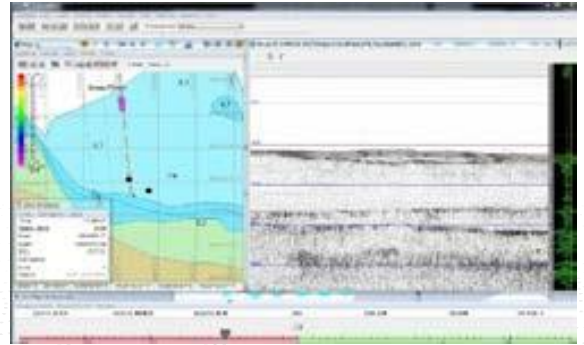


# HYPACK® Geophysics 24Bit Workstation

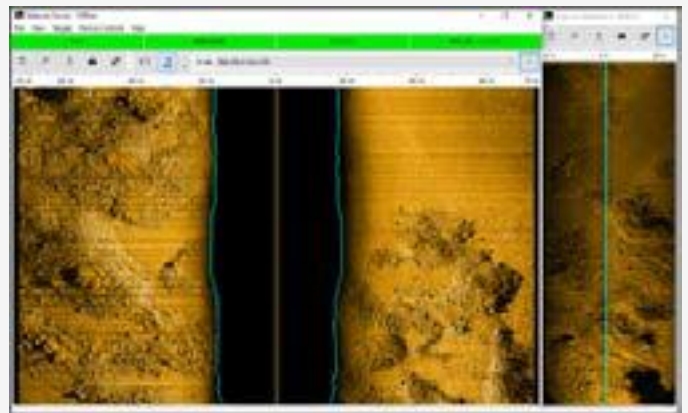


## Key features

- All in one sub-bottom profile acquisition and data processing software
- Real time ultra-high resolution data collection
- Continuous data recording
- Various SEG-Y data storage formats
- Chart and vessel display ability
- Survey planning
- Chart overlay
- SEG-Y and JSF data processing formats
- Industrial ruggedised PC workstation
- 3D supported

## Applications

- Single channel analogue ultra-high resolution seismic operations
- UHR Sparker geophysical surveys
- UHR Boomer geophysical surveys
- Digital SBP interfaces supported



Collect data and map side scan data with the latest sensors on the market, including this data from the Klein MA-X View 600.

## HYPACK® Geophysics Overview

Integrating HYPACK® Geophysics into an industrial ruggedised workstation provides an all-in-one data acquisition and processing software package for the marine geophysical operating environment.

HYPACK® Geophysics is a sub-bottom profiling (SBP) software package designed for marine geophysical, engineering & geotechnical site surveys, dredging, mining applications.

HYPACK® Geophysics has additional logging functionality to support full offline seismic processing of analogue single channel ultra-high resolution data. Geophysics supports dual channel continuous data logging to SEG-Y 2.1 format at industry standard sampling rates and positional information.

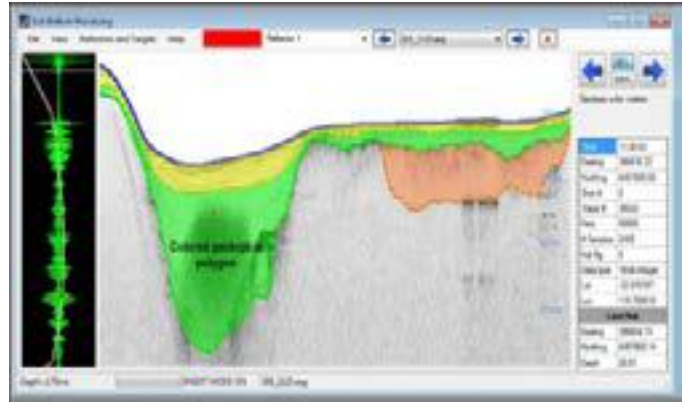
Processing sub-bottom data allows for the creation of geological polygons to visualise layers within the recorded data.

## Specification

HYPACK® Geophysics supports the collection and processing of geophysical survey data. Three common geophysical survey devices are supported; magnetometers, side scan sonars, and sub-bottom profilers.

## Feature Benefits

- Survey planning and navigation support
- Support for popular ASV/ USV interfaces (MAVLink, SeaRobotics)
- Side scan data collection, targeting and mosaic tools
- Sub-bottom collection and analysis tools to digitise layers
- Magnetometer support to collect, target and create contours
- Simple and cost-effective solution
- HYPACK® Geophysics can be upgraded to HYPACK® Max
- On-call technical support provided by HYPACK®'s
- Experienced and knowledgeable customer support team



HYPACK® Geophysics enables collating and comparing data from these devices in one interface.

|                             |  |
|-----------------------------|--|
| <b>Survey Planning</b>      | HYPACK® Shell, Web Map Server, Line Planning, Autonomous Mission Planning.   |
| <b>Geodesy</b>              | Support for over 100 pre-defined grids including UTM, State Plane, and many country-specific grids. Geodesy supports EPSG code search.   |
| <b>Position Support</b>     | GPS / GNSS / RTK / INS support, including Applanix, SBG, VectorNav, and many others.   |
| <b>Magnetometer Support</b> | DF 1000, Gem Systems GSM-19, Gem Systems GSMP-35UC, Insight Dual Mag, IXSEA Magis, JW Fisher Proton (3,4,5), JW Fisher Pulse 12, Marine Magnetics SeaQuest (3/4 Channel), Marine Magnetics SeaSPY Explorer, Marine Magnetics SeaSPY Gradiometer, OFG SCM Magnetometer, Quantro Sensing, Scintrex ENVI GRAD, SMM II, UC Magnetometer, Geometrics (881, 882, G-858, G-882 TVG, G-882TVG Mag and Transverse Gradiometer)  |
| <b>Side Scan Support</b>    | Benthos I62x, Benthos C3D, C-MAX CM2, EdgeTech ( 272-T/TD, 4100, 4125, 4200, 4205, 4300, 4600/6205), GeoAcoustics (Digital Side Scan, GeoSwath), Imagenex (878 RGB, AUV, SportScan, YellowFin), Innomar SES, Klein (3000, 3500 Deep, 3900, 4000, 4900, 4K-SVY, 5000, D3500TF, HydroScan 3500, UUV-3500 ), Kongsberg PULSAR, Marine Sonic (Sea Scan, Sea Scan ARC Explorer, Sea Scan HDS, SonarTech SonarBeam S-150, Tritech (SeaKing, StarFish 450/452, 990) |
| <b>Sub-Bottom Support</b>   | EdgeTech 3000 Series, Falmouth HMX-6xx, Fugro 32 Bit Analog, Innomar SES-2000, Knudsen Pinger, Knudsen Chirp, Benthos SBP, Specialty Devices, SyQwest B2010/SB3510HD, SyQwest StrataBox, Teledyne Odom Chirp III   |

# HYPACK® Geophysics Technical Specification

## CASE: INDUSTRIAL 2U ANODISED RACK MOUNTABLE CASE

- 17 10th Gen Intel® Core CPU
- 16GB memory
- 512GB O/S + 1Tb SSD Data log hard drives
- Windows 11 IoT Enterprise
- HP Quadro P620 2GB graphics
- Dual monitor graphics card
- 2 x Serial I-O Ports
- 6 x USB Rear / 2 x USB Front
- LAN Port

## ANALOGUE TO DIGITAL CONVERTER

**Number of channels** 4 (2 required per analogue SBP channel, 1 synch 1 data.)

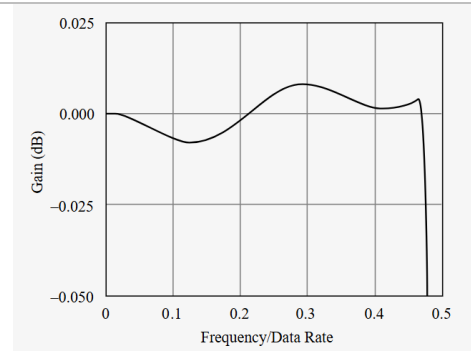
**ADC Resolution** 24 bit

**Type** Delta-Sigma (with analogue prefiltering)

**Sample Rate** 51.2KHz max, user typical 25.6 kHz

Sample Rates available with the NI-9234 module are limited by the master timebase frequency ( $f_{M}$ ) of 13.1072MHz and the following equation  $(f_s) \frac{f_{M} \pm 256}{n}$  where n is an integer from 1 to 31.

### Pass Band



**Coupling** AD or DC

**Termination** Differential / Pseudo Differential (50  $\Omega$  to GND)

## TRIGGER CARD

**Number of channels** 4 (2 supported with HYPACK)

**DAC Resolution** 16 bit

**Output range** -10 V to +10 V

**Output drive** 10 mA per channel

**Pulse Width control** 1 to 50 ms user set on HYPACK control

**Isolation** Channel to channel 250 V RMS / 1390 V RMS 5 sec test

Channel to ground 250 V RMS / 2300 V RMS 5sec test

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## ADC AND TRIGGER MODULE ENVIRONMENTAL

|                              |   |
|------------------------------|---|
| <b>Operating temperature</b> | -40 to +70 °C   |
| <b>Storage temperature</b>   | -40 to +85 °C   |
| <b>Humidity operating</b>    | 10% to 90% RH, non-condensing   |
| <b>Humidity storage</b>      | 5% to 95% RH, non-condensing  |
| <b>Ingress Protection</b>    | IP40  |
| <b>Shock and Vibration</b>   | Random 5 g RMS, 10 Hz to 500 Hz<br>Sinusoidal 5 g RMS, 10 Hz to 500 Hz<br>Operating Shock 30 g 11 ms half sine, 3 ms half sine<br>18 stocks at 6 orientations |

## PHYSICAL

|                   |  |
|-------------------|--|
| <b>Dimensions</b> | Depth 400 mm, width 430 mm, height 90 mm |
| <b>Weight</b>     | 10 kg. Supplied in transit case          |

## ELECTRICAL

|               |                                  |
|---------------|----------------------------------|
| <b>Supply</b> | 90 - 264 V AC supply, 50 - 60 Hz |
| <b>Earth</b>  | Chassis connection               |