



ADVANCED CENTRIC SYSTEMS B.V

Sea / Air/ Land

TTAPSS

TACTICAL TETHERED AEROSTAT PERSISTENT SURVEILLANCE SYSTEM



THE PROBLEM

The effective range of optical surveillance systems often depends on the altitude at which the system is deployed relative to the area being observed. The higher the altitude at which the system is positioned – the longer its observation range.

In certain situations, elevated surveillance systems have to be deployed in areas that contain neither suitable terrain features nor man-made infrastructures (masts, towers, etc.). Mobile systems incorporating telescopic masts offer some help in deploying elevated surveillance payloads, but the height of their masts is inherently limited.

Tactical electro-optical surveillance applications will benefit from a mobile, rapidly-deployed, integrated system capable of promptly positioning a surveillance payload at a substantial altitude, independently of any infrastructures, and keeping the payload stabilized at that altitude for extended periods of time

THE SOLUTION

ACS presents TTAPSS – Tactical Tethered Aerostat Persistent Surveillance System.

TTAPSS consists of four primary elements: a tactical tethered aerostat, a mobile rapid deployment unit, a ground command and control unit and a cutting-edge stabilized electro-optical surveillance payload.

The TTAPSS tactical aerostat may be raised to an altitude of 1,000 feet and kept at that altitude for up to 72 hours. Then, it must be lowered for a helium refill with the turnaround interval lasting 20 minutes, after which it may be redeployed to the desired altitude.

The TTAPSS mobile rapid deployment unit consists of a towed trailer containing the tethering cable and the other elements required in order to deploy the aerostat for operational use. The mobile unit and the aerostat may be deployed to full readiness status within 20 to 30 minutes. No preliminary preparations are required at the deployment site. Two operators are required in order to handle the mobile rapid deployment unit. The on-going operation of the surveillance system requires only one operator. The mobile rapid deployment unit is easy to deploy, operate and maintain.

The TTAPSS ground control unit is a tactical C4I system offering full mission support, including mission planning, preparation, execution and AAR (After-Action Review). It features an extensive range of capabilities such as mapping & graphics, navigation & orientation, mission management, communication and video management and enables the operator to control the aerostat while commanding the primary surveillance activity.

TTAPSS incorporates the Mini-VESPA electro-optical payload as its surveillance payload. The basic model of the Mini-VESPA payload includes a daytime camera and a thermal imager for night surveillance. More elaborate versions can accommodate up to four elements including a Laser pointer, a Laser rangefinder and an Automatic Video Tracker. The Mini-VESPA payload is also used on small UAVs, tactical naval vessels and land vehicles.

TTAPSS offers an aerostat-based surveillance option that may be deployed promptly to support such long-term activities as persistent area surveillance or specific tactical situations in the context of such applications as border security, emergency or alternative deployment situations, coastal surveillance and special operations, as well as various HLS and civilian applications.

KEY FEATURES & MAJOR ADVANTAGES

Tethered aerostat platform for surveillance applications

- State-of-the-art surveillance payload & ground control system
- Day, night & adverse weather surveillance
- Mobile rapid deployment unit
- Extended endurance & short turnaround interval
- Typical applications:
 - Persistent area surveillance
 - Border security
 - Surveillance support for emergency/alternative deployment situations
 - Coastal surveillance
 - Special operations
- Specifications
 - Maximum deployment altitude: 1,000 feet
 - Deployment interval: 20 to 30 minutes
 - Maximum endurance: 72 hours
 - Turnaround interval: 20 minutes
 - Payload weight: 6.5-9.5kg, depending on configuration

