

Blighter[®] Scout



Blighter Scout
(Deployed on vehicle mast)

- Lightweight vehicle mountable integrated radar and electro-optic (EO) surveillance system
- Blighter Revolution 360 for rapid target detection and location in all terrains (dual Blighter B303 option)
- Integrated radar tracker option ('BlighterTrack')
- Hawkeye robust, high performance EO camera system for target recognition & identification
- Compact surveillance system can be mounted to standard telescopic masts for rapid deployment
- Low power consumption and high reliability
- Options for LRFs and video tracking
- Rapid deployment and orientation with GPS compass
- All controlled through the BlighterView HMI 2, enabling auto-cueing with manual override

Blighter Scout is one of a range of integrated multi-sensor surveillance platforms from Blighter Surveillance Systems. Blighter Scout is designed for mounting on vehicle or trailer masts enabling rapid deployment in just minutes. Featuring the Blighter Revolution 360 radar for high sensitivity and rapid surveillance in tough environments plus the Hawkeye low-light camera and optional thermal imaging camera, Blighter Scout is able to detect humans at distances of more than 7 km, track them and then cue the electro-optical (EO) system to follow the targets leading to recognition and identification as the targets approach.

The Blighter Scout surveillance platform provides a mobile surveillance capability for situations where fixed towers are prohibitively expensive, impractical to build or simply ineffective due to terrain or environment. Blighter Scout enables security forces to move the surveillance platform to pre-empt or follow intruder routes as they adapt to the seasons or in reaction to interdiction.

Blighter Scout is based on the Blighter Revolution 360 radar fitted with wide 20° elevation beam antennas. These allow it to operate in hilly terrain, where it can scan the tops of hills and down into valleys in a single sweep. A dual Blighter B303 option is also available. Blighter's PESA electronic scanning technology allows it to ignore ground clutter yet rapidly detect small and slow moving human targets and vehicles. The Blighter Revolution 360 radar platform allows the Blighter Scout system to achieve a full 360° of surveillance with a single lightweight and low power radar sensor.

Hawkeye EO Camera System

The Blighter Scout platform may be integrated with a range of EO camera systems. The recommended

complementary system is the Hawkeye EO platform featuring the Piranha MRTV or LRTV high sensitivity colour daylight TV cameras and a Piranha TV wide field of view context camera. Coupled to this is the optional thermal imaging camera, which produces outstanding image quality day or night. The EO system is mounted on a robust pan/tilt mechanism. This highly reliable platform provides a simple modular mounting system for easy detachment of the sensors when maintenance is required.

BlighterView HMI 2

The Blighter Revolution 360 and Hawkeye EO system are integrated and controlled through BlighterView HMI 2. This Microsoft Windows based Command and Control (C2) application provides a clear display of the radar detections overlaid onto a map. Simple camera controls are provided to enable the EO system to be either automatically or manually controlled through BlighterView HMI 2. Alert zones can be prioritized to enable the camera to be cued to those alert zones or to follow an established track. This simple automation relieves operator burden and allows more time for threat assessment. An optional video tracking application

allows the EO system to automatically follow an intruder once the radar has cued it to the target location.

The Blighter Scout platform is designed to mount on industry standard telescopic masts. A typical six metre hydraulically extending mast allows Blighter Scout to look over the tops of surrounding vegetation and achieve optimum detection ranges from its sensors.

Blighter Scout requires only a single mast, with the EO system mounted on top for a full 360° unimpeded view, with the radar either rotating around the mast section directly below it (*Blighter Revolution 360 option*) or fixed to the sides of the mast (*Dual Blighter B303 option*). Both radar options offer a full 360° of coverage.

Radar Specification



Option 1: Single Blighter Revolution 360 Radar

Architectural Overview

- Radar type: E-scan Frequency Modulated Continuous Wave (FMCW) Doppler Ground Surveillance Radar
- Scan type: electronic-scanning in azimuth ('e-scan') using a Passive Electronically-Scanned Array (PESA)
- Pan type: fully integrated cable-drive positioner allowing 360° surveillance

Target Detection Performance

- Maximum detection ranges:
 - Crawling person (RCS 0.1 m²): 3.2 km (2.0 mi.)*
 - Walking person (RCS 1 m²): 7.4 km (4.6 mi.)*
 - Moving vehicle (RCS 30 m²): 16.0 km (9.9 mi.)*

* HP version



Option 2: Dual Blighter B303 Radars

Architectural Overview

- Radar type: E-scan Frequency Modulated Continuous Wave (FMCW) Doppler Ground Surveillance Radar
- Scan type: fully electronic-scanning in azimuth ('e-scan') using a Passive Electronically-Scanned Array (PESA)

Target Detection Performance

- Maximum detection ranges:
 - Crawling person (RCS 0.1 m²): 1.5 km (0.9 mi.)*
 - Walking person (RCS 1 m²): 3.3 km (2.1 mi.)*
 - Moving vehicle (RCS 30 m²): 8.0 km (5.0 mi.)*

EO Camera Specification



Architectural Overview

- Type: Hawkeye EO platform
- Pan tilt head: rugged Cobra PTH

Sensor Options

- Context camera (wide FoV):
 - Type: 36x zoom colour TV camera
 - D/R/I (Person): 3.0 / 1.0 / 0.6 km
 - D/R/I (Vehicle): 6.0 / 2.0 / 1.4 km

- Medium range camera:
 - Type: Piranha MRTV
 - D/R/I (Person): 8.0 / 2.5 / 1.5 km
 - D/R/I (Vehicle): 25.0 / 13.0 / 9.0 km
- Long range camera:
 - Type: Piranha LRTV
 - D/R/I (Person): 14.0 / 8.0 / 5.0 km
 - D/R/I (Vehicle): 38.0 / 15.0 / 10.0 km
- Thermal imaging camera:
 - Specification available on request

Errors and omissions excepted. Blighter Surveillance Systems Ltd reserves the right to modify specifications without notice. Blighter radars are protected by a number of international patents. The Blighter name is an international registered trademark. BSS-0306 © 2017 Blighter Surveillance Systems Ltd

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