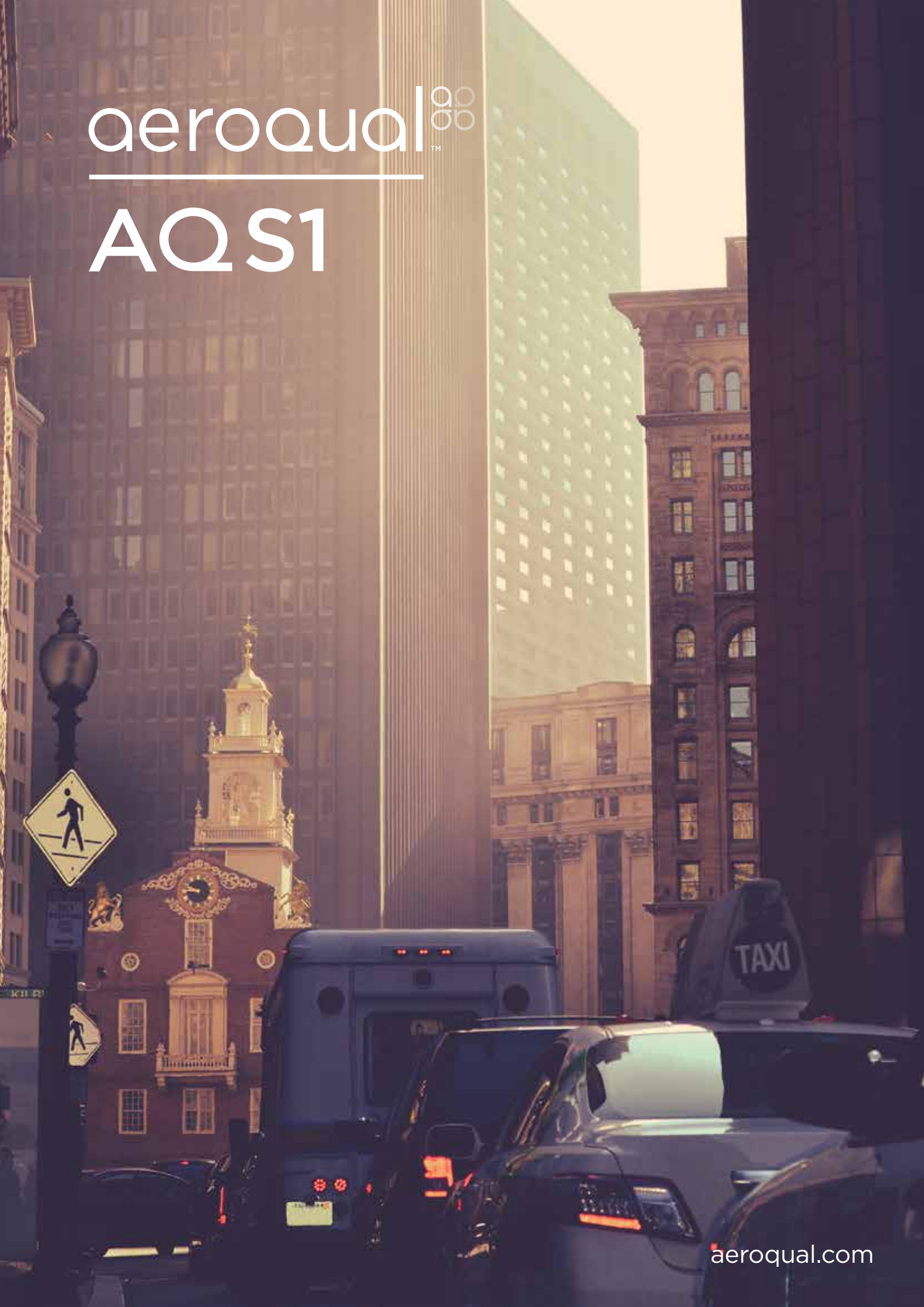
aeroqual™

AQS1



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AQS Urban Air Quality Monitor

The AQS is a tool for air quality professionals to target specific applications of interest in the urban environment. It is a flexible air quality monitoring system that can be configured for a range of uses.

What can it measure?

- Particulate matter (TSP, PM_{10}, $PM_{2.5}$, PM_{1})
- Ozone
- Nitrogen dioxide
- VOC
- Meteorological & noise

Where can it be used?

- Construction dust & emissions
- Roadside traffic emissions
- Rail corridor and terminal emissions
- Mapping smog formation & distribution
- Validation of air quality models
- Community exposure studies

How is the AQS different?

Key technology features of the AQS enable it to deliver data with very strong correlation to EPA-approved monitors (Near Reference) over extended periods of time – several years with appropriate maintenance.

In head-to-head tests with traditional EPA-approved analyzers, the AQS has shown R^2 correlations as high as 0.98.

Patented technology underpins AQS performance. The gas sensitive semiconductor O_3 technology is proprietary to Aeroqual, as is Automatic Baseline Correction (ABC) and the technique for removing ozone interference on the electrochemical NO_2 sensor.

In head-to-head tests with traditional EPA-approved analyzers, the AQS has shown R^2 correlations as high as 0.98.

Key Features

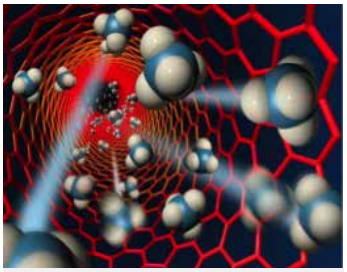
The AQS can measure particulate matter (PM) and/or up to two gases at the same time. At any time the AQS can be upgraded to measure additional parameters by adding new modules. New modules can be added in the field; there is no need to return the unit to the factory.

Inert sampling cane and pump for precision flow.

Inlet filters ensure hygiene and integrity of gas sample.

Heated PM inlet corrects humidity effect.

High stability via Automatic Baseline Correction (ABC).

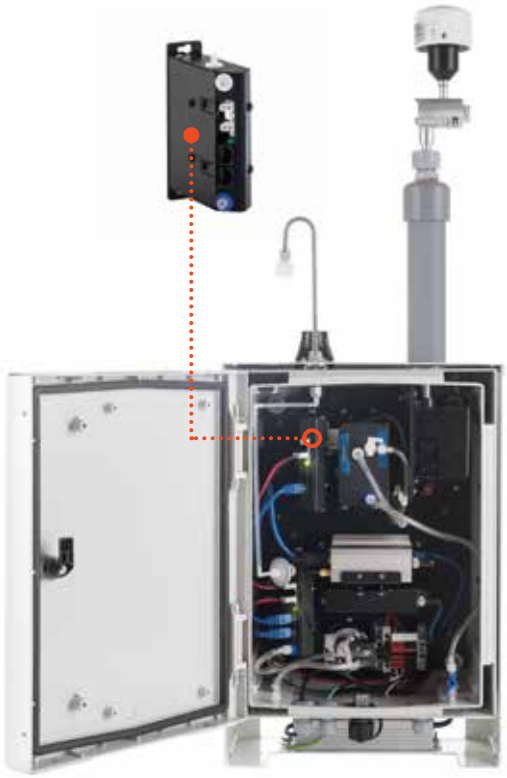


Part-per-billion gas detection in ambient air.

Traceable factory and field calibration.

Designed for the toughest environments.

Wireless/GSM data connectivity for remote access.



The AQS system is modular

Each sensor is housed in a module, and the system is built with only the modules you require.

Each module is connected with the control system for air sampling, data and power.

All module data is available on the same software interface.

During servicing, modules can be easily removed and replaced without affecting the rest of the system.

AQS Applications

Combining a robust light scattering particulate monitor, and Aeroqual's sensor-based gas analyzer modules, the monitor performs to Near Reference levels, yet costs much less than comparable analyzers; it is also lightweight and can be installed and moved with ease making it suitable for a wide range of applications.

Construction dust and emissions

Monitor and manage airborne dust particles and emissions from construction site activity including from site vehicles and generators. AQS is designed to survive in these demanding environments.

PM NO_2

Roadside traffic emissions

Capture detailed traffic emission data at locations including traffic intersections, vehicle emissions testing centres and bus terminals. The compact AQS design enables quick deployment for hotspots.

PM NO_2 O_3

Smog monitoring

Understand spatial distribution of smog pollutants; $PM_{2.5}$, O_3 and NO_2. AQS costs much less than traditional air quality monitors allowing it to be deployed in higher numbers enabling city-wide monitoring.

PM NO_2 O_3

Air quality model validation

See continuous high resolution data from multiple locations over an extended period of time. AQS is small enough to overcome the majority of site selection challenges in dense urban environments.

PM NO_2 O_3

Community exposure studies

Obtain high quality data for understanding the temporal and spatial distribution of key urban pollutants with a city wide network, or study health effects at the micro-scale using a smaller deployment of AQS.

PM NO_2 O_3

Rail corridor and terminal emissions

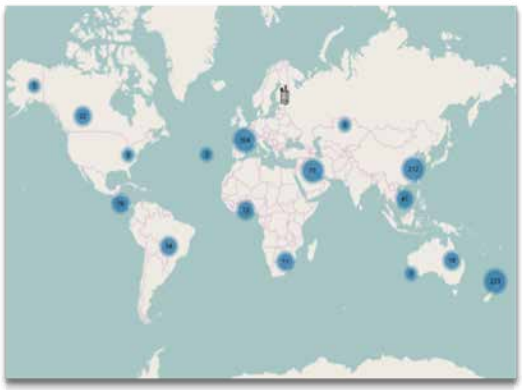
Capture the impact on urban areas from transport corridors and terminal emissions; monitoring programs to capture detailed data and subsequently manage the impact of activities are easily undertaken with the AQS.

PM NO_2

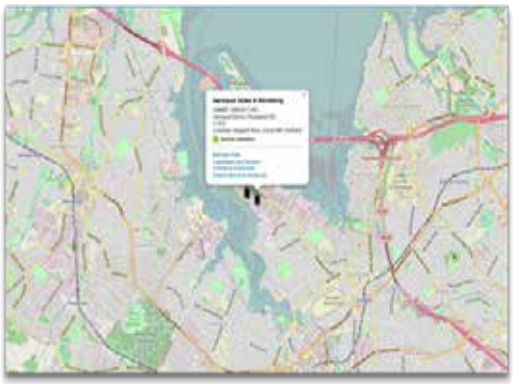
AQS Air Monitoring Software

Aeroqual software comes standard when you purchase the AQS. The software is designed to maximise the health of your instrument, and provides an intuitive interface for data management and analytics.

Aeroqual Connect and Aeroqual Cloud are easy to use and keep your data secure via encryption.



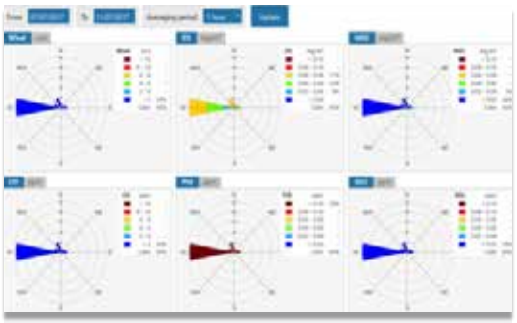
Manage data, instruments and diagnostics conveniently from anywhere in the world.



Set up your FTP, SMS/email alerts, calibration and service for single instruments or networks.

Plot and download data in real-time or historical sets by user selectable averaging periods.

Advanced charts features network view and lets you combine data sets and annotate for reports.



Use the wind and pollution rose charts in Aeroqual Plus to present professional reports.

Particulate Matter

Why measure it?

Airborne particulate matter (PM) is categorised into different size fractions. Total Suspended Particulate (TSP) includes all particle sizes and is a good measure of nuisance dust. PM_{10} (particles ≤ 10 microns) is a criteria pollutant and is a serious health risk because PM_{10} particles can penetrate the lungs. $PM_{2.5}$ (particles ≤ 2.5 microns) is also a criteria pollutant which has even greater health impact due to risk of penetration deeper into the respiratory system. Research has linked particulate pollution to lung and heart disease, strokes, cancer, and reproductive harm.

Where does it come from?

Large particles come from natural sources e.g. soil and organic matter stirred up by wind or human activity. Small particles are by-products of combustion e.g. emissions from vehicles and power stations. Particles from these sources react with other gases in the atmosphere to create particles of various chemical compositions. Gas to particle conversion can also produce fine particulate.

How do we measure it?

The Particle Monitor measures airborne particulate matter using a light scattering nephelometer. A sharp cut cyclone fitted to the inlet physically selects a target mass fraction e.g. PM_{10}, $PM_{2.5}$, or PM_{1}. The combination of nephelometer and sharp cut ensures high accuracy and durability. The nephelometer is able to automatically correct for thermal and optical drift. A built-in sheath air filter keeps the optics clean, and a fibre optic span enables a check of the optical components.

Near reference performance

The Particle Monitor has demonstrated strong statistical correlation in head to head field trials with US EPA and EU certified reference methods. The sensor has been approved by MCERTS in the Aeroqual Dust Sentry. It is suited to robust and accurate measurement of a single target particulate fraction in industrial, urban, and research applications.

SIZES	RANGE	ACCURACY	FLOW RATE	LOWER DETECTABLE LIMIT (2σ)
PM_1, $PM_{2.5}$ or PM_{10} or TSP	Up to 2000 µg/m^3	<±(2 µg/m^3 + 5% of reading)	2.0 LPM	<1 µg/m^3

Particulate Profile

Why measure it?

A particulate profile is a wide-ranging measure of airborne particulate matter (PM). PM is categorised into different size fractions (see Particle Monitor). TSP provides a measure of nuisance dust. PM_{10} and $PM_{2.5}$ are criteria pollutants and are often measured together in order to understand the impact of particle pollution on human health. PM_1 is of interest to researchers trying to quantity the health risks of combustion-related particle pollution. Measuring all particle sizes at once provides a complete cross section of particulate pollution in the atmosphere.

Where does it come from?

Large particles come from natural sources e.g. soil and organic matter stirred up by wind or human activity. Small particles are by-products of combustion e.g. emissions from vehicles and power stations. Particles from these sources react with other gases in the atmosphere to create particles of various chemical compositions. Gas to particle conversion can also occur to produce fine particulate fractions.

How do we measure it?

The Particle Profiler provides continuous and simultaneous measurement of PM_{10}, $PM_{2.5}$, PM_1, and TSP. The Profiler comprises an optical particle counter that converts counts to a mass fraction via a proprietary algorithm stored in the system firmware. Measurements are logged and reported in real-time. The Profiler is configured to display and log particle mass; particle counts are optional.

Near reference performance

The Particle Profiler demonstrates good precision and accuracy in the field when calibrated against US EPA and EU certified reference methods. The sensor is valuable in research and air monitoring studies, and industrial applications where measuring more than one size fraction is necessary.

SIZES	RANGE	ACCURACY	FLOW RATE	LOWER DETECTABLE LIMIT (2σ)
PM_1, $PM_{2.5}$, PM_{10} and TSP	PM_1 200 µg/m^3 $PM_{2.5}$ 2000 µg/m^3 PM_{10} 5000 µg/m^3 TSP 5000 µg/m^3	<±(5 µg/m^3 + 15% of reading)	1.0 LPM	<1 µg/m^3

Ozone

Why measure it?

In the upper atmosphere 'good' ozone (O_3) protects life on Earth from the sun's ultraviolet rays. At ground level 'bad' ozone is a criteria pollutant that is a significant health risk, especially for people with asthma. It also damages crops, trees and other vegetation and is a main component of smog.

Where does it come from?

Ground level ozone is not emitted directly; it is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight. Emissions from industrial facilities and electric utilities, vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NOx and VOC.

How do we measure it?

The O_3 analyzer module continuously measures ozone in ambient air. Air is actively sampled by pump and travels through a glass and Teflon coated inlet system to the analyzer module. The ozone analyzer module incorporates an Aeroqual gas sensitive semiconductor (GSS) sensor. This sensor is a tungsten oxide (WO_3) formulation that is particularly sensitive to O_3 when operated at elevated temperatures. By subjecting the sensor to periodic zero flow conditions and temperature cycling, the analyzer module compensates for drift and cancels interferences from NO_2 and VOCs.

Near reference performance

The O_3 module is factory calibrated and traceable to NIST Standard Reference Materials. It can be field calibrated against US EPA protocol gas standards if required. In head to head field trials with an ultraviolet photometric analyzer the O_3 module demonstrates very strong linear correlation. The O_3 module is suitable for use in ambient air monitoring in urban and rural areas.

RANGE (PPB)	RESOLUTION (PPB)	NOISE ZERO / PPM; SPAN % OF READING	LOWER DETECTABLE LIMIT / PPB	PRECISION	LINEARITY (% OF FS)	DRIFT 24 HOUR ZERO / PPB; SPAN % OF FS
0-500	0.1	<1; <1%	1	<2% of reading or 2 ppb	<1.5%	1; 0.2%

NO_2

Nitrogen Dioxide

Why measure it?

Nitrogen dioxide (NO_2) is a criteria pollutant and contributes to the formation of photochemical smog, with significant impact on human health. Breathing raised levels of NO_2 inflames the lining of the lungs and reduces immunity to lung infections. The result is wheezing, coughing, colds, flu and bronchitis, and more frequent and intense asthma attacks.

Where does it come from?

The major source of NO_2 is from combustion of fossil fuels: coal, oil and gas. Most of the NO_2 in cities is derived from motor vehicle exhaust. Other sources of NO_2 are petrol and metal refining, electricity generation from coal-fired power stations, other manufacturing industries and food processing.

How do we measure it?

The NO_2 analyzer module continuously measures nitrogen dioxide in ambient air. The air is actively sampled by pump and travels through a glass and Teflon coated inlet system to the analyzer module. The module incorporates an electrochemical cell and operates both a sample and zero cycle which maximizes stability. Because 'NO_2' electrochemical sensors are strongly sensitive to ozone as well as NO_2, the ozone module reading is used to correct for ozone interference. The corrected NO_2 measurement is calculated and recorded in real-time in the AQS software. The technique is proprietary to Aeroqual.

Near reference performance

The NO_2 module is factory calibrated and traceable to NIST Standard Reference Materials. It can be field calibrated against US EPA protocol gas standards if required. In a head to head field trials with a chemiluminescent analyzer the NO_2 module demonstrated strong linear correlation. The NO_2 module is suitable for use in ambient, fenceline, and near roadside monitoring applications.

RANGE (PPB)	RESOLUTION (PPB)	NOISE ZERO / PPM; SPAN % OF READING	LOWER DETECTABLE LIMIT / PPB	PRECISION	LINEARITY (% OF FS)	DRIFT 24 HOUR ZERO / PPB; SPAN % OF FS
0-500	0.1	<1; <1%	2	<2% of reading or 3 ppb	<2.0%	2; 1%

VOC

Volatile Organic Compounds

Why measure it?

Volatile organic compounds (VOCs) are carbon-containing gases and vapors such as gasoline fumes and solvents. Many VOCs such as benzene and formaldehyde are toxic air pollutants that can cause cancer and other serious health problems. VOCs such as 1,3 butadiene are also involved in the formation of ground level ozone.

Where does it come from?

VOCs are emitted to air by natural sources (vegetation, forest fires) and anthropogenic sources (resulting from human activity) such as emissions from the oil and gas industry, solvent usage and transportation. Although natural sources of VOC emissions are larger overall, anthropogenic sources are the main contributors of VOCs in urban areas.

How do we measure it?

The VOC analyzer module continuously measures volatile organic compounds and gases in ambient air. Air is actively sampled by pump and travels through a glass and Teflon coated inlet system to the analyzer module. This module incorporates photo-ionisation detector (PID) sensor technology. A long-life 10.6 eV deep UV lamp breaks VOCs down into positive and negative ions. The detector measures the current of the ionised gas, which is proportional to detectable VOCs. Automatic Baseline Correction promotes a stable zero and removes humidity effects. The VOC module is sensitive to a wide range of VOCs, including benzene and toluene.

Near reference performance

The VOC module is factory calibrated and traceable to NIST Standard Reference Materials. It can be field calibrated against US EPA protocol gas standards if required. The VOC module is suitable for use in ambient air monitoring in urban and rural areas.

RANGE (PPB)	RESOLUTION (PPB)	NOISE ZERO / PPB; SPAN % OF READING	LOWER DETECTABLE LIMIT / PPB	PRECISION	LINEARITY (% OF FS)	DRIFT 24 HOUR ZERO / PPB; SPAN % OF FS
0-500	0.1	<1; <1%	<1	<2% of reading or 1 ppb	<1.0%	1; 1%

Environmental Parameters

Why measure environmental parameters?

Air pollution is the culmination of many environmental factors, both natural and man-made. Meteorological conditions play a crucial role in the creation, distribution and impact of air pollution. Noise pollution impacts quality of life, and solar radiation plays a role in ozone formation in photochemical smog. Different applications may call for specialty measurements, for example; vibration is a concern on construction sites; soil moisture is of interest in forestry and agricultural research; visibility is a parameter commonly measured at airports and on highways. In this way the AQS can be expanded to become a complete environmental monitoring system.

How do we measure them?

The AQS can measure, log and report environmental parameters along with gas and particulate data. We offer a range of sensors from market-leading manufacturers, the range is based on suitability for application, known performance and after rigorous field testing. The sensors are factory integrated and fitted with the AQS, so you can be assured of their compatibility with AQS hardware, communications and software. If you would like to integrate measurement from a sensor not offered, please contact Aeroqual or an authorised representative.

Vaisala Weather Transmitter WXT536

The WXT520 is a complete weather station that measures seven parameters simultaneously. With no moving parts the sensor is very low maintenance, extremely durable, and produces measurements of the highest quality.

WIND SPEED	
Range	0-60 m/s
Accuracy	±3% at 10 m/s
WIND DIRECTION	
Range	0-360°
Accuracy	±3% at 10 m/s
RAINFALL	
Output Resolution	0.01 mm
BAROMETRIC PRESSURE	
Range	600-1100 hPa
Accuracy	±1 hPa @ -52 to +60 °C
AIR TEMPERATURE	
Range	-52 to +60 °C
Accuracy	±0.3 °C
RELATIVE HUMIDITY	
Accuracy	±3 %RH (0-90 %RH); ±5 %RH (90-100 %RH)

Met One MSO

The MSO is a cup and vane wind speed and direction sensor coupled with temperature, humidity and barometric pressure sensors – providing a cost effective solution for key meteorological parameters.

WIND SPEED	
Range	0-50 m/s
Accuracy	±2%
Resolution	0.1 m/s
WIND DIRECTION	
Range	0-360°
Accuracy	±5°
Resolution	1°
AIR TEMPERATURE	
Range	-40°C to +60°C
Accuracy	±0.5°C
Resolution	0.1°C
RELATIVE HUMIDITY	
Range	0-100%
Accuracy	±4%
Resolution	1%
BAROMETRIC PRESSURE	
Range	500-1100 mbars
Accuracy	± 2 mbars
Resolution	0.1 mbar

Gill WindSonic

The WindSonic is a robust, low cost ultrasonic wind sensor with no moving parts. This 2-axis ultrasonic wind sensor offers wind speed and direction monitoring with very low maintenance.

WIND SPEED	
Range	0-60 m/s
Accuracy	±2% @ 12 m/s
Resolution	0.01 m/s
WIND DIRECTION	
Range	0-359° (no dead band)
Accuracy	±3° @ 12 m/s
Resolution	1 °

Novalynx 240-200SZ Silicon Pyranometer

The Pyranometer is designed to measure solar radiation which is a key contributor to formation of ozone in photochemical smog. In clear daylight it compares well with first class thermopile type pyranometers, but at a fraction of the cost.

Sensor	High stability silicon voltaic detector
Accuracy	± 5% typical under natural daylight conditions
Sensitivity	100 µA per 1000 W/m² typical
Linearity	Max deviation of 1% up to 3000 W/m²
Resolution	0.1 W/m²
Temperature dependence	0.15% per °C max
Operating temperature	-40°C to +65°C

Cirrus MK427 Noise Sensor

The MK427 is a outdoor Class 1 noise sensor. It requires no additional equipment to be made outdoor ready. Integrated automatic calibration removes the need for site visits to calibrate.

Frequency Weighting	dB(A) to IEC 61672-1:2002
Automatic Calibration	Electrostatic Actuator System with DC voltage control
Measurement Range	30-100 dB(A)
Resolution	0.1 dB(A)

Communications

Communicating with the AQS is easy – wired or wireless, near or far. Staying connected to your instrument is essential for data acquisition, service and diagnostics. WIFI and Ethernet (LAN) communications come as standard. For remote communications choose our cellular IP modem which comes fully integrated and is pre-configured to operate with Aeroqual Connect and Aeroqual Cloud.

WIFI

WIFI is a standard feature of the AQS communications system. You connect to the AQS instrument the same way as you do any wireless router. This allows quick and easy connection by PC, laptop, smartphone – without even having to open the AQS door. You connect to the instrument via Aeroqual Connect software which opens in your web browser.

Ethernet

Ethernet / LAN connection is a standard feature of the AQS. You connect to the AQS instrument the same way as you would any computer on the Local Area Network (LAN). A weatherproof Ethernet port is located on the underside of the AQS enclosure, allowing for a quick and easy wired connection in cases when WIFI is not available or when you need maximum connection speed. You connect to the instrument via Aeroqual Connect software which opens in your web browser.

Modem

Connection via cellular modem is an optional feature. This option allows you to connect remotely by using the local cellular (2G GPRS) network. The modem assigns a unique IP address to the instrument and you connect to the instrument via Aeroqual Connect or Cloud software which opens in your web browser.

API – Application Programming Interface

API is available as a standard feature of the AQS with an Aeroqual Cloud license or as a paid option when using Aeroqual Connect. API is used to configure and transfer information to 3rd party apps, webpages or equipment.

FTP – File Transfer Protocol

FTP is available as a standard feature of the AQS with an Aeroqual Cloud license or as a paid option when using Aeroqual Connect. FTP is used for the transfer of standard network protocol files between the AQS and a remote server or device.

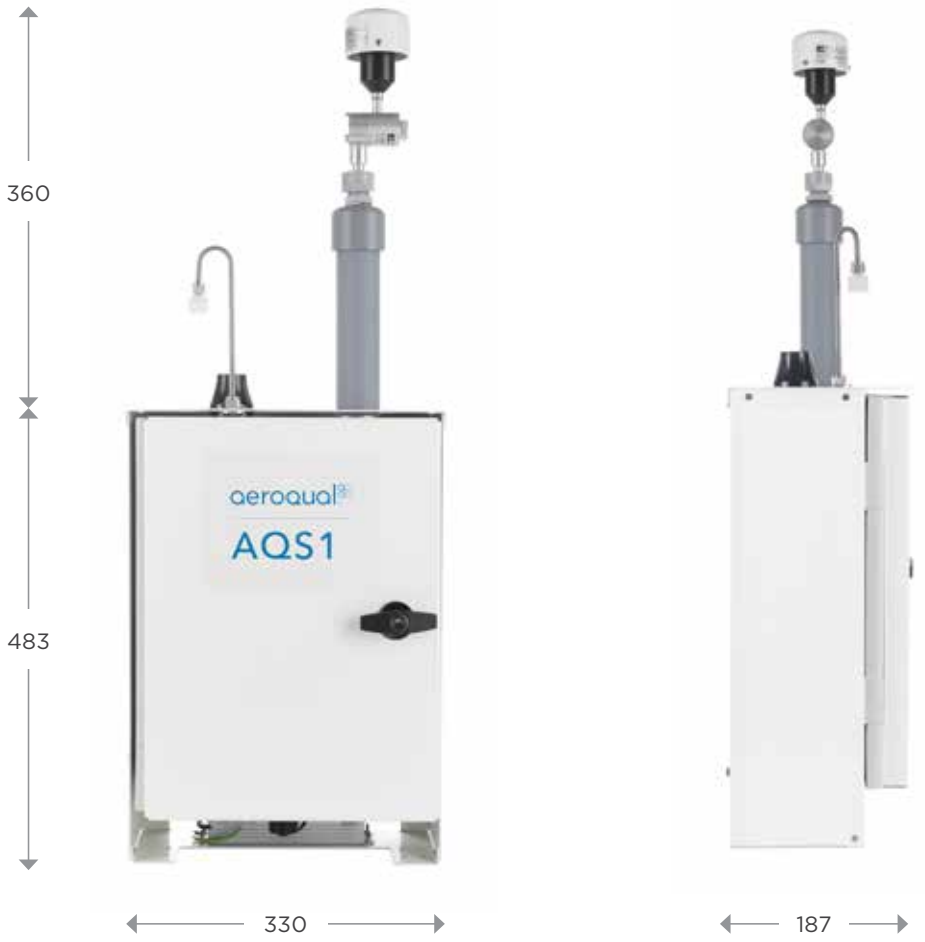
4-20mA and Relay Output

4-20mA and relay output cards are available as an optional feature of the AQS for integration with industrial PLC/SCADA networks. The cards offer 4 x 4-20mA and 2 x relay outputs and can be user configured in Aeroqual Connect or Aeroqual Cloud.

Installation

The AQS can be used almost anywhere – on roofs and lamp posts, by a busy street or an offshore oil rig, in cold and hot climates, on or off-grid. Installation is easy; get set up in under 10 minutes.

The enclosure is a lockable IP65 glass-reinforced plastic (GRP) cabinet with integrated aluminium solar shield armour.



Dimensions are in mm

Weight: 12.5kg*

Mounting Accessories: Platform, pole and wall mounting hardware included

Power Consumption:
100-260VAC (standard): 21W / 30W*
Regulated 12VDC (if required):
21W / 30W*

Environmental Operating Range:
-10°C to +45°C

*Configuration used for power and weight calculations: base unit, nephelometer, PM10 sharp cut, O3 module, modem, heater off / heater on.

Maintenance

The AQS is an air monitoring station that integrates a number of measurements into a single compact instrument platform. The total cost of ownership and skill levels required for operation and maintenance are low compared with a traditional air quality station.

Here is an example of scheduled maintenance for a typical AQS system with gas and particulate measurements.

	3-6 MONTHS	1 YEAR	2 YEARS
ACTIVITY	Change gas/PM inlet filters	—	Service gas analyzer modules
	Check inlet flow rates and zero calibration	Check gas/PM flow pumps	—
	Clean particle inlet and sharp cut cyclone	—	Factory calibrate particle sensor
SKILL LEVEL	LOW / MEDIUM	LOW / MEDIUM	HIGH
WHO	End user or service agent	End user or service agent	Authorised service centre / Aeroqual

Calibration

The AQS is delivered with a NIST-traceable factory calibration. In the majority of cases the factory calibration transfers very well to the field, meaning that field calibration is not required as part of commissioning. At any time the AQS can be field calibrated using Standard Reference Materials (just like an EPA approved monitor). This gives an extra level of confidence in the data by tracing it back to known standards. Aeroqual recommends annual calibration of the sensor modules.

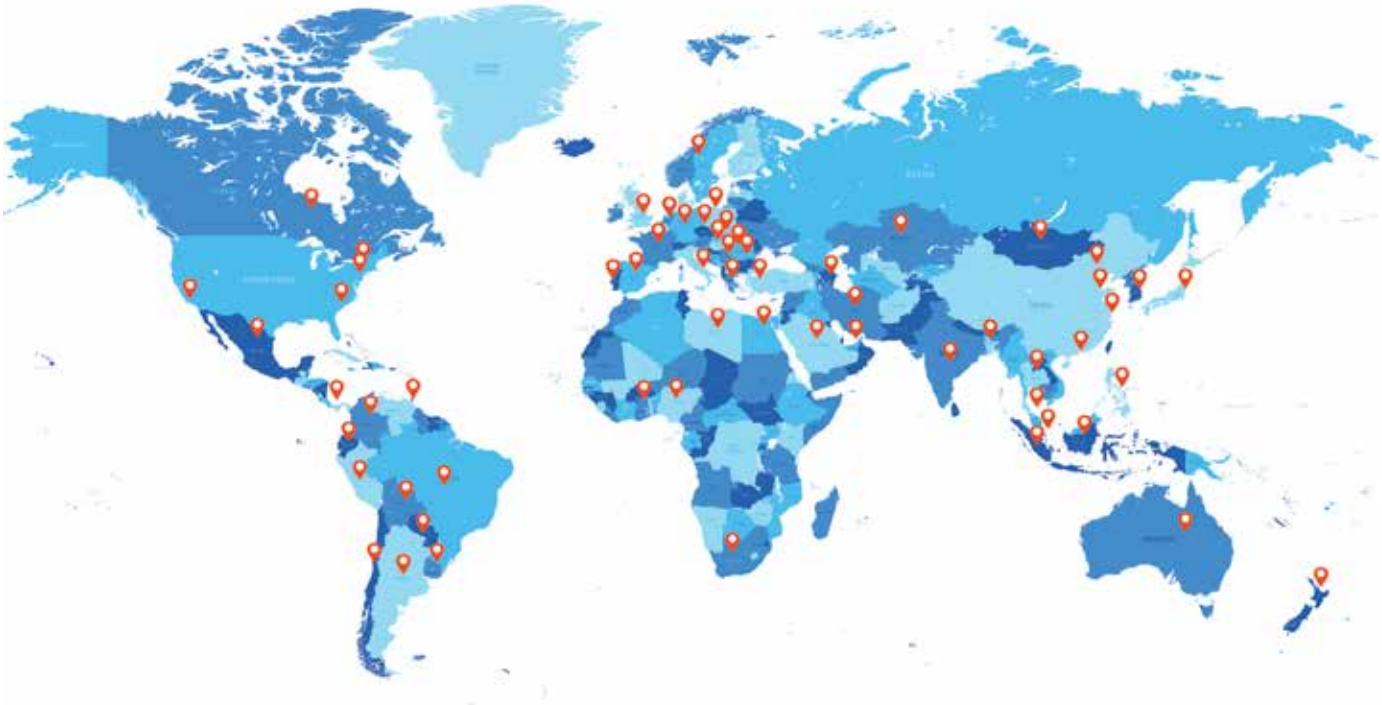
The AirCal 1000 is a portable calibrator designed for use with the AQM and AQS air monitoring systems. It is a dynamic dilution calibrator that allows two calibration gas cylinders to be connected at the same time. By swapping cylinders the AirCal 1000 can be used to calibrate a wide range of gas analyzer modules. It also includes a zero air generator.

The AirCal 1000 can be controlled using the PC software provided or manually operated using the buttons on the control panel. All necessary tubing and gas connections are supplied with the AirCal 1000. Conveniently, the AirCal 1000 can be used to calibrate other gas measurement instruments.

GAS CONNECTIONS	
Compressed gas inlet ports (x2)	1/8” inch Swagelok compression fitting
Outlet gas port	1/4” inch PVDF compression fitting
ZERO AIR GENERATOR	
Scrubbing media	Purafil chemisorbant, activated carbon, heated carulite catalyst
Ambient gases scrubbed	NO_2, NO, SO_2, CO, H_2S, O_3, hydrocarbons
GAS DILUTION MODULE	
NIST Traceable Mass Flow Meter (MFM)	0 to 3000 sccm per minute Accuracy <+/- 2% of reading
NIST Traceable Mass Flow Controller (MFC)	0 to 50 sccm per minute Accuracy <+/- 2% of reading
Dilution range set by user	40 – 1000 times dilution
SPECIFICATIONS	
Communication port	9 pin serial RS232 port
Power supply module	100-240V AC to 12V DC switching adaptor
Dimensions and weight	422 x 422 x 148 mm; 12 kg
Instrument carry case	Impact and water resistant; 515 x 430 x 200 mm

Service

Our distributors are uniquely experienced in the specification, delivery and support of our ambient air monitoring products for air monitoring projects. We are now represented in over 50 countries, meaning you're never too far from an Aeroqual service centre.



Training

Training is the essential ingredient of project success. We have developed a range of tools to train customers and distributors globally. In most cases our authorised distributor will train your engineers when the equipment arrives on site.

We also provide an Online Learning System free of charge. Here you can learn everything you need to know about the installation, operation and maintenance – it is full of videos, diagrams and links to useful resources. Factory training here in Auckland, New Zealand, is another option. There is nothing like getting hands on training with the latest equipment and meeting the people behind the product. Come visit us and make the most of our fresh air, fine food and first class facilities.

Technical Support

With your permission we can stay connected to your product throughout its operating life. Connect and Cloud are powerful software tools that enable us to remotely view and analyze data, diagnose faults, and implement fixes. Having the manufacturer available when it's needed adds another layer of comfort to the support you will enjoy from your authorised Aeroqual distributor.

Warranty

If there is a defect or a fault due to workmanship, most likely it will be covered by Warranty. Every Aeroqual product comes with a factory-backed Warranty that is generously administered.

Other Products

Our ambient air monitoring product range spans portable and fixed instruments for spot checks and surveys, short and long term monitoring. The products have been designed to maximise accuracy and affordability, and are easy to deploy and easy to use. With a decade of experience making sensor-based air quality instruments, we are innovating and releasing new products at a rapid rate. Keep in touch with us to hear about the latest developments.

Portable Monitors

- Handheld ultraportable instruments
- Measure multiple gaseous and particulate pollutants
- Long life lithium battery for a full day in the field
- On board data logging and software included (Series 500)
- Optional enclosure for short term fixed monitoring
- Applications: air quality surveys, checking 'hot spots', personal exposure studies

Recognised by the EPA - In the US EPA's 2014 Air Sensor Guidebook, Aeroqual's Series 500 was highlighted among a handful of manufacturers

Dust Monitors

- Fixed instruments for outdoor ambient monitoring
- Laser-based detection allows real-time measurement
- Choose from TSP, PM_{10}, $PM_{2.5}$ and PM_1
- Optional wind, noise, weather sensors
- MCERTS certified Dust Sentry PM_{10}
- Applications: fenceline monitoring, roadside monitoring, air quality research, short term studies

MCERTS, a world first - Our Dust Sentry PM_{10} was the world's first nephelometer to pass the MCERTS indicative particle monitoring standard of the UK's Environment Agency.

Air Quality Monitoring Systems

- 'Near Reference' multi-parameter monitoring
- Simultaneous measurement of gas, particulate, and environmental conditions (wind, noise, solar)
- Capable of monitoring to WHO requirements
- 1ppb detection of O_3, NO_2, NOx; <10ppb SO_2
- Optional integrated calibration
- Applications: national air monitoring networks, urban air monitoring, industrial fenceline monitoring, air quality research

MCERTS, Certified Product: Indicative Ambient Particulate Monitors.

Hi-Tech Awards, Winner:
Innovative Hardware Award.

WINNER OF THE NZ HI-TECH AWARDS 2016

Just a handful of customers who chose Aeroqual:

aeroqual

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