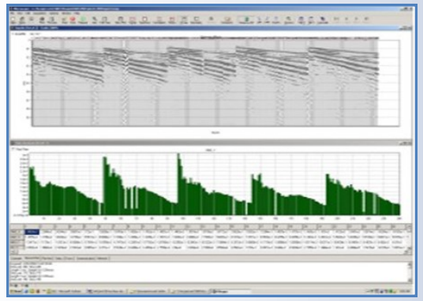
iSeis DAQlink 4 Seismograph

Includes VibraScope Software



Functions:
Configures DAQlink 4 for Acquisition
Monitors Seismograph Operation
Offloads and Evaluates Data

Features:
Data Display
Analysis – Amplitude & Phase Spectra
RMS Noise and Signal Graphs

Expansion:
For larger systems, DAQlink 4 seismographs are compatible with the full line of iSeis Sigma Field Software, including Source Link & Sigma Observer

DAQlink 4 Seismograph Specifications

Electrical	
A/D	24 bit sigma delta converter
Anti-Alias Filters	85% of Nyquist frequency
Low Cut Filter	User Selectable: 0.001 to 120 Hz
Filter Type	Linear Phase
Sample Rates	125 to 64,000 sps
PreAmp Gain	x1 (0 dB) and x16 (24 dB)
Max Input Voltage	±3.7 Volts @ x1 gain
Bandwidth	DC to 20 kHz
Input Impedance	100k Ohms
Clock Sync	GPS or VHF Radio
Power Supply	10 to 28 VDC
Power Usage*	Typically 0.13 watts per channel
Performance @ 500sps	
Trigger Accuracy	± 1 µs
Dynamic Range	Better than 124 dB
% THD	0.00008 %
Crosstalk	Better than -125 dB
CMRR	Better than 100 dB
Noise Floor	< 0.2 µV RMS @ 500sps

Physical	
Number Channels	24
Temperature	-40°C to +85°C
Humidity	0 to 100%
Size*	11.0" x 9.7" x 1.6" (279 x 246 x 40 mm)
Weight*	4.5 lbs. (2.0 kg)
Data Storage (Internal 16GB CF)	120 hours continuous (24 channels @ 500 sps)
Data Storage (on Computer)	Unlimited
Data Storage (External USB)	Unlimited
Data Format	SEG-2, SEG-D, SEG-Y, ASCII and MiniSEED
LEDs	Network, Status, Battery
Connectors	
Computer Network	10-pin Weatherproof
GPS	4-pin Weatherproof
Trigger	3-pin Weatherproof
Power	2-pin Weatherproof
Auxiliary Data	14-pin Weatherproof
USB Memory	19-pin Weatherproof
Seismic Data	55-pin Weatherproof
Network Backbone**	10-pin Weatherproof (2 ports)

*** Standard DAQlink 4 (without Network)**

**** Distributed DAQlink 4 (with Network Extenders)**

DAQlink 4 Seismograph

Seismic Source

High Resolution Seismic Recording System

High Speed, Compact Size & Low Power

DAQlink 4 is the fourth generation of portable seismograph systems. It can be configured as a stand-alone monitoring system, a refraction system or a distributed seismic reflection system.

Vscope software controls the seismograph, providing acquisition control, data QC and file storage. This seismograph utilizes industry standard Ethernet for command, control, and fast data file transfer.

System Features:

Cutting-Edge Performance
- 1 to 24 channels per seismograph node
- High-Speed 24bit ADC – up to 64,000 sps
- Wide Bandwidth – DC to 20 KHz
- Low Distortion – 0.00008% THD @ 500 sps
- Wide Dynamic Range – >124 dB @ 500 sps
- Low Noise – <0.2 µV RMS @ 500 sps

Multiple Time Synchronization Modes
- GPS Clock Discipline for Autonomous Recording
- VHF/UHF Radio for Underground Use
- Or synchronize multiple DAQlink via cable

Multiple Trigger Modes
- Trigger on hammer switch for shot acquisition
- Trigger using GPS time for noise monitoring
- Trigger using LTA and STA for event monitoring
- Two trigger circuits available, one for standard and a second for low-voltage inputs

Multiple Data Storage Methods
- 16 Gbytes internal memory card standard
- External mounted, USB-compatible Memory Plug for data backup and transfer
- Ethernet connection for fast data transfers and remote data storage

Built-in Ethernet Network
- Use network to configure seismograph and monitor acquisition
- Compatible with cables, Wi-Fi and Cellular Data
- Internal FTP server for external data access

Built-in Acceptance Testing
- Instrument Tests:
  - Distortion, Cross-feed, CMRR, Impulse & Noise
- Sensor Tests:
  - Resistance, Frequency, Damping, Sensitivity

DAQlink 4

24 Channel Seismograph

Operation Modes:

Operate as Stand-Alone Seismograph
- Use a sledgehammer and hammer switch
- Small, lightweight unit for small, fast crews

Operate as an Acquisition System
- Use a vibrator and Force 3 controller
- Network a computer to Monitor Acquisition, Quality Control Data, and Store Shot Records

Passive Monitoring
- True Continuous Recording
- Use Cellular Modem for Remote Data Collection
- Works with surface or downhole sensors

Automated Event Detection
- Continuously record and store data
- Use LTA (Long Term Average) or STA (Short Term

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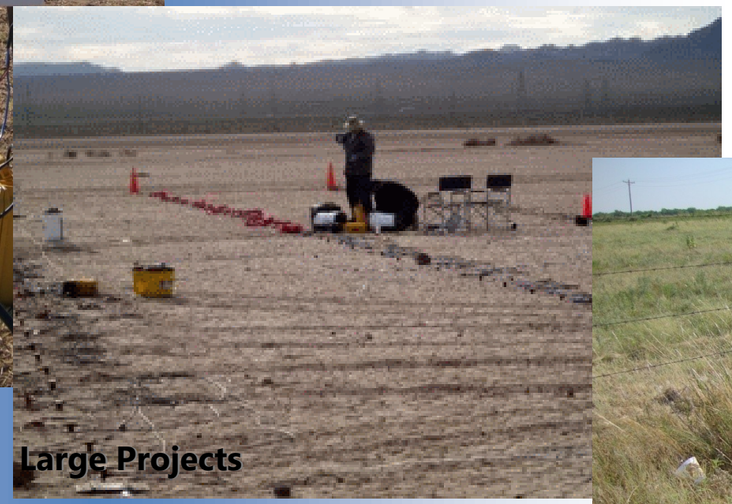
Multiple Node System


Downhole Data Acquisition


Large Projects


Small Crews

DAQlink 4 Seismograph

DAQlink 4 is the fourth generation unit from the Seismic Source Acquisition Series.

The system can be configured as a stand-alone monitoring system, a refraction system or a distributed seismic reflection system.

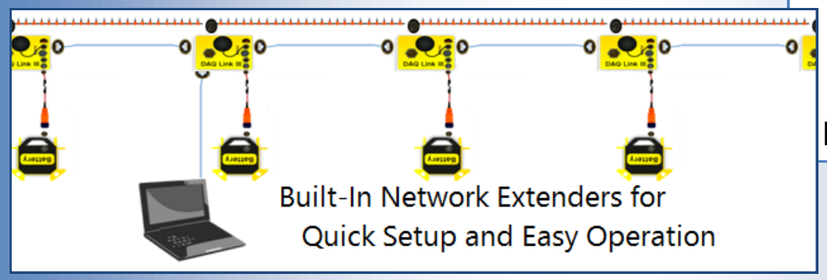
The DAQlink 4 is a true continuous recorder, and is perfect for acquiring passive data.

DAQlink 4 Seismograph

Distributed DAQlink 4 System

The Distributed DAQlink 4 System is the combination of a standard DAQlink 4 seismograph and internal, high-speed, network extenders. Using inexpensive twisted pair telephone cable, these network extenders will send triggering times and receive seismic data from other DAQlinks. These cable links can send reach 10,000 ft, or three kilometers in length.

The entire system is connected to a computer which controls the seismograph network and stores the acquired seismic data. This computer can be simultaneously providing Quality Control as the project is acquired. The final data files can be stored in SEG-2, SEG-D, SEG-Y, ASCII or MiniSEED format.



Distributed DAQlink 4

Expandability and Flexibility

All DAQlink 4 seismographs are compatible with the entire line of Seismic Source Co source control electronics. This includes the Force 3 Vibroseis controller, the Boom Box 3 dynamite synchronizer and the RTM 3 remote trigger module. DAQlink nodes are also compatible with the Universal Encoder 2. Use the UE2 for precise source operation.