IFRSLAB

IFRSLAB R10

Portable Infrared Gas Leak Detection Solution

Detect. Protect. Perform.

Advanced Gas Leak Detection in the Palm of Your Hand.

- High Sensitivity Detection
- Ergonomic & Portable Design
- Reliable Performance
- Real-Time Leak Visualization
- Built for Industrial Environments

Smarter Detection. Safer Operations. Greener Future.

See Invisible Gas Leaks. Detect Faster. Respond with Confidence.

IFRSLAB introduces the R10 Portable Infrared Gas Leak Detection Solution, an advanced handheld inspection device designed to identify invisible gas leaks with speed, accuracy, and operational confidence.

Built for industrial, energy, utilities, oil and gas, petrochemical, refrigerant, ammonia, and environmental inspection environments, the R10 enables maintenance teams, safety professionals, facility managers, and environmental inspectors to detect gas leakage without direct contact.

As the exclusive distributor and technical application partner, IFRSLAB brings this solution to the region with local expertise, product advisory, application support, training, and after-sales service.

See What the Eye Cannot Detect!

Natural gas and methane leaks are normally invisible to the human eye. In many industrial environments, a leakage point may exist even when there is no visible smoke, colour, flame, or obvious sign of gas release.

The IFRSLAB R10 helps inspection teams convert invisible gas leakage into a visible on-screen gas cloud. Through infrared gas imaging and laser-based detection, the operator can see the gas plume, understand its direction, identify the likely leakage point, and record visual evidence for maintenance and HSE action.

This makes the device especially useful where conventional visual inspection is not enough and where early detection is required before leakage develops into a safety, operational, or environmental risk.

Product Overview

The IFRSLAB R10 is an uncooled portable infrared gas leak detector designed for real-time visual detection of gas leakage.

The device allows users to see leakage patterns, identify leakage points, measure temperature, record inspection data, and support field documentation.

It is compact, ergonomic, and field-ready, making it suitable for inspection teams working across complex industrial sites, plant facilities, pipeline networks, storage areas, utility corridors, and high-risk operational environments.

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Key Features

01 Real-Time Infrared Gas Imaging

The R10 uses high-resolution infrared detection to visualise gas clouds and leakage points in real time. This helps inspection teams identify the source and direction of leakage more efficiently than conventional point-based methods.

02 Dual Detection Technology

The device combines TDLAS laser absorption spectroscopy with infrared imaging, providing a stronger detection approach for gas leakage inspection. This dual method improves confidence by supporting both concentration response and visual leakage tracing.

03 Fast Response Time

With a rapid response time of 0.5 seconds, the R10 supports quicker field decisions and faster identification of potential leakage points.

04 High-Resolution Thermal Imaging

The device is equipped with a 640 × 512 uncooled infrared detector, providing clear imaging support for gas leak detection and thermal inspection activities.

05 Methane Detection Capability

The standard detection object is methane, making the solution highly relevant for natural gas, oil and gas, petrochemical, pipeline, and utility applications.

06 Temperature Measurement

The R10 also supports temperature measurement, enabling inspection teams to combine gas detection with hotspot tracking and thermal condition assessment.

07 Data Storage and Transmission

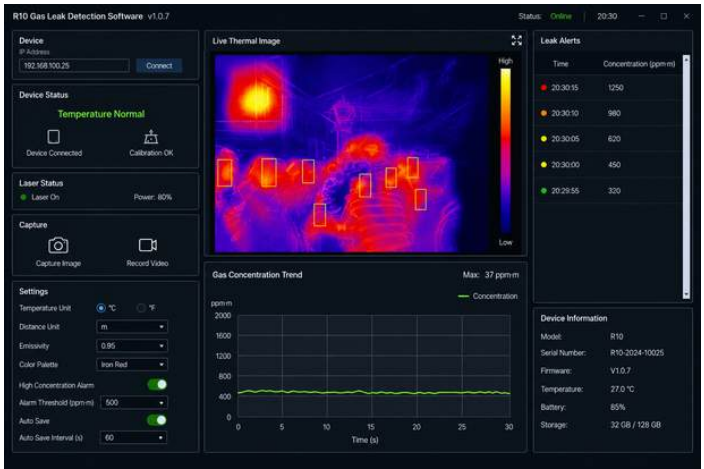
The device supports MicroSD storage, USB 3.0, HDMI, Wi-Fi, and Bluetooth connectivity, allowing easy transfer, storage, and review of inspection records.

08 Field-Ready Design

With IP54 ingress protection, ergonomic handling, rechargeable lithium battery, and explosion-proof certification, the R10 is designed for demanding industrial environments.

Technical Highlights

Parameter	Specification
Product Type	Portable Infrared Gas Leak Detector
Detector Type	Uncooled Vanadium Oxide
Thermal Resolution	640 × 512
Infrared Response Band	7.0–8.5 μm / 9.5–12 μm
Thermal Sensitivity	25 mK
Detector Frame Rate	25 Hz
Focal Length	18 mm
Field of View	29.8° × 22.6°
Detection Object	Methane
Detection Principle	Laser Absorption Spectroscopy
Static Detection Limit	5 ppm·m
Response Time	0.5 seconds
Detection Range	0–50,000 ppm·m
Temperature Range	-20°C to 150°C
Temperature Accuracy	±2% or ±2°C
Display Screen	4.3-inch LCD Touch Screen
Display Resolution	800 × 400 pixels
Storage	MicroSD card, up to 128 GB
Image Format	JPG
Video Format	MP4
Connectivity	USB 3.0, HDMI, Wi-Fi, Bluetooth 5.0
Battery Type	Rechargeable Lithium Battery
Working Time	Not less than 3 hours
Ingress Protection	IP54
Explosion-Proof Grade	IIC T4 Level
Weight	About 1 kg



Application Areas

Oil and Petrochemical Inspection

The R10 supports leak detection across refineries, petrochemical plants, storage facilities, processing units, and related infrastructure where early detection of gas leakage is critical.

Natural Gas Inspection

The device is suitable for gas pipelines, valves, metering stations, compressor stations, distribution networks, and plant areas where methane detection is required.

Industrial Safety Inspection

The R10 assists HSE teams in identifying leakage risks during routine safety checks, preventive maintenance, shutdown planning, and emergency response.

Environmental Monitoring and Compliance

By supporting faster detection of fugitive gas emissions, the device helps organisations strengthen environmental monitoring, emission control, and compliance documentation.

Ammonia Leakage Inspection

The R10 can support inspection environments where ammonia leakage risks are present, including industrial refrigeration, cold storage, processing facilities, and chemical operations.

Refrigerant Leakage Detection

The solution is useful for facility management teams, HVAC contractors, district cooling operators, and building owners seeking to detect refrigerant leakage more effectively.

Optional Custom Deployment

Robotic / Push-Cart Gas Leak Detection

For high-risk, restricted-access, or hazardous inspection areas, the R10 detection system can also be offered as a customised robotic or push-cart deployment option.

This configuration is not part of the standard handheld package. It can be provided on demand where the client requires gas leakage inspection in areas where direct human entry may be unsafe, difficult, or operationally restricted.

The robotic or push-cart option can support remote or semi-remote movement of the detection device into sensitive zones, allowing gas leakage screening with reduced human exposure.

This option is suitable for:

- High-risk industrial areas
- Confined or restricted-access zones
- Hazardous gas-risk locations
- Emergency response environments
- Areas where human inspection should be minimised
- Sites requiring remote or semi-remote gas leak screening

Availability Note:

Robotic / push-cart configuration is available only as a customised on-demand solution and is not included in the standard R10 handheld package.

IFRSLAB Advantage

IFRSLAB is not only offering a device. We are providing a complete technical solution supported by our experience in energy efficiency, environmental performance, industrial advisory, ESG, sustainability, and operational risk reduction.

Our role includes:

Exclusive Distribution

IFRSLAB is introducing this advanced gas leak detection technology as an exclusive regional solution for industrial and commercial clients.

Technical Advisory

We help clients understand where and how the device can be applied across their facilities, pipelines, utilities, and inspection routines.

Application Training

We provide user guidance and application training to support effective deployment by inspection teams, HSE teams, maintenance teams, and facility operators.

After-Sales Support

We support clients with technical consultation, operational guidance, and product-related support to ensure long-term value.

ESG and EnvironmentalAlignment

The solution supports broader sustainability goals by helping organisations detect fugitive emissions, reduce leakage losses, and strengthen environmental monitoring practices.

Who Should Use This Solution?

The R10 is suitable for:

- Oil & Gas Companies
- Petrochemical Plants
- Natural Gas Utilities
- Pipeline Operators
- Industrial Facilities
- Power and energy companies
- District cooling operators
- HVAC and refrigeration companies
- Environmental inspection bodies
- HSE departments
- Facility management companies
- Maintenance and reliability teams
- Government and regulatory inspection teams

See the Unseen. Stop the Threat Before It Starts.

IFRSLAB R10 is a next-generation portable infrared gas leak detection solution designed to help industrial and energy-sector organisations detect invisible gas leaks faster, safer, and with greater operational confidence.

By combining advanced infrared imaging, laser-based gas detection, field-ready design, and local technical support, IFRSLAB enables clients to improve safety, reduce losses, support compliance, and strengthen environmental performance.

IFRSLAB | Dubai, UAE

Advanced Gas Leak Detection | Industrial Safety | Energy Efficiency | Environmental Performance

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Schedule your Demo today.