

ARGUS™

Perimeter Security System

U.S. Patent number 8,232,878
EAR99 Export Classification



ARGUS™ is a highly portable, self-localizing, and long-endurance RF-based perimeter intrusion detection system. This innovative system of networked, unattended sensors serves as a “wireless trip wire” for early warning against intrusions. An ARGUS™ system requires no infrastructure and can be deployed in minutes. Cameras or other sensors can be cross-cued by alerts issued by ARGUS™ to provide automated visual verification of the perimeter breach. ARGUS™ provides intrusion detection on any terrain, non-line of sight locations, and can operate through walls, foliage, and other obstructions.

Originally developed for U.S. Military applications, **ARGUS™** provides unattended and reliable protection for commercial, government, and institutional infrastructure. With as few as two to as many as fifty **ARGUS™** devices, users can secure small areas or vast expanses without the need for dedicated security personnel nor surveillance systems. **ARGUS™** provides automated alerts of perimeter intrusions. Captured images are sent to a command center, remote monitoring station, or mobile device.

ARGUS™ is fully interoperable with a wide range of COTS surveillance systems and can also be used to trigger existing systems to maximize video monitoring effectiveness. Images and alert data are archived within the **ARGUS™** command center for analysis and potential prosecution. Never before has physical security been so easy and convenient.

The **ARGUS™** family of products is a complete tool set that provides the following:

- Designed for indoor and outdoor environments with foliage and other obstructions
- Built for extreme weather & temperature conditions
- Optimized for long-term, unattended operations
- Fully interoperable with existing security networks
- Resistant to jamming and spoofing attacks

ARGUS™ Principle of Operation



- Mesh of sensors form invisible RF-based trip wires
- Alerts are triggered when intruders cross the detection zone

ARGUS™ is ideal for a range of applications

- Tactical Deployments
- Covert Operations
- Border Protection
- Permanent Security Applications
- Infrastructure and Asset Protection

Sensor Technology Comparison

| | ARGUS™ | Optical | Seismic | Passive IR | Microwave | Magnetic |
|------------------------------------|--------|---------|---------|------------|-----------|----------|
| Substrate Independent | ✓ | ✓ | | ✓ | ✓ | |
| All-Weather Operation | ✓ | | | | ✓ | ✓ |
| Line Detection | ✓ | ✓ | | ✓ | | |
| Temperate Independent | ✓ | | | | ✓ | ✓ |
| Operates in Foliage and Obscurants | ✓ | | ✓ | | | ✓ |
| Mesh Coverage | ✓ | | | | | |
| Mounting Independent | ✓ | | | ✓ | ✓ | |
| Cost of coverage per square km | Low | Med | Low | Med | Med | High |

The ARGUS™ Family of Products serves all your needs:



Tactical Deployments

Rapidly deployable **ARGUS™** kits for First Responders, Military, and Police. Provides situational awareness with existing and/or **ARGUS™** cameras that can be integrated with Operations Centers.



Expeditionary Applications

Highly portable and compact expeditionary nodes that can be mounted anywhere for covert operations. Customizable security perimeter providing warnings of approaching threats.



Border Protection

Designed for permanent applications, **ARGUS™** border protection poles operate for up to 4 years. Layered mesh network enables large-area intruder tracking. Camouflage options available.



Asset Security

ARGUS™ Aero Sentry nodes are integrated with safety cones, creating an RF barrier around aircraft and critical assets. Ideal for protection on the tarmac and optimized for aviation security. Visual verification of alerts via MMS/SMS messaging.



Permanent Installation

Hardened industrial **ARGUS™** permanent nodes work as stand-alone, temporary or permanent security for construction and/or industrial sites. Remote antenna options for mounting **ARGUS™** nodes. Hard-wire and solar power options available.



Custom Configurations

Nodes can be hidden and connected to the RF antenna up to ten feet away. Packaging options allow **ARGUS™** nodes to be mounted on signs, enclosed in poles, and even installed within drywall for indoor security.

ARGUS™ Accessories

ARGUS™ has a range of accessories allowing the user to customize the system to meet the user's requirements.

Extended battery lifetime options

- BB25XX military batteries
- Hard-wire power compatibility
- Turn-key solar panel recharging systems

Wireless network relays for extended point-to-point communications

- 5 GHz data link and long-distance microwave relay options

Custom and optimized antennas

- Directional high-gain antennas
- Specialized installations

Integrated camera systems

- ARCAM fish-eye camera for visual identification
- **ARGUS™ Eye**, a Pan Tilt Zoom (PTZ) camera
- Other COTS IP cameras fully supported



ARGUS™ Software

ARGUSView™ Standalone

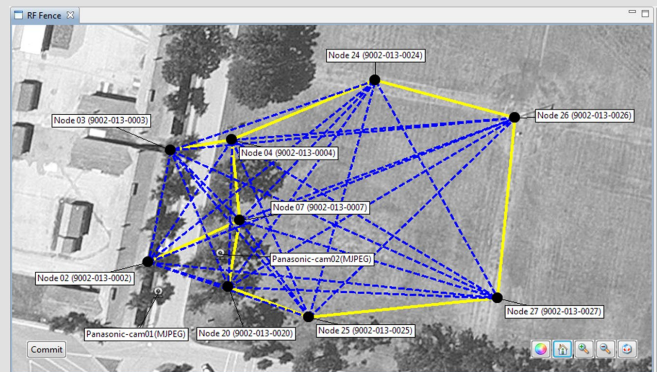
- Monitor status and alerts on a PC connected to the **ARGUS™** sensor network
- Map-based user interface

ARGUSView™ Cloud

- Enterprise software for remote access anywhere
- Private/public hosting options available

Software interoperability

- Cursor on Target (CoT) - Connect to other SA tools, including RaptorX, ATAK, Spyglass, etc.
- Integrated Sensor Architecture (ISA)



ARGUSView™ Mobile

- SMS/MMS notifications for alerts and system status
- Interface and control using Android devices

ARGUS™ Deployments

ARGUS™ has been tested and evaluated at myriad locations and fielded for diverse applications. Deployments include but are not limited to the following:

- Tactical Field Evaluations by the U.S. Department of Defense and Government
- Industrial Complexes
- Domestic and Foreign VIP Protection
- Special Operations Forces, Anti-Terrorism Units
- Security Complex for Nuclear Safety
- Special Operations Technical Evaluations
- Aircraft Security
- Border Protection
- Commercial Surveillance



| Specifications | Tactical | Expeditionary | Border | Asset | Permanent |
|-----------------------|--|---|--|------------------------------------|-----------------------------------|
| Battery Runtime | 4 weeks | 1 week | 6 months to 4 years | 2 weeks | Indefinite |
| Sensing Modalities | RF trip wire, GPS, Motion | RF trip wire, GPS*, Motion | RF trip wire, GPS*, Motion | RF trip wire, GPS*, Motion, Camera | RF trip wire, Camera |
| Peripherals* | Passive IR, Camera | N/A | Passive IR, Camera, Acoustic, Seismic | Camera | Passive IR, COTS security systems |
| Mounting Options | Tripod, Ground spike | Wall and Tree Mount, Tripod, Ground spike | Free standing, Ground spike, Concrete base | Safety Cone (internal to) | Custom |
| Expansion I/O port | Yes | No | Optional | No | Yes |
| Max. Sensing Range | 50m (in open environment); 35m (in moderate foliage); 25m (in dense foliage) | | | 25m (cone or wall mounted) | |
| Max. Range for Comms | 1km in Line of Sign (LoS) environment | | | | |
| Operating Temperature | -35°C to 85°C | | | | |
| Enclosure Rating | IP65 - sealed against dust and splashing/falling water | | | | |

*Optional

Specifications subject to change without notice



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