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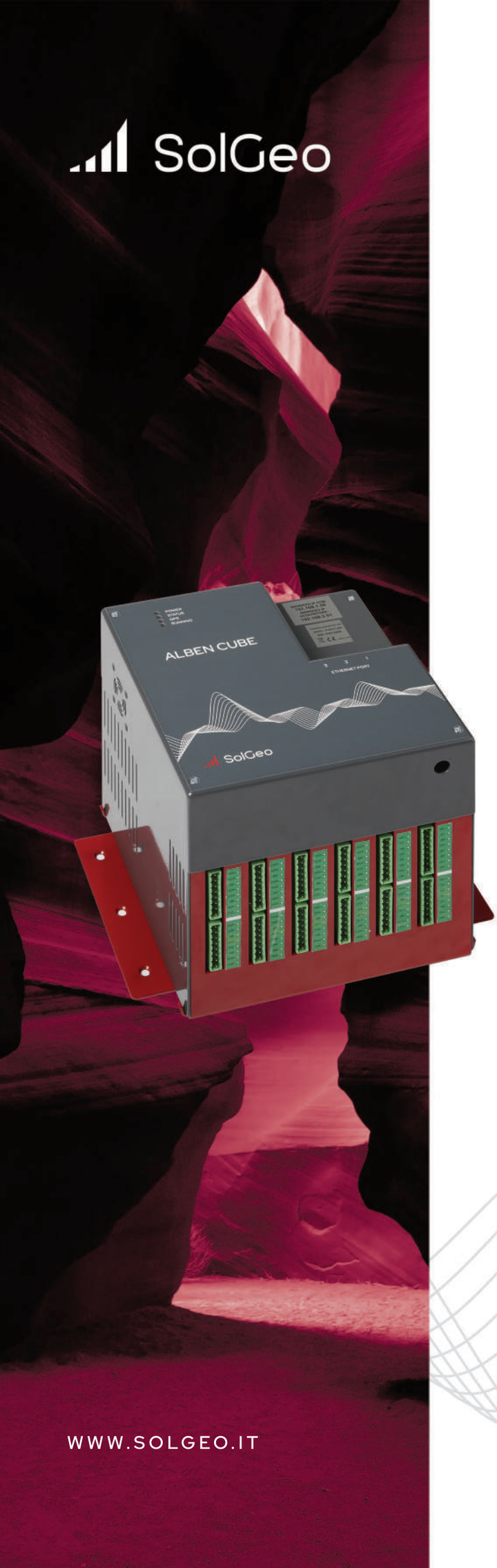

ALBEN CUBE DIGITAL ACQUISITION SYSTEM

The Alben Cube is a multi-channel digital acquisition system (up to 36 channels) specifically designed for fixed installations for long-term monitoring of seismic events on civil, industrial and monumental works.

The digital acquisition system Alben Cube allows you to acquire up to 36 channels in multiples of 6, placed in a single cabinet with wall or floor mounting.
The communication system via LAN cable to cover distances up to 300m; the connection to the system from remote can be made via 4G modem, fiber optic, WiFi and more on request.
The configuration is done through a simple WEB interface without the need for dedicated applications.

APPLICATION

- Civil and industrial long-term monitoring, dynamic monitoring of viaducts and implants

WWW.SOLGEO.IT

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TECHNICAL CHARACTERISTICS

Input channels	Up to 36 channels
Configuration	Standalone or multi-station network
Synchronization	Internal RTC synchronized via GPS or via LAN by using UTM module, simultaneous sampling
Triggering mode	Threshold level and/or STA/LTA, selectable for each channel
Recording mode	Continuous acquisition with ring buffer, possibility to set event or programmed acquisitions. Selectable pre/post-trigger length. Recording of peak (Min-Max) and average (RMS) values, according to DIN 4150 part II, internally selectable from 10 to 100s.
Data storage	Recording of peak (Min-Max) and average (RMS) values, according to DIN 4150 part II, internally selectable from 10 to 100s.
Diagnostics	temperature, sensors test, power supply voltage, anti-intrusion
Power consumption	About 3.5W each 6 channels
Communication	Ethernet long range (300m) via cable or optionally via 4G modem or WIFI.

24 BIT MODULE

Converter	Individual 24-bit Sigma/Delta for each channel, with DSP each 6 channels, integrated digital antialiasing filter
Channels	Up to 36 channels
Input level	Differential input +/- 10V; +/- 2.6V optional
Sensor test	Positive or negative test signal
Sampling	Selectable from 10Hz to 1kHz
Bandwidth	DC - 400 Hz
Dynamic range	130 dB@100Hz
Programmable gain	1-2-4-8-16-32-64-128 independent for each channel
Anti-aliasing filter	FIR digital filter. Frequency attenuation >130dB (½ sampling rate), cut-off frequency 0.4 of sampling rate.

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EXTERNAL INTERFACES

GPS	External GPS for time synchronization, RS-422 interface
Power supply	10 VDC to 18 VDC (automatic turn OFF <10,8 V, turn ON >12,0V with battery safe function enabled). 120/240 VAC adapter can be provided as optional. The cabinet provides the possibility of housing buffer batteries with autonomy up to 24 hours (depending on the type of sensors connected)
Seismic compatible sensors	Seismometers, mems and force-balanced accelerometers, geophones, and other sensors with voltage output
Other sensors	4-20mA output and IEPE sensors (require optional modules)
Comm. interfaces	Ethernet port (4G or WIFI optional)
Other interfaces	Digital inputs/outputs.

PHYSICAL CHARACTERISTICS

Cabinet	Alben Cube acquirer in metal cabinet, typical configuration provided in outdoor cabinet with IP65 or higher)
Operating temperature	-20°C / +70°C
Humidity	0-100% non condensed
Dimension (LxWxH)	205x205x205mm
Weight	5,7 Kg (36 ch configuration).