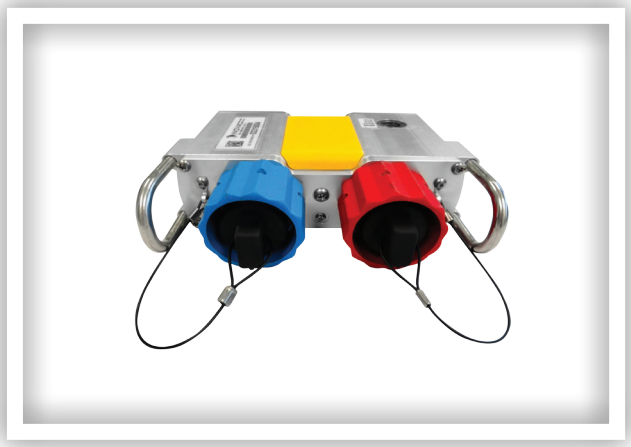
Hawk Recording System

GROUND EQUIPMENT

FIELD STATION UNIT (FSU)

- 24-bit Delta-Sigma A/D conversion
- 3 Analog and 3 Digital Channels per FSU
- Local 16GB or 32GB data storage
- FSU is powered by an external battery (10-17V DC input)
- Positive operation LED'S that provide verification of GPS, power and sensor.



GENERAL SPECIFICATIONS

Number of analog channels:

1, 2 or 3

Number of VectorSeis 3C digital interfaces:

1

Data Storage Capacity:

16 GB non-volatile flash memory (upgradeable to 32GB)

Power Consumption:

309 mW (1-channel analog)

380 mW (3-channel analog)

950 mW (VectorSeis 3C digital)

External Battery Input:

10-17 V DC

LED Status Indicator:

Station Health, Sensor Health, GPS Signal, Battery Voltage

Wireless Communication Interfaces:

Bluetooth and Wi-Fi

Sensor Input Connector Options:

6 pin Dynacon (multi-channel configuration)

Power/Ethernet Connector:

8 pin Dynacon

Timing accuracy:

+/- 25 µs,2ms

ENVIRONMENTAL SPECIFICATIONS

Storage Temperature:

-50 °C to +85 °C

MIL-STD-810F Method 502.4, Procedure I

Operating Temperature:

-40 °C to +85 °C

MIL-STD-810F Method 501.4, Procedure II

Operating Altitude:

MIL-STD-810F Method 500.4, Procedure II

Salt Fog:

MIL-STD-810F Method 509.4, Procedure I

Immersion:

MIL-STD-810F Method 512.4, Procedure I

Shock and Drop:

MIL-STD-810F Method 516.5, Procedure IV

Loose Cargo Transportation:

MIL-STD-810F Method 514.5, Procedure II, Category 3

PHYSICAL

Size:

16.7 cm(L) x 20.3(W) cm x 5.5(H) cm

(6.6" x 8.0" x 2.2")

Weight:

1.7 kg (3.7 lb)

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GROUND EQUIPMENT

FIELD STATION UNIT (CONT.)

ANALOG SPECIFICATIONS

Performance specifications are typical values at 25 °C and 2 ms sample interval.

A/D Converter
24-bit

Preamplifier Fixed Gain Levels
Unity, 6 dB, 12 dB, 18 dB, 24 dB, 30 dB

Sample Interval
1/4 ms, 1/2 ms, 1 ms, 2 ms, or 4 ms

Maximum Input Signal

1768 mV RMS;	2500 mV peak at Unity
884 mV RMS;	1250 mV peak at 6dB
442 mV RMS;	625 mV peak at 12dB
221 mV RMS;	313 mV peak at 18dB
110 mV RMS;	156 mV peak at 24dB
55 mV RMS;	78 mV peak at 30dB

Equivalent Input Noise (EIN)
0.79 µV RMS at Unity
0.39 µV RMS at 6dB
0.22 µV RMS at 12dB
0.12 µV RMS at 18dB
0.10 µV RMS at 24dB
0.09 µV RMS at 30dB

Dynamic Range (DR)
Instantaneous DR
127 dB at Unity
127 dB at 6dB
126 dB at 12dB
125 dB at 18dB
121 dB at 24dB
116 dB at 30dB

System dynamic range
147 dB

Total Harmonic Distortion
0.0001%
Common Mode Rejection
110 dB

Frequency Response
0 Hz to 1652 Hz

Input Impedance
Differential mode 20 kohm in parallel with 12 nF
Common Mode 2.0 Mohm in parallel with 1 nF

Digital anti-alias filters (remotely selectable):
- Zero or Linear Phase response
- 1652 Hz at 1/4 ms sample interval
- 826 Hz at 1/2 ms sample interval
- 413 Hz at 1 ms sample interval
- 206.5 Hz at 2 ms sample interval
- 103 Hz at 4 ms sample interval
- Rejection above Nyquist frequency: 135 dB
- Passband ripple ± 0.003 dB

DC removal
Static (zero phase shift)

ANALOG BUILT-IN TESTS (BITs)

INSTRUMENT TESTS
- Common-Mode Rejection, Cross-feed, Harmonic Distortion, Noise

SENSOR TESTS
- CMRR, Damping, Distortion, Impedance, Leakage, Natural frequency, Powerline pickup, Resistance, Spread noise

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Hawk Recording System

GROUND EQUIPMENT

EXTERNAL POWER PACK

Purpose built high energy density Lithium Ion battery pack used to power an INOVA cableless field station unit. Options include a standard capacity 192 WHr pack and high capacity 288 WHr pack.

SPECIFICATIONS

Capacity:

192 WHr (standard); 288 WHr (high capacity)

Charge time (max.):

192 WHr pack - 4 hours; 288 WHr pack - 6 hours

Charge Temperature Range:

0 °C to +40 °C

Discharge Temperature Range:

-40 °C to +60 °C

Transportation Certification:

Tested to ensure compliance with UN/IATA requirements for Lithium Ion batteries

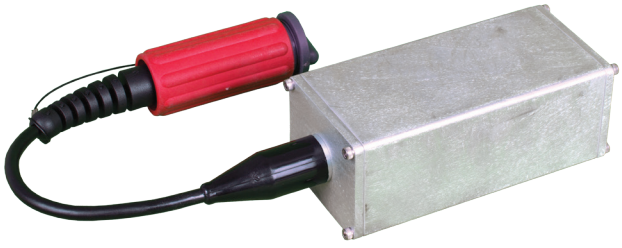
PHYSICAL

Size:

19.5 cm (L) x 9.6 cm (W) x 7.3 cm (H)
(7.7″ x 3.8″ x 2.9″)

Weight:

2.49 kg (5.5 lb)



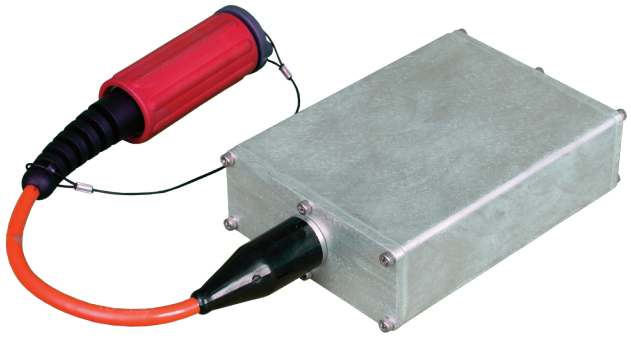
192 WHr Power Pack

Size:

19.5 cm (L) x 13.7 cm (W) x 7.3 cm (H)
(7.7″ x 5.4″ x 2.9″)

Weight:

3.45 kg (7.6 lb)



288 WHr Power Pack

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