

# ABX ACCELEROMETER

**ABX Accelerometer compact and reliable ideal for the study of seismic events and structural monitoring of large works through arrays of sensors.**

ABX is a high-performance accelerometer that incorporates three force-balanced accelerometer sensors; it can record the high-resolution seismic signal to USB memory devices. It offers several interconnection services as well as the necessary seismic communication protocols such as SeedLink for real-time data transmission to popular data acquisition software.

ABX is excellent for temporary open field networks, local area networks, structural monitoring, dam monitoring, sensor arrays, aftershocks studies.

With a set of sophisticated triggering algorithms, it can also work in network with other units in order to avoid false detections and at the same time not to miss any transient.

From the control panel via WEB browser it is possible to control the device in an easy and fast way.

Customizations are possible both to the hardware and to the management software.

## APPLICATIONS

- Long-term monitoring on large structures, dams, monuments
- Monitoring requiring higher sensitivity



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## TECHNICAL CHARACTERISTICS

Power supply	10-36Vdc; consumption: 3.2W @ 13.8V with GPS, ethernet and data writing active
Number of channels	3 channels at 24 bit ( $\Sigma\Delta$ ) 144dB with anti-aliasing
Sensitivity	238 ng/count with +/-2g full scale sensor
Sampling	1, 10,20,50,100,200,250,300,400,480,500, 600,800,1000,1500 Hz
Real Time Clock	Synchronized by GPS +/- 10ppm -20/+70°C (+/- 40ms with respect to UTC)
GPS antenna	external with 10mt cable and BNC connector
GPS functions	accuracy < 1ms, coordinates reading, altitude, status
Mass storage	USB pen-drives, with EXT2 file system up to 8 Terabytes
Data format	GSEcm6, GSEint, SAC, SAF, miniSEED, SEG2
Data interfaces	Ethernet 10-100 and RS232
Logging	continuous, triggered (STA/LTA, amplitude, Ip voting)
Case	aluminum, IP68, treated against corrosion and powder
Dimensions	205x170x107mm, weight about 5kg
Operating temperature	-20/+70°C
Anchoring	with central fixed point and three adjustable feet
Control panel	16x2 LCD display; three keys to monitor status and setup
Software	SeedLink, ModBus, FTP, SSH, Seisan, Earthworm, SeiscomP

## SENSORS

Accelerometers	Triaxial Pure Force Balance with fixed gain (+/- 2g standard) or programmable by +/- 4, 2, 1, or 0.5g, with orthogonal sensors (Z,Y,X); no need of masses blocking
Dynamic range	sensor cell >165dB, system >140dB
Bandwidth	DC-100 (standard), DC-200 (optional)
Transverse axis detection	<= 0.1%
Linearity	<= 0.02% of full scale
Instrumental noise	< 20 ng/ $\sqrt{\text{Hz}}$
Functional check	test pulse applied in the feedback circuit
Offset compensation	by software via various options from web control panel

**Contact now your  
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