

The LifeShirt First Responder System was created to meet the needs of first responders, hazmat workers, fire fighters, industrial cleanup crews, and Homeland Security. The system provides real-time life-sign information in an easy-to-read visual display allowing commanders to make informed decisions and proactively intervene to assist their teams in completing their critical missions.

LifeShirt 300S

Real-Time Life-Sign Monitoring of First Responders. The LifeShirt® System Enables Instant Command Decisions



Features

- Life-Sign Monitoring
- First Responders wear a lightweight chest strap
- Embedded life-sign sensors to monitor:
 - Respiration, Heart Rate, Activity, Posture, Skin, Temperature

ViewPoint™ Real-Time Monitoring Software

- Real-time lifestign data for team members are displayed on a screen for rapid interpretation to enhance proactive decision making
- Each parameter is numerically displayed and updated once per second
- Green/yellow/red alerts indicate when thresholds have been exceeded
- Thresholds are customized for each team member
- Database, and spreadsheet data formats available for storage and data retention

The LifeShirt® is a lightweight chest strap with embedded sensors. Life-sign data are transmitted in real-time to a remote command center where first responders are monitored. A commander can simultaneously monitor multiple team members with an intuitive graphical interface.

Improves Team Efficiency

In an emergency situation, first responders can push themselves too hard, leading to lengthy recovery time before redeployment. Life-sign data helps commanders determine when to rotate out team members for short restorative breaks to assist the team's efficiency.

Provides Safety Officers

with Vital Information Heavy protective clothing and equipment worn by hazmat teams can lead to performance problems. Real-time life-sign data can help safety officers and commanders see when a team member is in danger.

Turn-Key Solution

Each team member wears a lightweight chest strap with embedded sensors that continuously collect life-sign data. The data



is transmitted in real-time to a remote command center where a commander can simultaneously monitor team members.

Post Event Analysis

All data is stored in a data base for post event analysis. This feature is especially useful for training and to see improvements over time in individuals and different groups of specialists.

Technical Specifications

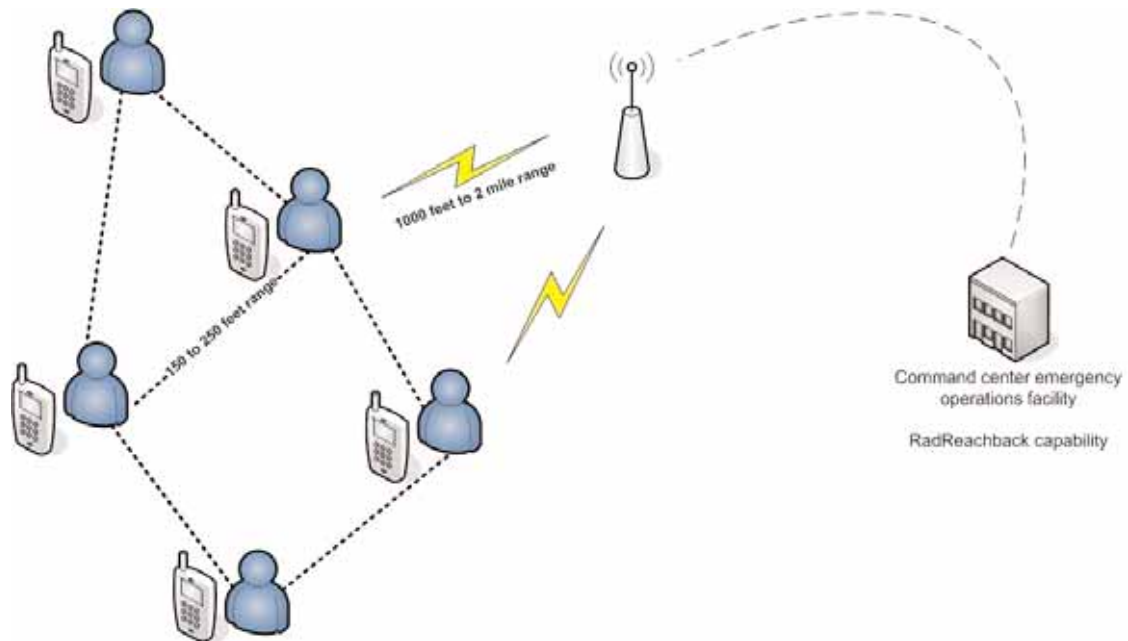
Wireless Telemetry

- Mesh network technology turns each responder into a network node and transmits data up to 150 feet. Team leaders have a 2 mile range to command center.
- Star Network. Each team member transmits 1000 feet to 2 miles direct to command center.
- Thermo Scientific wireless systems integrate easily into existing wireless networks, as well as existing LANs via TCP/IP
- Thermo Scientific wireless systems allow personnel and sensor data to be transmitted to a remote command center through it's RadReachback™ technology

Industry Proven Technology

- LifeShirt technology is used by: US Air Force FLARE program, AFRL, Walter Reed Army Institute of Research, Mayo Clinic, Johns Hopkins University, Yale Medical School, NIH, NIOSH, GlaxoSmithKline, Medtronic, and many others.

LIFE SHIRT 300S STRAP	Dimensions:	53"x 2.75"x 0.25"
	Weight:	7.6 oz. (215 grams)
	Fabric Composition:	84% nylon, 16% spandex
	Fits sizes:	Small to 4XL
	Washing:	Cold/ Line Dry
SAMPLING RATES, RESOLUTION	ECG:	2Khz, 10 or 12bits
	R-Wave:	1mSec tracking
	Accelerometer Channels:	16Hz, 8bits
	Plethysmographs:	50Hz, 13bits
	Skin Temp:	10Hz, 11bits
ACCURACY AND RANGE	Respiration:	3-70 BPM (+/- 5% of rate or 2 BPM)
	Heart Rate:	30-208 BPM (+/- 10% or +/- 5% BPM)
	Position:	8bit, power-up calibrated
	Activity:	8bits
	Skin Temp.:	+/- 0.3 °C, 10-60 °C



The Matrix Communication Network (Matrix CNET) System with personnel mesh technology.

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