Performance Management & Injury Prevention

Reduce fraudulent compensation claims while helping keep workers safe

Integrated Network Solution's Performance Management & Injury Prevention solution is built on our Universal Smart Sensor Platform (USSP) and is embedded in a uniform or vest with built-in sensors, battery and wireless communication capabilities. Our solution tracks a worker's movement patterns to provide customized coaching/education on injury prevention while monitoring for potential injuries.
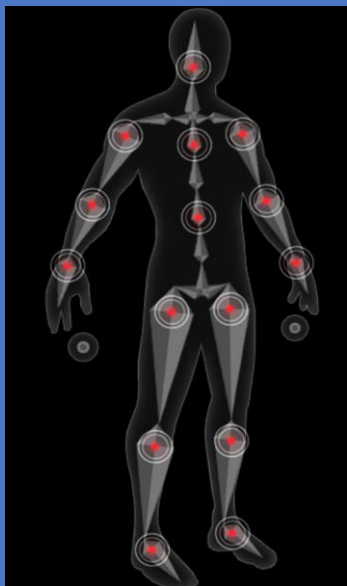
Features

- Real-time transmission of data
- Automatic alerts of potential injury
- Management portal & detailed reporting
- User Portal - basic performance summary
- Launder garment with minimal impact
  (Washing: 140F – 165F, Dryer 300F)

Monitors For

- Range of motion
- Speed of movement - arm/shoulder
- Repetition of specified movements
- Time in specific positions
- Accumulation of movement

Other Monitoring Includes

- Concussions/Head Injuries
- Skin Temperature
- Blood Oxygen Levels
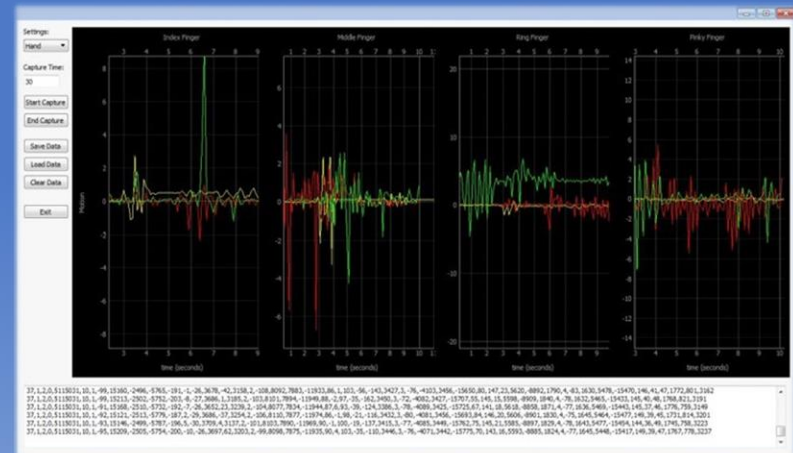- Blood Pressure & Heart Rate
- Respiration Rate

Management Portal

Router

User Portal & Individual Alerts

IoT Systems & Networks – Sensor Devices & Applications – OEM Partnerships

Device and Data Security Many of today's IoT devices are small computers with built-in storage and processing capabilities but may be left unprotected with minimal security provisions. USSP's Communications Protocol was designed from the ground-up to provide best-in-class security and to prevent malicious access to corporate networks.	• USSP's **operating system is embedded** directly on the device's firmware, significantly improving security. • **Data is encrypted** from the sensor until successfully received and accepted by the server. • The USSP wireless protocol implements a **4-phase commit strategy** to ensure the secure and accurate transmission of data.
Intelligence at the Edge IoT networks can easily generate an overwhelming amount of data making it more difficult to apply meaningful analytics while requiring expensive storage and transmission costs. The USSP platform provides remote programming capabilities for edge devices enabling dynamic processing and analytics directly on Sensor Devices, Gateways and Routers. The overall costs of an IoT network can be significantly reduced while ensuring only relevant data is transmitted for storage and analysis.	• USSP's Intelligent Sensor Packs, Gateways and Routers have **built-in processing and remote programming capabilities** enabling the adoption of distributed computing models.
Mid-Range Wireless Transmission Most wireless communication protocols are designed for Local Area Networks with a 150ft – 300ft transmission range (e.g. Wi-Fi, Bluetooth) or for Large Area Networks such as for a campus or city (i.e. LoraWan). The USSP wireless protocol provides a fully secured Mid-Range Wireless Protocol with a ½ mile range, enabling more streamlined and effective IoT network designs.	• USSP Intelligent Sensor Packs **transmit up to a ½ mile (line-of-site)** with and doesn't compete for frequencies nor combine data from other devices. • The USSP wireless protocol was developed 15 years ago and has been in production use internationally for over 6 years, making it **a proven wireless protocol for mission critical applications**. • Transmission ranges can be **extended up to 20 miles**.
Power Management Sensor devices and other edge devices typically use batteries to provide power to capture and send data which require ongoing monitoring and recharging/replacement. While typical rechargeable batteries typically require daily recharging with only 8 hours of capacity, USSP devices have been able to run 10+ years on a single battery	• USSP benefits from **exceptional battery life** due to device board designs, the USSP Communication Protocol and dynamic and intelligent data transmission strategies.
Interoperability Most wireless communication protocols do not communicate with each another resulting in siloed IoT networks when integrating with other networks or whenever multiple protocols are used. USSP provides an interoperable communications protocol that can seamlessly integrate with other IoT networks using different protocols. This helps reduce associated risks by simplifying and streamlining system designs while reducing costs.	• USSP is **interoperable with other wireless protocols** (e.g. BLE, Wi-Fi, Zigbee, etc.) and can seamlessly integrate with existing IoT implementations.