



# X820S

**Touch screen display** **Integrated monitor**

**Integrated battery** **24 bit**

## Seismograph 24 - 96 channels - 24 bit

Top-range seismic/accelerometric digitizer equipped with 24-48-72-96 embedded channels for active and passive seismic surveys, dynamic investigations and buildings dynamic studies. X820S basic configuration integrates 24 channels and can be expanded with 24 channels modules, without external boxes, up to maximum 96 integrated channels. Instrument has a PC with 10" monitor and operative system Windows 10. It is possible to record signals coming from velocimeters or accelerometers. Management of all settings, acquisition parameters, recording and visualization of recorded data, are performed sequentially and in an intuitive manner by means of the operative system installed on the instrument, which includes also a guide with step by step instructions for the realization of the most common surveys. High flexibility together with high dynamic range make X820S the ideal solution for every kind of active and passive seismic survey: surface seismic investigations such as Refraction, Reflection (P and S waves), M.A.S.W. , Re.Mi. , E.S.A.C., bore-hole surveys such as Down Hole and Cross Hole, stand-alone passive station H.V.S.R. and vibrational monitoring. With particular regards to seismic methodologies, 24 channels module allows the use of a single cable with 24 takeouts that, together with integrated battery pack, reduces the number of accessories to bring on site.

<b>Metodologie</b>	
Refraction Seismic	
Reflection Seismic	
Seismic Down-Hole/Cross-Hole	
M.A.S.W.	
Nakamura Method, HVSR, H/V	
Dynamic surveys on structures	
Re.Mi / ESAC	
Seismic Tomography	

<b>Generali</b>	
Number of channels	24 up to 48 - 72 - 96

**Generali**

Power	internal lithium ion battery pack 11,1V - 10,4Ah/115W
Acquisition medium power consumption	1,5 A
Environmental conditions	Temperature (°C):-20 a 80; Humidity (RH): 0-90%
Dimensions	cm 40 x 39.5 x 15.2
Weight	6 kg
Case	Polypropilene, automatic pressure valve, IP67
Connections	USB, LAN
Monitor	TFT-LCD capacitive 10" touch-screen
GPS	Yes
HS code	90158011

**Acquisizione**

A/D converter resolution	ADC Delta-Sigma @24 bit (Fc max 50000 Hz)
Band width	0-25000Hz / selectable Low Pass Filter max.2000Hz
Dynamic range	128 dB
Maximum distortion	0.0005%
Common mode rejection	110 dB at 60 Hz
Diaphony	-128dB at 20 Hz
Anti-alias filter	-3dB, 80% of Nyquist frequency, -80dB
Maximum range of inlet signal	+/-1.25V
Input impedance	39 KOhm
Amplificator noise treshold	1 $\mu$ V

## Generali

Sampling rate	68,129, 263, 53,1053, 2193, 4386, 8772,10526,13158,17543, 26315, 52648 Hz
Sampling interval	14 msec, 6.1 msec, 3.8 msec, 1.8 msec, 0.94 msec, 456 $\mu$ s, 228 $\mu$ s,114 $\mu$ s, 95 $\mu$ s,76 $\mu$ s, 57 $\mu$ s, 38 $\mu$ s,18.9 $\mu$ s
Digital filters	Selectable from STNET managing app
Geophone tests	automatic check to identify interruptions of cables or short circuit geophones
Trigger	positive, negative with threshold regulated through software
Pre-trigger	Selectable up to 6255 campioni.
Data format	SEG2

