



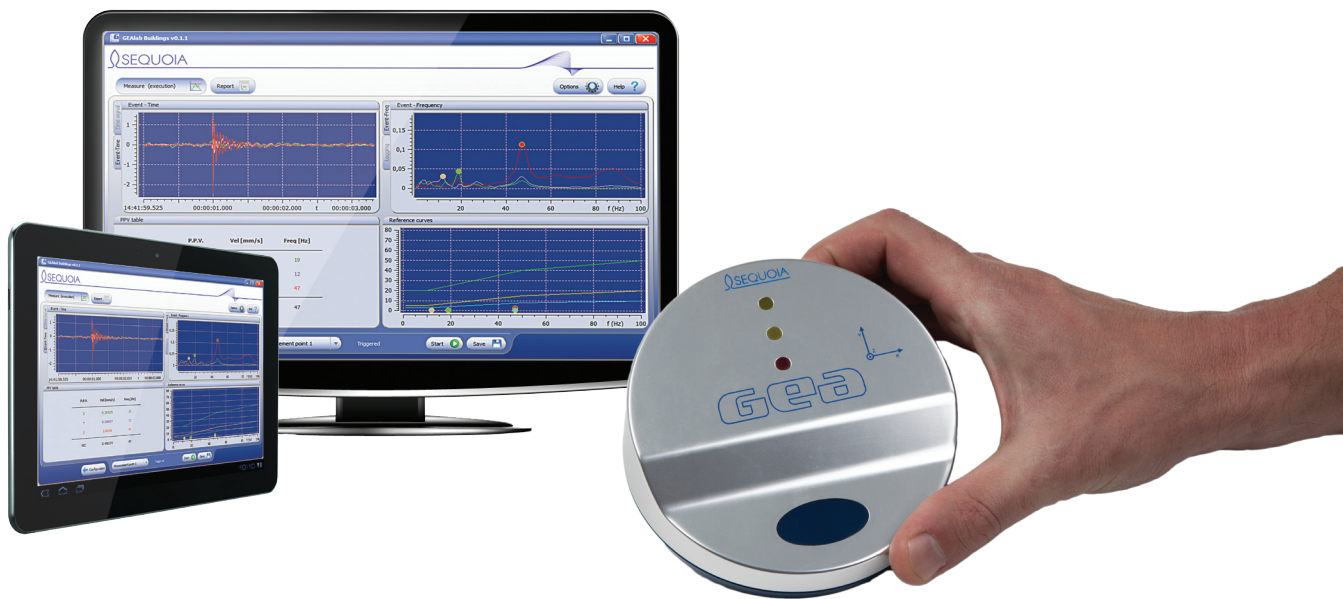
GEA

GROUND AND BUILDING VIBRATION

 SEQUOIA

GEA, the new integrated sensor for vibrations measurement within civil environment.

Developed using MEMS technology, conforms DIN 4150-3 for evaluation of building structural damage due to vibrations exposure.

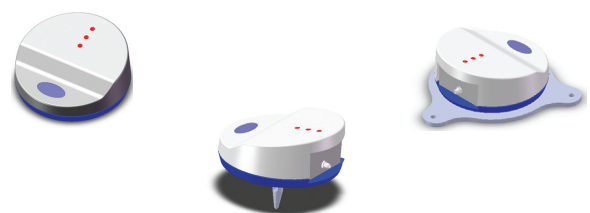


Not just a sensor, but a complete system for vibration to perform vibration measurement and analysis

Within the instrument, together with tri-axial low-noise MEMS sensor, are integrated all the components needed for powering and conditioning signal, including the digital conversion (24 Bit A/D).

Thanks to this feature the solution is unique within the civil vibration market. It allows economics savings, optimization in term of measurement preparation and execution and an higher level of flexibility and scalability.

The digital sensor allows for direct transmission of data to the PC, where the acquisition and analysis software is installed, without the need of any other specific hardware. Connection cables, even long, are far cheaper than traditional cable since there is no more need for high protection shield against electromagnetic noise.

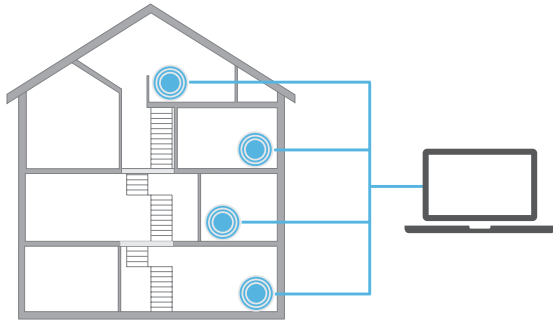


MEMS Sensors, allowing measurement of DC components, permit electronic alignment of the sensor avoiding therefore the boring needs of manual leveling.

Flexibility

GEA vs. traditional system based on acquisition board

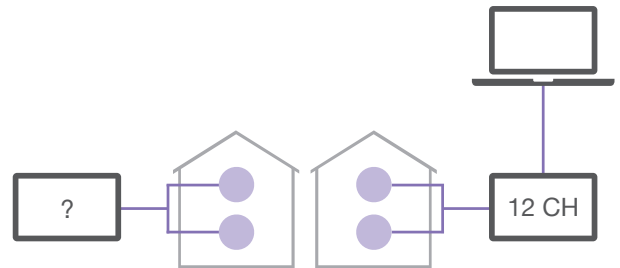
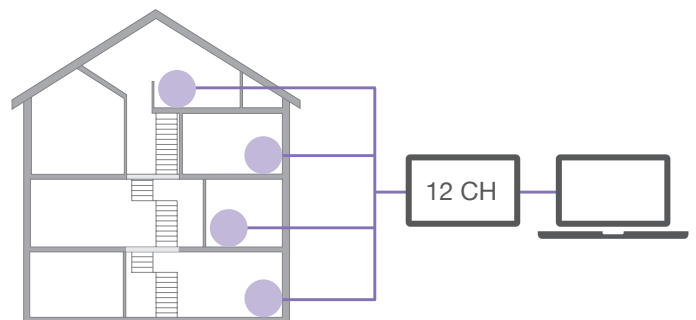
The digitalization of data within **GEA** lead to a simpler measurement chain.



GEA flexibility gives the user the possibility to use sensors independently in different test site ensuring the highest system versatility.



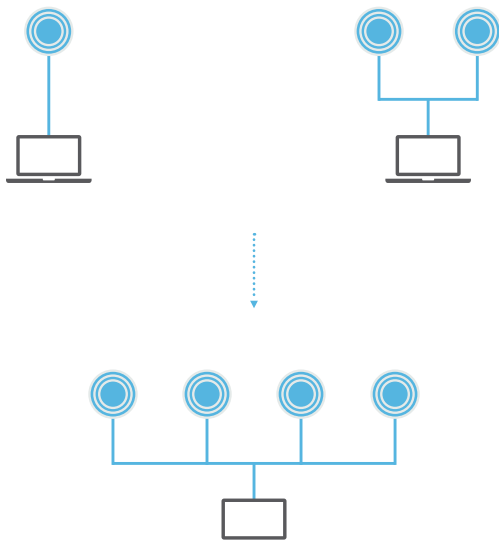
TRADITIONAL SOLUTIONS need additional hardware and software to manage different kind of measurement.



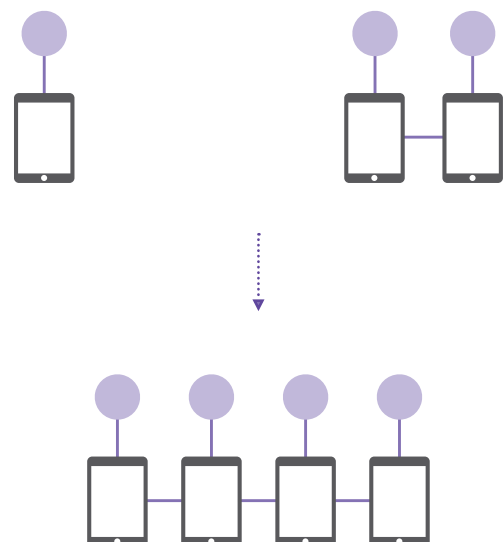
Modularity

GEA vs. Traditional handheld system

GEA allows greater modularity in terms of system growth.



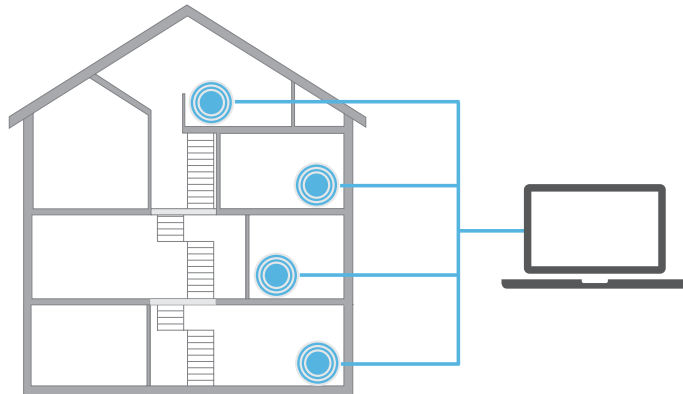
With **TRADITIONAL HANDHELD SYSTEM** or **VIBROMETER** the entire measurement chain need to be duplicated. Furthermore, managing several system at the same time require dedicated cabling.



Multi Point Measurements

GEA gives significant advantages for the execution of multipoint measurement within a building (E.g. Foundation, Roof, other floors) such the utilization of more economic cables and direct management via PC.

without additional specific hardware



WIFI solution

GEA short setup and measurement time

Thanks to the additional Wifi module, at a cost comparable to that of 30/60 m analogic cable.



Software

The software has been developed in order to drive the user, in simple and intuitive manner, through measurement execution in conformity to standards.

Settings

Few simple steps to set the measurement, describe through user defined field, managing information related to different sensors and using the appropriate reference or tolerance curves as defined by national and international standard or user defined.



Short term measurement or single shot

Different kinds of acquisition mode are provided within the software such as the evaluation of single event. This modality, common for evaluation of impulsive vibration event, presents real time to the user the entire time history and spectral analysis of the event, shows PPV result in tabular view and compares with the chosen reference curve.



Continuous measurement

For long term measurement the software allows not just to record at user defined time interval the peak and rms values, but, by defining appropriate trigger level to analyze, save and retrieve information of any single event exceeding defined vibration level.



Basic Kit

GEA is supplied complete of:



- > GEA Tri-axial digital MEMS Sensor
- > GEA-Lab Acquisition and data analysis software
- > CABLE Standard, 3 m*
- > ACCESSORIES Feet and mounting plate
- > CALIBRATION Accredited calibration certificate
- > CASE IP67 case

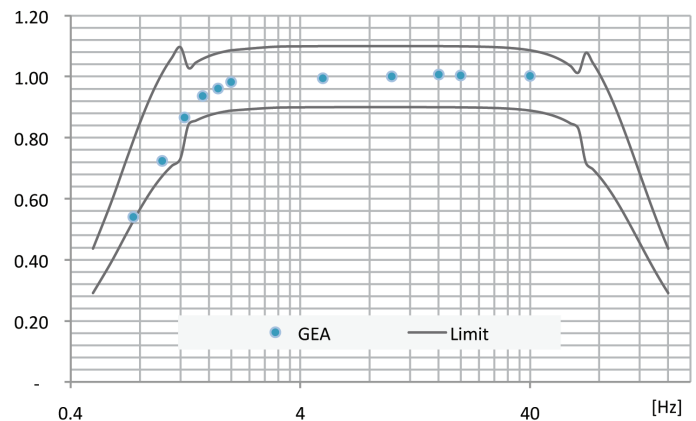
* Standard Extension cable of 4, 10, 18 and 27 meter are available. Longer cable can be supplied following specific customer request.

Technical Specifications

Sensors:	MEMS, Tri-axial
Dynamic Range:	100 dB
Minimum Level:	0,05 mm/s
Dynamic Range ¹ :	0,8 – 100 Hz (315 Hz)
Protection Grade:	IP65
Measured Parameter:	P.P.V, P.C.P.V
Dimensions:	ø 115 mm x h 35 mm
Weight:	350 g
Shock Resistance:	5000 g

¹ Selectable via software

FREQUENCY RESPONSE



Test performed at INRIM, primary Italian laboratory for calibration.
Limit curve as per DIN 45669-1



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