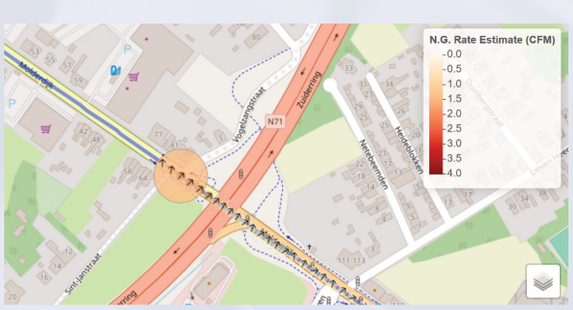
MIRA Pico CH_4/C_2H_6

WORLDS SMALLEST, MOST POWERFUL METHANE AND ETHANE LEAK-MAPPING TOOL

The **MIRA Pico CH_4/C_2H_6** analyzer operates in the mid-infrared (mid-IR) spectrum, delivering unmatched simultaneous sensitivity to methane (CH_4) and ethane (C_2H_6) with a fast response time. It effectively distinguishes natural gas from biogenic sources—such as landfill gas, cattle operations, wetland gas, and permafrost—with exceptional precision. This unique capability offers discrimination accuracy significantly greater than that of other laser-based analyzers, all within a compact design. This reduces false alarms and enables real-time, accurate ethane-to-methane ratio measurements.

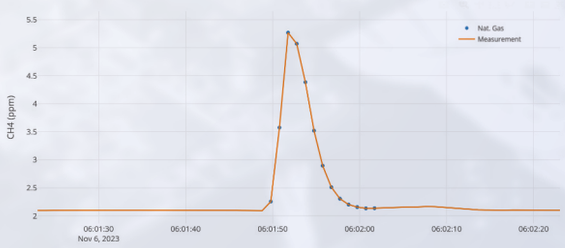
The **MIRA Pico CH_4/C_2H_6** analyzer delivers the same accurate ethane-to-methane ratios of comparable analytical techniques at a fraction of the cost. Pico offers real-time measurements while eliminating the need for extensive sample handling or consumables.

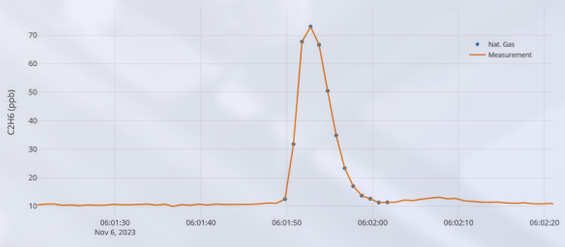
- *Superior sensitivity: <900 ppt/s CH_4, <230 ppt/s C_2H_6*
- *GPS enabled:*
  - *Mapping leaks*
  - *Modelling leaks*
  - *Easy data processing*
- *Portable, 2.8 Kg handheld operation, 6-hour battery*
- *Up to 5 Hz, 1 Hz standard*
- *Wifi, RS232*
- *Low 18 W power consumption*
- *Polynomial water vapor correction*
- *Data in .txt and .kml format for import in GIS*



Pico units have the capability of logging GPS and anemometer simultaneously. This allows easy data analysis for leak detection, localization and quantification.

Unmatched sensitivity, accuracy, and speed with superior thermogenic vs biogenic discrimination





Simultaneous methane and ethane peak increase indicates the methane measured is coming from a thermogenic source. Ethane to methane ratio as well as correlation is calculated for each data point which aids in source apportionment.

Aeris Technologies, Inc. 26252 Eden Landing Road, Hayward, CA 94545 USA
PH +1 650.620-9421 **FAX** +1 (510) 460-9107
www.aerissensors.com

Industry-leading
sub ppb accuracy and sensitivity

Metric	Specification
Measurement Method	Mid-Infrared Direct Laser Absorption Spectroscopy
Sensitivity (1σ) at 1 Hz	CH_4: <2 ppb/s / C_2H_6: <500 ppt/s
Sensitivity (1σ) at 5 Hz	CH_4: <900 ppt/s / C_2H_6: <230 ppt/s
Temperature / Humidity*	10 - 40° C, 10 - 95% RH (non-condensing)
Measurement Range**	CH_4: 10 ppb to 6,000 ppm / C_2H_6: 1 ppb to 1,000 ppm
Flow Rate	0.37 to 0.73 L/min
Size	30.0 cm W (11.8") x 20.3 cm H (8.0") x 9.9 cm D (3.9")
Weight	2.8 kg (6.1 lbs.)
Power Consumption	18 W steady state, 23 W at startup
Voltage / Current	12-15 VDC 1.9 A, 100-240 VAC 0.23 A (50-60 Hz)
Interface / Outputs	Wi-Fi, USB-A, USB to DB9 RS232 adapter (optional Ethernet or analog out)
Memory	32 GB (expandable)
Data Update Rate	1 Hz (selectable options up to 5 Hz)

***RH Sampling range can be higher with an appropriate dryer.**

****Linear measurement range. Operational range configurable for specific applications.**

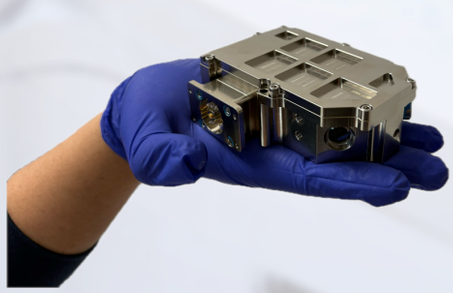
Included Accessories:	GPS
Rugged Shipping Case	Tablet
User-Friendly Software	12 V and 110/240 V Power Plug

Optional Accessories:	Advanced GPS
Scrubber	Nafion Dryer
Sampling Wand	Anemometer

MIRA Pico is the world's first truly portable, battery-powered, laser-based gas analysis platform. Weighing only 6.1 lbs (2.8 Kg) with a 6-hour battery life, the Pico is uniquely designed for a wide range of handheld and mobile applications without sacrificing performance or reliability. The compact size, light weight, and low power consumption enable new field applications previously impractical with competing analyzers.

Core Sensor Technology

MIRA series analyzers combine Aeris' patented multipass cell technology with mid-IR solid-state lasers and custom electronics to achieve superior sensitivity and accuracy in an extremely robust and compact platform. The proprietary sensor engine used in every MIRA analyzer uniquely achieves a long absorption path length in an extremely small volume resulting in a fast response time with reduced pumping and power requirements.

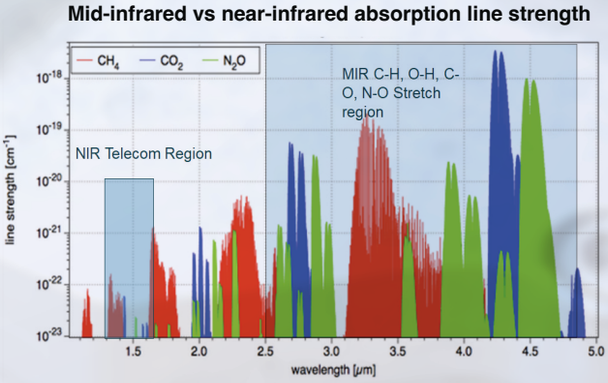


MIRA's compact optical core achieves a 13 meter path length in a 60 cc volume.

The Power of Mid-infrared

Spanning wavelengths from 2.5 to 5 micrometers (μm), the Aeris mid-IR technology achieves the same or superior short-term sensitivity as fragile NIR cavity-based techniques. The robust design of the mid-IR core is well suited for a wide range of applications including airborne analysis and environmental monitoring.

Mid-infrared vs near-infrared absorption line strength



Absorption spectrum of greenhouse gases across the IR. Absorption line strength is orders of magnitude stronger in the Mid-IR than NIR.

Aeris Technologies, Inc. provides ultrasensitive gas analyzers for trace gas monitoring applications. Aeris is redefining the state of the art in laser-based gas analysis systems, reaching unparalleled size, weight, power, and cost milestones.

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DOC# SPE-00024