



# ORION

## Smart Vibration Monitoring Terminal

Always keep an eye on vibrations



REDUCE YOUR ENVIRONMENTAL IMPACT



# ORION

## Smart Vibration Monitoring Terminal

With the growth of urbanisation and continual expansion and development of cities around the world, new construction sites arise daily. These sites bring increased noise and vibration, with adverse effects on communities' health, well-being and peace and quiet.

Construction vibration also threatens the physical integrity of adjacent structures and buildings. The negative impact includes structural damage like cracks, movement or collapse, and secondary impairment to sensitive equipment like computer systems and laboratory instruments.

To mitigate the risk of these potential issues, it is essential to implement vibration monitoring of construction projects from inception.

**ORION** is the newest addition to ACOEM's range of state-of-the-art vibration monitoring and measuring solutions for management of man-made activity.

Building on the best features of its **DUO** and **CUBE** systems, **ORION** offers unrivalled monitoring performance and sets a new benchmark for the vibration monitoring industry.

**ORION** is fully integrated into the **ACOEM** ecosystem and utilises the same web-based interface, **ACOEM WebMonitoring** online services and **dBTrait** software as the rest of the product range.



Demolition sites



Construction sites



Pile driving



Explosions (mines, tunnels)



Tunneling



Impact of transport (road, rail)



# With ORION monitor vibrations differently

**ORION** offers an unparalleled, all-in-one vibration monitoring system with integrated sensor, 3G modem, Wi-Fi and GPS. It is robust, waterproof, easy to configure and use, and features seven measurement channels and smart integration of vibration standards.

## ROBUST AND HARD-WEARING

Strong casing  
IP65 waterproof level  
Robust connectors  
Battery Life of 30 hours

## EASY TO CONFIGURE

QR code to log on  
Mobile application  
Web interface



## METEOROLOGICAL PERFECTION

3 internal vibration channels  
3 external vibration channels  
1 pressure microphone channel  
5 integrated standards  
(including DIN 4150-3 and BS 5228-4)  
Smart alarms thresholds



## EASY TO INSTALL

Spirit level  
Can be mounted horizontally or vertically  
Automatic start-up of measurements

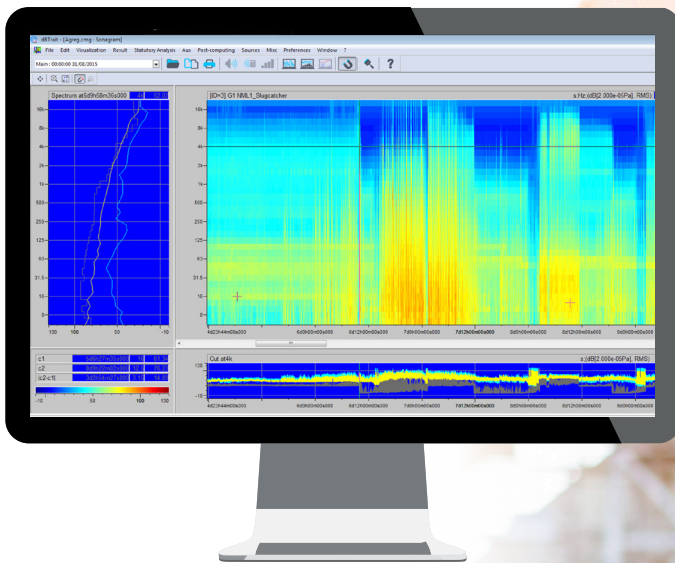
## ALWAYS CONNECTED

3G modem  
Wi-Fi  
Ethernet  
GPS  
Advanced Push mode  
HTTP commands for integrators

**With a view to improving productivity in the field, ACOEM offers a comprehensive, coherent and metrologically flawless acoustic and vibration monitoring solution.**

# With dBTrait analyse your data as an expert

Measurement data collected using **ORION** can be analysed using **dBTrait** software. Used by thousands of consultants around the world, this software is the industry standard and offers all the features required to maximise noise and vibration data.



- Display of acoustic, vibration and meteorological data
- FFT analysis of recorded signals
- Comparison between different channels
- Sonogram
- PPV/Dominant frequency graph
- Multi-spectrum display
- Reporting including compliance with vibration standards.

**In a class of its own**



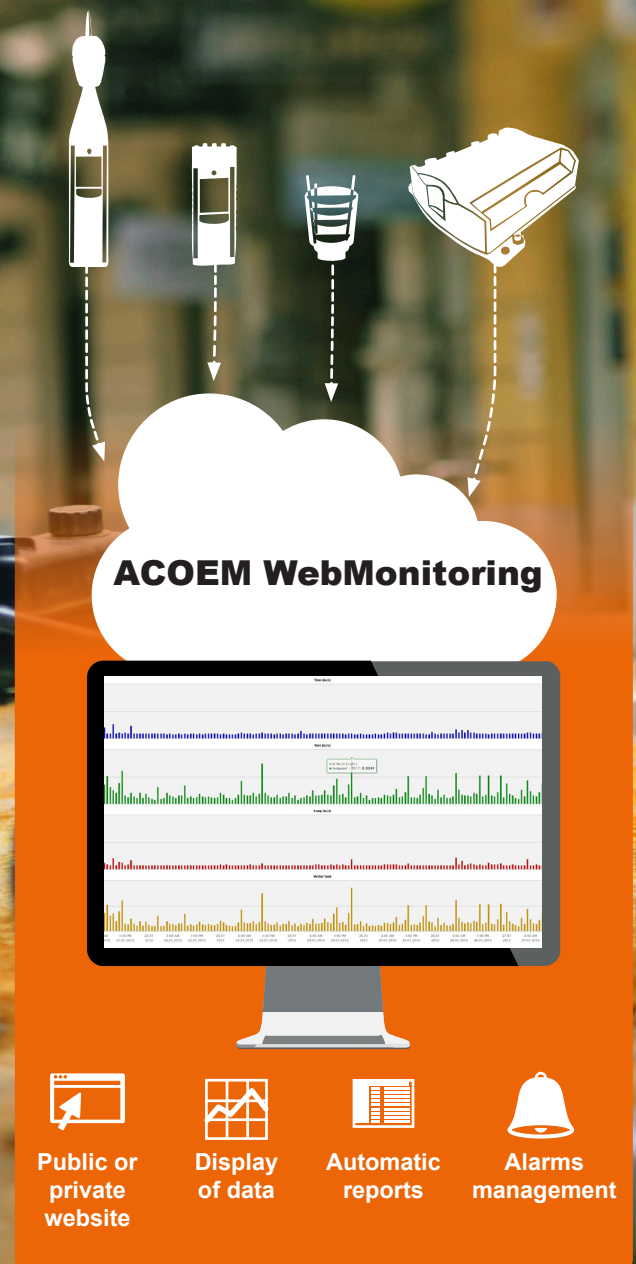


# With ACOEM WebMonitoring management of monitoring is made easy

Like DUO and CUBE, ORION interfaces with ACOEM WebMonitoring online services to simplify monitoring and project management.

- Data storage and security
- Web interface
- Display of acoustic, vibration and meteorological data
- Real-time and offline modes
- Information displayed on an interactive base map
- Various configurable graphs
- Management of alarms activity
- Monitoring of SoH (State of Health) of the terminals
- Manual and automatic reports.

**ACOEM WebMonitoring is cost-effective, reliable and versatile,** freeing users from technical constraints and enabling them to focus on data analysis.





## An entire ecosystem to enhance productivity

All **ACOEM** products are designed to increase productivity and are based on shared operating principles. They work on the same data processing software platform and have the same accessories.



**CUBE** is the most versatile noise monitoring terminal on the market. It can be protected in a case or mounted in a cabinet and is compatible with the **ACOEM WebMonitoring** range or can be easily integrated with other applications.



**FUSION** is the first hyper-connected sound-level meter that allows you to envisage new working methods. It offers a simple solution to test conformity to construction, environmental, health and safety requirements.



**DUO** is completely modular and offers users a wide range of options to switch from sound-level meters to monitoring stations without needing to change equipment.



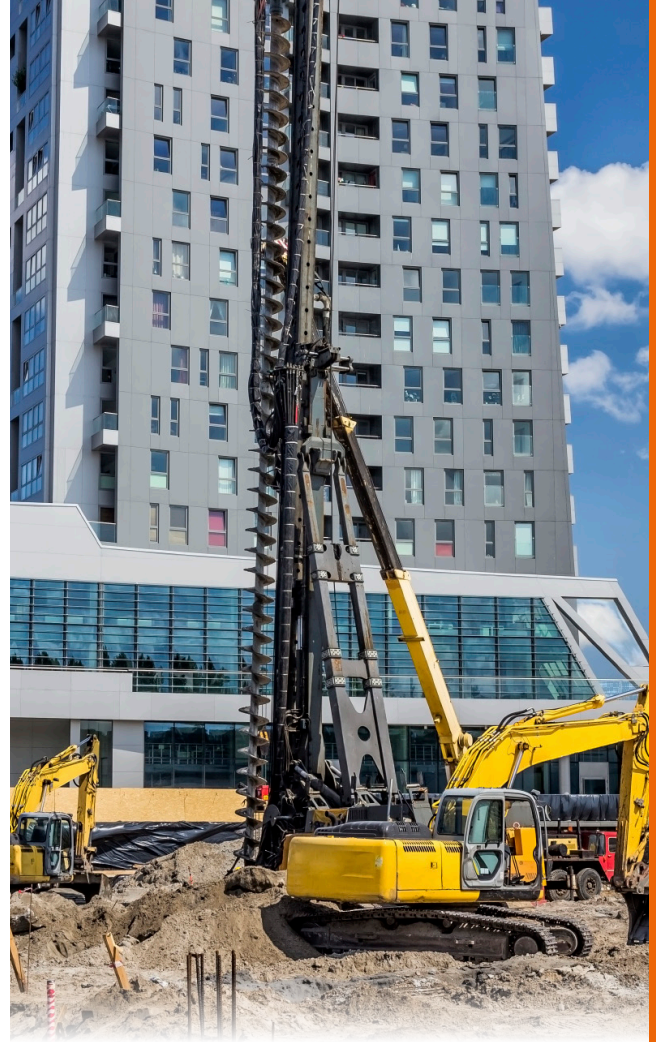
**ACOEM products** interface with weather stations. Meteorological data is stored and transmitted in the same way as noise and vibration data.



**dBTrait** is the high-performance software program for post-processing of noise, vibration and meteorological data acquired using all **ACOEM** instruments.



**ACOEM WebMonitoring** is a simple and effective cloud-based solution for the management of noise and vibration monitoring projects. It features data storage; data security; online display of measurements via a website; and alarms management.



### About ACOEM

#### Reduce your environmental impact

In today's fast-moving world, the environment is increasingly impacted. The ACOEM Group is committed to sustainable development and help companies and public authorities limit their environmental impact by offering products and services that:

- Prevent and control air, noise and vibration pollution
- Increase the productivity and reliability of industrial machinery
- Contribute to the development of effective, robust & noiseless products
- Protect soldiers, sites and vehicles in military theaters of operation

The ACOEM Group is based in Limonest, France, and has 17 subsidiaries and offices around the world. The Group generates an annual turnover over €100 million and currently employs 750+ people globally.

For more information, please visit our website at [acoem.com](http://acoem.com)