Multi-Trace 24-48-96
24-bit 2D/3D UHR seismic recorder

Multi-Trace 24 - 48 - 96 Channel Acquisition System

The new Multi-Trace 24 acquisition module is a very hi-res, 24-bit delta-sigma, seismic recorder, which can record **continuously** 24 channels with a 10 kHz sample rate. .It can be interfaced to any computer, through a standard Ethernet connection.

Synchronisation of 2-4 Modules

A dedicated synchronisation interface allows to combine two or four modules into one recording system up to 96 channel

Internal or External trigger

The MultiTrace module can be triggered independently, with its internal trigger source, or externally using either a TTL pulse or a custom navigation string sent via RS-232 or Ethernet.

Geo Recorder Acquisition Server

The Multi-Trace unit is operated with the innovative GeoRecorder acquisition software. This software can run either on a small acquisition laptop or a dedicated field computer to guarantee performance and reliability.

Powerful web based user interface

GeoRecorder is a web based application. This means you can use any internet capable device to use it (even your smartphone or tablet).

Easy installation

No drivers are required to operate the system and the GeoRecorder software is pre installed on the embedded field computer.

Moreover, the software can automatically detect any MultiTrace unit connected, avoiding the burdens of manual network configuration.

High performance recording system

GeoRecorder software can sample data in continuous mode at high sampling frequencies (up to 10 kHz). That is, there is no limitation in the record length.

Inputs and Outputs

Analogue Input

The unit has 24 input channels, each with a +/- 10V differential input. The 24-bit sigma-delta A/D converter provides 112 dB of dynamic range. This range eliminates the need to preset the AD converter for the incoming signal strength, thereby simplifying setup procedure while retaining high data quality.

4 Aux Channels

In addition to the 24 channels, each module offers 4 auxiliary channels

Trigger Input

The slave input (Key In, BNC) accepts 4-12V pulses, 5-10mA, of 1ms or more.

Trigger Output

The master output (Key Out, BNC) is a 1ms, 5V, max. 20mA pulse.

Sync In & Out

The Sync In- and Output provide the possibility to link two MultiTrace 24 units, to create a 48 / 96 channel acquisition system.

Trigger outputs

Trigger output is programmable, allowing the usage of multiple sources in flip-flop mode. The software also supports multi-pinging, to achieve great horizontal resolution in deep water.

Navigation

Navigation input is available via PC serial ports or LAN Network. The acquisition software supports NMEA 0183 data format, AIS sentences and / or any other proprietary ASCII format, fix and annotation strings, all data are logged and accessible in separate log files.

Data Recording & Back-up

Recording Devices

Internal hard disk of PC, external hard disk (via USB 2.0 or IEEE 1394), DVD RAM and remote network devices.

Automatic continuous recording switch-over.

Post acquisition data back-up to DVD-R and CD-R disks

Recording

All raw data files are recorded in proprietary binary format. The software can export data in standard SEG-Y and SEG-D formats. In addition, extensive logging in text files of all acquisition events, manual fixes, raw and processed navigation data is provided.

Display Modes

Multiple screens..

Simultaneous display of the navigation map, multiple data channels and data types in multiple windows, on single or dual monitors.

User defined Windows

User-defined windows, Profile, Raw Trace, Processed Trace, Spectrum Analysis,

Real-time Navigation track plot window, left/right, up/down, scroll directions.

Navigation Track plot

Real-time navigation annotation on screen is standard, dedicated window for real time track plot, navigation editing, smoothing, speed correction etc.

All you need for ultra hi-res seismic recording

GeoRecorder software offers basic and advanced tools for high resolution seismic recording.

Online processing never affects the raw data and is for QC purposes only. Nevertheless your online settings are automatically saved and can be used for a quick replay.

- User friendly web based interface
- Advanced QC tools
- Online processing
- Multiple monitor support
- Proprietary recording format optimized for speed and disk space occupancy
- Extensive logging capabilities (raw inputs, events, alarms, notifications, etc)
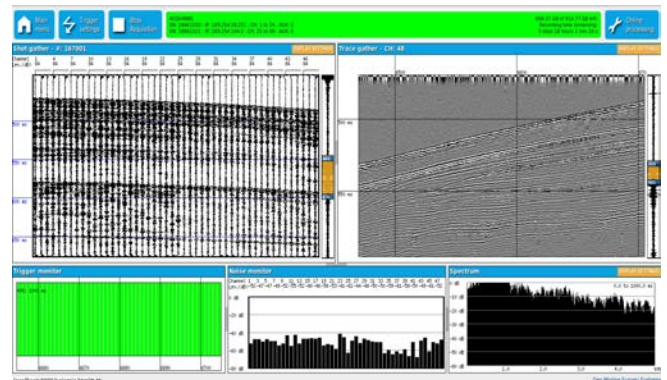

Online replay function

GeoRecorder software allows to replay recorded lines directly from the web browser, without the need to copy data files from the acquisition computer to the operator terminal.

Basic processing tools (AGC, Filter, Debias, etc.) are also avaialble.

Recorded lines can be downloaded in SEG-Y or SEG-D standard formats.

Real-time high accuracy positioning and 3D binning
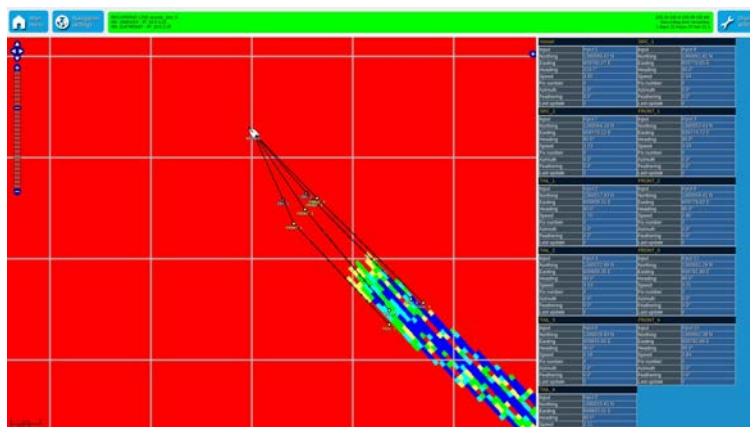
GeoRecorder software allows you to plan survey and monitor vessel route in real-time.

Multiple GPS inputs are avaialble, allowing the real-time logging of the vessels' position as well as the seismic source and the streamer cable.

Moreover, AIS protocol can be used to track other vessels' positions and route and can be also used to broadcast seismic source and streamer cable position.

The navigation page can be accessed from any computer on the vessel's network, allowing multiple users to monitor the positioning information, even outside the acquisition room.

A dedicated DGPS + acoustic positioning system has been developed to perform high accuracy real-time 3D binning.

Physical Specifications

Standard Model

Our standard configuration is winch mounted

In this configuration the acquisition module is mounted inside a watertight, winch-mounted **PELI** case.
Interfacing to the survey room is limited to the trigger line and the LAN connection, which also provides the **PoE** to the MultiTrace Acquisition module

Acquisition module housing options:
The standard version is mounted in a watertight aluminum housing size: L x W x H = 200 x 170 x 55mm

Options

Optionally, the acquisition electronics can be mounted in a slim-line desktop case, or in a rack-mounted 19" unit.

Server Requirements

The acquisition server software can run on any up-to-date Windows Desktop or Laptop with the following minimum specs: Intel Dual Core 2.0 GHz, RAM 2 Gigabyte HD 1 Terabyte, UPS is always recommended.

User interface

The web based user interface is compatible with any modern browser, including Internet Explorer (ver. 10 or above), Mozilla Firefox, Google chrome, opera, Apple safari, and supports all major desktop and mobile OSs.

Multiple Screens

For the 19" rack-mounted fixed systems we recommended wall mounted 29 " LCD screens, which can be suitably placed in the survey room.
All MultiTrace systems are delivered with complete set of standard accessories, mouse,

Best Solution

GMSS can elaborate for each situation the optimum computer configuration

3-year Guarantee

Each MultiTrace module comes with a 3-year guarantee for any hardware breakdown, which is not due to an operator error, over voltage or obvious negligence.

GEO Marine Survey Systems b.v.
Sheffieldstraat 8, 3047 AP Rotterdam
Phone: + 31 10 41 55 755
info@geomarinesurveysystems.com
Website: www.geo-suite.com