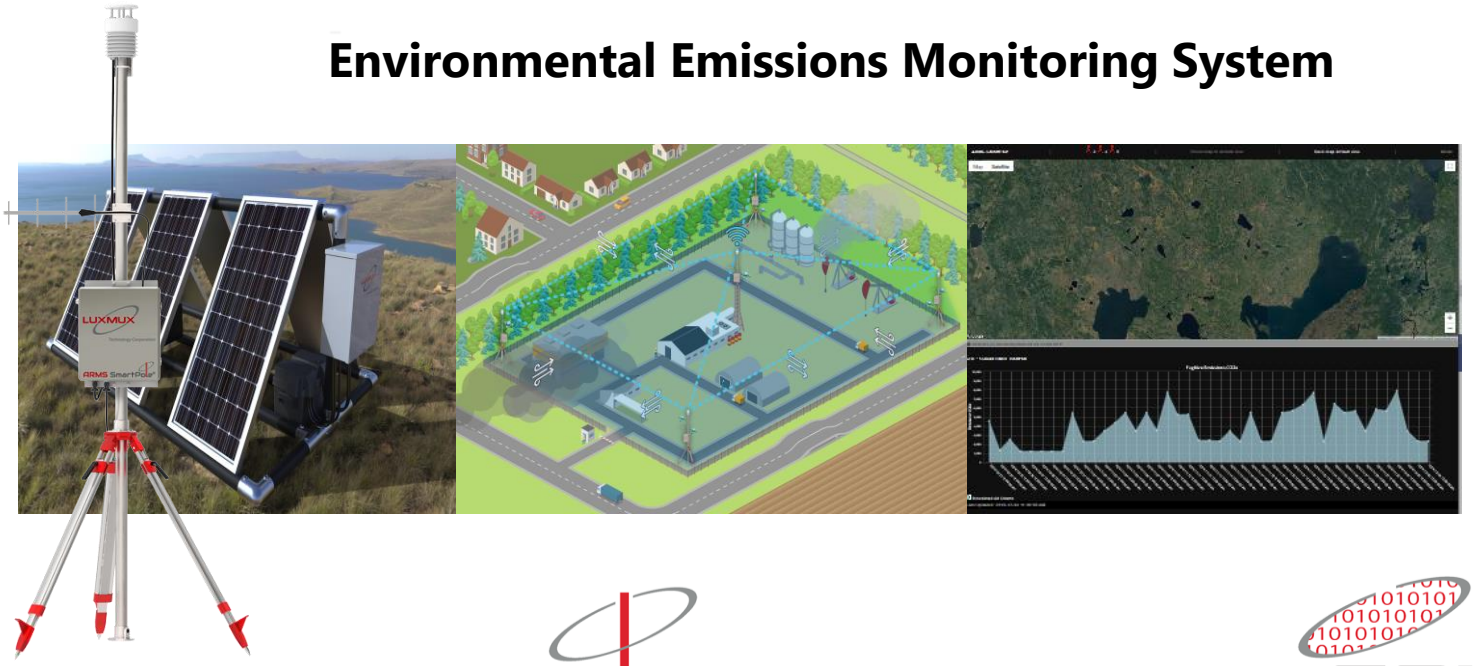
LUXMUX

Redefining Spectral Boundaries

Environmental Emissions Monitoring System



ARMS SmartPole™

Luxmux ARMS SmartPole™ - a Multiple Gas Detection System specifically engineered to be a continuous emissions monitoring solution

SmartPole™ - gas sensing includes CH4, CO2, CO, O2, NH3, H2S, NO2, HF, SO2, CL2, O3, and VOC. Up to two gasses can be measured with one unit.

SmartPole™ - ideal for accurate multiple gas detection and quantification of greenhouse gas, especially in remote locations. SmartPole™ is available in a self-powered model

SmartPole™ - available with a video surveillance option – keeping your assets safe

SmartPole™ - designed to work in harsh climate conditions while achieving a high degree of accuracy. Simple to service in the field

ARMS SmartER™

Luxmux AEMS SmartER™ – consolidate multiple SmartPole™ installations into a customizable data acquisition reporting and monitoring program

SmartER™ - facilitates commercially viable large-scale deployment for continuous monitoring of multiple gases and alarms

SmartER™ - data is stored securely on the cloud and accessible 24/7 (alarms and Realtime data)

SmartER™ – provides Realtime data in a simple to navigate and configurable web-based platform

SmartER™ - with an available SmartPole™ video surveillance camera system, clients can view activity within the frame of the remote camera through the SmartER™ software

Applications

Oil and Gas

Pipeline Leak Detection

Coal

Landfill

Agriculture

Wastewater

ARMS SmartPole™ Overview

Gas Detection System (CH4 – Methane, CO2 – Carbon Dioxide, CO – Carbon Monoxide, O2 – Oxygen, NH3 – Ammonia, H2S – Hydrogen Sulphide, NO2 – Nitrogen Dioxide, HF – Hydrogen Fluoride, SO2 – sulfur dioxide, CL2 – Chlorine, O3 – Ozone, VOC- Volatile Organic Compound)	
Gas Measurement range [ppm]: **CH4:** 0-10,000, **CO2:** 0-10,000, **CO:** 0-1,000; **O2:** 0-25,000; **NH3:** 0-100; **H2S:** 0-100; **NO2:** 0-20; **HF:** 0-10; **SO2:** 0-20; **CL2:** 0-10; **O3:** 0-20, **VOC:** 0-5000	**Accuracy (overall rated conditions):** +/- 1% of repeatability
Power options: 120VAC plug in or solar with chargeable battery Power consumption ~6W	**Repeatability (over all rated conditions):** CH4, CO2, CO, O2, VOC: +/- 1 ppm NH3, H2S, NO2, HF, SO2, CL2, O3: +/- 100 ppb
Solar Power: Standard: 1 panel - 15W (12v 15w POLY-SI Solar Panel)	**Ambient Operating Temperature Range:** Standard: -40C to 60C Optional: Heaters available for -20C and below. Heaters can be configured to turn on at desired temperature
Battery: Standard: 2 x (12V 9AH Non-Spillable Sealed Lead Acid)	**Communication:** Standard: Cellular LTE over secured private APN network Optional: RS232, USB or ethernet Cloud Connectivity to Luxmux's IoT platform
Maintenance: Recommended annual re-calibration and zeroing of sensors at site	**Communication Protocol:** MODBUS RTU
Continuous Monitoring Measurement Interval: Standard: 1 minute Optional: Can be configured: 30 seconds – 1 hour	**Battery Life:** Monitored and reported through wireless communications
Weight: Standard Model: 15kg	**Enclosure Dimensions:** Standard Rack Mount: 15.32" x 13.3" x 6.7"
Accessories: Solar Panel: Additional solar panels available Camera: Optional video surveillance	

Meteorological Station (Air Temperature, Relative Humidity, Air Pressure, Wind Direction, Wind Speed, GPS, Altitude)	
Air Temperature: Measurement Range: -50 to 80C; Resolution: 0.1C; Sensor Accuracy: 0.8C	**Relative Humidity:** Measurement Range: 0 – 100% RH
Air Pressure: Measurement Range: 10 – 1,100 Pa; Sensor Accuracy: +/- 1.0 Pa; Resolution: 0.1 Pa	**Wind Direction:** Measurement Range: 0 – 360 Degrees; Accuracy: <3, RMSE from 1.0 m/s; Resolution: 0.1 m/s; Response Threshold: 0.3m/s
Wind Speed: Measurement Range: 0 - 60ms; Resolution: 0.1m/s	**GPS:** GPRs-01
Altitude: Measurement Range: 0 – 5,000m; Resolution: 0.1m	

Luxmux Technology Corporation
1030, 2424 - 4th Street SW
Calgary, AB Canada T2S 2T4

sales@luxmux.com
techsupport@luxmux.com
Phone: +1 (587) 392-6192
www.luxmux.com

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