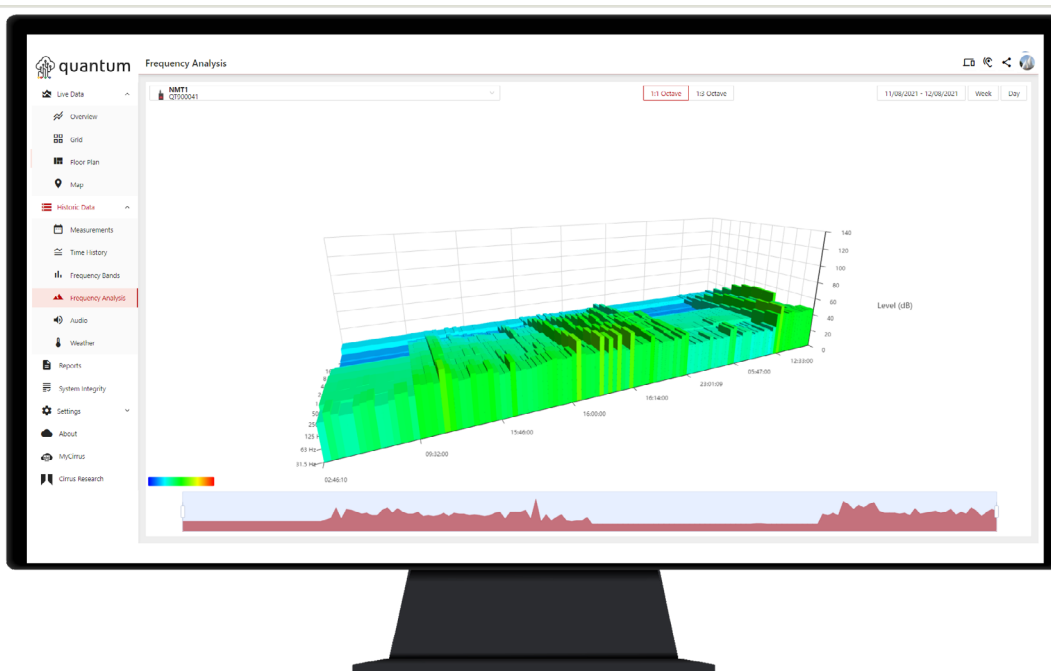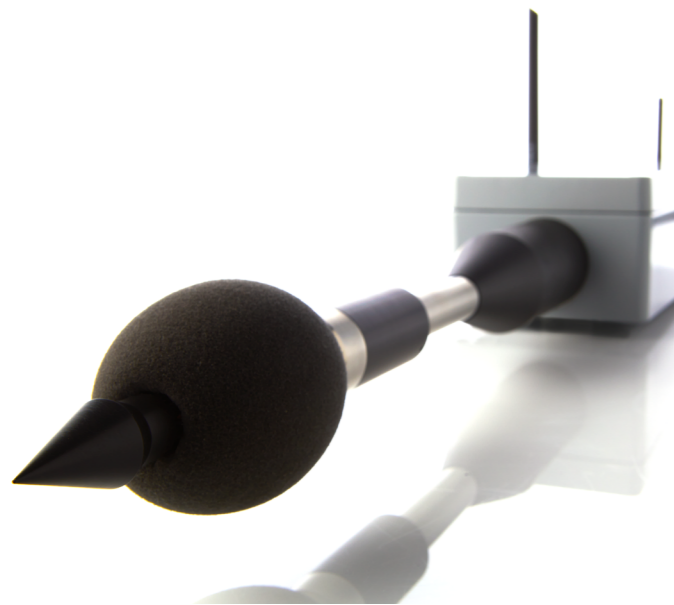# Quantum Outdoor
Cloud-Based Noise Monitoring

Go beyond noise measurement: unattended monitoring and control of environmental noise with our cloud-based system

Quantum Outdoor
Cloud-Based Noise Monitoring System

What is Quantum Outdoor?

Quantum Outdoor is a powerful noise monitor with built-in cloud connectivity, ideal for long-term unattended noise monitoring applications. Quantum Outdoor offers the complete noise monitoring solution by offering all the benefits of remote 24/7 noise monitoring, along with the ability to see noise level data on the MyCirrus cloud platform anytime, anywhere. Together with the ability to trigger events and record audio, Quantum Outdoor can send alerts and notifications to users using a variety of methods allowing you to take corrective action in real time.

Applications

- Unattended environmental noise measurements
- Boundary noise monitoring
- Industrial noise monitoring
- Construction and demolition site noise monitoring
- Outdoor music, sport and entertainment monitoring
- Measurement of noise to meet standards such as BS 4142 and BS 5228

Key features of Quantum

- Class 1 environmental noise monitor – meets all applicable international noise measurement standards including IEC 61672-1:2013
- Cloud connectivity to Cirrus Research's unique MyCirrus cloud platform

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- Connect multiple devices and view live measurements simultaneously to get the full picture of your noise impact
- View your data whenever and wherever you need to around the clock
- Upload site maps and/or site plans to see all your connected devices
- GPS location data for every measurement
- 1:1 and 1:3 octave band filters for detailed environmental noise analysis
- LAeq, LCpeak, LAF max, and statistical level (Ln) noise level measurements
- Schedule your measurement times
- Set repeat measurement durations of 5, 15 and 30 minutes or 1 hour
- Get real-time SMS, email and mobile app alerts based on user-defined noise level triggers
- Upload and store historical noise and weather data
- Export historical data into Cirrus Research's NoiseTools software for further analysis and reporting
- Self-System Integrity Check (SiC) for field calibration and over the air system updates
- Connectivity via Ethernet, WiFi, or 3G/4G LTE Modem*
- SIM pre-installed, can be enabled remotely whenever required
- Power over Ethernet (PoE) option

Available features may depend on your selected MyCirrus subscription. Bespoke models and system integration modules also available.

Weather monitoring

Adding the optional weather monitoring station enables to you get comprehensive data on rainfall, wind speed and direction, humidity, pressure, and temperature, sent directly to MyCirrus too.

*Modem options for a range of countries and network providers are available. Ask for more details if your preferred option is not listed.


MyCirrus cloud platform

MyCirrus is the platform used by Cirrus Research's cloud-connected noise measurement instruments. It allows you to view noise activity remotely across all your Quantum devices, giving you the full picture of noise impacts in the areas where you're monitoring, whether that's across just one site or a large geographical area.

Flexible subscription plans are available depending on your needs. No software download required.

View live and historical data

Quantum Outdoor communicates with MyCirrus, streaming data to it every second. This data is displayed as the live part of the cloud and can be viewed around the clock remotely from any device.

Historical noise data can be viewed when a set measurement duration is complete. Time history rates can be varied from 10 milliseconds to 1 second. This data is then stored on the MyCirrus cloud platform, along with any weather and any audio data recorded during the measurement period.
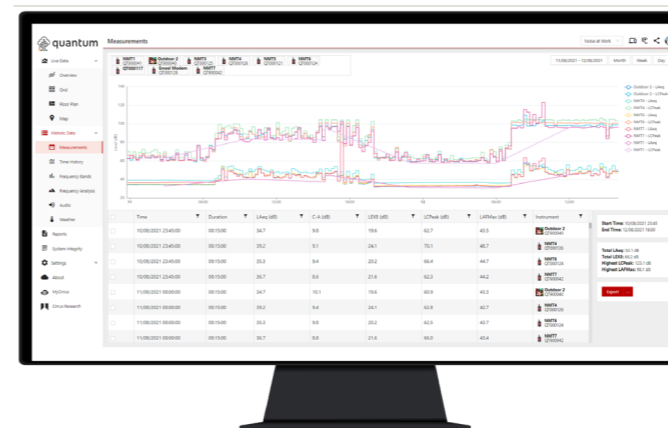

Set audio triggers and get noise event alerts

Numerous audio triggers can be created based on breaches of your pre-set conditions. When these conditions are met, Quantum Outdoor sends a notification and triggers an audio recording if you have configured it to do so.

These notifications can be sent by email, SMS text, webhook, or via the smartphone application developed to work alongside Quantum Outdoor. Audio recording is triggered (with pre-recording) and uploaded to the cloud when the measurement is complete.

Frequency analysis

With both 1:1 and 1:3 octave band data measured and stored in MyCirrus, you can further analyse your noise data to understand your noise issues, and better understand what remedial action may be required.
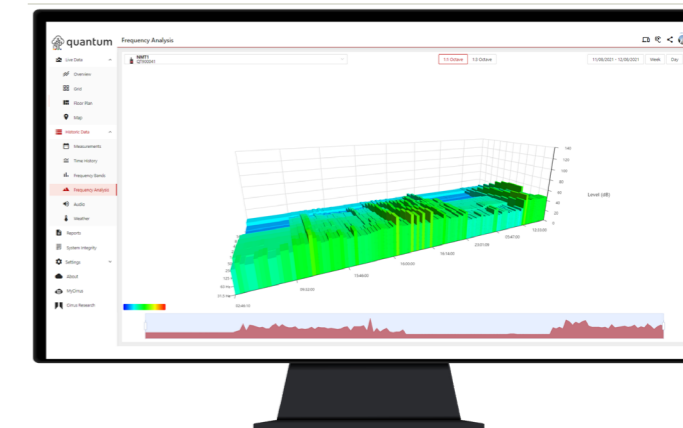

Reports

Create detailed noise measurements reports directly in MyCirrus. There are standard in-built reports available, together with user-definable options coming in a future release.

You can also export your data directly into our outstanding licence-free reporting software, NoiseTools, for further analysis and access to our comprehensive library of noise data reports.

All your data in one place

No matter whether you're monitoring one small area or several locations across a worksite, city or region, each individual Quantum noise monitor links up to your cloud account. You can view live noise data from all your monitors in one place, wherever you are and whenever you need to.

The map view allows you to see noise levels across multiple locations.
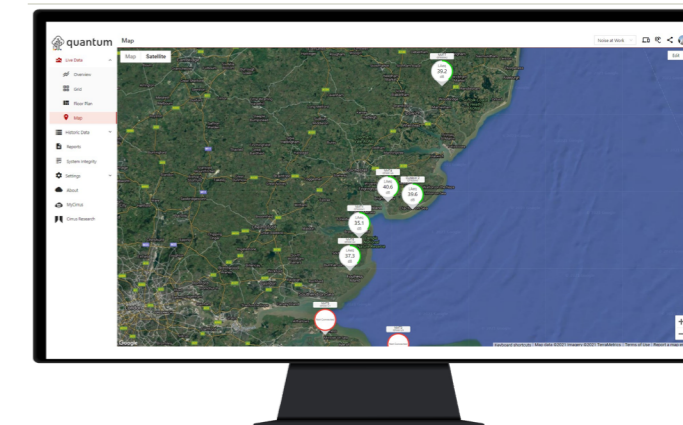
Product Specifications

Acoustic standards

IEC 61672-1:2013 (Class 1)

IEC 61260:1995 (1:1 and 1:3 octave band filters)

ANSI S1.4 -1983 (R2006)

ANSI S1.43 - 1997 (R2007)

ANSI S1.11-2004 (1:1 and 1:3 octave band filters)

EMC

EN 61000-6-3:2007+A1:2011

EN 61000-6-1:2007

Environmental

Meets IP65

Microphone

1/2" MK:224 free-field pre-polarised electret

Total Measurement Range

20 to 140dB RMS in a single range

Noise Floor

<19dB(A) Class 1

Frequency weightings

RMS & Peak: A, C & Z measured in parallel

1:1 octave bands: 31.5Hz to 16kHz

1:3 octave bands : 6.3Hz to 20kHz

Time Weightings

Simultaneous Fast, Slow and Impulse

Time History Data Rates

User selectable 10ms, 100ms, 500ms, 1 sec

Live data rate

1 sec

Live data view

Noise at work (LAF, LAeq & LCPeak)

Environmental (LAF & LAeq)

Custom (LAeq, LCeq, LZeq, LAFMax, LASMax, LCPeak & LZPeak)

Measurement Control

User definable schedule measurements & user selectable 5min, 15min, 30min, 1hr repeat timers

Stored Values

LAeq, LCeq, LZeq, C-A, LAE, LEX8, LAFMax, LASMax, LCPeak, LZpeak, LAF1, LAF5, LAF10, LAF50, LAF95, LAF99, LAeqT1 & LAeqT2

1:1 octave bands: 31.5Hz to 16kHz

1:3 octave bands: 6.3Hz to 20kHz

Time history of 1:1 & 1:3 octave bands

Audio

Audio quality

Standard (16bit/16kHz)

High (24bit/48kHz)

Dimensions

200 x 850 x 122mm

(7.8 x 33.5 x 4.8")

Weight

5.0kg

(11lbs)

Integrators

User selectable dual integrators OSHA HC, OSHA PEL, MSHA HC, MSHA PEL, ACGIH, Custom A & Custom B

Moving average

User selectable 5min, 15min, 30min, 60min

System Integrity Check (SIC)

Three frequency single level charge injection 500Hz, 4KHz & 8KHz

Mounting

BK:901 wall mounting kit

Pole mount (standard option)

Power

PoE IEEE 802.3af-2003 37V - 57V DC 12V - 18V DC 1.5A

Power Consumption

<8w

Operating conditions

Temperature -10 to 50°C (operational)

-20 to 60 °C (storage)

Humidity up to 95% RH non-condensing

Network Connections

4G with 3G fallback factory fitted with industrial multi-network SIM

Ethernet

Dual band Wifi (2.4GHz & 5GHz)

Bluetooth

Product ordering codes

Class 1 Quantum Outdoor noise monitor (EMEA, APAC)	CR:920
Class 1 Quantum Outdoor noise monitor (NA)	CR:920-NA
Quantum Outdoor all-weather power supply unit	CU:920
Quantum Outdoor weather station	MO:901
Quantum outdoor wall-mounting kit	BK:901
Power over Ethernet (PoE) injector	CU:900