

AEMS, Continuous Monitoring for Green House Gas Protocols

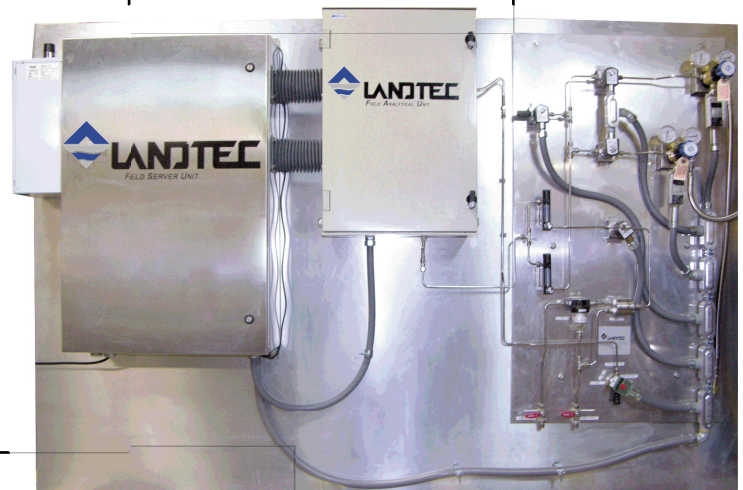
LANDTEC is manufacturing continuous monitoring systems to meet the requirement of the Kyoto Protocol for the worldwide carbon credit market. The AEMS has easily passed independent third party validation for systems installed on LFG extraction systems, GTE facilities and anaerobic digester projects. For the carbon credit market, the AEMS is the premier product for collecting, analyzing and reporting data.

Features:

- Measures % CH₄, CO₂, O₂ and gas temperature
- Accuracy of 1.0% full scale (CH₄, CO₂)
- Conditioning unit efficiency of 99.97% (0.3 - 0.6 Microns)
- Data acquisition from multiple sources (4-20mA, 0-5 Volt, 110 Volt, thermocouples, engine & flare station status)
- PLC configured
- Industrial rated computer
- Auto-Calibration system
- Optional: 4-20 mA outputs
- Optional: up to 48 input channels

Benefits:

- Security & Data Storage: Tier 3 Data System
- Reliable Field Proven Technology
- Auditable trail of data throughout history of project
- Carbon Credits calculated per reading
- Immediate electronic notifications sent
- Ensured accuracy with auto-calibration system
- Data validation process made easy
- Remote accessibility to field data
- Remotely configured and updated
- Secure internet application (data integrity)



Applications:

- Green House Gas/Carbon Credit Projects
 - (CDM, CAR, CCX, REGGI, GSV2, VCS)
- Gas to Energy Projects
- Environmental Compliance Projects
- Anaerobic Digesters Projects
- Aerobic-Bioreactor Projects
- Closed site monitoring

Technical Specification

The AEMS is a flexible electronic data acquisition and storage system. The system collects data from electronic input signals (4-20mA, 0-5volt, 110volt) and/or existing PLCs and extracts data from multiple sources. Data is stored locally and routinely uploaded to the data center via cellular network or satellite connections. Management can receive updates simply by opening daily e-mail or via other text message devices. Since the AEMS accommodates multiple users and multiple sites, operators, service groups and consulting engineers can share the information among team members regardless of their location.

Gas Analyzer (FAU)

Gases Measured CO₂, CH₄, by dual wavelength infrared cell with reference channel. O₂, by internal electrochemical cell

Range

CH ₄	0-100% Reading	O ₂	0-25%
CO ₂	0-100% Reading		

Gas Accuracy	CH ₄	CO ₂	O ₂
0-5%	±0.3%	±0.3%	±1.0%
5-Full Scale	±1.0%	±1.0%	±1.0%

Other Parameters

Flow Rate	300 - 500 cc/min	Vacuum - 100" W.C. Max
Temperature Probe	10°C - 75°C (14°F - 167°F)	

Conditioning Unit (FAUCU) Coalescing filter and membrane separator
Efficiency of 99.97% (0.3-0.6 Microns)

Auto-Calibration System Maintain minimum +/- 1.0% accuracy with analysis

Field Server Unit (FSU)

Integrated GSM Radio (Standard Configuration)	900/1800MHz, GPRS capable, International Frequencies
Digital Inputs	8 standard, (upgradeable up to 48 input channels)
Analog Inputs	8 standard: 4-20mA, (optional 0-5 V, or thermocouple)
Serial Ports	1 RS232/422, 1 USB, 1 Ethernet, MODBUS compatible
Input Power (Standard)	Isolation Transformer for 110 or 240VAC
Industrial Field Rated Computer	CE Platform

LANDTEC SYSTEM SOFTWARE

The LANDTEC System Software is a web based suite of applications and analysis tools with extensive reporting capabilities that are the heart of the LANDTEC System. Utilizing robust, secure database infrastructure to support the demands of maintaining and accessing billions of records for clients worldwide, the data is stored on secure servers at a Tier 3 data center at another location. Using a remote data center on a major backbone of the internet provides maximum uptime and data security. The system software helps optimize gas extraction systems for maximum MMBTU & Carbon Credit production.

“More than two million tons of CER’s data collected and processed to date using the AEMS in CDM projects”



The Climate Registry



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