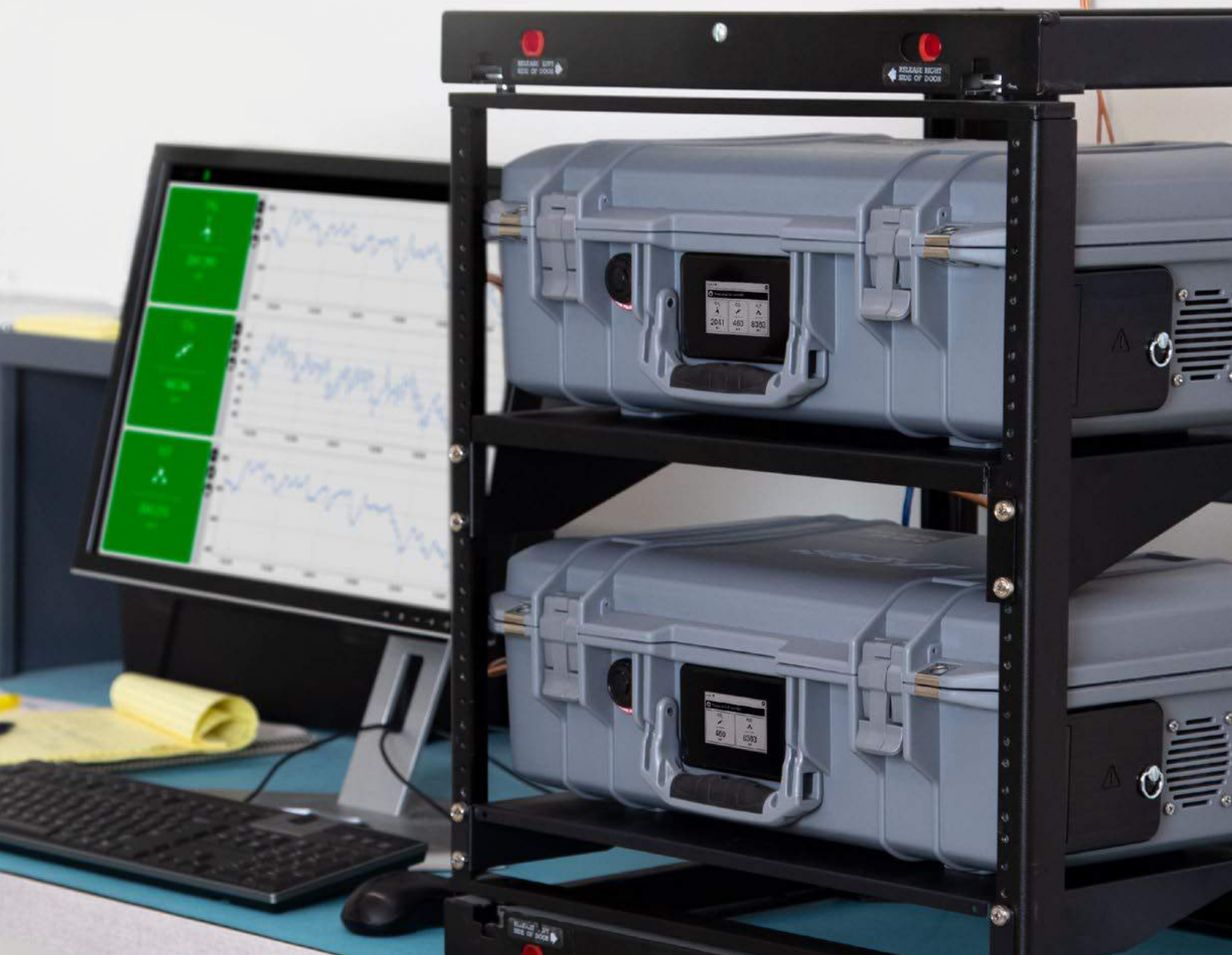
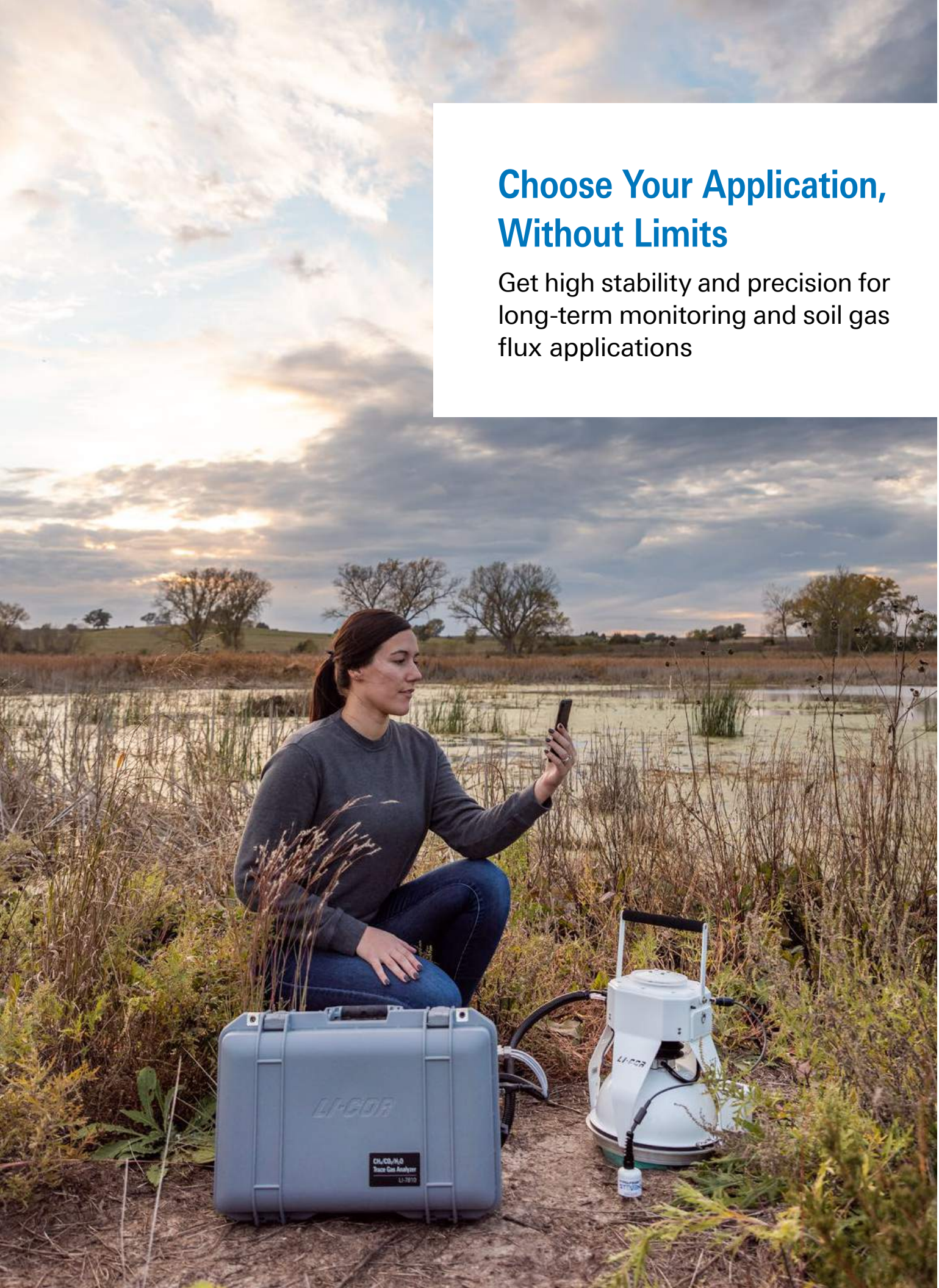
New Trace Gas Analysis Platform

Strong performance with hassle-free results in the lab or in the field.





Choose Your Application, Without Limits

Get high stability and precision for long-term monitoring and soil gas flux applications

Get simple, hassle-free results in the lab or in the field with new PreciseTech™ Design, integrating multiple patented technologies that provide exceptional performance in a new lightweight, affordable mobile platform. Whether deployed long-term at a station or used for field measurements, gain the flexibility required for your research with battery or AC-power options and built-in Wi-Fi-enabled web server for convenient data viewing and communication.

Highly-Stable CH_4 Performance with the LI-7810 $CH_4/CO_2/H_2O$ Analyzer

Capture methane measurements with 0.25 ppb precision (1σ, with 5-second averaging) at 2000 ppb CH_4 in dry air at STP with less than 1 ppb standard drift per 24-hour period.

High-Precision CO_2 Measurements with the LI-7815 CO_2/H_2O Analyzer

Across applications, take CO_2 measurements with 0.04 ppm precision (1σ, with 5-second averaging) at 400 ppm CO_2 in dry air at STP.

*Not available in all countries

Specifications

General Specifications

Measurement Technique: OF-CEAS (Optical Feedback-Cavity Enhanced Absorption Spectroscopy)

Measurement Rate: 1 sample per second (1 Hz)

Optical Cavity Volume: 6.41 cm^2

Flow Rate: 280 sccm (nominally)

Total Weight: 11.4 kg (incl. batteries)

Case Dimensions: 51 cm L x 33 cm W x 18 cm H

Operating Temperature Range: -25 °C to 45 °C (without solar load, under normal operating conditions)

Operating Humidity Range: 0 to 85% RH (non-condensing, without solar load, under normal operating conditions)

Operating Pressure Range: 70 to 110 kPa

Connectivity: Ethernet, Wi-Fi (not available in some countries)

Wi-Fi Compatibility: 2.4 GHz, 802.11g

Power Consumption: 22 W (at steady-state), up to 60 W (during warmup; up to 80 W during warmup, depending on temperature)

Power Supply: Universal Power Adapter (100 to 240 VAC input, 50-60 Hz; 24 VDC output)

Battery Life: 8 hours typical with 2 batteries

LI-7815 CO_2/H_2O Specifications

Response Time (T_{10}-T_{90}): CO_2 ≤ 2 seconds, 0 to 400 ppm

CO_2 Measurements

Range: 1 to 10,000 ppm

Precision (1σ):

0.10 ppm at 400 ppm with 1 second averaging

0.04 ppm at 400 ppm with 5 second averaging

H_2O Measurements

Range: 100 to 60,000 ppm

Precision (1σ):

45 ppm at 10,000 ppm with 1 second averaging

20 ppm at 10,000 ppm with 5 second averaging

LI-7810 $CH_4/CO_2/H_2O$ Specifications

Response Time (T_{10}-T_{90}): CH_4 ≤ 2 seconds, 0 to 2 ppm

CH_4 Measurements

Range: 0.1 to 50 ppm

Precision (1σ):

0.60 ppb at 2 ppm with 1 second averaging

0.25 ppb at 2 ppm with 5 second averaging

Max Drift: < 1 ppb per 24-hour period

CO_2 Measurements

Range: 1 to 10,000 ppm

Precision (1σ):

3.5 ppm at 400 ppm with 1 second averaging

1.5 ppm at 400 ppm with 5 second averaging

H_2O Measurements

Range: 100 to 60,000 ppm

Precision (1σ):

45 ppm at 10,000 ppm with 1 second averaging

20 ppm at 10,000 ppm with 5 second averaging

Specifications subject to change without notice

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