



GEA24 Plus

Modular seismograph - 24 channels or more





THIS BROCHURE IS INTERACTIVE

Some elements of this document **refer to in-depth pages** on the PASI website.

 [DISCOVER MORE](#)

GEA24 Plus

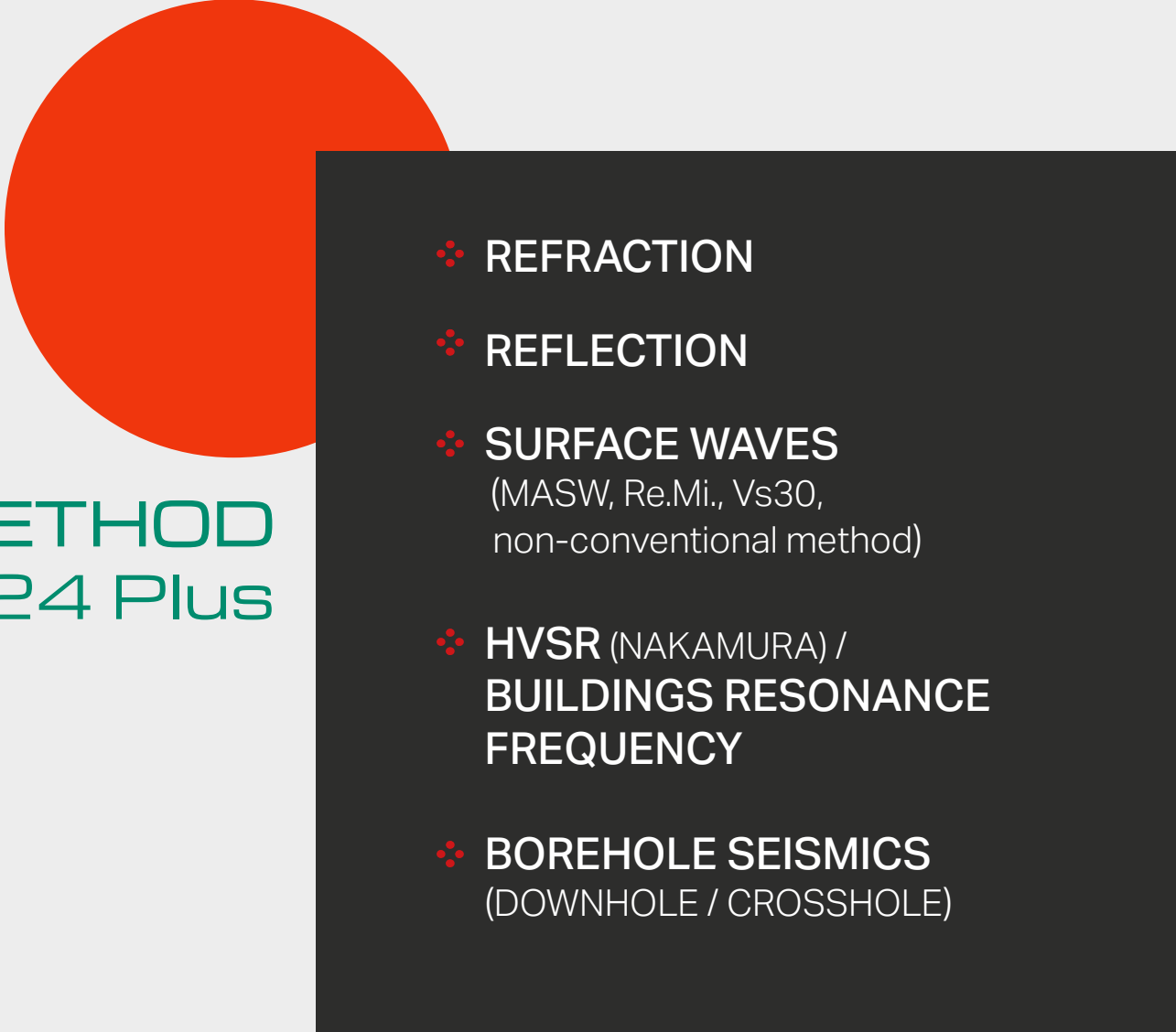
is a modular system for seismic data acquisition.

Each unit (24 channels, 24 BIT) can be integrated into a multichannel configuration controlled by a single external PC*.

Thanks to its great flexibility, it can be used for all applications, allowing you to design your seismic lines exactly as you need

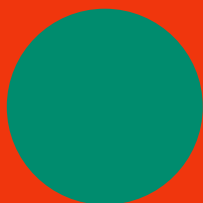


*not included in the supply



METHOD GEA24 Plus

- ❖ **REFRACTION**
- ❖ **REFLECTION**
- ❖ **SURFACE WAVES**
(MASW, Re.Mi., Vs30,
non-conventional method)
- ❖ **HVSR (NAKAMURA) /
BUILDINGS RESONANCE
FREQUENCY**
- ❖ **BOREHOLE SEISMICS**
(DOWNHOLE / CROSSHOLE)



NEVER HAVE
ENOUGH CHANNELS?

DISCOVER THE
GEA SYSTEM
SOLUTIONS

GEA SYSTEM

Two or more **GEA24 Plus** units can be daisy-chained and connected to the same external PC through the **GEA PowerLink** module and the **GEA Bus** signal cables. The dedicated acquisition software, **GEA Manager**, detects all the components in the GEA System and identifies them by their serial number. Step by step, GEA Manager will guide you in designing the spread geometry according to your seismic cables (12 or 24 channels) and the geophone sequence you are using in the field. GEA PowerLink enables the connection between all linked GEA24 Plus units and the PC via a USB cable. It also powers the system through an external 12V battery (not included in the supply).

GEA SYSTEM

The basic elements



GEA24 Plus



GEA Powerlink



GEA Bus - Signal cable 1m



GEA Bus - Signal cable 65m



GEA Bus - Signal cable 130m

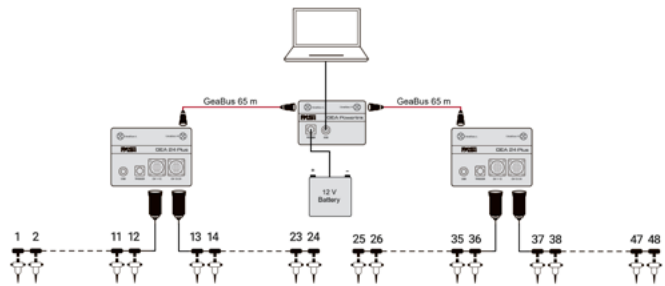


Power cable



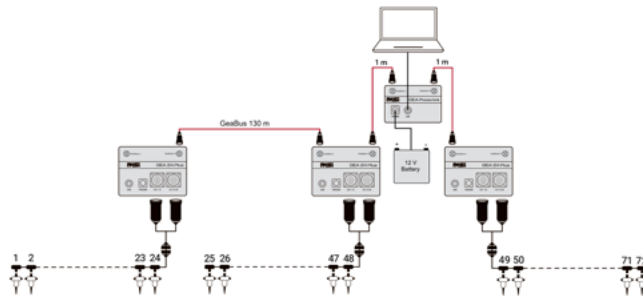
End caps

Some examples of GEA SYSTEM



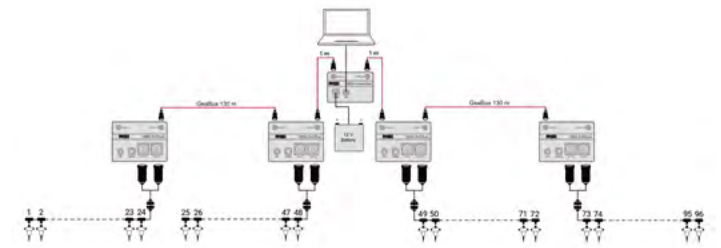
48 geophone configuration

4× 12-channel cables, 5 m spacing – with 2× GEA24 Plus connected to a PC via GEA PowerLink and 2× 65 m GEA Bus signal cables



72 geophone configuration

3× 24-channel cables, 5 m spacing – with 3× GEA24 Plus connected to a PC via GEA PowerLink, 1× 130 m GEA Bus signal cable and 2× 1 m GEA Bus signal cables



96 geophone configuration

4× 24-channel cables, 5 m spacing – with 4× GEA24 Plus connected to a PC via GEA PowerLink, 2× 130 m GEA Bus signal cables and 2× 1 m GEA Bus signal cables

**some configurations may require a second GEA PowerLink*



ACCESSORIES GEA24 Plus



Seismic Cables

Full range of seismic cables for refraction/ reflection, 12 or 24 channels



Geophones

In standard shell, 75mm steel rod, 1m cable terminated with split spring connector (single clip)



3DLG-2 - 3C land geophone

3C land geophone for MASW, HVSR and determination of Buildings Resonance Frequency

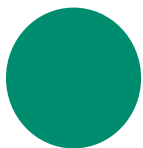
GFA 3D borehole geophone

3C borehole geophone for down-hole and cross-hole surveys with mechanical-pneumatic clamping system (available with 50 or 100m of cable graduated in meter)



GFA spacing assembly

it allows the use of 2xGFAs together in the same borehole @ 1m vertical spacing.



ACCESSORIES GEA24 Plus



❖ **CHE - Crosshole energizer**
Specially designed for small-scale crosshole surveys, this compact hammer can be used to generate both P and S waves (available with 50 or 100m cable)

❖ **Starter Geophone**
Standard version with 10Hz vertical geophone



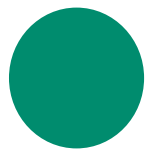
❖ **Piezoelectric Starter**
Hammer Switch with cable

❖ **Trigger Extension Cable**
Shielded cable on reel, length 130m, for starter geophone / hammer switch



❖ **Radio trigger**
Versatile, user friendly instrument, designed to "trigger" the acquisition of the seismograph via radio





ACCESSORIES GEA24 Plus



Sledge
Hammer



Striking
Plate



Horizontal wave
Striking plate



Isotta Seismic energizer

It can generate type 'p' (longitudinal) and type 's' (transversal) waves



GPS Option



Multitrigger Box

This accessory allows the trigger synchronization between two separate acquisition units

TECHNICAL SPECIFICATIONS

GEA24 Plus

5-YEAR WARRANTY

Number of channels	24 ch + trigger (AUX ch) Multiple units can be daisy-chained within the GEA System
Data Conversion	24-bit true Sigma-Delta Analog-to-Digital Converter (compatible with analog geophones of any resonance frequency)
Sampling Interval	<p>Single acquisition (active and passive):</p> <ul style="list-style-type: none"> -from 1 to 6 chs : up to 31.25 microsec/32000 Hz -from 7 to 12 chs : up to 62.5 microsec/16000 Hz -from 13 to 24 chs : up to 125 microsec/8000 Hz <p>Continuous acquisitions (passive):</p> <ul style="list-style-type: none"> -from 1 to 3 chs : up to 500 microsec/2000 Hz -from 4 to 6 chs : up to 1 millisec/1000 Hz -from 7 to 12 chs : up to 2ms /500 Hz -from 13 a 24 chs : up to 4ms /250 Hz
Acquisition length	<p>27500 samples @ 24 chs (+aux)</p> <p>174500 samples @ 3 chs (+aux)</p> <p>Unlimited samples for continuous acquisitions</p>
Preamp. Gain	LOW (0dB) - HIGH (52dB), software selectable
Stacking	Unlimited number of stackings
Input impedance	2MOhm // 22nF
Dynamic Range	144dB (system); >117db (instantaneous, measured @1ksps)
Distortion	0.007% @16kHz

Technical specifications subject to change without notice

TECHNICAL
SPECIFICATIONS
GEA24 Plus

5-YEAR WARRANTY

Bandwidth -3dB Bandwidth +/- 0.1dB	From DC to 6.8kHz@32ksps - from DC to 0.21 kHz@1ksps From DC to 3.5 kHz@32ksps - from DC to 0.11 kHz@1ksps
Filters	Low Pass:125-200-500-1000Hz High Pass: 10-20-30-40-50-70-100-150-200-300-400H
Notch Filter	50-60Hz + harmonics
Trigger	Normally closed contact, normally open contact (e.g. with explosive), analog signal (starter geophone, hammer switch), TTL triggering. Trigger sensibility adjustable via software
Trace Display	Wiggle-trace / variable area
Noise-monitor	All channels + trigger: real-time display shown as bars (with indicator of maximum noise level)
AUX channel	1x (for trigger or any other input signal)
Geophone Test	Noise, Impedance, Sensitivity, Frequency, Damping
Communication interface	1x USB 2.0 to external PC (not included)
Data format	SEG2 (other formats available on request)
Power supply	5VDC from USB, 0.25A
Operating/Storage Temp.	from -30°C to + 80°C
Dimension and Weight	27cm x 24cm x 10,5cm - 3 kg Shock-resitant PELI CASE IP67
Humidity	80% relative humidity, non condensing

Technical specifications subject to change without notice



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