COMPLETE SYSTEM FOR HIGH-RESOLUTION UAV/ROV-BASED MAGNETOMETRY & COMPENSATION

State-of-the-art system for magnetometry based on Unmanned Aerial Vehicles (UAVs) or Remotely Operated Vehicles (ROVs, including waterproof submersibles), with real-time compensation and general-purpose data acquisition/recording. Allows configurations with a single high-sensitivity magnetometer, or with two magnetometers in a gradiometer setup.

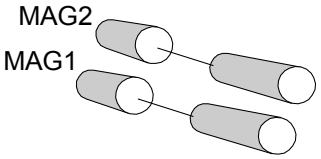
Intended for applications that require compensation of the magnetic interference generated by the platform, typically in fixed-mount installations. When coupled with advanced real-time compensation technology, this offers a largely superior approach to towed-sensor installations, with lower residual errors and none of their inherent risks and logistical issues.

- ***AARC52 Adaptive Aeromagnetic Real-Time Compensator*** [*AARC52 Datasheet*]
  - Integrated magnetometer power/decoupler module for two sensors
  - Real-time compensation of total-fields and gradient
  - Includes fluxgate (vector) magnetometer for attitude reference
  - Integrated dual-frequency GPS receiver (L-Band corrections)
  - Built on the foundation of highly reliable hardware and firmware, and sophisticated and robust algorithms that have been proven in a multitude of installations
  - Consistent with the magnetics, ancillary data acquisition is delivered with unparalleled performance, accuracy and reliability
  - Full remote control and real-time monitoring from any Windows-based computer
- ***Scintrex CS-VL (or CS-3) Magnetometers*** [*CS-VL Manual*]
  - Optically-pumped, self-oscillating cesium vapor magnetometer sensors for UAV/ROV applications
  - Very high sensitivity, narrow dead zones, low heading errors, simple integration – extensively proven in a variety of airborne installations
- ***Flying-Cam UAV Helicopters*** [*Website*]
  - Fully-integrated, fixed-mount solutions on industry-leading helicopters, designed to meet or surpass the most stringent general aviation standards
  - Single magnetometer or lateral gradiometer configurations
  - Electric (up to 10-kg payload, 60-min flight time), or turbine (up to 30-kg payload, 3-hr flight time)

Photo courtesy of Flying-Cam.

- Ancillary instrumentation: PDU500 Power Distribution Unit (*PDU500 Datasheet*), radar and/or laser altimeters, navigation system, etc.

FLUXGATE VECTOR MAG
(ATTITUDE REFERENCE)

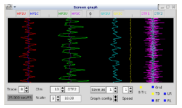


MAGNETOMETER SENSORS

- One or two high-sensitivity Scintrex CS-VL or CS-3 cesium sensors

Larmor-frequency signals & power to mags.

REMOTE CONTROL &
REAL-TIME MONITORING



RSI GAMMA-RAY
SPECTROMETER

RADAR / LASER
ALTIMETER(S)

NAVIGATION
SYSTEM

GPS ANTENNA
(EMBEDDED GPS
RECEIVER)

General-Purpose Data Acquisition

- 4 analog inputs (differential, 16-bit resolution); embedded barometric-pressure & temperature sensors
- Ethernet (1 Gbps, multiple logical connections)
- Ancillary instrumentation:

Optional

Data Monitoring & Recording

- Embedded solid-state drive – real-time data recording
- Real-time graphical & numerical monitoring: any external VGA display
- Full remote control via Ethernet

AARC52 ADAPTIVE AEROMAGNETIC
REAL-TIME COMPENSATOR

PDU500 POWER DISTRIBUTION UNIT

RMS INSTRUMENTS
For Geophysical Exploration

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AIRBORNE GEOPHYSICAL EXPLORATION CONFIGURATION

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