

Introduction

The Picarro Handheld is a ground-up rethink of the handheld methane detector. Using diffusion sampling and a fast-response, high-sensitivity OPLS (Open Path Laser Spectroscopy) sensor, (Figure 1) the Picarro Handheld is shown to significantly improve the detection performance for all leaks targeted by leak survey technicians on a daily basis.



Figure 1 The unit uses diffusion sampling and an OPLS sensor.

The Handheld incorporates a realtime Ethane sensor, enabling real-time source discrimination and virtually eliminating the need to send gas samples to an off-site laboratory for ethane content characterization.

As show in Figure 2, the Handheld is lightweight at just 3.4lbs, and features provisions for shoulder or chest straps to meet the individual user's ergonomic requirements. It can be practically used for all day shifts while minimizing physical stress or strain. The on-board Li-Ion battery allows for a minimum of 8 hours of continuous operation, and recharges at a higher rate.



Figure 2 The Picarro Handheld is lightweight, only 3.4 lbs.

Seamless Integration

The Picarro Handheld integrates seamlessly with Picarro's P-Cubed Mobile App, (Figure 3) which enables data collection and transfer from the individual Handheld into the P-Cubed Cloud. When paired with our Mobile App, the Picarro Handheld transmits Methane, Ethane, and GPS/GNSS/RTK location data to the P-Cubed Cloud to enable survey quality control, visually auditable LISA and Gap investigation records, investigation efficiency metrics displayed via P-Cubed Dashboards, and more.

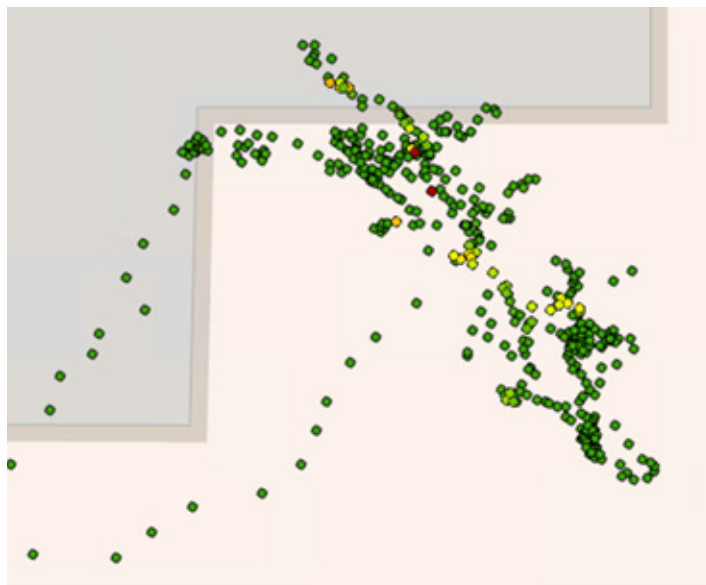


Figure 3 Example data collection from Picarro Handheld

Detailed Specifications

| | |
|------------------------|---|
| Detection Range | 1.80ppm to 5,000ppm CH ₄ (Methane) 50ppb (0.050ppm) to 200ppm C ₂ H ₆ (Ethane) |
| Resolution | <25ppm: 1ppb >25ppm: 1ppm |
| Accuracy | +/- 5% of reading |
| Precision | 60ppb @ 2ppm CH ₄ (Methane) 15ppb @ 0ppm C ₂ H ₆ (Ethane) (2ppm dry sample @ 1.5LPM) |
| Measurement Speed | User-Selectable (1, 2, 4, 5, 10hz) |
| Response Time | <0.5 seconds |
| Operating Conditions | IP43 rated -10°C to 45°C, 0-95% RH (non-condensing) |
| Onboard Memory | Integrated flash memory |
| Outputs | Bluetooth (connects to Picarro Mobile App) USB port (direct data extraction) |
| Weight | 3.4lbs |
| Battery Specifications | Self-contained Lithium-Ion battery pack Minimum 8 hours per full charge |
| Controls | Physical on/off button Touch-screen menus Picarro Mobile App menu controls |

*Specifications subject to change