

# FOTRIC P7 Mix

## Acoutherm Camera

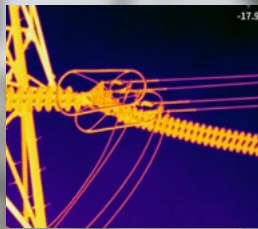
Where Professional Thermal Imaging Meets Professional Acoustic Technology



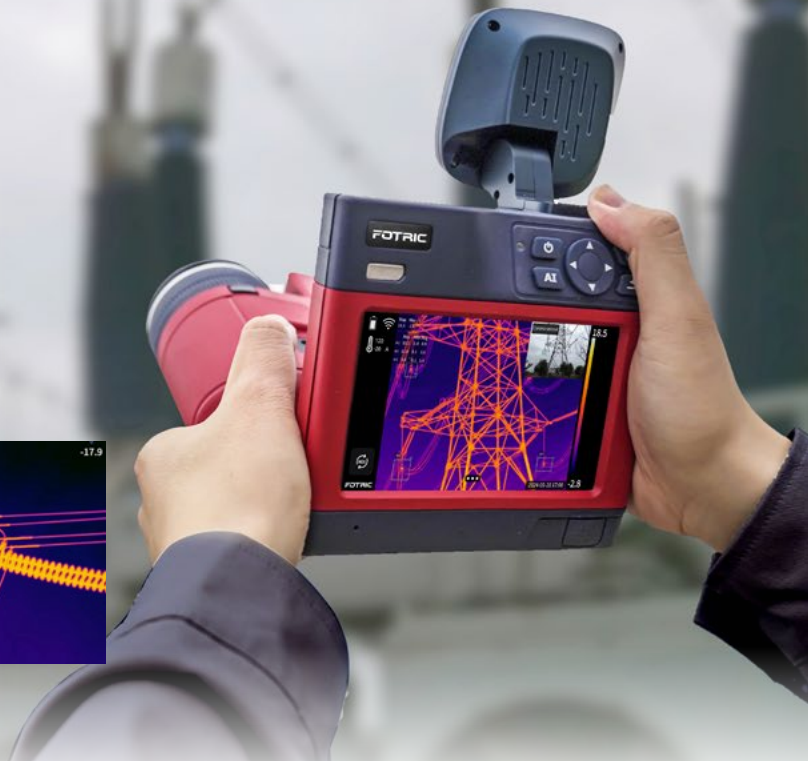
25° Lens



12° Lens

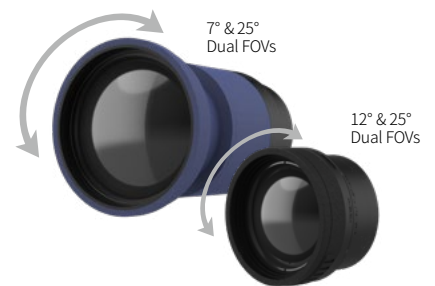


7° Lens



## Dual-View Optical Zoom for Smarter, Safer Inspections

Eliminate the need to carry or swap extra lenses in the field, minimizing the risk of accidental damage to costly optics. Switch seamlessly between wide-area scans and detailed close-ups with a simple twist, ensuring reliable data capture with minimal disruption.



## A Wealth of Alternatives



46°

Wide-angle Lens



25°

Standard Lens



12°

Telephoto Lens

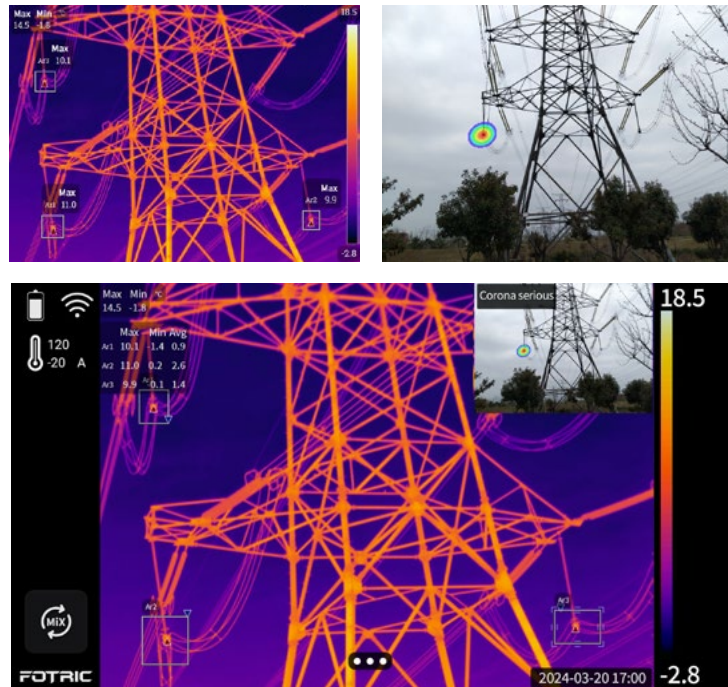


7°

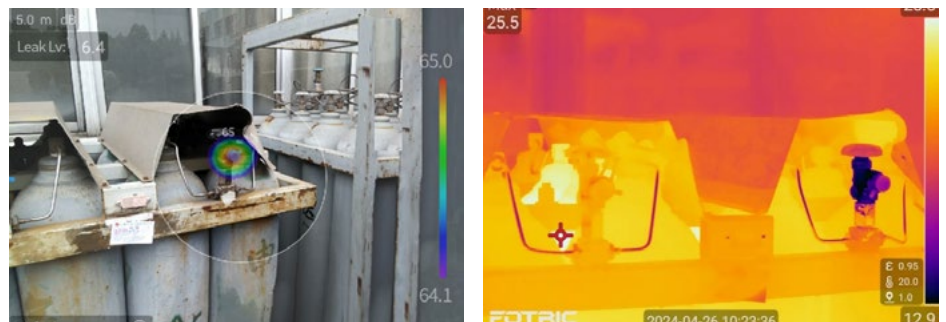
Ultra Telephoto Lens

# Approach a problem from different perspectives

In industrial inspections, signals can often be ambiguous, and one method may require validation by another. A signal that is unclear in one device might be more evident in another.



For instance, when inspecting compromised insulators, a thermal camera may only show a minor temperature difference—sometimes as small as 1 °C—making it easy to overlook. However, an acoustic camera can reveal a much clearer signal, identifying the type of partial discharge.



Conversely, in industrial leak detection, ambient noise and reflections can obscure acoustic readings. In such cases, pairing an acoustic camera with a thermal camera can immediately highlight the thermal anomalies caused by the rapid convection of leaking materials, confirming the presence of a leak.

# Robust and Meticulous Thermal Imaging

Thermal Mode is the perfect mechanism to switch to when encountering instruments such as:

Electrical equipment, transmission devices, high-temperature containers, insulation equipment, and other equipment with potential thermal failure risks.

## 640x480 Thermal Resolution & IREdge Image Detail Enhancement

Provides clear thermal gradients for easy analysis and preserves thermal details to highlight object contour.

## A Wealth of Selectable Lenses

Single view lenses: 46° , 25° , 12° , 7°

Dual-view lenses: 25° &12° , 25° &7°

## TurboFocus® Smart Focusing

Ensures image clarity at any distance and any position, laying a solid foundation for AI recognition.

## MagicThermal®

AI-based auto-recognition and feature contour mark up.





## AI-empowered Acoustic Mode

### **162 MEMS digital microphones & 13MP digital camera**

Unveil acoustic details with unprecedented clarity.

### **Partial Discharge Diagnosis**

Surface, floating, corona discharge

### **Leakage Evaluation**

Leak level, leak rate, leak cost

### **Filter Mode**

Narrow the focus of the camera to an isolated area, screening out unwanted noise.

### **Signal Delay Mode (T-FFTD®)**

Extrapolate intermittent signals to enhance camera detectability.

In real-world scenarios, many equipment failures result from complex factors. Analyzing from a single dimension may not provide comprehensive or accurate insights.

In such cases, activating the device's MiX Mode simultaneously analyzes equipment through both thermal and acoustic dimensions, thereby effectively and rapidly identifying potential hazards.

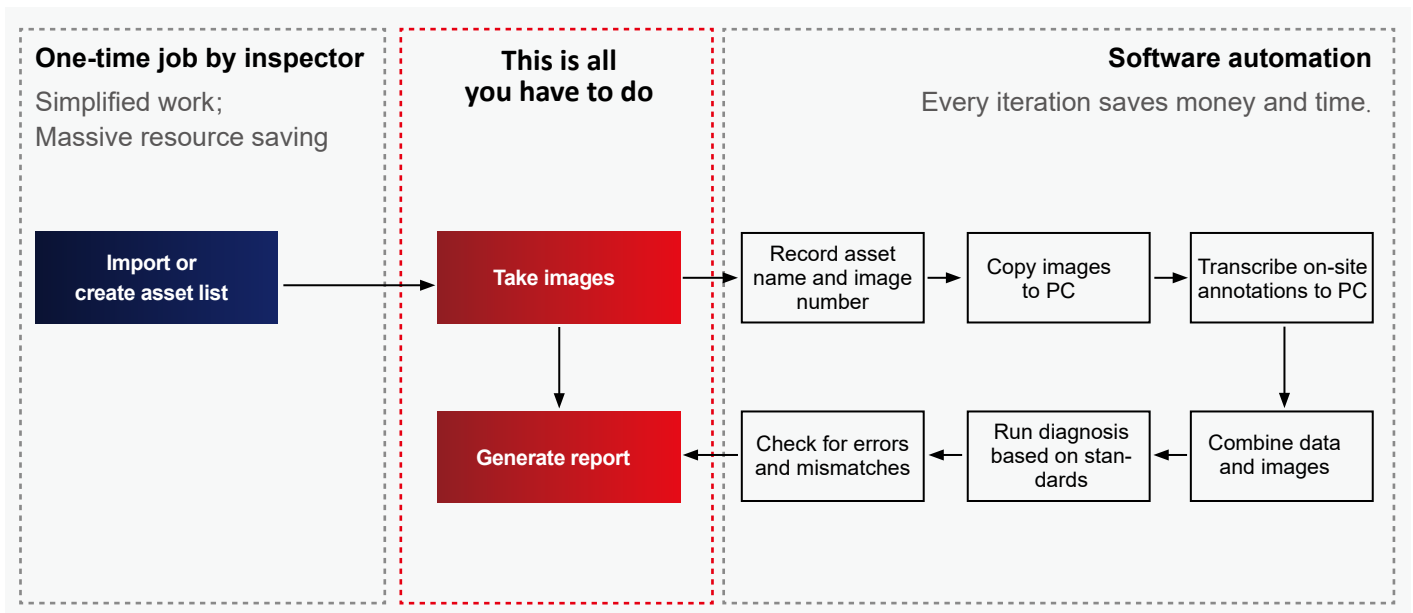


**NaviPdM®**  
Digital Inspection Assistant



## Boost Efficiency with AI-powered Automation

Approximately 90% of inspectors' time during inspections is squandered on repetitive logistical tasks. 'NaviPdM®' will handle those, allowing you to focus on what truly requires your expertise.



# Specifications

|                                    |                                                                                                                                                                                 |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                              | P7-MiX                                                                                                                                                                          |
| <b>Unique Features</b>             |                                                                                                                                                                                 |
| Mix Mode                           | Display thermal imaging and acoustic signals on the same interface, enabling cross verification.                                                                                |
| NaviPdM®                           | Support, AI inspection assistant                                                                                                                                                |
| <b>Hardware</b>                    |                                                                                                                                                                                 |
| <b>Thermal Imaging Parameters</b>  |                                                                                                                                                                                 |
| Infrared Resolution                | 640 x 480                                                                                                                                                                       |
| Super Resolution                   | 1280 x 960                                                                                                                                                                      |
| Detector Type                      | Uncooled infrared focal plane detector                                                                                                                                          |
| Thermal Sensitivity (NETD)         | <30mK@30°C (86 °F )                                                                                                                                                             |
| Detector Pitch                     | 17µm                                                                                                                                                                            |
| Spectral Range                     | 8~14µm                                                                                                                                                                          |
| Frame Rate                         | 30Hz                                                                                                                                                                            |
| Field of View (FOV)                | 25° x 19°                                                                                                                                                                       |
| Spatial Resolution (IFOV)          | 0.68 mrad                                                                                                                                                                       |
| Focus Mode                         | TurboFocus® system (thermal contrast AF, laser-assisted AF, continuous AF, touch AF); Manual                                                                                    |
| <b>Acoustic Imaging Parameters</b> |                                                                                                                                                                                 |
| Microphone Channels                | 162 MEMS digital microphone                                                                                                                                                     |
| Acoustic Image FOV                 | 66° x 52°                                                                                                                                                                       |
| Sound Pressure Sensitivity         | 0.01L/min@0.1MPa, 1.5m, ϕ30µm leakage<br>0.025L/min@0.3MPa, 6.5m, ϕ30µm leakage.                                                                                                |
| Sound Pressure Measurement Range   | 10kHz: 6~120dB SPL<br>20kHz: -7~120dB SPL<br>35kHz: 8~120dB SPL<br>50kHz: -5~120dB SPL                                                                                          |
| Acoustic Sampling Rate             | 200kHz                                                                                                                                                                          |
| Acoustic Refresh Rate              | 25Hz                                                                                                                                                                            |
| Working Distance                   | 0.3~100m(1~328ft)                                                                                                                                                               |
| <b>Analysis Parameters</b>         |                                                                                                                                                                                 |
| <b>Temperature Analysis</b>        |                                                                                                                                                                                 |
| Temperature Range                  | -20~120°C (-4~248 °F ), 0~650°C (32~1202 °F ), Intelligent range                                                                                                                |
| Measurement Accuracy               | ± 1°C (1.8 °F ) or ± 1 %, whichever is greater (ambient temp at 25°C /77 °F , temperature range 0° C-100° C/32 °F ~212 °F ), ± 2°C /3.6 °F or ± 2 % for other temperature range |
| PC Software                        | NaviPdM                                                                                                                                                                         |

# Specifications

| Acoustic Measurement Analysis |                                                                                                                                                                                         |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency Range               | 2~100kHz                                                                                                                                                                                |
| Frequency Range Selection     | Support preset frequency range for different scenarios for later selection; Support manual adjustment for frequency range.                                                              |
| Detection Mode                | LQ Mode: Displays the leakage level;<br>PD Mode: Displays a PRPD diagram, adapted to different AC frequencies (50/60Hz).                                                                |
| Acoustic Image Focus          | Masks the surrounding area and focuses only on a selected part of the acoustic image.                                                                                                   |
| On-device Analysis            | The device can directly analyse acoustic images and holographic acoustic videos.                                                                                                        |
| Leak Evaluation               | Automatic identification of leakage points, automatic evaluation of leakage and annual energy costs.                                                                                    |
| Partial Discharge Diagnostics | Automatic diagnosis of discharge types such as surface, floating and tip (corona) discharges.                                                                                           |
| Display Parameters            |                                                                                                                                                                                         |
| Thermal Imaging Display       |                                                                                                                                                                                         |
| Image Mode                    | Thermal\Digital\PIP\T-DEF® blend                                                                                                                                                        |
| Palette                       | 16 standard palettes+16 inverted                                                                                                                                                        |
| Minimum Temperature Span      | Auto (Minimum Temp Span 3°C /5.4 °F ), Manual (Minimum Temp Span 2°C /3.6 °F ), Touch-screen(Minimum Temp Span 2°C /3.6 °F ).                                                           |
| Acoustic Imaging Display      |                                                                                                                                                                                         |
| Image Mode                    | Single, Multi, Hologram                                                                                                                                                                 |
| Palette                       | Support 3 palettes:<br>Red-Blue, Iron, Grey.<br>Supports transparency adjustment.                                                                                                       |
| Data Connection               |                                                                                                                                                                                         |
| WiFi                          | Support 2.4GHz&5GH channel, Support 802.11a/b/g/n/ac                                                                                                                                    |
| Bluetooth                     | Support                                                                                                                                                                                 |
| Remote Control                | Mobile and webpage access via IRExplorer                                                                                                                                                |
| Auxiliary Features            |                                                                                                                                                                                         |
| LED Flash Lamp                | Supports torch illumination and flash light mode                                                                                                                                        |
| GPS                           | Support                                                                                                                                                                                 |
| Power System                  |                                                                                                                                                                                         |
| Battery                       | 3.6V, 9900mAh rechargeable lithium battery, field replaceable.                                                                                                                          |
| Battery Operation Time        | Continuous work with Thermal mode $\geq$ 4h<br>Continuous work with Acoustic mode $\geq$ 2.5h<br>Continuous work with MiX mode $\geq$ 2.5h<br>(depends on the environment and workload) |