AQD5000-X Ambient Air Quality Monitoring System: Precision in Every Measurement

Model **AQD5000-X** | Brand **Master Science**



The AQD5000-X is a state-of-the-art ambient air quality monitoring system, designed to meet the needs of urban air quality assessment and industrial emission pollution monitoring. This robust system offers multi-parameter measurement capabilities, tracking gases, particulate matter, and meteorological conditions simultaneously.

KEY HIGHLIGHTS

- Low Maintenance & Cost
- Additional Information

AT A GLANCE

0.1°C) TEMPERATURE-40°C ~ +120°C (RESOLUTION	**0.1 m/s)** WIND SPEED0~20 M/S (RESOLUTION

Request a Quotation
Contact us for pricing, configuration options and delivery details.

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Overview

With real-time data transmission to cloud platforms and remote control via cloud, the AQD5000-X ensures continuous and precise environmental monitoring, offering invaluable data to environmental agencies, industries, and municipalities. Its affordable cost makes it an ideal solution for agencies seeking comprehensive air quality monitoring without breaking the budget.

Simultaneously tracks up to 9 gas parameters, along with particle and meteorological measurements, providing a holistic view of air quality.

Features high-sensitivity sensors that ensure accurate readings with detection limits as low as ppb levels.

Operates continuously, ensuring that air quality is consistently tracked without interruptions.

Real-time data upload to cloud platforms and remote control features allow for efficient and effective management from anywhere.

Designed for low-cost operation with simple regular maintenance, ensuring minimal downtime and operational costs.

Capable of measuring 1-9 gas parameters alongside particle and meteorological data, providing a comprehensive overview of air quality. Optional modules allow for customization based on your specific needs.

The AQD5000-X uses imported high-sensitivity sensors that deliver fast response times, high resolution, and excellent linearity. Achieve detection down to the ppb level with unmatched accuracy.

Featuring a 7-inch color touch screen, the system allows for easy and intuitive data viewing, enhancing usability for operators in various environments.

Equipped with a dust-proof, rain-proof, and temperature-resistant outdoor shield, the AQD5000-X thrives in both high and low-temperature environments, ensuring consistent performance under all conditions.

Dual flowmeters ensure precise gas flow control, enhancing the accuracy and consistency of monitoring data, even in challenging environments.

The system is compatible with high-temperature probes, oil removal, dust filtration, and water filtration devices, ensuring accurate detection and extending device lifespan.

With continuous 24-hour operation, the AQD5000-X offers real-time data uploads, self-diagnosis, and automatic restarts for non-stop monitoring.

The system can store monitoring data for up to two years, ensuring that you have historical data readily available for trend analysis and regulatory compliance.

Optional solar power supply ensures sustainable operation even in areas without access to a reliable electrical grid.

With RS485, 4G DTU, and LORA (optional) modules, the AQD5000-X supports wireless communication over long distances, making it suitable for remote or large-scale monitoring applications.

Optional camera integration allows for remote dust concentration monitoring and visual recording, adding an extra layer of data collection.

Designed for easy operation and low-maintenance, the AQD5000-X reduces the need for costly service interventions, making it ideal for organizations with limited resources.

Environmental monitoring agencies, municipalities, and industries seeking a cost-effective and accurate solution.

Key Benefits

REAL-TIME VIDEO MONITORING

Low Maintenance & Cost

Additional Information

Looking for a high-precision air quality monitoring system that is easy to operate, reliable, and cost-effective? The AQD5000-X is the solution. Contact us today to learn how the AQD5000-X can transform your air quality monitoring.

Technical Specifications

GENERAL	
General	Sampling MethodPump suction
General	Pump Flow Rate0.5L/min (gas); 1.8L/min (particles/dust)
General	Monitoring MethodContinuous automatic real-time monitoring
General	Signal OutputRS485, 4G DTU (optional), LORA (optional)
General	Power Supply220VAC, 0.1A
General	Working Current<100mA (Max)
General	Operating Temperature-10°C to 55°C
General	Operating Humidity0-95% RH
General	AlarmSound and light alarm (optional)
General	Product ShellAnti-corrosion, UV-resistant, and impact-resistant
General	InstallationCeiling or wall-mounted
General	Weight18kg
General	Product CompositionPre-processing system and monitoring factor analysis system
General	Filtration SystemOil-water-dust filter with glass fiber and PE material
Temperature-40°C ~ +120°C (Resolution	0.1°C)
Wind Speed0~20 m/s (Resolution	0.1 m/s)
Wind Direction0-360° (Resolution	1°)
Air Pressure0~120 KPa (Resolution	1 KPa)
Light Intensity0~200,000 Lux (Resolution	1 Lux)
Noise30 dB~130 dB (Resolution	1 dB)
Ozone (O3)0-1000 ppb (Resolution	1 ppb)
Sulfur Dioxide (SO2)0-1000 ppb (Resolution	1 ppb)
Nitrogen Dioxide (NO2)0-1000 ppb (Resolution	1 ppb)
Formaldehyde (CH2O)0-5 ppm (Resolution	0.01 ppm)
Carbon Monoxide (CO)0-20 ppm (Resolution	0.001 ppm)
TVOC0-5 ppm (Resolution	0.001 ppm)
PM2.5, PM100-1000 μg/m³ (Resolution	1 μg/m³)
General	Display7-inch color touch screen, adaptive display with automatic page turning
General	Dimensions480×580×163mm (excluding external sensors, rainproof beams, and mounting brackets)
Working VoltageInternal	24VDC; External: 220V/50Hz AC

GENERAL	
Humidity0~99% RH (Resolution	1% RH)
Accurate Data	The AQD5000-X eliminates the uncertainty and inaccuracies often found with traditional air quality monitoring tools, providing reliable, real-time data for air quality management.

CUSTOMER PAIN POINTS ADDRESSED	
Continuous Monitoring	Never worry about missing critical environmental data – the AQD5000-X offers 24/7 continuous monitoring with automatic self-diagnosis and data uploads.
Easy Setup & Low Maintenance	Designed for quick deployment with minimal ongoing maintenance, reducing the complexity and cost of maintaining a robust air quality monitoring system.
Remote Access & Customization	Whether you’re managing multiple monitoring stations or require specific data points, the AQD5000-X allows for remote management and customizable parameters to suit diverse needs.

Applications

- Urban air quality monitoring and industrial emission assessments