System Components:
- NcIQ™ Sensor
- Casualty Tracker Belt
- Data Management System

Data Management System:
- Windows XP Platform
- 48k/24 hrs

Power:
- NcIQ™ Sensor uses a custom battery
- 4 AA Alkaline Batteries in Tracker Ensemble

Enclosure:
- Rugged AVS nylon
- Flame, water, sand & dust resistant

Dimensions:
- 3" x 1" x 4"
- 7 cm x 2.4 cm x 10 cm

Weight:
- Less than 6 oz

Communications:
- Operations up to 500 feet with or without line of sight

Operating & Storage Temperature:
- 15ºC – 40ºC (40ºF – 113ºF)

Relative Humidity for Operation & Storage:
- 20% - 80% non-condensing

Casualty Tracker Belt:
- 8 C-2 Tactors
- Ruggedized Amphenol Connector to the Advanced Tactor Controller
- Elasticized Belt
- Tactor Vibration Frequency:
  - Stable: 1 Hz
  - Urgent: 4 Hz
  - Emergent: 10 Hz

- Disaster/Emergency Response
- First Responders
- Fire and Rescue
  - Hospitals
  - Trauma Teams
  - Public Health
  - Homeland Security
- Emergency Communications Centers (ECCs); Emergency Medical Services (EMS); HAZMAT teams; Law Enforcement Agencies; Bomb Squads; SWAT; Risk Management; Security; Emergency and Disaster Management; Emergency Preparedness
About NcIQ™ Casualty Management System

The NcIQ™ Casualty Management System is the integration of three technologies:
• NcIQ™ Noncontact Sensor
• Casualty Tracker Belt
• NcIQ™ Data Manager

NcIQ™ utilizes recent advances in evidence based trauma care integrated with precision guided medical targeting for the early intervention of First Responder assistance and casualty management in any environment. The NcIQ™ Casualty Management System expands situational awareness and the field of empowered responders while minimizing responder risk.

NcIQ™ System Components Include:
• NcIQ™ Noncontact Sensor – placed on the casualty at time of wounding on the outside clothes
• Casualty Tracker Belt – worn by First Responder to track and assess multiple casualties
• NcIQ™ Data Manager – Stores and trends data from point of wounding and seamlessly transitions data from NcIQ™ to any electronic computing or communications device

The NcIQ™ Sensor

The small, lightweight, easy-to-use NcIQ™ provides real time hemodynamic status monitoring and relative casualty location communications to the First Responder.

The NcIQ™ uses patented technology to measure the reflected electrical signal length from anatomical structures in motion. The signal generated from the NcIQ™ is integrated into NMT's patented IQ algorithm (the predicate technology) and the following hemodynamic parameters are measured and trends:
• Cardiac Output
• Heart Rate
• Respirations
• Life Score

A computer and encrypted radio are integrated into the NcIQ™ in order to store data to memory, monitor measurement trends and communicate pertinent data.

<table>
<thead>
<tr>
<th>First Responder Benefits</th>
<th>Casualty Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noncontact cardiac output</td>
<td>Noncontact cardiac output</td>
</tr>
<tr>
<td>Convenient placement on the chest outside of clothing</td>
<td>Sense of security in monitoring at point of wounding</td>
</tr>
<tr>
<td>Easily placed and activated by the casualty or his buddy</td>
<td>Progression toward self-care when appropriate</td>
</tr>
<tr>
<td>Situational awareness of the total casualty site</td>
<td>Higher level of awareness and understanding of assistance required</td>
</tr>
<tr>
<td>Ability to monitor multiple casualties, even while assisting others</td>
<td>Awareness that help is imminent</td>
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The Casualty Tracker Belt Ensemble

Using haptic actuators the Casualty Tracker Belt Ensemble intuitively increases the first responder’s situational awareness regarding casualty location and acuity.

The belt incorporates innovative haptic sensor technology developed to teach military helicopter pilots to hover and fly in degraded visual environments. Three levels of tactile inputs can be delivered depending on a casualty’s severity. Training to distinguish these levels is easy and intuitive. The NcIQ™ transmits hemodynamic information to the tracker belt regarding the casualty’s relative location and acuity.

The Casualty Tracker Belt also contains a secure radio that receives transmissions from NcIQ™ in the field. In addition, the belt communicates to a wrist graphic display worn by the first responder that provides actual cardiac output, heart rate, respirations and Life Score, as well as the trend data associated with each individual casualty.

The NcIQ™ Data Management System

• Ruggedized hand-held computer
• Uploads 24 hours of NcIQ™ casualty data
• Monitors multiple casualties simultaneously
• Displays hemodynamic trend data on wrist mounted display
• Offers connection to medical databases
• Provides easy access to protocols
• Meets all MIL-STD for rugged environment
• Provides method for seamless transfer of valuable medical data

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<tr>
<td>Increased situational awareness</td>
<td>Feeling of security in monitoring from point of wounding</td>
</tr>
<tr>
<td>Tactile notification signals integrated into existing gear</td>
<td>High degree of satisfaction that a medic knows where you are</td>
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<tr>
<td>Intuitive display augments triage and treatment</td>
<td>Acuity status is known before the first responder arrives</td>
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<tr>
<td>Saves steps and reduces risk during care</td>
<td>Improved outcomes</td>
</tr>
<tr>
<td>Ability to monitor multiple casualties, even while assisting others</td>
<td></td>
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</tbody>
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NONCONTACT CARDIAC OUTPUT  
ENHANCED SITUATIONAL AWARENESS