

Kelunji Echo SMA

TRIAxIAL STRONG MOTION ACCELEROGRAPH

FEATURES

- Low price, high performance
- Internet ready
- 3-channel accelerograph
- GPS timing
- CompactFlash data storage
- Ethernet
- Web-based user interface
- LCD panel for displaying waveforms, view settings and state-of-health information

APPLICATIONS

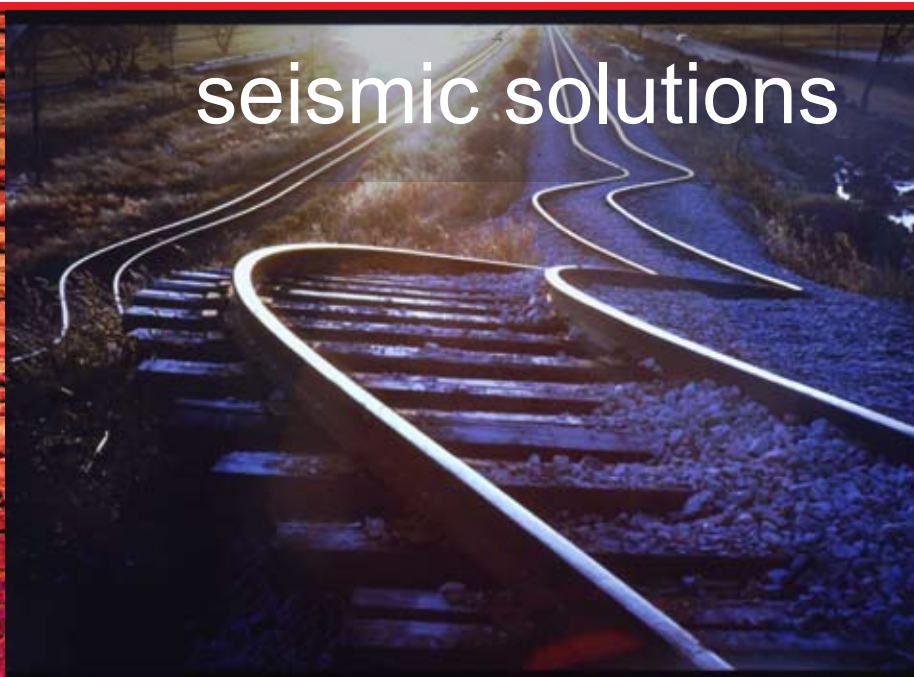
The Kelunji Echo SMA can be used for structural monitoring, blast and other vibration monitoring.

The Echo is simple to use, easy to install and maintain, and light and robust enough for aftershock monitoring or other portable surveys.

Ethernet based communications such as VSAT, ADSL and some 3G modems and radios allows easy configuration of networks for data telemetry.

The core Echo, by using its built-in GPS timing system, can act as a Network Time Server for synchronizing other NTPv4 enabled timing-critical equipment.

LOGGERS / RECORDERS



Every Echo comes supplied with our eqWave software for waveform analysis and manipulation. eqWave runs on most computing platforms that run a Java Virtual Machine, including Windows, Unix, Linux and MacOS X.

Echo seismic data is recorded in PC-SUDS file format, stored in a standard file system. A logical hierarchy is implemented for simple copying to PC using a CF-USB reader or via FTP.



ISO 9001
CERTIFIED

TECHNICAL SPECIFICATIONS

PHYSICAL

Dimensions	260 x 230 x 130 mm, 2kg
Environmental	Operating temp -20° to +60°C, humidity up to 100% R/H
Connectors	Power, Ethernet, GPS
Enclosure	IP67 rated (dust proof, water resistant)
Colour	Orange

PORTS

Console Internal	(DB9) RS-232 port used for terminal interface
Ethernet	(RJ45) 10/100Mbit port for connection to PC, LAN, VSAT, Ethernet radio etc

COMMUNICATIONS

Interface	via Web browser or Telnet over Ethernet
Data Transfer	Using HTTP or FTP

MAIN PROCESSOR

Core	ARM processor with 16MB RAM available
Input Voltage	9-15V DC, protected against over/under/reverse voltages
Consumption	Typically 95mA@12V for main board
Memory	1GB Compact Flash memory card (2GB, 4GB available)

PROCESSES

Functions	Trigger detection, phase picking
Recording	Triggered and/or continuous data
Telemetry	Files sent by FTP, serial streaming
State of Health	Extensive monitoring, recording and transmission of SOH information
Memory Buffer	100,000 samples

INTERFACES

Main GUI	Any common web browser (eg. Explorer, Firefox, Safari)
Console	Any common VT100 emulator (eg. HyperTerminal)
Data transfer	Any common FTP client (eg. FileZilla)
LCD (optional)	View real-time waveforms, settings and SOH information
eqWave	Waveform analysis software is provided with every Echo purchase. Operates on Windows, Unix, Linux, MacOS

ACCELEROMETER

Orthogonally aligned triaxial internally mounted accelerometer

Sample Rates	up to 200sps with 100Hz bandwidth @ 24 bit resolution
Absolute full scale	±2g
RMS noise	15µg
Dynamic range @ 100sps	100dB
Power consumption	15mA

GPS TIMING

Accuracy	Down to 10 microseconds
Oscillator	Internal voltage-controlled temperature-compensated crystal oscillator
Reference	Disciplined from internal GPS receiver
Backup	Battery backed clock (-100 to +10 ppm)