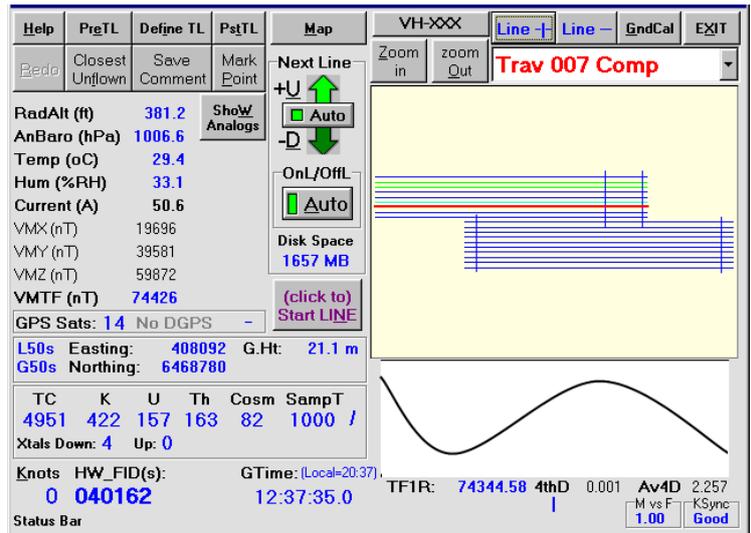


ZDAS Acquisition and Navigation System



Zdas Main Unit:

Size: 29 x 24 x 10 cm (excluding side wings)
Power: 28 Volts at approx 3 Amps
Weight: 3 kg

Website: www.georeresults.com.au
Email: peter.m@georeresults.com.au

The Zdas all in one acquisition and navigation unit (requiring no separate navigation computer or power distribution units) was conceived to fill a role of combining the necessary functions of navigating an airborne platform accurately and recording the parameters in one small integrated system.

This was deemed necessary to prevent the proliferation of computers that appears to be invading most aircraft with the problems of ensuring that they're all running correctly and synchronised with each other.

The Zdas reads the GPS positions and immediately tags the incoming streams of data with a precision counter and the last good position coordinates that the onboard GPS receiver provided.

These are written to a file in a sequential mode to preserve the spatial integrity of the incoming data streams.

In addition, it provides command information to the pilot in an aviation friendly display that has been optimised to give intuitive guidance during the critical phases of low-level flight where extraneous information is both distracting and dangerous.

The aim was to package the system in the smallest case that allowed fitment to small utility helicopters and fixed wing platforms.

Current version may differ due to continual hardware and software improvements

ZDAS Specifications and Features

- Compact size and weight allowing easy strap-down installation in helicopters and light aircraft.
- Four Serial ports (RS232)
- Eight differential 16 bit analogue inputs (+/- 10 Volts)
- Up to Four external USB ports
- One video output port
- Magnetometer data rate of 20Hz
- Integrated Novatel GPS receiver

Versatile interface options using some of the above ports to equipment including:

- High precision Cs magnetometer counter
- 3 Axis Fluxgate
- Radiometrics (Gamma-Ray Spectrometers)
- Temperature and Humidity sensors
- Barometer (option internal or external to Zdas enclosure)
- Radar Altimeter / Laser Range finder
- Current or Voltage monitoring
- High Brightness monitor showing both data acquisition readings and flight navigation information

- Pilot's Navigation mini screen displaying:
 - Xtrack (value and crosshair)
 - Height (value and crosshair of current vs line height)
 - Track to Start/End, Distance to Start/End...
 - Survey Line and Attempt number
 - Aircraft's Track
 - Heading Compass
 - Ground Speed...

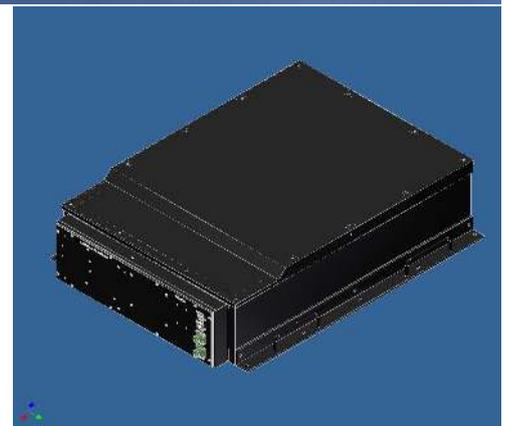


Caesium Magnetometer Counter

- High precision (0.001nT's)
- High Sample rate capable
- Flexible triggering option
- Lightweight and low power consumption

Spectrometer (Radiation Solutions)

- High speed adaptive digital signal processing (1024 Ch)
- Multi-peak automatic gain stabilisation
- No radioactive test sources required for system start up
- Downward and Upward crystal support
- Real time crystal health monitoring



Novatel GPS Receiver Module

- Can be integrated internally to the Zdas acquisition unit
- GPS L1 or L1L2 dual frequency and/or Glonass & DGPS options
- Horizontal Positional Accuracy down to 10 cm options
- External triggering

Bendix-King KRA-405B Radar Altimeter

- Operating Altitude 0-2500ft (0-762m)
- Power requirements 28v less than 1 amp

