



SES DEMONSTRATION AT PARIS INTERNATIONAL AIR SHOW

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The 52nd edition of the Paris International Air Show closed its doors a few days ago. For those who have not been able to meet the SES teams or attend the demonstrations, you will find below a quick summary of the innovations presented

SES, the global leader in the satellite industry, presented its rapid response communications solution—designed for defense, security and humanitarian missions as well

as its innovations as part of its Government + offer, including TPS.

Satellite solutions are increasingly becoming the preferred means for governments seeking agile, secure and cost-effective transmission routes. These are vital elements for maintaining security, protecting borders and citizens, especially in the face of increased conflicts and natural disasters that require the rapid deployment of military forces on land or at sea. Acquiring situational knowledge in real time represents a major challenge for the detection, location and management of crisis situations.

- The Rapid Response Vehicle (RRV) is capable of connecting defense, security, emergency response and humanitarian assistance missions in most remote areas and without land infrastructure, adapting to a wide range of scenarios.
- Tactical Persistent Surveillance (TPS) is an efficient and cost-effective intelligent monitoring and reconnaissance platform that can be integrated into the RRV. This integrated satellite solution has advanced features and can be used as a mobile relay tower to provide 3G and 4G / LTE connectivity.

SES's Tactical Persistent Surveillance/Persistent Surveillance Aerostat (PSA) is a mobile information collection solution. It provides an effective and economical Intelligence Surveillance Reconnaissance (ISR) capability enabling leadership to make rapid and accurate decisions based on real time airborne intelligence.

TPS is based on Lighter-Than-Air (LTA) inflatable aerostat technology hosting advanced electro-optical (EO) sensor and communications payload options, which is designed to provide situational awareness for border and operations security, event monitoring and disaster response initiatives.

Coupled with the Rapid Response Vehicle, the TPS aerostat can benefit a wide range of applications for both defence and security or humanitarian services, (such as enabling wireless internet access for refugee camps and local communities, IP backhaul for mobile networks and downed public infrastructure, and long-term connectivity for development agencies on the ground).

Key Features

- Fully integrated solution is based on an aerostat platform, capable of being fully operational in twenty minutes, with an operating altitude of over 300 meters
- The TPS/PSA's baseline configuration is equipped with an E/O (electro-optical) sensor enabling detection and surveillance of vehicle and human presence up to 5 km. The system includes a satellite backhaul of sensor data for an added layer of monitoring and analysis via a centralised monitoring center.
- The aerostat can also be equipped with a communications payload using MIMO radio technology providing two-way communications and streaming video with any IP enabled device.

SES's unique fleet of GEO and MEO high-throughput satellites provides the flexible connectivity needed to apply the surveillance solution to virtually any application requiring monitoring including natural disasters, border security, crowd control, port security, refugee camp monitoring and oil, gas and remote mining security:

- Border Monitoring
- Crowd control
- Ports
- VIP

- Random security check-points
- Refugee camps
- Oil, gas & remote mining
- The solution is equipped with a variety of wireless capabilities, including mobile communications platform to support private 3G / 4G LTE networks and government push to talk (“PTT”) frequencies, high-throughput microwave backhauled via satellite, and more.

The RRV is enabled for connectivity in commercial Ku and Ka frequency bands, as well as government X- and Mil-Ka. The vehicle can also operate in MEO Ka-band to support very high throughput operational scenarios.

Examples of applications enabled by the RRV:

- Intelligence Surveillance & Reconnaissance (ISR)
- Tactical Persistent Surveillance/Persistent Surveillance Aerostat
- Emergency.lu; other disaster response and recovery missions
- Telemedicine (e.g. SATMED)
- Video contributions

The Rapid Response Vehicle (RRV) is a mobile SATCOM-enabled communications platform designed to accommodate a variety of applications for commercial, civil, humanitarian, defence and security missions around the world. The RRV can help restore essential communication links, support multiple end-to-end services, provide immediate coverage via stand-by capacity reserved for relief efforts. SES’s combination of GEO (Geostationary Earth Orbit) widebeam satellite coverage and MEO (Medium Earth Orbit) low-latency offers seamless coverage across the globe. This multi-band, multi-orbit GEO/MEO access allows to configure tailor-made cost-efficient solutions.



The RRV can provide connectivity for specific scenarios and applications such as high-definition video surveillance streaming, mobile comms for security forces and ‘blue-light’ services, emergency connectivity for critical

national infrastructure and drone video relay.

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