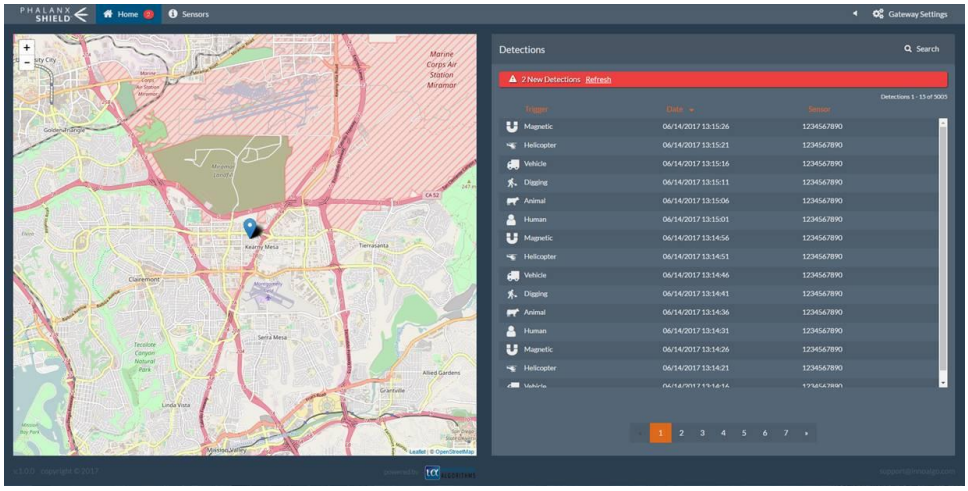
PHALANX SHIELD™

INNOVATIVE ALGORITHMS

**"Situational awareness through innovative algorithms"**

Highest performance/best value/most affordable solution




## Key Features & Specifications

### ▪ Phalanx Shield™

Innovative Algorithms' Phalanx Shield Sensor System features detection ranges well in excess of current fielded systems, 7 classification types and double the autonomy of current products. New generation highly scalable ultra-low power communications with both cellular and Iridium (satellite) beyond-line-of-sight capability as well as integration with RaptorX.

Phalanx Shield is the next level of performance in technology, advancing capabilities beyond yesterday's Unattended Ground Sensors (UGS). Advanced processing, communication and data management capabilities opens the door to more intelligent processing and algorithms, while achieving lower power consumption. Reduced False Alarm Rates, reliable long detection range and integration with advanced UIs, such as RaptorX, makes Phalanx Shield the most innovative UGS.

The Phalanx Shield Sensor system is offered in 4 models, the $X_3$, $X_3$-ER, $Q_5$, & $Q_7$, specifically tailored with the operator in mind. Improved and more intelligent detection devices offer a significant potential to improve Border Patrol Agent's and Warfighter's situational awareness, allowing a unique capability to detect threats.

### ▪ Highlights

**Increased Performance**

- Best in class range/sensitivity
- 7 target classification types
- Best in class False Alarm Rate
- 3 x lower power consumption

**Next Generation Technology**

- Advanced sensor/data capture
- Ultra-low power wireless – 15+ km
- Increased scalability – 100s nodes
- Capacity for intelligent processing/machine learning

**Flexible Employment**

- Improved SWaP/form factor
- AES 128 (256 optional) encryption
- Fewer sensors required
- Scalable processing/memory
- RaptorX & Phalanx Shield User Interface; Nano Raptor future capability
- No cables, external battery packs or separate antennas
- Tamper detection
- Cellular and/or Iridium based repeater for beyond-line-of-sight

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## Model Comparison

| | **X3** – Reduced SWaP, expendable version | **X3-ER** – Reduced SWaP, extended range | **Q5** – Optimized SWaP, increased performance | **Q7** – Longest life, best performance (7x sensor sensitivity) |
|---|---|---|---|---|
| **Detection Range** | | | | |
| Biped | 50+ m | 125+ m | 125+ m | Extended Range* |
| Vehicle | 150+ m | 300+ m | 300+ m | Extended Range* |
| Digging | 50+ m | 100+ m | 100+ m | Extended Range* |
| Low Flying Aircraft | 50+ m | 100+ m | 100+ m | Extended Range* |
| **Battery Life** | Single COTS C Cell - 160 days min, 200 days nominal | Single COTS C Cell - 120 days min, 150 days nominal | Single COTS D Cell - 370 days min, 460 days nominal | Dual COTS D Cell - 740 days min, 920 days nominal |
| **Size** | 6.3cm x 3.9cm x 10.9cm | 6.3cm x 3.9cm x 10.9cm | 8.5cm x 5.6cm x 9.6cm | 8.9cm x 7.0cm x 9.6cm |
| **Weight** | 312 g (11 oz) | 312 g (11 oz) | 425 g (15 oz) | 540 g (19 oz) |

*In Test/Evaluation

## All Models

### Classification Types

- Single biped
- Group biped
- Quadruped
- Digging
- Vehicles
- Low flying aircraft
- Magnetic (vehicle)

### Detection

- Pd - 0.90
- FAR - 1 per 100 hours

### Communication

- Network Topology – Star Network
- Frequency – 915 Mhz ISM
- Modulation – Frequency Hopping Spread Spectrum
- Range – 15+ km LOS
- Cellular or Iridium capable
- Encryption – AES-128
- Scalability – Multiple hundreds of nodes

### Durability

- Built to MIL specs
- Temp range -40C to +85C
- Built to IP67 (dust and waterproof) rating

### Database & User Interface

- Compatible with Microsoft Windows
- Secure database
- Selectable target classification mode
- Customizable to end user requirements

Innovative Algorithms full spectrum advanced rapid prototyping capabilities allow for customization based on customer requirements

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IMAGINED ENGINEERED MADE IN THE USA

Service Disabled Veteran Owned Small Business (SDVOSB)