



DigiAtlantis

Digital 3-component borehole magnetometer system for TEM, MMR & magnetics

- 3-component fluxgate magnetometer borehole probe
- Lightweight and rugged laptop receiver with Windows® XP operating system
- 24-bit ADC for very low noise data acquisition
- Simultaneous acquisition of three components for faster surveys
- Automated communication with the probe
- Real-time display of incoming 3-component data
- Customisable displays for multiple decay or profile panels
- Colour touch screen LCD
- SMART digital signal processing – superior rejection of power line, sferic, VLF and telluric interference
- Integrated graphic spectrum analyser and oscilloscope functionality
- Optionally record raw and/or stacked time series
- Industry standard ASCII data files
- Real time primary field calculation & display
- Rotation corrections use accelerometers (default), magnetometers or primary field (useful for vertical holes)
- Compatible with Zonge, Geonics and Phoenix transmitter systems
- Direct, GPS or crystal-synchronised transmitter control capability
- Low power consumption, long-life internal batteries
- Large hard disk for storage of several days of raw time series
- Specialised functions written on request



The DigiAtlantis system represents a new generation borehole EM system with 24-bit, rapid, simultaneous sampling of the magnetometer's three components to improve data quality and significantly increase efficiency. This system provides fully customisable colour display of raw and processed data as profiles or decays. Real-time data viewing and signal processing results in improved QA and QC.

Geophysical technology development for mineral exploration, groundwater and the environment.

DigiAtlantis Probe

Sensor	3 orthogonal fluxgate magnetometers (x,y,z)
Depth rating	3km
Max signal level	+/-70uT
Calibration accuracy	+/-0.1%
Orthogonal accuracy	0.1 degree
Sensor noise level	max. 6pT/VHz @ 1Hz on all components
Noise level	approx. 3pT on late time window
A/D	24 bit delta-sigma
Available gain settings	1, 10 or 100
Sample rate	12.5 - 25kHz per ADC, simultaneously
Bandwidth	0-4kHz
Battery	Lilon
Battery life	8hrs, extended with power feeding
Dimensions	2280mm x 33mm (Ø)
Weight	7kg

DigiAtlantis Receiver

The DigiAtlantis receiver is a *Panasonic Toughbook* 30:

- Rugged, small (300mm x 285mm x 70mm) and lightweight (3.7kg)
- 13" Touch screen colour LCD (daylight readable, 1024x768)
- Running Microsoft Windows® XP
- 80 Gb hard disk (upgradeable to 160Gb)
- QWERTY keypad, touchpad, USB
- Single ethernet connection to DigiAtlantis probe controller
- Operating temperatures from -20degC to +65degC
- Powered by Lilon battery for 8hrs (or external 12VDC or 240VAC power)

DigiAtlantis Controller (for Probe and Transmitter)

Synchronisation	GPS, direct trigger, crystal
Transmitter compatibility	Geonics, Zonge & Phoenix
Waveform shape	Bipolar rectangular
Duty cycle	25%, 50%, 100%
Base frequency	Programmable; 50/60Hz 0.001Hz to 10kHz
Battery	12V NiMH (or external 12VDC power)
Battery life	8hrs (constant operation)
Dimensions	310mm x 260mm x 135mm
Weight	5kg

Ancillary

Cabling requirements:

- 4-conductor cable with shield
- Quality pins in good condition
- Winch will need to be tested for compatibility prior to use

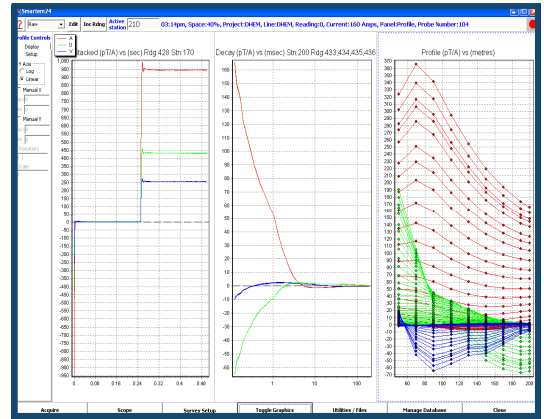
DigiAtlantis Software

- One program for acquisition and post-processing
- Specialised functions written on request
- Software & firmware updates can be easily performed by the user
- Extensive HELP file for software and hardware trouble-shooting
- Upload survey parameters from project files
- Multiple panels on one screen can include a combination of profiles & decays for each, or all, components. Choose to display raw, stacked, windowed and processed data

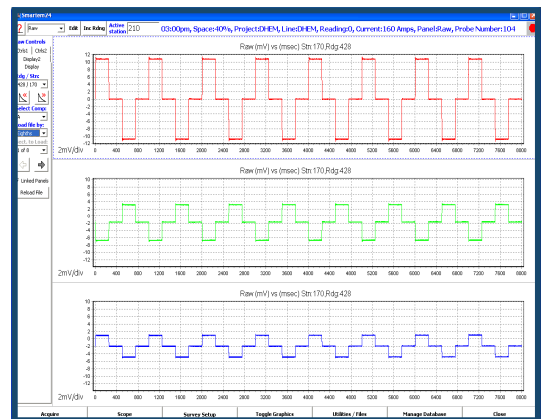
Shipping

Item	Case Type	Dimension (mm)	Weight (kg)
Probe	Aluminum	2400 x 140 x 140	21
Controller, charger & cables	Rugged Poly.	480 x 400 x 210	~10
Receiver	Rugged Poly.	480 x 400 x 210	~10

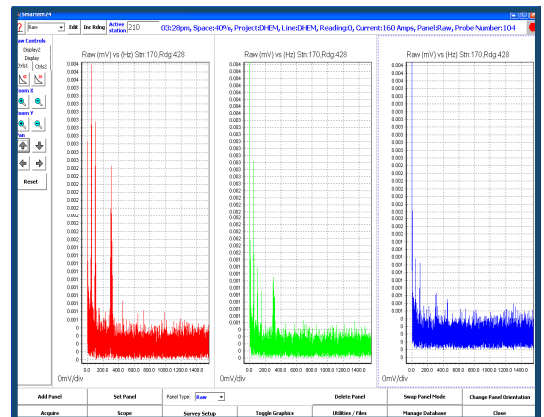
Stacked, Decay & Profile Panels



Raw Panels



Raw Spectra Panels



Processing

Update Rotation

Select an option to update the rotation of the cross-hole components. (U,V)

Select Rotation Method

Accelerometers

Magnetic Field

Specify an Azimuth

Specify Azimuth

New Azimuth for U (X) Component : 90 (deg)

New Azimuth for V (Y) Component : 0 (deg)

Local Magnetic Field Values

Magnetic Declination 1.171 (deg)
(positive means that magnetic North is East of true North)

Magnetic Inclination -65.205 (deg)
(-90 to 90 degrees, negative for Southern Hemisphere)

Field Strength: 58137 (nT)
(Specify this for Weighted combo rotation)

These values need to be specified if using the magnetic field in your rotation method.

To find the declination, inclination and field strength for your survey, use the following site: www.ga.gov.au/oracle/geomag/agifom.jsp

Rotate

[? Help](#)