AUM - PEMS

Ultimate Solution for Real Drive Emission Monitoring

AUM - PEMS
(Air Unique-quality Monitor - Pollution Emission Monitoring System)

AUM PEMS - A single photonic system monitoring Real Drive Emission, capturing Registration Plate/Number, as well as Speed and Acceleration of the Vehicle.

FEATURES

- Integration Of Cutting-edge Technologies:
  - LASER Backscattering
  - Big Data & AI
  - IoT (Internet of Things)
- Real-time Monitoring Of Various Parameters like Gases, Opacity, as well as Meteorological Data
- Portable and Compact.
- Low Power Consumption.
- Low Maintenance, One-time Calibration.
- Cloud-based Big Data Analytics and Streaming for Global Access.
- **Precision in Emission Monitoring:** AUM PEMS offers versatile gas monitoring, precisely measuring Hydrocarbons, CO, NO, NH_3, CO_2, SO_2, CH_4, NO_2, PM2.5 and PM10 within specified ranges, meeting the highest regulatory standards.
- Rugged Design: AUM PEMS withstands shocks, vibrations, temperature fluctuations, air pressure changes, and electromagnetic interferences.

- **Regulatory Compliance & Comprehensive Monitoring:** AUM PEMS meets BHARAT/Euro Stage VI and AIS 170 standards, providing real-time tracking for strict regulatory adherence.
- **Effortless Vehicle Identification:** AUM PEMS employs Automatic License Plate Recognition (ALPR), a specialized OCR technology, capturing moving vehicle registration plates for applications like car parking control, toll collection, and vehicle tracking, as well as speed and acceleration of the vehicle.
- **GPS and Time-Stamped:** Each emission data point is GPS and time-stamped, offering precise location and temporal information.
- **Trend Analysis:** Analyzes historical data trends for each pollutant, aiding decision-making and policy adjustments.

Pyrotech

AUM-PEMS CATSMART BIG DATA

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VEHICLE

Front   Exhaust

TEST RESULTS

Nitric Oxide (NO)	Nitrogen Dioxide (NO2)
100 ppm	50 ppm
Sulpher Dioxide (SO2)	Ammonia (NH3)
20 ppm	10 ppm
Methane (CH4)	Carbon Dioxide (CO2)
750 ppm	750 ppm
Hydro Carbon (CH)	Carbon Monoxide (CO)
100 ppm	100 ppm
Opacity	
20 %	

- **Seamless Connectivity:** CATSMART's Big Data analytical software integrates effortlessly with AUM_PEMS, providing a user-friendly interface for extensive data analysis.
- **Dashboard Overview:** Interactive dashboard providing information of each and every vehicle.
- **Vahaan Portal Integration:** Ensure regulatory compliance and streamlined reporting by integrating seamlessly with the Vahaan Portal through API.
- **Communication Integration:** Integrate communication protocols such as SMS and emails for efficient data dissemination.
- **Security Assurance:** Robust default controls for data integrity and confidentiality.