Primrose

Miniature unattended ground sensor system for terrain coverage









Miniature unattended ground sensor system Intelligent, scalable Wireless Sensor Networks

When covert unattended ground surveillance is required, Primrose's network of miniature wireless sensors can autonomously detect human and vehicular activity in a defined area of interest. Primrose can be used in smaller tactical deployments and can also monitor larger geographical regions.

As the most efficient sensor system currently on the market, Primrose's intelligent sensing system contains multiple layers of technology that only transmits actionable data. With advanced real-time data fusion and filtering algorithms, only relevant images from the most strategically positioned camera are communicated, maximizing Primrose's power efficiency that is so critical in a low energy environment.

Developed by Pearls of Wisdom, a subsidiary of Elbit Systems and a noted Centre of Excellence for advanced sensing technologies, Primrose's end-to-end design offers all-weather continuous operation in complex terrain with limited visibility. Advanced sensor data integration and analysis enables intelligent surveillance to augment a wide range of applications, such as border protection, remote area monitoring, beyond-line-of-sight force protection, and effective terrain dominance.



Unique networking and sensing capabilities

A smart mesh topology network of various sensors are fused together to deliver complete terrain coverage and beyond line of sight (BLOS) communications. The varied and efficient sensing system ensures a high probability of detection (PD) while maintaining a low false alarm rate (FAR).

Small form factor for complex terrain

The Primrose system is comprised of lightweight sensors with small dimensions that can be quickly and easily deployed and camouflaged in any location or environment. Ideal for use in hilly and densely vegetated areas or other hard-to-observe spots where line-of-sight (LOS) monitoring is impractical, the Primrose wirelessly-networked tactical sensors are exceptionally low power and can provide continuous coverage for months.

Building-block approach to strategic terrain coverage

Using an integrated web of terrain-appropriate sensors, such as acoustic, seismic, optical (cameras), IR, magnetic and radar capabilities, the Primrose kit can be deployed for a wide range of missions and applications. The sensing system can be integrated with 3rd party systems such as command and control applications to provide a more comprehensive perimeter security solution.

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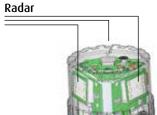
Features

- · Network of wireless miniaturized stationary sensors
- Robust ground-to-ground communications
- Sensing capabilities tailored to mission requirements
- Real-time data fusion and accurate target tracking
- Autonomous activity
- Sensor data integration and analysis
- Self-forming / self-healing mesh networks / Autonomous maintenance
- Standalone capability or integrated to other C⁴I systems

Benefits

- Continuous 24/7 remote sensing
- Comprehensive coverage of complex terrain
- Scalable network of sensor combinations
- Ultra-low power consumption
- High PD and low FAR
- All weather continuous operation
- Easy to deploy no pre-planning required
- Ease of operation

Multi-Sensor





Technical Specifications

| | Size | Weight (incl. batteries) | Power (Duration) | FOV/typical range D/H/V (deg) |
|--|--------------------------------|-----------------------------|---------------------|---|
| Multi Sensor (Radar, Seismic, Acoustic) | Diameter: 87mm Height: 82mm | 520g | 3-4 weeks | Detection Range 100 meters for human target |
| Seismic Acoustic | Diameter: 52mm Height: 65mm | 170g | 5-6 weeks | 35 meters for for human target |
| Day Camera | (D)84x(W)79x(H)63 mm | 270g | 3-4 weeks | 140/100/70 |
| Night Camera | (D)40x(W)126X(H)91 mm | 500g | 3-4 weeks | 63.5/50/37 |
| End Node | (D)114X(W)78X(H)73 mm | 460g | 3 months | |



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