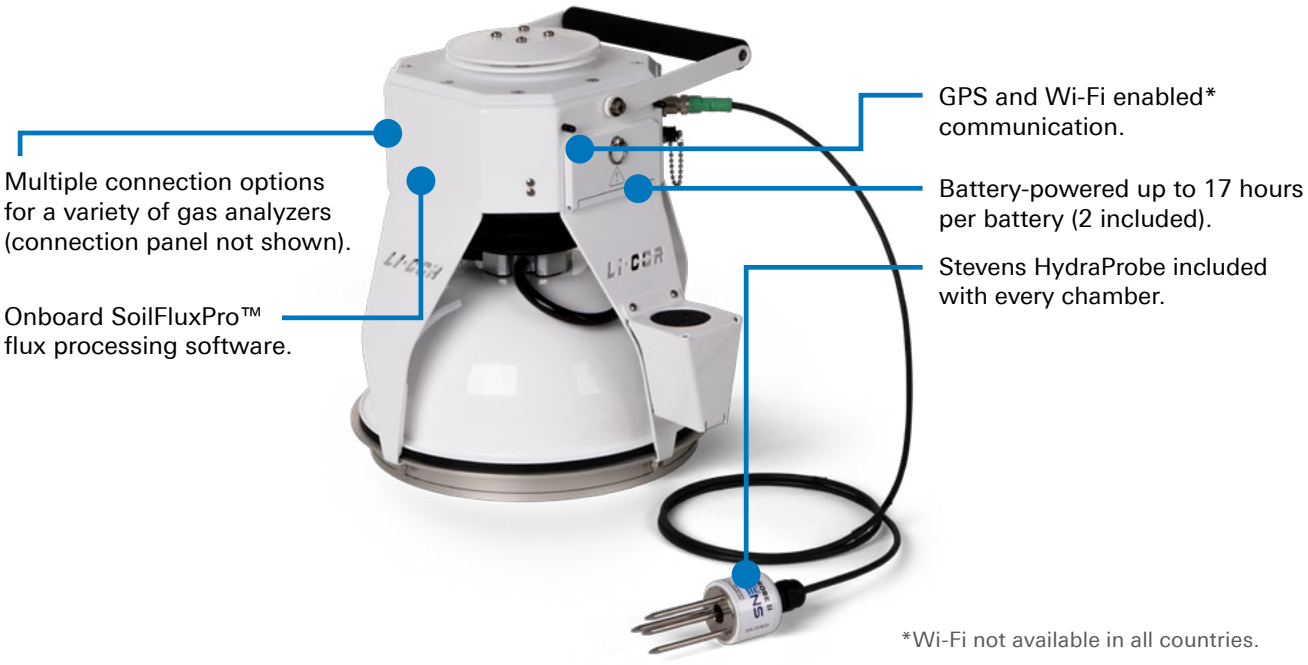
New Soil Gas Flux Survey Solutions

Quickly and comfortably assess the spatial variability of a broader range of gas species with expanded analyzer capabilities.

New Smart Chamber

The latest advancement in soil gas flux technology from LI-COR: The Smart Chamber is a portable, self-powered, GPS and Wi-Fi* enabled survey chamber capable of real-time flux processing, soil moisture and temperature ancillary data collection, and complete self-control of gas flow to a wide range of analyzer options.



*Wi-Fi not available in all countries.

Built Upon a Legacy of Scientific Advancements

Expand your soil gas flux measurement capabilities with the same patented technology unique to LI-COR chambers, including patented pressure vent, chamber air mixing and bowl design, and an automated bellows mechanism that minimizes pressure changes that may impact fluxes.

Powerful and Versatile Software

Capture and store fully-calculated flux and other data in real time, program measurements in the field, and monitor your system onsite using embedded Wi-Fi.

Expanded Gas Analyzer Compatibility

Assess the spatial variability of a broader range of gas species quickly and comfortably with flexible new analyzer capabilities, including methane fluxes with LI-7810 $CH_4/CO_2/H_2O$ Analyzer.

New LI-870 CO_2/H_2O Analyzer

The LI-870 is housed in a dust- and splash-resistant case. Temperature-controlled optics provide precise measurements in a variety of environmental conditions.

Simple Configuration

No user assembly is required to operate the LI-870. Simply attach the pre-made cable assembly with convenient quick-connect fittings to the Smart Chamber and get measuring. Power is supplied directly from the chamber with up to 20 hours of use (for a typical use case, using 2 batteries supplied with the Smart Chamber).

Rugged Case

The LI-870 is dust- and splash-resistant and temperature-controlled optics provide precise measurements in a variety of environmental conditions.

Smart Chamber Advantages

With the new Smart Chamber, you can view your LI-870 measurement and diagnostic data in real time from your computer or mobile device and quickly get data formatted for visualization and analysis with SoilFluxPro™ Software.

Specifications

Smart Chamber (8200-01S)

Bowl diameter: 20 cm
Chamber volume: 4244.1 cm^3
Soil area: 317.8 cm^2 (49.3 $inches^2$)
Air temperature thermistor:
- Operating range: -20 to 70 °C
- Accuracy: ± 0.5 °C over 0 °C to 70 °C

Barometric pressure sensor:
- Operating range: 50 - 110 kPa
- Accuracy: +/- 0.4 kPa
- Resolution: 1.5 Pa (typical)

Operating temperature range: -20 to 50 °C
Battery life: 20 hours (10 hours per battery, 2 batteries, when powering LI-870 for a typical use case).
Weight: 4.3 kg (9.6 lbs, including battery)
Memory: 8 GB total non-volatile (includes operating system and user data files)
GPS accuracy: 2.5 m CEP
Wi-Fi: 2.4 GHz, 801.11g*
*not available in all countries
Connectivity ports:
- USB-A: sealed and strain-relieved, for connection to LI-870 CO_2/H_2O Analyzer.
- RJ-45 Ethernet: Sealed and strain-relieved, for connection to LI-COR Trace Gas Analyzers.
- USB-B: Sealed and strain-relieved, for connection to non-LI-COR gas analyzers
- USB-A: standard, for connection to external Wi-Fi adapter.
- SDI-12 interface (Stevens HydraProbe included).
- Type-E thermocouple adapter port.

LI-870 CO_2/H_2O Analyzer

Case dimensions: 28.4 cm L × 27.9 cm W × 12.4 cm H (11.2 in × 11 in × 4.9 in)
Weight: 2.31 kg (5.1 lbs.)
Measurement rate: 1 measurement per second (1 Hz)
Operating temperature range: -20 to 45 °C, without solar loading
Relative humidity range: 0 to 95% RH, non-condensing
Operating pressure range: 50 to 110 kPa
Flow rate (nominal): 0.75 liters min^{-1}
Power requirements:
- After warmup (without pump): 0.33 A @ 12 VDC (4.0 W) average
- After warmup (with pump): 0.42A @ 12 VDC (5.0W) average

CO_2 Measurements:
Measurement range: 0 to 20,000 ppm
Accuracy: Within 1.5% of reading

H_2O Measurements:
Measurement range: 0 to 60 mmol mol^{-1}
Accuracy: Better than 1.5% of reading