

Department of Earth and Environmental Science
K.S.K.V Kachchh University
Mundra Road,
Bhuj-Kachchh. PIN: 370001
Phone (O) :(02832) 235021

SPECIFICATIONS FOR THE INSTRUMENTS

We are inviting Tenders/Quotations for the purchase of Geophysical instrument City Shark-II Seismic Noise Recorder, Sensors and data processing softwares to be used and required under a CSIR sponsored Geophysical research project at the Department of Earth & Environmental Science, KSKV Kachchh University, Bhuj.

Detail Specifications are given below for the types of instruments and equipments to be purchased:

City Shark- II -Ambient Vibration recording system

SUPPLIER WITH MODELS OFFERED	DETAILS OF TECHNICAL SPECIFICATIONS
Number of channels	Multi channel station (up to 18)
ADC	24-bit digitizer
Dynamic range	At least 100 dB at 100 Hz
Sampling rate	User selectable up to 1000 sps per channel.
Data Acquisition mode	Window mode (1 – 60 minutes) Repeated mode at selectable time intervals (1- 12 hours)
Input range	Internal 12V/7Ah
Power consumption	200 mA at 12 volt, six 3D active sensors
Gain Amplifier	User selectable gain
Storage	Extractable flash card of ≥ 1 GB capacity
Status display	Status display indicators for power, data acquisition and state of health should be provided.
Recording	Standard earthquake format
System noise	The overall system noise should not be more than the 2-3 counts of 24-bit system on a RMS basis in the frequency range of 0.0083 Hz to nyquist.
Timing system	In-built GPS timing system should be provided.
Operating temperature	-10°C to +50°C
Format and software support	Compatible with windows allowing usage of proven data compression technique. Software for data management alongwith utility for applying instrument correction should be provided. Utilities for estimating 1-D Vs structure and site amplifications should be in-built facilities of the software.
Calibration	Facility for integrated system calibration to be provided and described.
Data transfer system	Hardware/software to transfer data from the recorder to laptop/PC should be provided.
State of health monitoring	Provision for checking state of sensor, temperature, voltage condition, time lock etc should be provided.

2. 5s SENSOR for microtremor study

REQUIRED TECHNICAL SPECIFICATIONS	DETAILS OF TECHNICAL SPECIFICATIONS
Type of sensor	5 s sensor ideal for microtremor recording
Dynamic range	At least 120 dB
Power consumption	10 mA @ 12 volt DC
Damping	0.707 of critical
Noise level	< 1 nm/s RMS at 1 Hz
Portability	Compact and lightweight
Temperature range	-10°C to +50°C
Humidity	Up to 100% RH
Connectors	All connectors to be waterproof
Pole and Zeros	Information regarding poles and zeros should be provided
Frequency response	Frequency response should be provided
Output voltage	400 V/m/s, precisely adjusted on all components

*Tenders/Quotations are invited for the purchase of instruments/equipments mentioned above.
Please do contact on below address:*

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K.S.K.V Kachchh University,
Mundra Road,
Bhuj-Kachchh. Pin: 370001
Phone (O) :(02832) 235021, Mobile: 09879121777
E-mail:mgthakkar@rediffmail.com**