



CO₂ FLUX/CH₄ FLUX

Greenhouse Gas Flux Lidar CARBON DIOXIDE/METHANE FLUX







Provide support for carbon flux calculation



3D detection pollution reduction and carbon reduction



Synchronous measurement of wind field all day



Max. detection distance up to 1000m



- The greenhouse gas flux lidar integrates differential absorption principle and coherent heterodyne detection technology, which can achieve high-precision synchronous detection of greenhouse gas concentration and wind field in the boundary layer.
- It's featured of miniaturization, low power, and high precision, which can continuously detect wind profiles, CO2/ CH4 column concentrations, CO2/CH4 profiles, signal-to-noise ratio, and other data products within the boundary layer all day long.
- It can be applied to monitor the distribution of greenhouse gas flux and locate the emission source in key regions, providing effective data support for urban or regional carbon accounting.



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Technical Specifications

Max. detection range: ≥1km (Clear sky without clouds)	Data refresh rate: column concentration ≤10min; profile≤30min
CO2 accuracy: column concentration≤ ±2ppm or ±5%; profile ≤ ± 8ppm or ±2%	
CH4 accuracy: column concentration $\leq \pm 20$ ppb; profile $\leq \pm 60$ ppb or $\pm 3\%$	
Wind speed and direction accuracy: wind speed ≤0.3m/s or Vx3%; wind direction ≤5°	
Protection gratings: IP66; Working temperature: -30°C~50°C; Weight: 140 Kgs	
Data outputs	
CO2/CH4 column concentration, CO2/CH4 profile, wind profile, CO2/CH4 flux, aerosol extinction coefficient, backscatter coefficient, SNR signal-to-noise ratio, etc	





Application Objectives

Greenhouse Gas Emission Monitoring

By real-time remote sensing monitoring of CO2 and CH4, greenhouse gas emissions can be regulated for specific locations or regions, and emission trends can be analyzed.

Support for Carbon Flux Calculation

By synchronous observation of wind field and greenhouse gas concentration, the greenhouse gas flux analysis of cities or key areas is carried out to provide effective data support for carbon accounting in cities or regions.

