BioHarness

Real-Time Portable Physiological Monitoring

The RAE Systems BioHarness is a lightweight, chest-worn strap that incorporates ECG (electrocardiogram) and breathing rate sensors for real-time portable physiological monitoring. The BioHarness links to a RAELink3 portable modem which enables the long-range wireless radio to transmit sensor readings and GPS coordinates in real time to a PC running ProRAE Guardian safety monitoring software.

The BioHarness facilitates quick assessment of an individual's health status so that work levels can be modified to reduce the risk of threats such as heat stress. The RAE Systems BioHarness readings can be coupled with a variety of other safety sensors for the detection and characterization of hazardous atmospheres using ProRAE Guardian.

- Quick assessment of health status
- Reduce risk of heat stress by adjusting work levels
- Improve team efficiency
- Perform post-event analysis
- Low life-cycle cost with no consumable components

Key Features

- Measurement of heart rate, breathing rate, temperature, posture, and activity

- Remote viewing of real-time sensor readings on a PC within a 2-mile radius

- GPS sensor for tracking on a local map

- Continuous datalogging

- Quick setup and easy to use

Applications

- HazMat & Emergency Response

- Confined Space Entry

- Environmental Remediation

- Industrial Cleanup

- Fire Overhaul

- Clinical Studies

BioHarness Kit Comes With:

- BioHarness chest strap with shoulder support harness
- USB charging cable with AC adapter
- RAELink3 Kit
- Quick Start Guide
- CD with documentation

BioHarness Team Kit Comes With:

- 8 BioHarness chest straps
- 4 RAELink3 wireless modems
- Rugged carrying case
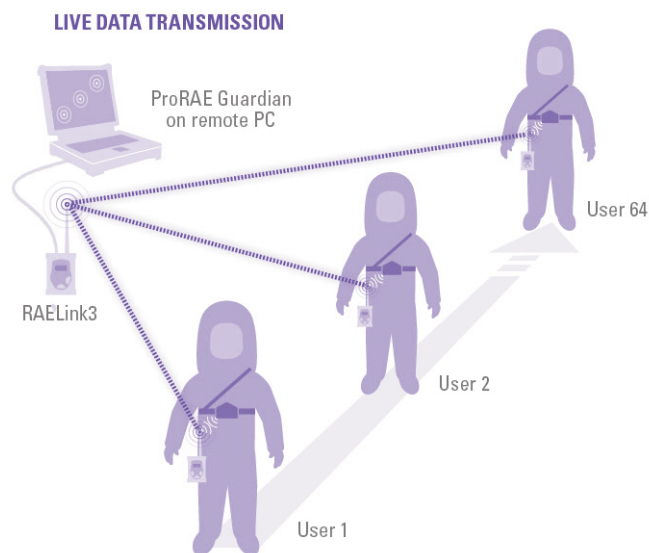- Complete accessories

BioHarness Team Kit

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Sensor Module Size	3" x 2.2" x 0.6" (76mm x 56mm x 16mm)
Sensor Module Weight	2 oz (60g)
Strap Fabric	Washable conductive smart fabric
Operating Temperature	-25° to 140° F (-30° to 60° C)
Humidity	0% to 95% relative humidity (non-condensing)
Battery	4.2V Li-Ion rechargeable
Run Time	Up to 8 hours
Charging Time	3 hours
IP Rating	IP-67
Wireless	Up to 2 miles (refer to RAELink3 datasheet for complete details)
GPS Accuracy (via RAELink3)	Within 5 meters

Sensors	
Heart Rate	25 to 240 BPM (±1 BPM)
Respiration	3 to 70 BPM (±1 BPM)
Activity	(±) 3.3g in each axis (Vertical/Lateral/Sagittal)
Skin Temperature	41° to 140° F ± 2° (5° to 60° C ± 0.1°)
Posture	± 90°

LIVE DATA TRANSMISSION

ProRAE Guardian on remote PC

RAELink3

User 1

User 2

User 64

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Specifications subject to change without notice (Nov14)