

AIR QUALITY MONITORING SYSTEM

Control the Air Pollution in Industries, Smart Cities, Airports,
Highways, and Any Other Place You Care About



ABOUT AERON

Aeron is a fast growing tech company developing innovative solutions for global customers. Aeron offers a wide range of technology driven products and solutions under Inertial Sensing and IIoT verticals. Backed by strong technical knowhow, refined algorithms and domain research, Aeron's products offer premium features at attractive price points.

Aeron started its IoT business with engine temperature monitoring systems for locomotives and vehicle telematics solutions for automotive OEMs. After this initial success, Aeron started offering data logger and weather monitoring station for smart agriculture and solar applications. Today, Aeron offers a large number of solutions like weather and environment monitoring solutions for renewable energy, smart environment and urban infrastructure and manufacturing sectors.

Under INS vertical, we offer highly refined product families of MEMS based inertial navigation systems. Our superior quality hardware and proven algorithms promise a performance better than most global tactical class MEMS systems. Aeron's Inertial Sensors and Systems offer everything that today's tough applications demand: versatility, ruggedness, precision and reliability over time. Aeron also offers a range of tilt sensors, inclinometers, tilt switches and digital compasses.

At Aeron, we believe that expertise is not merely an accident but an outcome of consistent team effort. Passionate people, well equipped manufacturing, testing facilities and excellent support network make us the trusted partner of our customers.



Located in
Pune, India



Serving customers
in 20+ countries



Installed base of
10,000+ units



India's leading
company in Inertial
Systems

Air Quality Monitoring System

LAMINAR AQM21 is a smart air quality monitoring system, ideal for real time monitoring of criteria pollutants, particulate matter, noise level, weather parameters and other gaseous contaminants. AQM21 is equipped to monitor air pollution data for PM2.5, PM10, CO, CO₂, NO, NO₂, SO₂, O₃, VOCs and environmental data for temperature, humidity, pressure, wind speed, wind direction along with the noise, UV, Light intensity and more.

AQM21 is easy to install, calibrate and maintain and it consumes very less power. The device is built on scalable architecture to accommodate sensors suitable for various applications and communication requirements.

LAMINAR AQM21 is suitable for numerous applications in town planning and development of smart cities, for tracking industry emissions, identifying pollution hotspots in the city, traffic re-routing and management, developing expansion plans for the city, approving or rejecting development proposals, etc.



PARAMETERS MEASURED

0 – 1,000 ppm CO	0 – 5,000 ppm CO ₂	0 – 100 ppm NH ₃	0 – 360 Deg. Wind Direction
0 – 20 ppm O ₃	0 – 100 ppm SO ₂	0 – 25,000 ppm CH ₄	0 - 75 m/s Wind Speed
0 – 20 ppm NO ₂	0 – 20 ppm NO	0 - 100 ppm TVOC	0 - 999.8 mm Rainfall
0 – 1,000 µg/m ³ PM1	0 – 100 ppm H ₂ S	0 - 100 ppm C ₂ H ₄ O	300 - 1100 mBar Pressure
0-1,000 µg/m ³ PM2.5	45 – 90 dB Noise	0 – 100 ppm CH ₂ O	0 - 100% RH Humidity
0-1,000 µg/m ³ PM10	10 – 20,000 Lux Light	0 - 16 Index UV	-20 - +80 °C Air Temperature

Note: All the parameters mentioned here are not available in the same device. Please contact us to discuss your requirement.

ADVANTAGES

WIDE RANGE OF PARAMETERS

Measurement of CO, CO₂, NO₂, NO, O₃, SO₂, H₂S, Noise, PM_{2.5}, PM₁₀, Temperature, UV, Wind speed, Wind direction, Rain fall and many more for all your air pollution measurement requirements

HIGH TECHNOLOGY

Powered by XTREME series data logger, it offers high resolution data collection, simultaneous wireless communication on Wi-Fi and Cellular (4G), built-in GPS, and edge computing. The scalable architecture allows you to add or remove the sensors at site based on your project requirement.

DATA TRANSFER TO USER SERVER

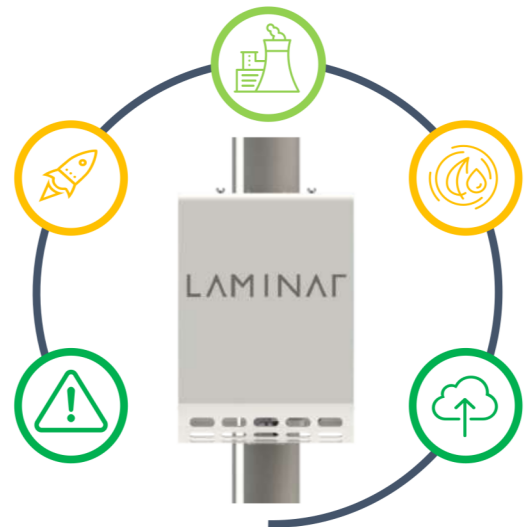
Laminar has the capability to send the data to the user cloud directly without the need for Aeron cloud or 3rd party cloud, this ensures that your data resides in your server, and in your country.

TAMPER PROOF

Compact size, environmentally protected rugged construction, tamper alert, ergonomic design

COST EFFECTIVE

With latest technology, the cost so attractive that it makes many applications possible unviable before.



APPLICATIONS



Smart City



Smart Highway



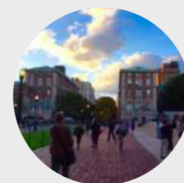
Clean Mining



Clean Industry



Clean Construction



Smart Campus

SPECIFICATIONS

PARAMETER	RANGE	RESOLUTION	MINIMUM DETECTION	EXTENDED RANGE*	UNIT
CO	0-1,000	0.5	0.004	0-2,000	ppm
CO ₂	0-5,000	50	1	-	ppm
O ₃	0-20	0.05	0.004	0-40	ppm
NO ₂	0-20	0.02	0.012	0-40	ppm
SO ₂	0-100	0.01	0.005	0-200	ppm
NO	0-20	0.15	0.015	0-40	ppm
H ₂ S	0-100	0.01	0.001	0-200	ppm
NH ₃	0-100	0.1	0.1	0-200	ppm
C ₂ H ₄ O	0-100	0.01	0.1	-	ppm
CH ₄	0-25,000	30	30	0-50,000	ppm
TVOC	0-100	0.005	0.005	-	ppm
CH ₂ O	0-100	0.001	0.002	-	ppm
PM1	0-1,000	1	0.01	-	µg/m ³
PM2.5	0-1,000	1	0.01	0-1,500	µg/m ³
PM10	0-1,000	1	0.01	0-2,000	µg/m ³
Noise	45-90	1	1	-	dB
Light	10-20,000	1	1	-	Lux
UV	0-16	0.1	0.1	-	Index
Ambient Temperature	-20 to +80	0.01	0.01	-40 to +123	°C
Relative Humidity	0 - 100	0.1	0.1	-	%RH
Barometric Pressure	300-1100	0.2	-	-	mBar
Rainfall	0-999.8	0.2	0.2	-	mm
Wind Speed	0-75	0.1	0.4	-	m/s
Wind Direction	0-360	1	1	-	deg

Power Source

9-28 VDC from solar power pack or AC power source using AC-DC converter

Weight

9.6 Kg including internal sensors

Size

52 x 34 x 22 cm*

Time Synchronization

Through GPS, and internet, RTC with backup battery

Data Backup

8 GB data memory

Wireless

Wi-Fi, LTE (4G) / UMTS / GPRS, LORA*, NB-IoT*

Wired

Ethernet, RS485 MODBUS, RS232

Protocols

HTTPS, APIs, MQTT*

Data Transmission Frequency

1 minute, 5 minutes, 10 minutes, 15 minutes, 30 minutes, 1 hour, 24 hours

Are you looking to measure parameter not mentioned here?
Please write to us at sales@aeronsystems.com

*Optional, contact us to discuss your requirements. The weight mentioned is for smaller variant. It may change depending upon the sensors used in the device.

LIVE3 - AI Cloud Software

Live3 is the AI based cloud software for the real-time monitoring and analysis of the data measured by the LAMINAR AQM21 devices. Aeron Live3 displays the real-time data in widgets, tabular format and calculates Air Quality Index. The graphs of various pollutants are plotted over time.

User can compare the data from multiple sites over time and can compare two or more parameters from the same station. The threshold values of the parameters can be defined and alerts are sent to user when the parameter(s) breach the threshold.

All Devices List

Quick list of all the devices you have access to

Widgets

The Live view of recent data from your device including the health

Device Status

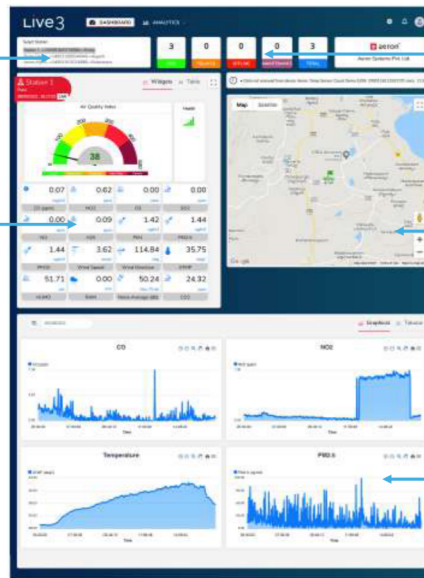
A quick view of the status of all your devices

Geo-Location

Map view showing geo-location of all the systems

Graph View

Quick view of the parameters' trend over time for anomaly detection



Multi Parameter

Generate graphs of single parameter or multiple parameters (upto 3) at the same time.

Analyze the trend over time, identify threshold breaches. The data analysis available for raw data, 15min, 30 min, 1 hr, 12 hrs, and 24 hrs.

User can select different data interval and chart type

Overlay threshold limits on the graph

Identify maximum, minimum and average values from graphs

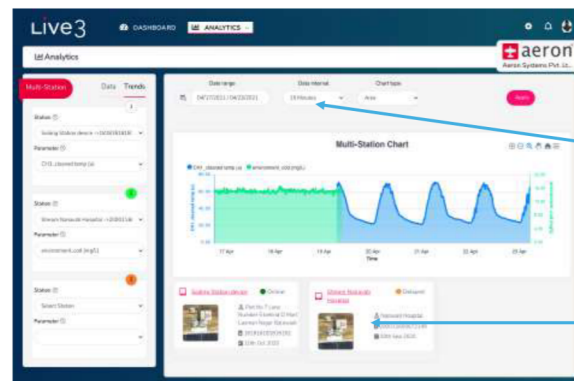


Multi Station

Compare parameters from multiple systems, analyze the trend of a particular parameter from different locations.

User can select different data interval and chart type

Profile of the selected devices



IOT PRODUCT TIMELINE



Wireless Data Logger
ACE DLG88
2010



Wireless Data Logger
ACE DLG89
2014



Wireless
Data Gateway
FLINT WDG45
2015



Smart Data Logger
XTREME
2019



Water Quality Monitoring System
STREAM
2019



Weather Station
2012



Air Quality Monitoring System
GRETA
2018



Air Quality Monitoring System
LAMINAR
2021



Weather Sensors
ALTAIR
2020

“What You Can Measure is What You Can Control”



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