FOTRIC
Sense the Digital Future

See Sound

From 'Inaudible' to 'Visible'

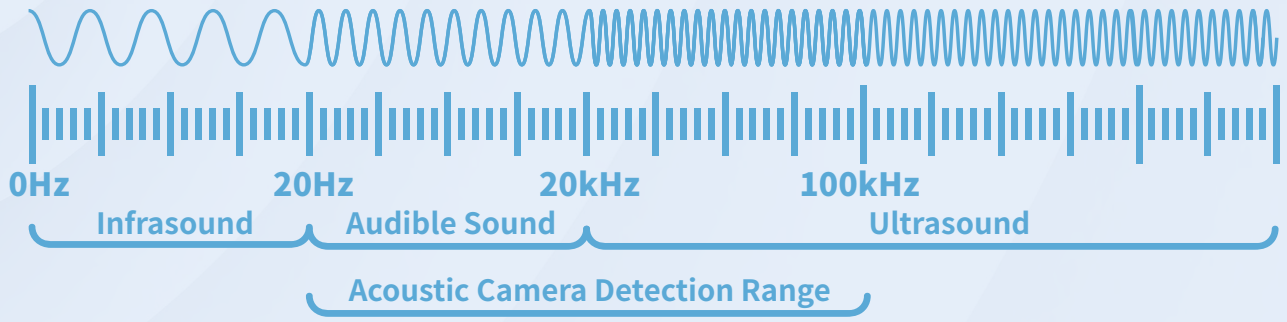
FOTRIC TD2e Kit

Acoustic Imaging Camera

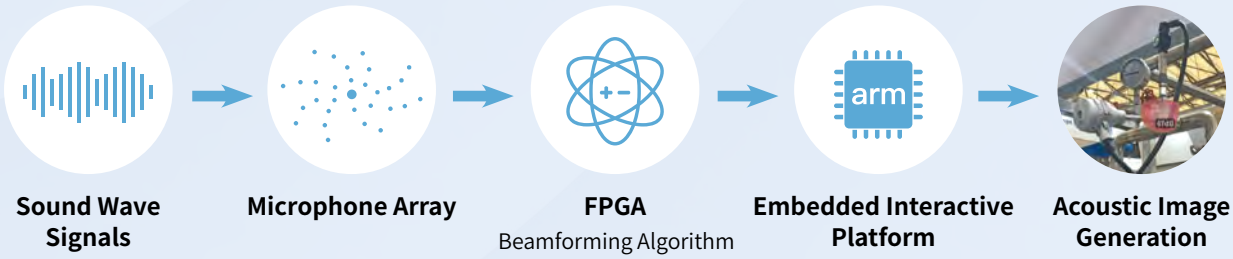
What is Acoustic Imaging?

Limitation of Human Perception

The human ear can only perceive sounds in the range of 20 Hz to 20 kHz. However, hidden faults such as gas leaks, bearing wear, and electrical discharges often emit much higher frequency ultrasound (>20 kHz) — sounds that are imperceptible to the human ear and beyond the capabilities of traditional stethoscopes or microphones.



How does it work?



- **Microphone Array:** Simultaneously captures sound signals from multiple sources to enhance spatial accuracy.
- **Beamforming Algorithm:** Focuses on sound sources from specific directions, filtering out environmental noise.
- **Acoustic Image Overlay:** Displays sound source locations as a heatmap over the image.
- **Low-Latency Rendering Engine:** Enables near-instant response, ideal for continuous inspection scenarios.

Beyond What's Audible

The FOTRIC TD2e Kit acoustic imaging camera can detect not only audible sound, but also high-frequency ultrasonic signals that are beyond the range of human hearing.

This means it can easily capture things like:

Compressed Air System Leaks

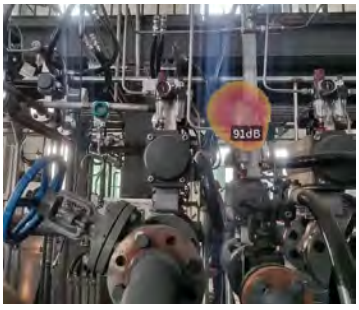
As gas leaks emit high-frequency turbulence noise, the TD2e Kit can quickly detect even the smallest leaks in compressed air pipelines.

Vacuum System Leaks

The TD2e Kitprecisely captures subtle leak sounds in vacuum systems that human ears cannot hear, enabling fast leak localization without contact or damage to equipment.

Loose Joint Vibration During Operation

The TD2e Kit detects abnormal high-frequency sounds caused by loose screws while equipment is running. It visualizes and pinpoints the issue in real time without requiring a shutdown.



Pneumatic Valve Leakage Detection

As pneumatic valves, cylinders, and fittings in automated production lines age, they frequently generate high-frequency leakage noise. The TD2e Kit captures real-time ultrasonic leakage signals from valve bodies and fittings, providing visual localization to pinpoint leak sources quickly.

- **High-density microphone array with 64 MEMS digital microphones**
- **Industrial digital camera: 5 MP, 58° × 45° field of view**
- **⩾ 3 hours of single-battery runtime, removable; Device rated IP54**
- **Detection distance: 0.3~60m**

TD2e Kit vs Traditional Methods

	FOTRIC Acoustic Camera	Ultra-probe
Detection Speed	Fast identification (within seconds)	Relies on user experience
Visualization	Real-time heatmap display	Not visualizable
Precision	High-precision positioning	Low-precision positioning
Data Recording&Analysis	Supports image export	Not supported
Ease of Use	Pick up and shoot	Requires skilled professionals

TD2e Kit Enhanced Package Configuration

Durable hard carrying case & soft carrying bag

- Industrial-grade shock-resistant design
- Custom-molded internal structure to ensure safe transport of the main unit and accessories
- Suitable for frequent travel / outdoor inspection

Lithium Batteries×2

- Standard configuration includes two 3.6V / 5000mAh batteries
- Single battery operating time ⩾ 3 hours
- Significantly improves all-day inspection capability

Wearable Tool Holster

- Allows the device to be securely attached to a belt or tool pouch
- Enhances on-site mobility and reduces the risk of accidental drops

Extended Warranty Service

- Exclusive TD2e Kit warranty: 18 months
- Applies to the device main unit

Specifications

Model	TD2e Kit
Basic parameters	
Microphone channels	64 MEMS Digital Microphone
Acoustic image field of view (FOV)	58° *45°
Sound pressure sensitivity	0.01L/min@0.1MPa，1.5m，ϕ30μm orifice 0.025L/min@0.3MPa，3.5m，ϕ30μm orifice 0.045L/min@0.3MPa，4.5m，ϕ40μm orifice
Sound sampling rate	200kHz
Acoustic refresh rate	15Hz
Working distance	0.3~60m
Positioning frequency range	2k–100kHz
Frequency range selection	Supports manual adjustment of the frequency range Supports displaying the peak frequency
Display screen	3.5-inch, 640*480 pixels, IPS LCD touchscreen with explosion-proof cover glass
Digital camera	5MP industrial-grade digital camera
Image format	jpg (acoustic image)
USB interface	USB Type-C, compliant with USB 3.0/2.0 standard
LED illumination lamp	Support flashlight illumination and flash mode
Power system	
Battery type	3.6V, 5000mAh Rechargeable Lithium Battery, Field-Replaceable
Battery operating time	⩾ 3 hours per battery(depends on
Reliability and certification	
Protection rating	IP54(GB/T 4208/IEC 60529)
Drop resistance	Designed for 2-meter drop resistance
Shock resistance	25g(GB/T 2423.5/IEC 60068-2-27)
Vibration resistance	2g(GB/T 2423.10/IEC 60068-2-6)
Languages	
Supported languages	English
Standard product configuration	
Standard configuration	Main unit ×1、Rechargeable Lithium Battery×2、Charging Dock、Power Adapter、USB Type-C to USB cable ×1、32GB TF card、Belt Clip、Quick start guide、Packing list、Portable Soft Bag、Hard Carrying Case

*For more detailed information please refer to the Datasheet.

Versatile Power Source

Shared battery with FOTRIC compact handheld thermal cameras.

FOTRIC TKx series

Same Battery

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