Digital 3-component borehole magnetometer system for TEM, MMR and Magnetics

Collect significantly better quality data more efficiently with DigiAtlantis

- 24-bit ADCs in the probe for very low noise data acquisition
- Direct, GPS or crystal synchronised transmitter control capability
- Simultaneous acquisition of three components for significantly faster surveys
- Lightweight and rugged laptop receiver with Windows 7 operating system and colour touch screen LCD
- Real-time display of incoming 3-component data
- Customisable displays with multiple decay or profile panels
- SMART digital signal processing – superior rejection of power line, sferic and telluric interference
- Integrated graphic spectrum analyser and oscilloscope functionality
- Record raw and/or stacked time series as required
- Industry standard ASCII data files
- Real-time primary field calculation and display
- Rotation corrections use accelerometers (default), magnetometers or primary field (useful for vertical holes)
- Compatible with Zonge, Geonics, Crone, Phoenix and Gap transmitter systems
- Low power consumption, long-life internal batteries
- Large hard disk for storage of several days of raw time series
- Compatible with a range of logging cables and winches

EMIT manufactured the first high performance fluxgate magnetometer system for borehole TEM measurements in 2004. These systems have been responsible for a considerable number of successes in metals exploration and orebody delineation.

The DigiAtlantis system is a new generation of borehole TEM technology with 24-bit, rapid, simultaneous sampling of the magnetometer’s 3 components to improve data quality and significantly increase efficiency.
**DigiAtlantis Probe**

- **Sensor**: Tri-axial fluxgate magnetometer
- **Depth rating**: 2 km (vertical depth)
- **Max. signal level**: +/-70,000 nT
- **Sensor noise level**: maximum 6 pT/√Hz @ 1 Hz on all components
- **Noise level**: approx. 3pT on late time window
- **ADC**: 24-bit delta-sigma
- **Available gain**: 1, 10, 100 or auto
- **Sample rate**: 12.5 - 25 kHz per ADC, simultaneously
- **Bandwidth**: DC - 4 kHz
- **Battery**: Lithium Ion
- **Battery life**: 12 hrs, extended with power feeding
- **Dimensions**: 2280 mm x 33 mm (Ø)
- **Weight**: 7 kg

**DigiAtlantis Receiver**

- **Receiver**: The DigiAtlantis receiver is a Panasonic Toughbook®:
  - Rugged, small (271 mm x 216 mm x 49 mm) and lightweight (2.3 kg), QWERTY keyboard, touchpad, USB
- **Screen**: 10.4" Touch screen colour LCD (daylight readable)
- **Hard Disk**: 160 GB hard disk
- **Interface**: Single ethernet connection to DigiAtlantis Controller
- **Battery**: Lithium Ion
- **Battery life**: 8 hours (plus external 12V DC or 240V AC power)

**DigiAtlantis Controller**

(for Probe and Transmitter control)

- **Synchronisation**: GPS, crystal
- **Transmitter**: Geonics, Zonge, Crone, Phoenix, Gap & others
- **Waveform shape**: Bipolar rectangular
- **Duty cycle**: 25%, 50%, 100%
- **Base frequency**: Programmable: 50/60 Hz, 0.001 Hz to 10 kHz
- **Battery**: NiMH (or external 12V DC power)
- **Battery life**: 12 hrs (constant operation)
- **Dimensions**: 310 mm x 260 mm x 135 mm
- **Weight**: 5 kg

**Ancillary**

- **Cabling requirements**: 3-conductor cable

**DigiAtlantis Software**

- One program for acquisition and post-processing
- Software and firmware updates can be easily performed by the user
- Extensive Help file for software and hardware trouble-shooting
- Multiple panels on one screen can include a combination of profiles and decays for each, or all, components
- Choose to display raw, stacked, windowed and processed data
- Processing of on-time measurements including removal of calculated primary field
- Specialised functions written on request

**Shipping**

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<tr>
<th>Item</th>
<th>Case Type</th>
<th>Dimension (cm)</th>
<th>Weight (kg)</th>
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<td>Receiver</td>
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<tr>
<td>Controller,</td>
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<td>charger, cables</td>
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