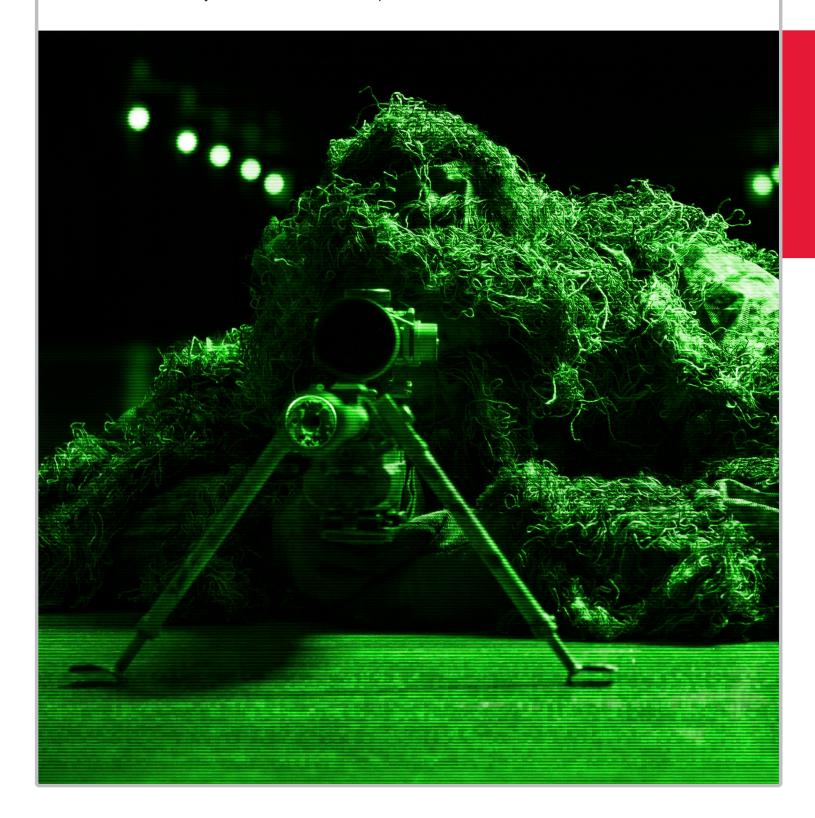


Boomerang Gunshot Detection

Locate The Enemy - Coordinate The Response



Boomerang Gunshot Detection

With more than 12,000 systems fielded and proven in worldwide combat operations, Boomerang gunshot detection technology is available for vehicles, site protection applications, and dismounted troops. Boomerang uses a compact array of microphones for passive acoustic detection and signal processing to deliver immediate and precise situational awareness of enemy location, ensuring mission accomplishment, increasing survivability, and saving lives.

- Greater than 95% shot detection
- Audible and visual alerts provide gps location and relative location (azimuth, elevation, range) of the enemy in less than one second
- No false alerts from non-ballistic battlefield noises
- Operates effectively in all terrain types and environmental conditions without the need for user input
- Motion compensation updates enemy shooter location while on the move

- Intuitive operation and simple user interface
- Detections up to the maximum effective range of the weapon
- User configurable exclusion zone filters friendly fire
- Immune to signal jamming
- Maintenance-free operation
- Boomerang System Integration Kit (SIK) ensures quick integration with any sensor or system



Boomerang can be integrated into Battle Management Systems to provide robust, layered defense across the battle space

Vehicle Protection

Boomerang systems provide hostile fire identification capabilities for manned and unmanned ground, air, and maritime vehicles while stationary or on the move. Boomerang gives vehicle crewmembers the warning they need to get out of harm's way and respond to hostile fire.

- Provides slew to cue capabilities for remote weapon stations (RWS)
- Operates at speeds up to 95 km/h
- Installs in minutes no tools required

Individual Protection

The Boomerang Warrior-X system is a lightweight, wearable shooter detection system that provides a proven shot detection capability to dismounted soldiers and law enforcement officials.

The compact sensor is equipped with a visual display that provides azimuth, range, elevation, and GPS location of the detected enemy shooter. A built-in speaker or tactical earpiece delivers auditory alerts.

- Motion compensation updates enemy shooter location while on the move
- Operates in all orientations (standing, kneeling, prone)
- Shot recall capability
- USB interface for after-action review (AAR) and system integration

Perimeter Protection

Multiple Boomerang systems can be linked with the Boomerang Situational Awareness (BSA) software to provide a scalable solution for the protection and monitoring of fixed sites using hasty set-ups or permanent installations. The BSA software combines output from all the Boomerang sensors to display an integrated "fused solution" of a shooter location on a map, and provides audible and visual event alerts to its users.

- Multiple-Sensor "Shot Fusion" triangulates shooter locations for improved accuracy
- Enhanced situational awareness with integrated Battle Management Systems (BMS) such as TAK and JBC-P
- Various networking and power configuration options
- Simple setup in less than 10 minutes







Boomerang III and Warrior-XP can both be used for perimeter pretection

Sensors	Boomerang III	Boomerang Warrior-X
Applications		
Performance Accuracy:		
Azimuth	< 2.5°	< 7.5°
Elevation	< 2.5°	< 15°
Range	+/- 10%	+/- 20%
Operating Temperature	-32°C to +55°C	-32°C to +60°C
Storage Temperature	-46°C to 71°C	-46°C to 71°C
System Power	9-30Vdc, 25 Watts	(2) CR123 batteries (up to 16 hrs)
Environmental	MIL-STD-810 MIL-STD-461 CE Mark Compliant	

Advantages:

- Enhanced rapid fire engagement capabilities
- Provides situation awareness to Tactical Operations Center (TOC)
- Integration-ready with widely used systems such as CROWS and TAK

Developments:

- View and manage sensor network remotely
- Monitor sensors and receive alerts on any Android or iOS mobile device
- Future flexible cloud-based platform provides low-latency situational awareness to any device
- Weapon caliber classification
 - To learn more about Boomerang, please call or write: Raytheon BBN Technologies 10 Moulton Street Cambridge, MA 02138 617-873-2002

