

A flexible multiplexer platform for automated flux measurements

- Flexible, analyzer-agnostic platform compatible with analyzers from LI-COR, Aeris, Picarro, Gaset, ABB-LGR, and more.
- Automates up to 16 chamber sampling locations with customizable schedules.
- Customizable automated sampling and data pre-processing.

Compatible with the Analyzers You Already Use

FluxLink multiplexers let you use the best analyzer for your science. They're built to support a range of brands including LI-COR, Aeris, Picarro, Gaset, ABB-LGR and support is actively expanding. Mix and match analyzer to achieve the target gases and precision your experiment needs while maintaining ease of use.

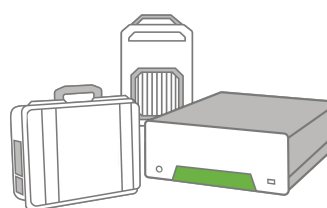
Analyzer		CO ₂	CH ₄	N ₂ O	NH ₃
LI-COR	LI-870	x			
	LI-7810	x	x		
	LI-7820			x	
Picarro	G2508	x	x	x	x
	G2509	x	x	x	x
Gaset	GT5000	x	x	x	x
	DX4015	x	x	x	x
ABB-LGR	MGGA	x	x		
	UGGA	x	x		
Aeris	MIRA N ₂ O	x		x	



A Smarter Multiplexer Experience

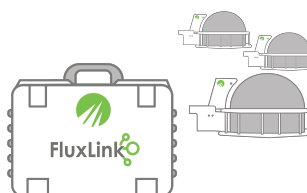
The FluxLink multiplexer's onboard computer connects directly to supported instruments, synchronizing data and chamber control in one place. The result is a self-contained system that's easier to set up, captures cleaner data, and works seamlessly across analyzers.

FluxLink connects directly to your gas analyzer for digital communication of gas concentrations. Once connected, the multiplexer is configured to recognize the analyzer and schedule automated chamber measurements. During each cycle, FluxLink coordinates the opening and closing of chambers, logs the associated analyzer data in real time, and keeps everything perfectly synchronized. When the measurement sequence is complete, it produces a single standardized data file ready for post-processing in eosAnalyze.



1. Connect

Connect your analyzer's digital data stream to the FluxLink multiplexer.



2. Configure

Configure your multiplexer to collect analyzer data and control flux chambers.

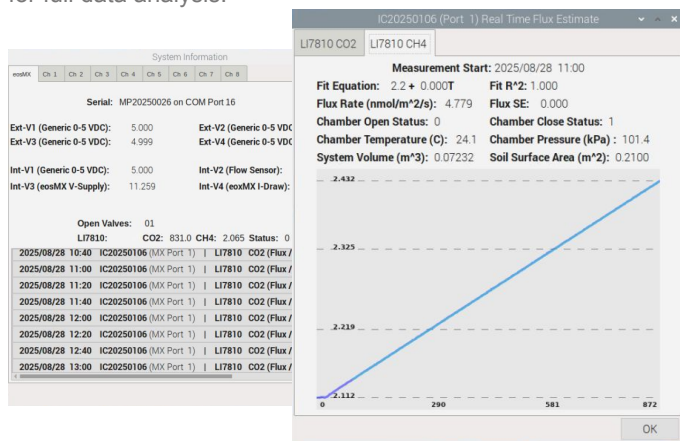


3. Collect

Collect your data and export it for analysis in standardized data formats.

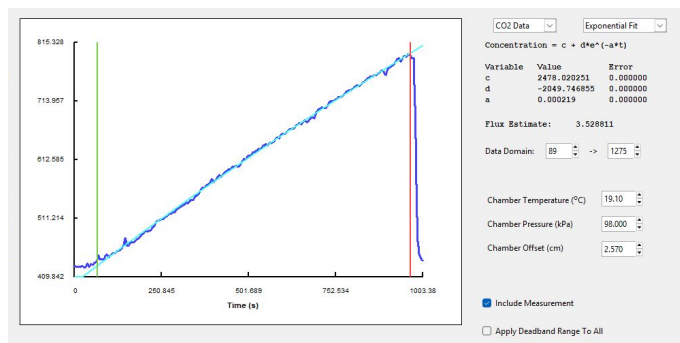
Real Time Fluxes and Post-Processing

Leveraging the onboard computer, eosLink calculates and displays live flux estimates as measurements are collected, giving researchers instant feedback in the field. These real-time fluxes make it easy to spot issues like poor chamber sealing, unstable baselines, or unexpected emissions trends and allow users to resolve them before leaving the site. It's a quick way to confirm system performance and data quality without waiting for full data analysis.



Above: Table of real time fits and example of real-time fitted flux curve showing fit parameters and other statistics.

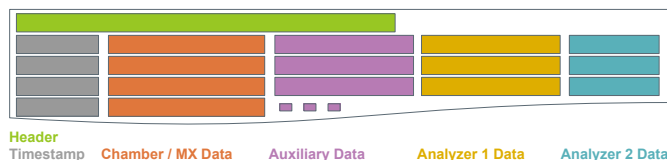
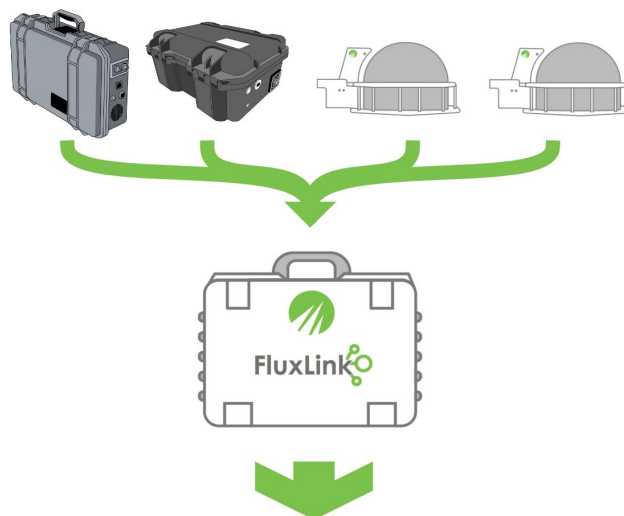
FluxLink quarterbacks every data stream so all chamber and analyzer measurements are captured in one synchronized, analysis-ready file, eliminating the need to manage separate logs from different instruments. The file structure remains identical across analyzer brands, ensuring a stable, repeatable workflow as your equipment or experiment evolves. At any stage of your deployment, the eosAnalyze post-processing software can process FluxLink data, fitting flux curves, calculating emission rates, and integrating auxiliary sensor data like temperature and moisture. Export the post-processed data to your preferred software and move straight into detailed analysis and scientific interpretation.



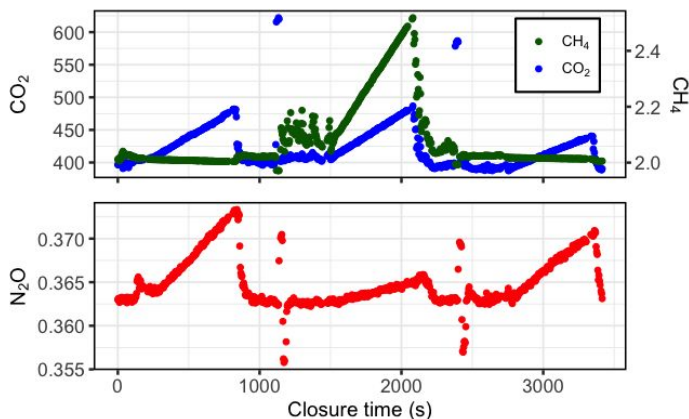
Above: Example exponential flux fit from the eosAnalyze post-processing software.

Real-World Example: Measuring CO₂, CH₄ and N₂O in a Rice Paddy

To capture CO₂, CH₄, and N₂O fluxes in a rice paddy, we paired a LI-COR LI-7810 with an Aeris MIRA N₂O using the FluxLink multiplexer. FluxLink synchronized both analyzers, producing one standardized dataset for all three gases.



Shown below are the synchronized accumulation curves for all three gases over three chamber closure cycles (CO₂ in green, CH₄ in grey and N₂O in purple). Together, these measurements allowed us to easily quantify the relative CO₂, CH₄, and N₂O contributions to the paddy's overall greenhouse gas emissions.



Above: CO₂, CH₄ (top panel) and N₂O concentrations (bottom panel) for three chamber closure cycles.