



CRY2624M

Ex Fixed Acoustic Imager



TÜV-Certified



Product Introduction

Designed for hazardous industrial environments such as petrochemical plants, power facilities, coal mines, and natural gas pipelines, the CRY2624M is an ATEX and IECEx-certified fixed acoustic imager for continuous condition monitoring. Its 128-channel MEMS microphone array and 8-megapixel camera combine acoustic imaging with real-time video to locate gas and vacuum leaks, identify partial discharge sources, and support PD type recognition.



ATEX & IECEx Certified for Zone 2 Gas and Zone 22 Dust

Certified with the markings II 3 G Ex ec ic IIC T4 Gc (Zone 2 Gas) and II 3 D Ex tc IIIC T95°C Dc (Zone 22 Dust) per certificate scope, the CRY2624M is designed for continuous monitoring in potentially explosive gas and dust atmospheres. Its IP66-rated enclosure protects against dust and powerful water jets, supporting dependable operation in demanding industrial environments.

24/7 Gas & Vacuum Leak Monitoring

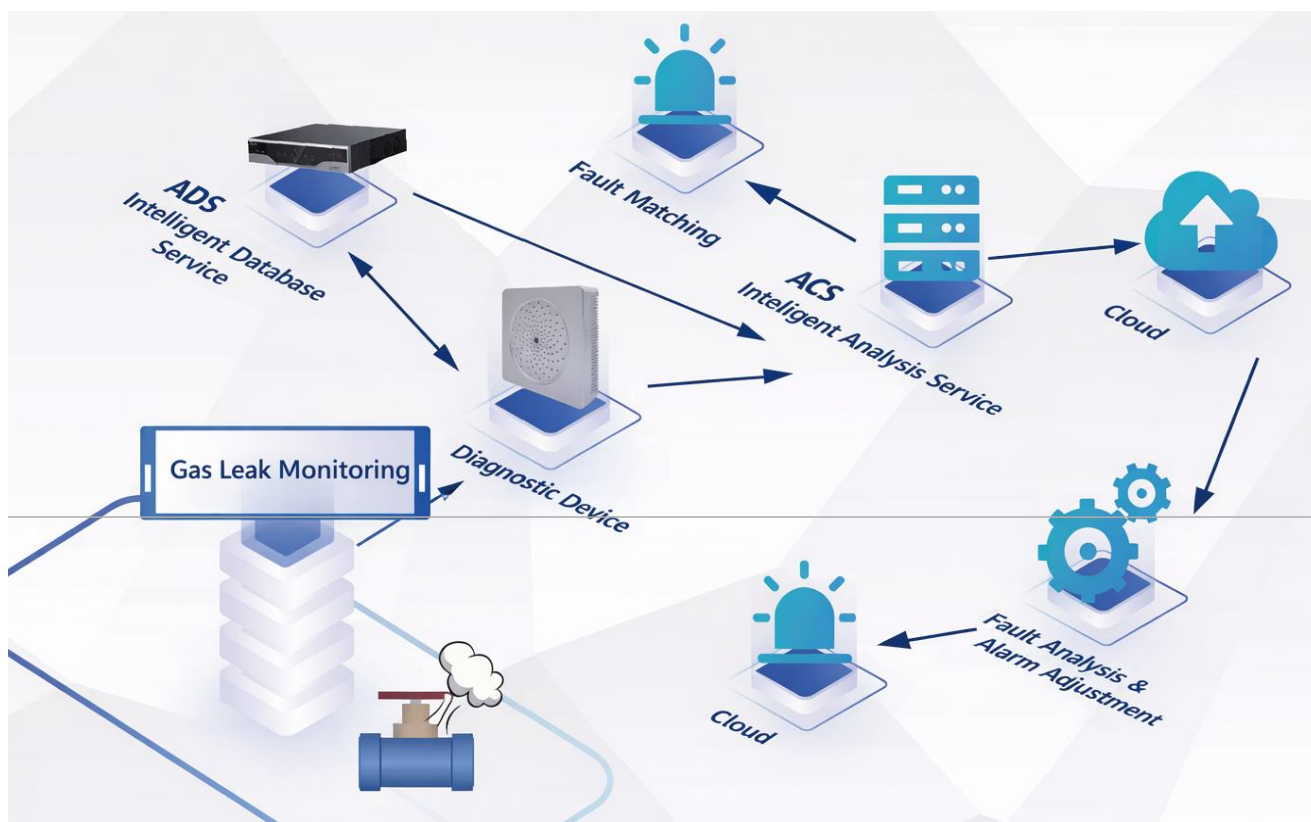
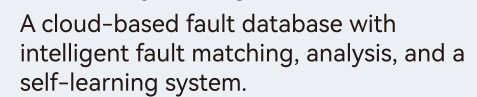
The 128-channel MEMS microphone array captures ultrasonic emissions from escaping gas, while the 8-megapixel camera provides a clear visual reference. By overlaying the acoustic image on live video, the CRY2624M pinpoints gas and vacuum leak sources.

PD Localization & Type Recognition

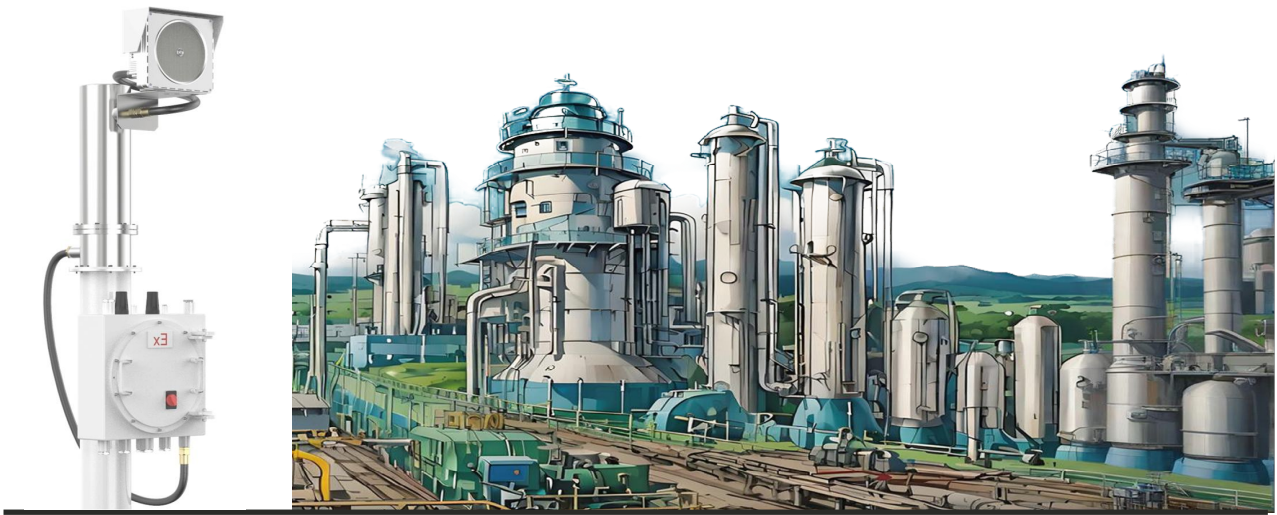
The CRY2624M combines acoustic imaging with partial discharge analysis to locate PD sources and recognize discharge types in high-voltage equipment. Real-time visualization and fault alerts help maintenance teams evaluate insulation condition, identify emerging electrical risks.

Web-Based Remote Monitoring & Flexible Integration

The web-based platform enables live monitoring and remote assessment over the local network. RESTful, WebSocket, and RPC interfaces, together with RTSP, RTMP, and WebRTC streaming, facilitate integration with industrial monitoring systems, robotic dogs, and wheeled robots.



Coal-to-Chemicals facilities

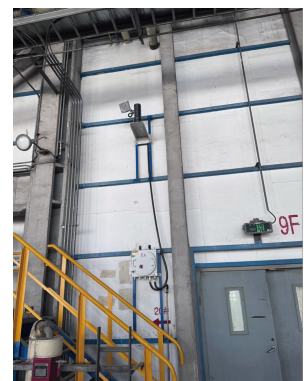
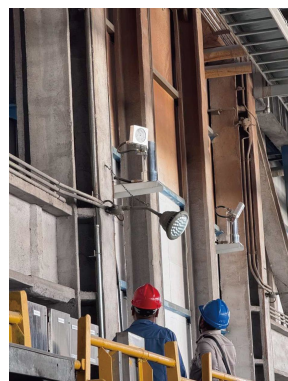
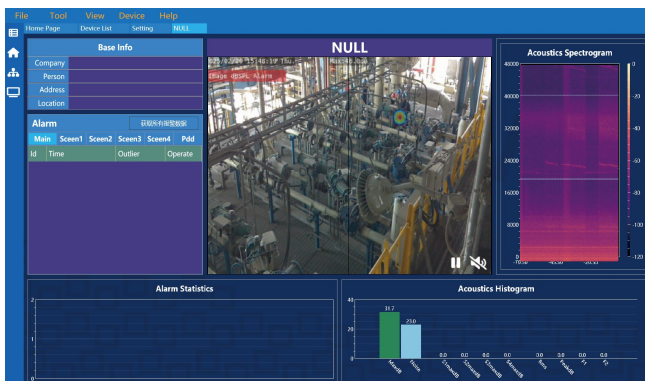


Coal-to-Chemicals facilities

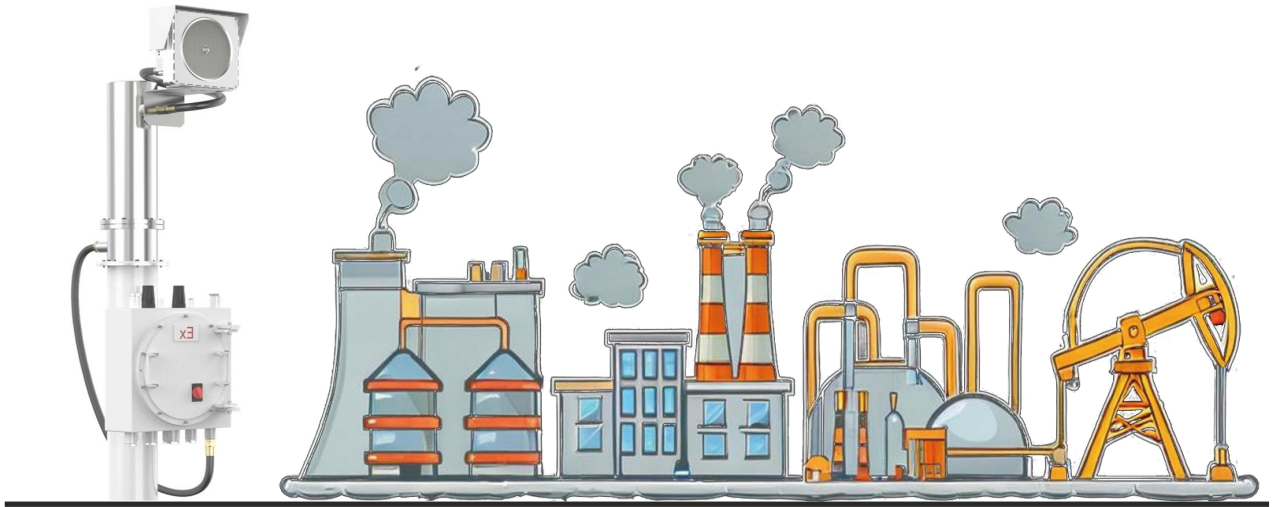
As a key pillar for national energy supply and chemical feedstock production, the coal chemical industry places extremely high demands on production safety. Gas leak monitoring is especially critical in high-risk units such as gasifiers and synthesis towers, where leaks can quickly escalate into major incidents.

Application Case: Gasifier Syngas Leak Monitoring Project at a Coal Chemical Plant

To address recurring risks of gas and pulverized-coal leakage at multiple vulnerable points—such as the pulverized-coal pipelines and valve flanges at the gasifier top, valve flanges on the CO pipelines along the gasifier body, and pipeline valve flanges at the gasifier bottom—the plant deployed multiple modular acoustic imaging units across the gasifier area. These units provide 24/7 continuous, full-coverage monitoring of the gasifier.



Petrochemical Industry



Petrochemical Industry

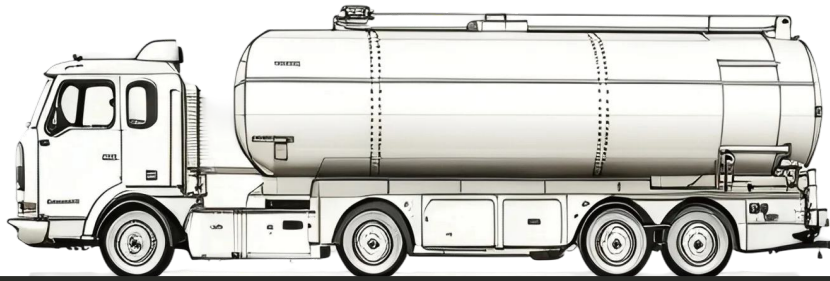
The petrochemical industry is the “lifeblood” of modern society. Its production processes involve flammable, explosive, and toxic substances such as hydrogen sulfide (H_2S), hydrogen (H_2), and benzene vapor. Reducing leak risks through advanced technologies is a long-term mission for petrochemical enterprises.

Application Case: Hydrogen Compressor Monitoring Project at a Petrochemical Plant

To prevent hazardous gas leaks during olefins production, multiple modular acoustic imaging units were installed around the hydrogen compressor and hydrogen pipeline areas. In this project, the acoustic imagers were mounted on explosion-proof pan-tilt units (PTZ), enabling simultaneous monitoring of multiple critical feed pipelines, including pipe bodies, valves, and flanges. Continuous, unmanned monitoring provides comprehensive protection for the unit.



LNG/CNG Tank Truck Loading & Port Hazardous Chemical Yards

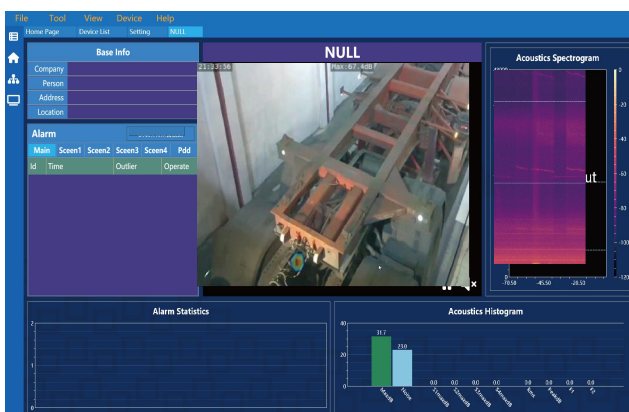


LNG/CNG Tank Truck Loading & Port Hazardous Chemical Yards

In the transportation of flammable and toxic gases, tank trucks are widely used. During compressed gas loading, unloading, storage, and parking, it is critical to detect whether tanks or related fittings are leaking.

Application Case: Incoming Vehicle Leak Inspection at a Hazardous Chemical Yard in Shanghai

A port company in Shanghai installed four modular acoustic imaging units in the hazardous-chemical vehicle entry area, working in coordination with a vehicle snapshot (license plate capture) system. When a container truck carrying hazardous chemicals arrives at the gate, the snapshot system quickly captures and records the vehicle information. Meanwhile, the modular acoustic imager uses its high-sensitivity microphone array to scan the vehicle in all directions, accurately detecting faint gas leak sounds and pinpointing the leak source.



Natural Gas Stations

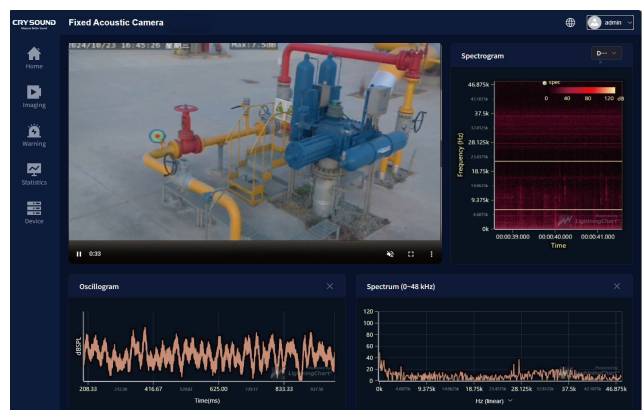


Natural Gas Stations

Across every stage of natural gas production, gathering, and purification—as well as at critical facilities such as underground gas storage sites and peak-shaving stations—continuous monitoring for natural gas leaks is essential.

Application Case: Leak Monitoring at a Natural Gas Gate Station in Tianjin

In this Tianjin natural gas gate station deployment, the modular acoustic imager demonstrated outstanding advantages. It operates reliably in Tianjin's windy conditions and large temperature swings, providing 24/7 continuous monitoring of key areas. It delivers full coverage of leak-prone locations such as pipeline joints and around valves, ensuring no abnormality is missed.



Technical Specifications

Acoustic Specification

Microphone Array	128 channels MEMS microphone
Frequency Range	2 kHz - 48 kHz
Dynamic Range	0.5 dB - 12 dB user adjustable
Test Sound Pressure Level Range	28 - 120 dBA
Test Distance	0.5 - 50 m

Minimum Leakage

Distance to Sound Source (m)	Leakage CCM (± 1)
0.5 - 2	28
2 - 4	46
4 - 6	47
6 - 8	50
8 - 10	53
10 - 12	66
12 - 14	70
14 - 16	78
16 - 18	90
18 - 20	97

Hardware Port

Power Interface	DC 12V
Network Interface	RJ45

Camera

FOV	62°
Focal Length	3.04 mm
Camera Pixels	8M pixels

General Specifications

Size	183 × 169 × 85 mm
Weight	1.6 kg
IP Rating	IP66
Ex Marking	II 3 G Ex ec ic IIC T4 Gc II 3 D Ex tc IIIC T95°C Dc
Storage	8GB internal
Operating Enviroment	-20°C to +60°C, 10% to 95% non-condensing
Power Consumption	7W
Mounting	Bottom 1/4 -20 UNC thread/M5 screw fixing
Port	RJ45

Software

Development Protocol	RESTful, WebSocket, RPC
Streaming Protocol	RTSP, RTMP, WebRTC
Language	Chinese, English

Platform

Platform	Web-based platform
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