

# Quantum Indoor Cloud-Based Noise Monitoring

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



# Quantum Indoor

## Cloud-Based Noise Monitoring System



### What is Quantum Indoor?

Quantum Indoor is a powerful noise monitoring solution with built-in cloud connectivity. It is ideally suited for unattended indoor noise monitoring across a range of applications, including long-term occupational noise monitoring, identifying the source and type of noise and assisting in flagging up where control measures are needed. Quantum Indoor offers all the benefits of remote 24/7 noise monitoring 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 Indoor can send alerts and notifications to users using a variety of methods allowing you to take corrective action in real time. Simply plug-in, register, and connect to your MyCirrus account to get started.

### Applications

Unattended noise monitoring for indoor environments, such as:

- Factories
- Warehouses
- Music venues
- Theatres
- Stadiums
- Hospitals
- Educational establishments
- Office and call Centres

### Key features of Quantum

- Class 1 integrating noise level monitor – to IEC 61672-1:2013
- Cloud connectivity to Cirrus Research's unique MyCirrus cloud platform
- Simultaneous measurement of all key noise parameters
- 1:1 and 1:3 octave band filters enable deep analysis of noise type and source
- LAeq, LCpeak, LAF max, dose and statistical level (Ln)
- Connect multiple devices via the cloud to see the full picture of your noise impact
- Upload floor plans and site plans to see all your connected devices
- View live event data from your desktop via the cloud
- Get real-time SMS, email and App alerts based on user-defined noise level triggers
- Automatically uploads measurements from the Quantum to the Cloud for later review and analysis
- Upload and store historical data. Option to export historical data into Cirrus Research's NoiseTools software for further analysis and reporting
- Organisations and people allow the prime user to manage multiple users with differing levels of access
- Customisable data points to capture and display the data you need
- Ethernet connectivity
- Power by PoE (Power over Ethernet) with other connection options available

Available features may depend on your level of MyCirrus Cloud subscription selected.



### MyCirrus cloud platform

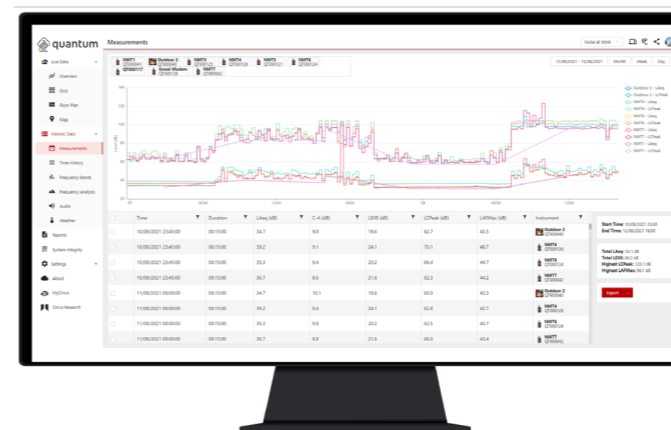
MyCirrus is the platform used by Cirrus Research's cloud-connected noise measurement instruments. It allows you to view noise activity remotely across all your Quantum devices, giving you the full picture of noise in the areas you are monitoring, whether that's across just one site or multiple sites.

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

### View live and historical data

Quantum Indoor communicates with MyCirrus, streaming live data every second. This data is displayed as the live part of the cloud and can be viewed 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 audio data recorded during the measurement period.



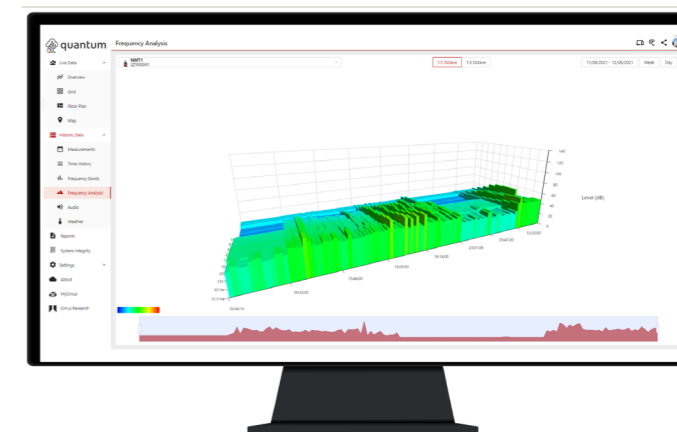
### Set audio triggers and get noise event alerts

Numerous audio triggers can be created based on breaches of your pre-set conditions. When these conditions are breached, Quantum Indoor 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 dedicated smartphone application, developed to work alongside Quantum Indoor. 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 levels and make more effective decisions on what remedial action needs to be taken as part of your noise reduction programme.



### 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 floorplan view allows you to see noise levels across your connected devices.



# Product Specifications

## Applicable Standards

IEC 61672-1:2013 (Class 1 - CR:901)  
 IEC 61672-1:2013 (Class 2 - CR:900)  
 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

## Microphone

MK:224 pre-polarized

## Measurement Range

20 to 140dB RMS in a single range

## Noise Floor

<19dB(A) Class 1  
 <22dB(A) Class 2

## 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

10ms, 100ms, ½ sec, 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 & LZPe

## 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

127 x 360 x 66mm

## Weight

1.2kg

## 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

## Mounting

DIN rail (standard)  
 Wall mount  
 Pole Mount  
 Tripod mount

## Memory

4GB Standard,30 days of measurement data or 24 hours of standard audio

## Power

PoE IEEE 802.3af-2003 37V-57V

## Power Consumption

Approx. 5w

## Operating conditions

Temperature -10 to 50°C (operational)  
 -20 to 60 °C (storage)  
 Humidity up to 95% RH non-condensing

## Network Connections

Ethernet  
 Dual band Wifi (2.4GHz & 5GHz)  
 Bluetooth

# Product ordering codes

Class 2 Quantum Indoor noise monitor	CR:900
Class 1 Quantum Indoor noise monitor (with microphone preamplifier extension cable)	CR:901
Quantum Indoor mounting clamp	CM:900-1
Quantum Indoor tripod mounting bracket	CM:901
Quantum Indoor microphone windshield	UA:900
5m microphone preamplifier extension cable (CR:901 only)	ZL:205
10m microphone preamplifier extension cable (CR:901 only)	ZL:210