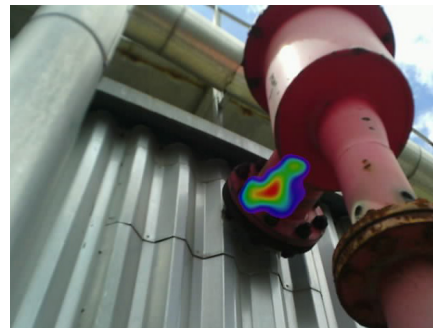
Directly generates Word or PDF reports on the device, with preview available in the gallery.



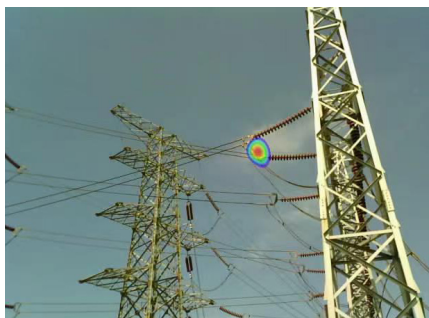
Favorite Function

Highlight, locate images quickly, and manage with ease.

Gas Leak Applications



Partial Discharge Applications



Others



Loosen Bolt



Mechanical Damage



Vacuum Leak



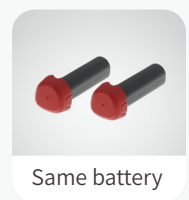
Leaky Tire

Specifications

Parameters	H7
Features	
Microphone Channels	345 MEMS digital microphone
Working Distance	0.3~300m(1~984ft)
NaviPdM Venus	AI Inspection Assistant
T-FFTD®	Capture instantaneous sound signals and make it stay longer in real-time acoustic display.
On-device Report Generation	Support generating word and PDF report
Acoustic Image Focus	Masks the surrounding area and focuses only on a selected part of the acoustic image.
Partial Discharge Diagnostics	Automatic diagnosis of discharge types such as surface, floating and tip (corona) discharges.
Gray-scale Background	Displayed as a digital image in black and white grey scale.
Battery	7.4V, 3500m rechargeable lithium battery, field replaceable.
Basic Parameters	
Acoustic Image FOV	66° × 52°
Acoustic Sampling Rate	200kHz
Acoustic Refresh Rate	25Hz
Frequency Range	2k~100kHz
Detection Mode	Leak Mode: Displays the leakage level; PD Mode: Displays a PRPD diagram, adapted to different AC frequencies (50/60Hz).
On-device Analysis	The device can directly analyse acoustic images.
Analysis Software	AnalyzIR professional thermal and acoustic image analysis software
Display Screen	5", 1280*720 pixels, LCD touchscreen display with Gorilla Anti-Explosion screen.
Image Mode	Single, Multi, Hologram
Digital Camera	13 megapixel, industrial-grade digital camera.
Storage Card	SD card, hot-swappable, supports up to 1TB.
Battery Operation Time	Continuous work ≥ 3h (depends on the environment and workload)
Language	
Languages	English, French, German, Italian, Japanese, Korean, Portuguese, Spanish, Thai, Traditional Chinese

Versatile Power Source

Shared battery with FOTRIC advanced handheld acoutherm and thermal cameras.



A Symphony of Sight and Sound

Where Professional Thermal Imaging Meets Professional Acoustic Technology

A dual-function product excelling in both thermal and acoustic imaging.

Combines the full capabilities of a professional thermal camera and a professional acoustic camera—delivering precise temperature measurement and high-definition imaging, while enabling fast and accurate leak evaluation and partial discharge diagnosis.



