

# NIMS

## Non-Invasive Medical Sensor

NIMS is a shirt-based wearable physiological monitoring system for combat casualty care and battlefield situational awareness. NIMS uses multiple sensors woven into a comfortable garment to digitally capture respiration rate, heart rate, activity level, body orientation and skin temperature, to support physiological status monitoring and assist combat medics. NIMS also interfaces with the BIDS (Ballistic Impact Detection Sensors) in the garment to provide a real-time indication of ballistic impact on the Soldier. By extracting critical measures, such as heart rate and respiration histories to the Battlefield Medical Information System-Tactical (BMIST), NIMS can aid in the assessment and management of battlefield casualties.

### Support Combat Casualty Care



### Here's how it works...

Military medics are tasked both with providing time-critical casualty care and with collecting accurate point-of-care casualty information to support health surveillance, longitudinal health records, and continuity of care. Medics need efficient, or preferably automatic, methods for data collection, and advanced tools to support diagnosis and treatment in patient care.

NIMS interfaces over a Bluetooth connection with a hand-held display system to display and upload critical medical information to BMIST. NIMS provides real-time monitoring from a distance, as well as the ability to maintain a digital record of the recent history of multiple physiological measurements.



**Triage & Evacuation**

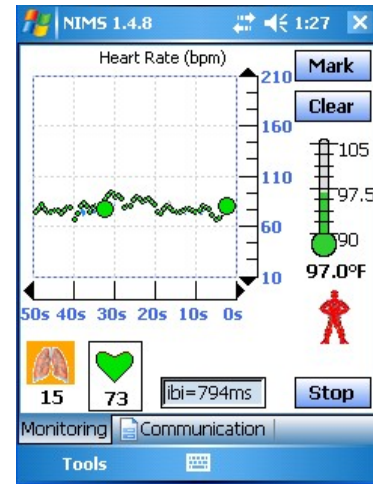
**NIMS with FFW  
(Future Force Warrior) Combat Shirt**



Automatic monitoring of Soldier physiological status can be used to assess Warfighter readiness, sustainability and capability, as well as to predict impending performance degradation and impending casualty. In the case of unavoidable casualty or battle injury, such monitoring, when combined with signal analysis algorithms and information display capabilities, can provide significant diagnostic support tools for military medics. Innovative application of new and emerging technologies offers new capabilities that will significantly enhance the survivability of injured and wounded Warfighters.

**For more information contact:**

Scott Shaw  
QinetiQ North America  
Technology Solutions Group  
Planning Systems Inc.  
12030 Sunrise Valley Drive  
Reston Plaza 1, Suite 400  
Reston, VA 20191-3453  
703-788-7765 · sshaw@plansys.com



**NIMS PDA Software**

**NIMS Key Features**

- Lightweight/Wearable Package
- Long Battery Life
- 24-hour Recorded History
- Real-time Wireless Monitoring
- Bluetooth Interface

**NIMS Vital Signs Monitored**

- Heart Rate
- Respiration Rate
- Ballistic Impact Detection
- Skin Temperature
- Activity Level
- Body Posture