







competing systems -- for precise resolution of anomalies.

## Accurate Positioning of Survey Measurement Locations

Accurate positioning of the bird during flight is essential to ensure that anomalies can be effectively located on the ground for subsequent follow-up surveys and drilling.

This helicopter solution features a dual antenna Trimble TRA3500 Radar Altimeter (or equivalent) that is able to "see" from ground to 850m (in contrast to single sensor receivers). This system provides accurate height information, which can be later plotted to identify problematic sections of the flight and sudden deviations in the bird height.

For X and Y positional information, the system uses two precision Novatel GPS (or equivalent) antennas mounted on the bird. Positional accuracy is generally sub-meter ... making the system ideal for well-positioned, high-volume magnetometer / gradiometer results.

## Rapid Downloading of Results via High-Speed Connection

Following acquisition of high volume magnetic data, results can be output rapidly using high speed RS-232 connection and data downloading software.  
(GEMLinkW)

Output formats are selectable so that the user has control over the order in which data are displayed.  
A typical format is TIME, X, Y, Data 1, Data 2, etc.

## Specifications

### Performance

Sensitivity: 0.0025 nT RMS @ 1Hz\*  
\* High Sensitivity (0.0007 nT) Option Available

Resolution: 0.0001 nT

Absolute Accuracy: +/- 0.1 nT

Dynamic Range:  
20,000 to 100,000 nT \*  
\* High Field (350,000 nT) Option Available

Gradient Tolerance: > 30,000nT/m

Sampling Rate: 1,5,10,20 Hz

### Orientation

Sensor Angle: Optimum angle 30° between sensor head axis & field vector

Orientation:



10° to 80° & 100° to 170°

Heading Error: +/-0.05 nT between 10° to 80° and 360° full rotation about axis.

## Environmental

Operating Temperature:

-20°C to +55°C\*\*

\*\* Optional to -40°C

Storage Temperature:

-70°C to +55°C

Humidity: 0 to 100%, splash proof

## Dimensions & Weights

Sensor:

141mm x 64mm (external dia)  
and 1.3 kg

Electronics Box:

310mm x 75mm x 90mm and 1.6 kg

## Power

Power Supply: 22 to 32 V DC

Power Requirements:

Approx. 50 W at start up, dropping to 12 W after warm-up

Power Consumption:

12 W typical at 20°C

Warm-up Time:

<15 minutes @ -40°C

## Outputs

20 Hz RS-232 Output with comprehensive Windows Personal Computer (PC) software for data acquisition and display.

Outputs UTC time, magnetic field, lock indication, heater, field reversal, latitude and longitude, GPS altitude, # of satellites and differential GPS.

## Components

Sensor, pre-amplifier, console, 4 m sensor / pre-amplifier cable, manual & ship case

TRA3500 Radar Altimeter

1000 lb reinforced Kevlar tow cable, Helicopter on-board cable

Novatel ProPak II GPS