GEOtiny30/60/120

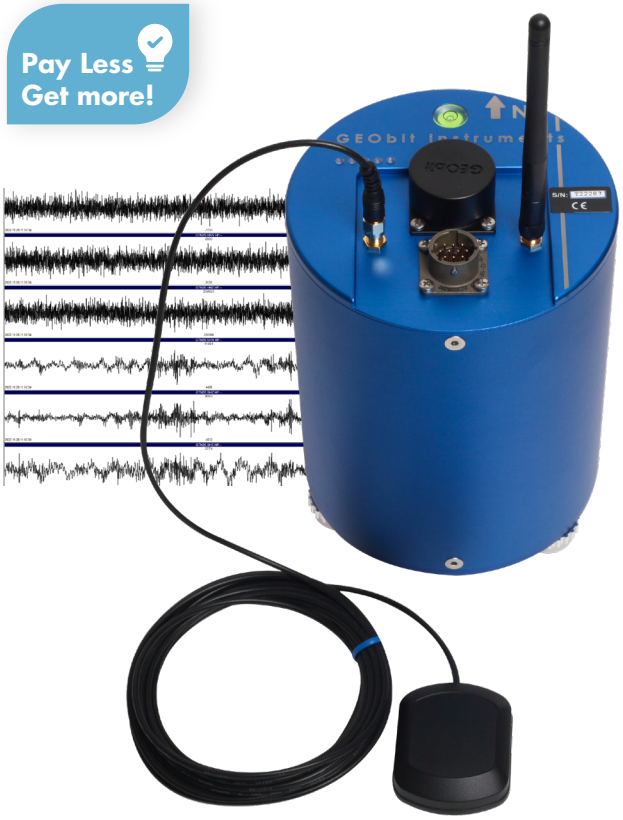
Compact Digital Broad-Band Seismometer

EXACT GLOBAL TEKNOLOGI

Monitoring the earth

- 3C seismic and 3C acceleration sensor
- DR: 155dB velocity. 97dB acceleration
- BB Response V:30-60-120sec, A:DC-550Hz
- Low power consumption
- Cost affordable design
- Only 130mm D/150mm H
- Integrated 24bit digitizer, 140dB
- Embedded Seedlink & Earthworm Server
- Realtime Telemetry and Local Storage
- MiniSeed data format
- Linux open source OS
- Web Interface Menu
- SSH, SFTP, HTTPS, CoAP, NTP
- Capacitive transducer sensor design
- Customized Sensor Corner Frequency
- High sensitivity 1500V/m/s
- Operation Range: -20 +65°C
- Waterproof IP67 aluminum case

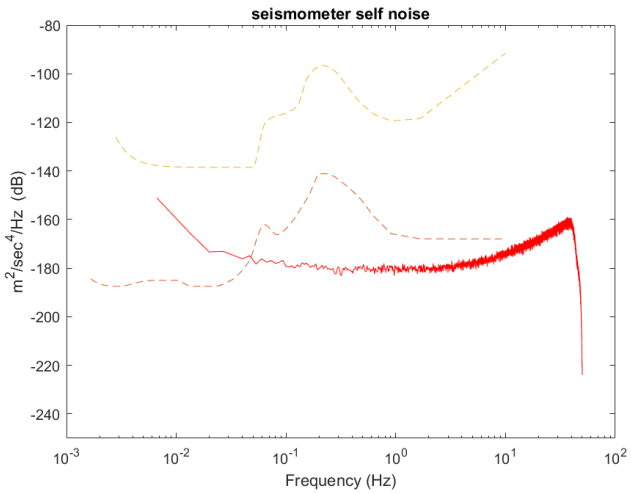
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GEObit introduces world's lowest price, compact digital broad-band seimometer which integrates seimic and acceleration sensor, 24bit digitizer, local data storage and Seedlink Server for data telemetry.

FEATURES

GEOtiny30/60/120 is a compact miniature digital broad band seimometer which integrates three seismic and three acceleration channels. It supports high resolution 24bit digitizer, embedded linux OS and GPS or NTP timing. Seedlink server ensures reliable real time data telemetry while large storage volume ensures long period local data recording. The instrument has very low power consumption so it can operate getting powered from a small 12Vdc battery. Due to its small size provides the ability to be buried underground. It supports capacitive transducer sensors and an adaptive analog integrator that allows the user to select between a variety of different sensor corner frequencies (120sec, 60sec, 30), while the high corner frequency remains high (80. 100, 120Hz respectively) thus covering a very wide range of the seismic band. Design simplicity is the great advantage, and it is reflected to the price which is only fraction of the common commercial seismometers. The user can deploy even 100% more units than using common seismometers at same cost.



- Aftershock monitoring
- Regional seismicity monitoring
- Seismic tomography acquisition
- Induced seismicity monitoring
- Volcano monitoring
- Structural monitoring
- HVSR, MASW surveys
- Global Earthquake Monitoring

INSTRUMENT SPECIFICATIONS

GEOtiny30/60/120 BROAD-BAND DIGITAL SEISMOMETER

DIGITIZER

Channels	Three seismic and three acceleration channels
A/D converter	Fourth Generation, Delta-Sigma, 24bits
Nonlinearity	+/-0.001%
Modulator	Fourth Generation, 4th order Delta-Sigma Modulator
Filter	Programmable, FIR filtering
Analog Input	Modular sensor board
Sampling Rate	1 to 1000 samples per second
Power	9-18Vdc , or 9-36Vdc, 2.3W
Autonomy	One week powered from a 12V/18Ah battery, 36days powered from a 12V/55Ah car battery
RMS Noise	140dB @ 100sps

PHYSICAL

Type	Surface Type
Dimensions	130mm diameter x 115mm length
Cable Length	Standard 5 meters, up to 50* meters
Mounting	Three adjustable legs
Weight	3.6kgr
Tilt	+/-2 degrees

TIME BASE

Type	GNSS receiver (GPS, GLONASS, WAAS, EGNOS, BeiDou, QZSS)/DPLL, GPS port
Accuracy Time	+/-1usec to UTC time pulse, +/-5 meters to position
Timing Sources	GPS, RTC, NTP*
DPLL Drift	Less than 17usec between one hour GPS cycles

COMMUNICATION

Telemetry	Ethernet port, WiFi
Connectivity	SEEDlink
LED	5 high brightness LEDs monitoring system SOH
Protocols	SSH, FTP, SFTP, Web Interface, TCP/IP, HTTP, HTTPS, PPP,MQTT, CoAP/CoAPS, NTP

INTEGRATED CAPACITIVE TRANSDUCER SENSOR ELECTONICS

Bandwidth	120sec-80Hz / 60sec-100Hz / 30sec-120Hz,
Technology	Capacitive transducer with Force-Balance feedback
Sensitivity	1500V/m/sec , Acc: +/-2g, +/-4g,+/-8g
Dynamic Range	Velocity >155dB, Acceleration > 97dB

DATA RECORDING

Media	Internal flash and Removable USB stick
Data File Type	Miniseed
Information File	System log file
Recording Mode	Continuous/Trigger or both

ENVIRONMENTAL

Temperature range	-20 to +70 °C
Humidity	100%, IP67 enclosure

GEObit
Monitoring the earth

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