



ADVANCED CENTRIC SYSTEMS B.V

MAN-PORTABLE AMBUSH SURVEILLANCE KIT

Product brochure



THE PROBLEM

Certain military, security and law enforcement operations require locally-operated technological surveillance support. Such support is required, for example, in border defense and law enforcement operations, special operations behind enemy lines, ambush operations and any other activity where technological surveillance information is insufficient or unavailable.

As the forces involved in such operations cannot transport bulky or heavy equipment in addition to their essential gear, the technological surveillance configuration to be employed in these situations should be compact, lightweight, easy to deploy and operate and self-contained in terms of power supply.

THE SOLUTION

ACS presents MPASK – Man-Portable Ambush Surveillance Kit.

MPASK is a compact, lightweight, self-contained surveillance kit specifically designed for easy transport and rapid field deployment with the intention of providing technological surveillance support (short-range detection & recognition) to tactical military forces, security and law enforcement units.

MPASK incorporates a K-band ground Radar with a day/night electro-optical sensor in a man-portable kit powered by its own battery pack.

Carried and operated by a single trooper, MPASK may be deployed in the field and operated either locally or remotely through a universal user interface (optional).

Various communication and display solutions are offered as optional equipment according to client requirements.

Offering short-range (500 to 1,000 meters) detection and recognition and 3 to 11 hours of continuous operation (depending on the number of batteries), MPASK offers effective tactical surveillance support for border defense operations, ambush operations, special operations, HLS activities and any other activity where technological surveillance support is required.

KEY FEATURES & MAJOR ADVANTAGES

Key Features & Major Advantages

- Man-portable, rapid deployment tactical surveillance kit incorporating a ground Radar and a day/night electro-optical sensor
- Short-range detection & recognition

- Compact, lightweight and portable
- Carried, deployed & operated by a single trooper
- Typical applications:
 - Border defense operations
 - Special operations
 - Ambush operations
 - HLS & law enforcement activities
- Radar specifications
 - Technology: solid state LFM CW Radar
 - Frequency band: K
 - Antenna module dimensions: 170mm x 130mm x 50mm
 - Antenna module weight: 1 kg
 - Operating voltage: 48 VDC
 - Power consumption: 15 Watts
 - Detection range, human target (RCS = 1 square meter): more than 500 m
 - Detection range, vehicle target (RCS = 10 square meters): more than 1,000 m
 - Range resolution: 1/100
 - Range accuracy: 0.5 m
 - Azimuth coverage: 90° (with additional units: 180°, 270°, 360°)
 - Azimuth accuracy: 1°
 - Elevation coverage: 12°
 - Minimum detectable target velocity: 1.8 km/h
 - Simultaneous tracks: 50
 - Track update rate: more than once per second
- Electro-optical system specifications:
 - Sensor technology: uncooled Vox microbolometer
 - Electro-optical module dimensions: 210mm x 210mm x 110mm
 - Electro-optical module weight: less than 0.1 kg
 - Operating voltage: 3.3 VDC
 - Power consumption: 2 Watts (6 Watts with heater)
 - Array format: 640x512 (or 320x256)
 - Pixel pitch: 12 μm
 - Spectral range: Longwave IR 7.5-13.5 μm
 - Continuous zoom: yes
 - Selected lens: 36mm
 - HFOV at effective focal length (36mm): 12° (640x512)
 - Recognition range, human target (RCS = 1 square meter): more than 500 m
 - Recognition range, vehicle target (RCS = 10 square meters): more than 1,000 m
- Complete system key technical characteristics:
 - Total weight & power autonomy, depending on configuration & number of batteries: as low as 27.2 kg for 3-4 hours; as low as 30 kg for 10-11 hours

- Total power consumption: as low as 81 Watts
- Optional system components (per client requirements):
 - Tripod
 - Camouflage net
 - Pan & tilt unit
 - Video switch
 - RS-422/RS-232 interface to Ethernet switch
 - Ethernet switch
 - Communication & data transmission modules
 - GPS
 - North finder
 - HMI (e.g. laptop computer, PDA)
 - High performance batteries
 - Solar panels

