



# ReMiDAQ™ 4 Bundle

Includes the system, software, training and support you need to save cost and time to independently and confidently:

- Assess the depth, thickness & lateral variability of rock and soil layers
- Assist with determining liquefaction potential across your entire site
- Determine rippability, excavation & overburden budgets
- Constrain the location of faults
- Map landslide planes
- Get a comprehensive view of your entire project area
  - Increase the value borehole information
  - Decrease the costs of your borehole program
  - Remove the “what’s between the boreholes” question!

With a global community of practitioners, the ReMiDAQ™ Bundle is backed by Terēan’s expert staff of geophysicists, there when you need it.

GEOTECHNICS

ENGINEERING

MINING

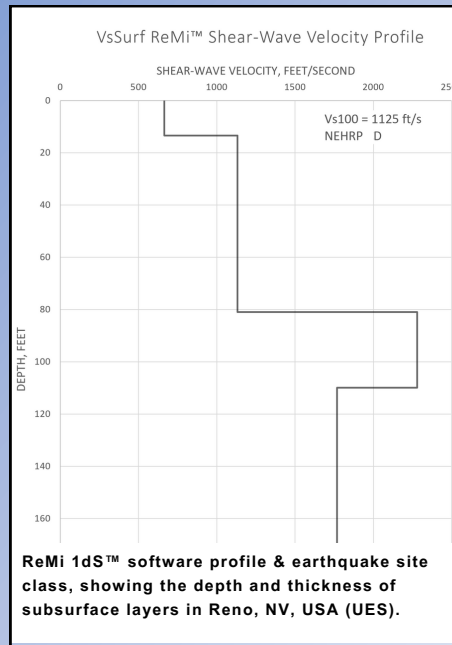
ENERGY

RESEARCH



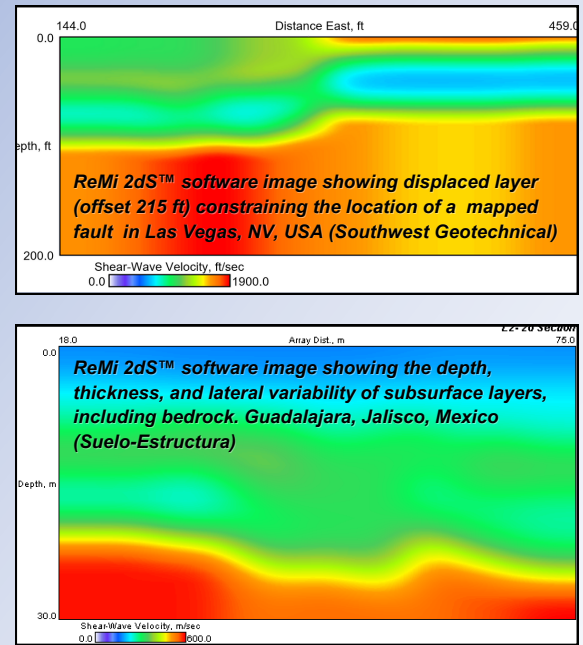
## ReMiDAQ™ 4 Seismograph

12-24 channel capabilities seamless for use with ReMi™ software. Wireless data transfer and user friendly ReMi™ software lets you QA/QC in real time and produce report quality output- before demob!



## ReMi 1dS™ Software

1d S-wave depth-velocity profiles using passive and/or active seismic sources. In less than 30 mins, determine earthquake hazard assessment per IBC/ASCE site class, determine rippability & map the depth & thickness of layers.



## ReMi 2dS™ Software

1d & 2d S-wave depth-velocity profiles for a comprehensive view of the subsurface; Lateral thickness, depth & variability of layers, rippability, constrain fault & landslides, reduce cost & enhance results for liquefaction work, & monitor earthen (retention) dams.



The ReMiDAQ™4 top panel includes 3 LEDs, indicating the status of the system for simple monitoring. Connects to a PC via wi-fi or Ethernet connection. Also pictured are the data input connector for 12+ channels, 12 volt battery connector, an optional GPS expansion connector. There is also a 12-pin “all-weather” connector for backing up your data at your project.



Innovative Solutions For Seismic Industry



# ReMiDAQ™4

## Features & Operation

The ReMiDAQ™4 is designed for seamless use with ReMi™ software and capabilities to handle additional tasks like P-wave acquisition and larger, basin-wide investigations.



### System Features:

#### Cutting-Edge Performance

Use 1 to 24 channels per seismograph  
24-bit Delta-Sigma ADCs – up to 8,000 sps  
Wide Bandwidth – DC to 4000Hz @ 8000 sps  
Low Distortion – <0.00008% THD @ 500 sps  
Wide Dynamic Range – >125 dB @ 500 sps  
Low Noise – <0.2 μV RMS @ 500 sps  
Long Records – 32,000 samples per trace



**Compact and easy to travel with.** The ReMiDAQ™4 seismograph plus cable and geophones fit in standard checked luggage.

#### Multiple Trigger Modes

Auto Trigger for Passive Acquisition (S-wave)  
Trigger Remotely w/ Hammer Switch Time Break for Active Source Acquisition (P-wave)

#### Multiple Data Storage Methods

8 GB internal memory card  
External mounted, USB-compatible Memory Plug for data backup and transfer  
Ethernet connection for fast data transfers & 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

#### Durable

The housing, made of durable aluminum, is designed to be compact, robust and lightweight, with O-ring seals to ensure case integrity and prevent water infiltration.

ReMiDAQ™4 meets and exceeds the standard IP 67

#### Expansion Possibilities

A ReMiDAQ™4 seismograph can be upgraded to full DAQlink 4 functionality. This upgrade includes DAQlink firmware and software, plus a GPS module.

ReMiDAQ™4 seismographs are compatible with the entire line of Seismic Source Co source control electronics.



**Deploy anywhere on soft or hard surfaces easily & quickly.** Use cultural cultural “noise” as your seismic signal or active source (MASW).



**ReMiDAQ™ system deployed in stream bed (above) and on city street (right)**

### Operation Modes:

#### Operate as Stand-Alone Seismograph

Use ambient noise for S-wave  
Use a sledgehammer and hammer switch for P-wave  
Lightweight & compact unit for small, fast crews

#### Operate as a Networked Seismograph

Use a network switch to control multiple seismographs  
Use wire to trigger multiple seismographs simultaneously

#### Operate as an Acquisition System

Use with a vibrator and Force 3 controller  
Network a computer to Monitor Acquisition, Quality Control Data, and Store Shot Records

# ReMiDAQ™ 4 Seismograph



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For Seismic Industry

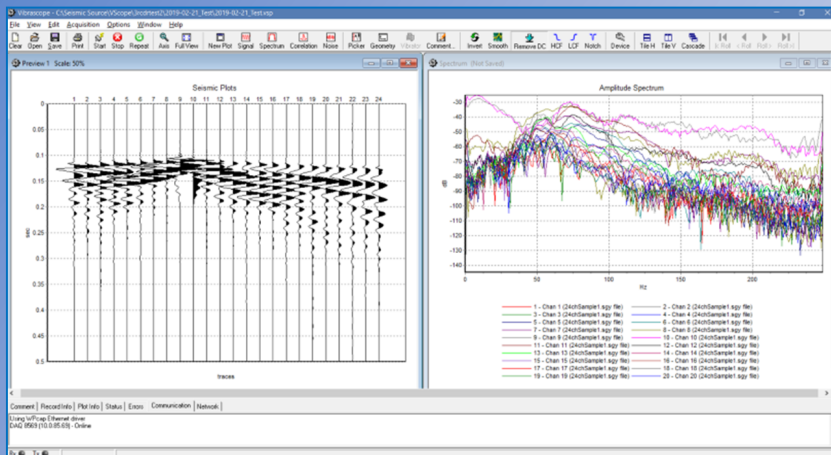
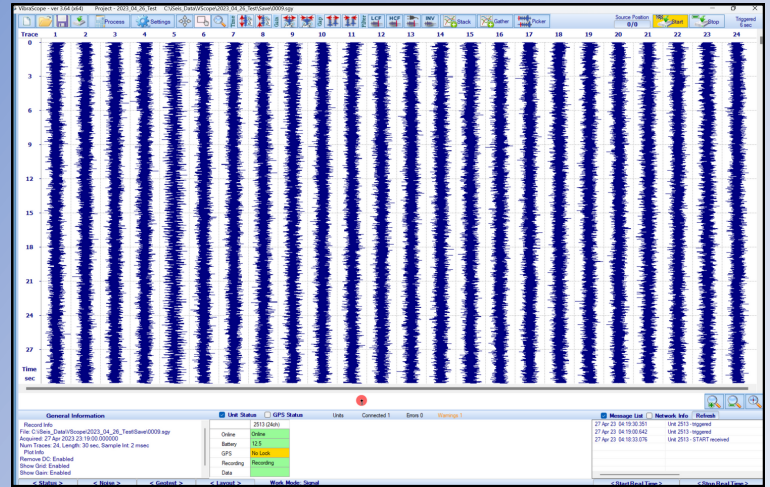


## Acquisition & Processing Software

Deliver an IBC site class report to your client in less than 1 hour with the ReMiDAQ™4's quick and easy data collection and ReMi™ software auto-report generation.

### Vscope Acquisition Software

- Configures Seismograph for Acquisition
- Auto Trigger for Continuous Data Collection
- Offloads Data from Seismograph
- Concatenates Records from Multiple DAQlinks
- Stores Data on Computer or Network
- Monitors Recording Operations
- Amplitude & Phase Spectra for Quality Control
- RMS Noise and Signal Graphs

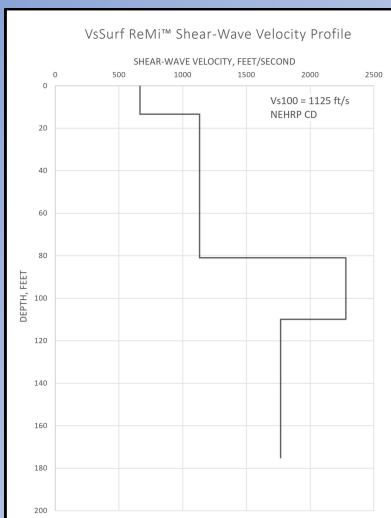


### Vscope Acquisition Software

- Offloads Data from Seismograph
- Concatenates Records from Multiple DAQlinks
- Stores Data on Computer or Network
- Seamlessly Transfer Records to ReMi Software
- QC/Process Data During Collection

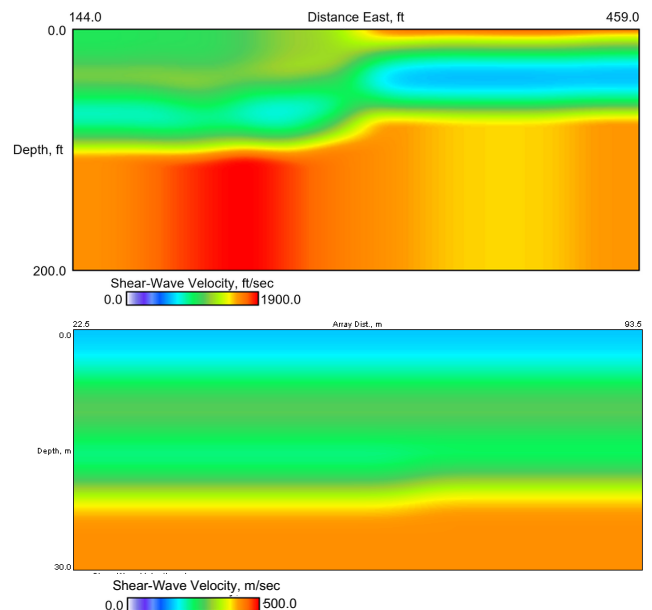
### ReMi™ Processing Software

- ReMi 2dS™ Software
- 1D & 2D S-Wave Depth-Velocity Profiles
- Locate potential faults, image depth & velocity to reveal lateral extent of subsurface layers, and monitor earthen structures.



### ReMi™ Processing Software

- ReMi 1dS™ Software
- Generate 1D S-Wave Depth-Velocity Profiles
- Auto-Generate a Final Report
- QC Data in the Field
- Calculate Earthquake Ground Shaking Potential; IBC site class (Vs30/100)
- Model Depth and Velocity of Subsurface Layers



# ReMiDAQ™4 Seismograph

## Features & Specifications

ReMiDAQ™4 seismographs are compatible with Seismic Source Co source control electronics: Force 3 Vibroseis controller, Boom Box 3, RTM 3, & the Universal Encoder 2 and 3 for precise source operation.

### Technical Features

**A/D Conversion:**

24-bit, high-speed, delta-sigma converters

**Dynamic Range:**

Greater than 124 dB (measured @ 500 sps)

**Crossfeed:**

Better than 124 dB (measured @ 500 sps)

**Common Mode Rejection:**

Better than 100 dB (measured @ 500 sps)

**Total Harmonic Distortion:**

Better than 0.00008% (measured @ 500 sps)

**Noise Floor:**

0.15  $\mu$ V RMS (measured @ 500 sps)

**Bandwidth:**

0 to 32 KHz (unfiltered)

**Preamp Gain (User Selectable):**

x1 (0 dB), x4 (12 dB) & x16 (24 dB)

**Maximum Input Signal:**

x1 gain - 6.5 Volts peak to peak

**Input Impedance:**

100 K Ohms

**Digital Filter (User Selectable):**

Low-Cut Filter - Disabled, 0.001-120 Hz

Filter Type - Linear or Minimum Phase

**Anti-Alias Filter:**

85% of the Nyquist frequency

**Sampling Interval:**

0.125, 0.250, 0.500, 1.0, 2.0, 4.0, & 8.0 milliseconds

**Sampling Rate:**

8000, 4000, 2000, 1000, 500, 250, & 125 sps

**Record Length:**

32,000 samples per trace

**Record Modes:**

DAQlink (Triggered by External Event; Continuous)

Sigma (Continuous Recording)

**Trigger Accuracy:**

$\pm 1$  microsecond at any sampling frequency

**Pre-Trigger Delay:**

Up to 32 seconds

**Post-Trigger Delay:**

Up to 100 seconds

### Physical Features

**Internal Network:**

100-BaseT Ethernet

Includes real-time data transfer

**Internal CF-Card Memory:**

8 GB Standard (can be expanded)

**GPS Interface Standard:**

Internal Clock synchronized to GPS time

GPS Time and Position saved with data

**Optional External Removable Memory:**

8 GB (can be expanded)

**Power Consumption (24 channels):**

Less than 0.13 watts/channel

**Power Requirements:**

9 to 27 VDC

**Included Tests:**

Internal tests for verification of the instrument and the geophone spread

**Dimensions:**

280 x 246 x 56 mm, 11.0 x 9.7 x 2.2 inches

Weight: 2.0 kg, 4.4 pounds

**Operating Temperature:**

-40° to 80° C

**Case:**

Sturdy Milled Aluminum

Weatherproof seal - IP67

**A complete ReMiDAQ™4 Field System includes:**

- 1 ReMiDAQ™4 Seismograph
- 1 Pelican Carrying Case
- 1 Power Cable
- 1 Ethernet Data Cable + Wi-Fi Unit for Wireless
- 0-1 "Y" Cable (for connecting to spread)
- 1-2 12 Channel Spread Cables
- 12-24 4.5 Hz Geophones
- 12v Battery (customer provided)

