Airborne Wide Area Persistent Surveillance System (AWAPSS)
Real-time 24 hour wide area persistent surveillance
Wide area surveillance provides value on battlefields and borders

Today’s security environment is challenging with potential threats originating from nonaligned actors, natural disasters, organized crime and border crossings. BAE Systems’ Airborne Wide Area Persistent Surveillance System (AWAPSS) is an unblinking eye in the sky, commanding a persistent watch over troubled areas to provide decision makers with actionable intelligence.

The unblinking eye day and night

The system satisfies the urgent need for persistent, day/night overhead surveillance of today’s asymmetric environments by simultaneously collecting registered, 100 mega pixel images in the visible and infrared. Blanketing a footprint of 8 kilometers in diameter, AWAPSS delivers near real-time imagery with abundant storage for analysis of current and past events. The system offers a variety of capabilities, including mission planning, sensor control, mode selection, tracking, and data analysis.

Easy to implement

Decision makers often require situational awareness over large areas of operation. These include civil defense, border patrol and disaster assessment. It is important to have a solution that is easy to implement, operate and is also cost-effective. The fielded AWAPSS system is the essential element in 24/7 operation for these mission types. It is housed in a 21” commercially available standard turret, which can support a variety of missions. With a fixed-wing, lighter than air or rotary-wing aircraft, AWAPSS can optimally cover large areas of the ground and generate useful and focused products that support decision makers and police authorities alike.

BAE Systems’ AWAPSS provides complete situational awareness and can be installed on fixed-wing, rotary-wing, and unmanned aircraft.
Fail-safe forensic collection

Product generation can be accomplished using specialized software and hardware to optimize user-selected areas of interest for near real-time or forensic analysis. Through the use of standard TCDL non-LOS transmission methods those functions can be off-loaded from the aircraft to a ground operation center in near real-time.

This persistent wide area surveillance has become an invaluable asset, providing a unparalleled view of cities and critical areas both day and night. Forensic analysis can be conducted on stored imagery giving analysts the ability to backtrack and determine who, how and when an action was implemented. This is most valuable when decoding a sequence of events leading up to a critical incident.

Features
- Extremely compact system incorporates dual-band large format imaging in a 21 inch diameter turret with simple bolt-on platform interface
- Collects and stores high resolution EO/IR imagery for near real time distribution to the appropriate decision makers
- Satisfies the rigors of military operational environments with self-contained control of vibration, temperature and aerodynamic loads
- 5-axis stabilization to 5 μrad RMS, forward motion compensation and image de-roll, geo-location to 50 meters
- Plug and play system components easily adapt to commercially available aircraft or helicopters
- Turnkey ground control, mission planning and analysis stations are provided for simple operation

Specifications

<table>
<thead>
<tr>
<th>Sensor type</th>
<th>Dual band sector scan panoramic, auto exposure, par-focalized</th>
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</thead>
<tbody>
<tr>
<td>Visible resolution, 20K’ SR</td>
<td>.75 meters</td>
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<tr>
<td>IR resolution, 20K’ SR</td>
<td>1.0 meter</td>
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<tr>
<td>Frames per second</td>
<td>Field selectable 1 or 2 hertz</td>
</tr>
<tr>
<td>Bits per pixel</td>
<td>12 Vis, 14 IR</td>
</tr>
<tr>
<td>Coverage</td>
<td>68 AT x 60 XT degrees</td>
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</tbody>
</table>

Flight hours | >30,000 hours |
Visible brightness range | 50 to 8,000 foot lamberts |
NEDT | 40 milli Kelvin |
Persistent Image area | 8 kilometer diameter |

Sensor turret

| Size | 21" diameter x 27" high (53 centimeter diameter x 68 centimeter diameter) |
| Weight | 212 pounds (96 kilograms) |
Average power | 500 watts |