

# Multi-Channel Autonomous Data Acquisition System

User configurable

Up to 8 channels sampled simultaneously

24 Bit data resolution

Up to 144,531 samples per second per channel

Onboard GPS

Onboard compass

Optional airspeed sensing

LAN / WLAN / Zigbee communication

Micro SD onboard storage

Linux-based operating system

Weighs 68g without battery

Overall dimensions 100 x 100 x 15mm

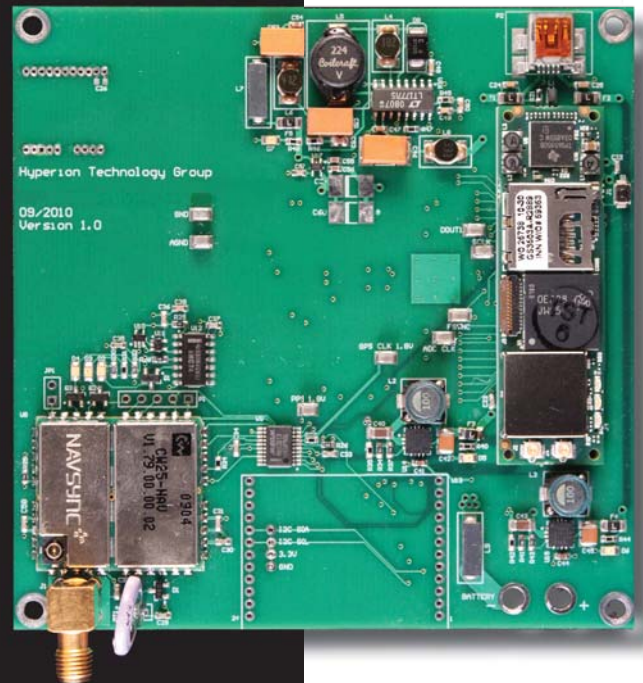
Delta-sigma conversion ( $\Delta\Sigma$ )

CMMR 108 dB

Operates on 8-14 VDC at 3 Watts standard, custom voltages available

Custom hardware configuration available

Custom software packages available



## SYSTEM SPECIFICATIONS

| General                      |   |                              |
|------------------------------|---|------------------------------|
| Size                         | Length - 17.8mm (7") Width - 11.4mm (4.5") Height - 5mm (2") without battery  |                              |
| Weight                       | 439.4g (15.5oz) without battery   |                              |
| Onboard Storage              | Micro SD Card   |                              |
| IP Communication             | 802.11b   |                              |
| Zigbee                       | Optional  |                              |
| Power                        | 8-14 VDC at 3 Watts standard, custom voltage ranges available upon request  |                              |
| USB                          | USB OTG Mini-B for external memory, drives, keyboard and/or mouse<br>(Powered hub may be required depending on external device power usage) |                              |
| GPS                          | On-board reporting of heading, location, time, date and altitude  |                              |
| Compass                      | On-Board reporting of azimuth, roll, pitch and temperature  |                              |
| Airspeed                     | Optional  |                              |
|                              |   |                              |
| Analog                       |   |                              |
| Analog Inputs                | User configurable up to 8 channel simultaneous sampling   |                              |
| Data Resolution              | 24 Bits   |                              |
| Conversion                   | Delta-Sigma ( $\Delta\Sigma$ )  |                              |
| Full Scale Input Voltage     | $V_{IN} = (AINP - AINN) = \pm 2.5V$   |                              |
| Absolute Input Voltage       | AINP or AINN to AGND = -0.1V to +5.1V   |                              |
| CMMR                         | 108 dB  |                              |
| Differential Input Impedance | High-Speed Mode   | 14 k $\Omega$                |
|                              | High-Resolution Mode  | 14 k $\Omega$                |
|                              | Low-Power Mode  | 28 k $\Omega$                |
|                              | Low-Speed Mode  | 140 k $\Omega$               |
| Maximum Data Rate            | High-Speed Mode   | 144,531 SPS                  |
|                              | High-Resolution Mode  | 52,734 SPS                   |
|                              | Low-Power Mode  | 52,734 SPS                   |
|                              | Low-Speed Mode  | 10,547 SPS                   |
| Noise                        | High-Speed Mode   | 8.5 $\mu$ V, rms             |
|                              | High-Resolution Mode  | 5.5 $\mu$ V, rms             |
|                              | Low-Power Mode  | 8.5 $\mu$ V, rms             |
|                              | Low-Speed Mode  | 8.0 $\mu$ V, rms             |
| Connector Pinout             | Pin 1   | Analog Ground (AGND)         |
|                              | Pin 2   | +5 Vdc                       |
|                              | Pin 3   | +2.5 Vdc                     |
|                              | Pin 4   | Analog Input Negative (AINN) |
|                              | Pin 5   | Analog Input Positive (AINP) |

System specifications valid as of 31 January, 2011, but are subject to change without notice.