

ESEN AEROSTAT WIDE AREA SURVEILLANCE (AWAS) SYSTEM



ESEN AWAS System provides analysts persistent surveillance capability over city-sized areas. Thank to its enabling tools to see the big picture, it helps analysts to gain situational awareness all over the region and create actionable intelligence and improved use of resources.

ESEN AWAS detects and tracks up to 2000 individual dismounts and vehicles in its field of view and provides geo-registered track information, in real time. Analysts can watch their specific areas of interest using high resolution watch boxes which can be panned and zoomed independently and follow a specific target automatically.

The system enables analysts to access both real-time and archived imagery providing many useful analysis opportunities with its advanced search capability (location, time, track information) at any time; live or off-line. The duration of archiving can be extended; thanks to scalable structure of the system.

ESEN AWAS also offers pattern of life analysis and anomaly detection in its field of view by integrating, transforming external sources of data with data fusion capabilities. This capability will enhance operator analysis as it provides automatic detection of abnormal activities.

The data obtained can be disseminated to other analysts or handheld devices.

ESEN can customize the Aerostat WAMI solution for specific mission requirements.



ESEN AWAS can be used for

- ➔ Marine and Land Border Surveillance and Control (Counter smuggling, human trafficking and illegal immigration)
- ➔ Critical Infrastructure Protection (Ports, critical industrial areas, etc.)
- ➔ Traffic Monitoring, Surveillance and Control
- ➔ Event monitoring, Crowd Monitoring, Surveillance and Control
- ➔ Public Safety
- ➔ Disaster Relief
- ➔ Refugee Camp Security
- ➔ Law Enforcement and Forensic Analysis

	Day Time*	Night Time*
Field Of View (Horizontal)	75°	43°
Coverage Area	8 km ² instantaneously	1,75 km ² instantaneously
Max Range (Tracking)	3.5 km	2.5 km
Scanning	360°	360°
Environmental	810 G	810 G
Operational Temperature	-30°C ; +50°C	-30°C ; +50°C
Detector Type	CMOS (Mono or Color)	Uncooler LWIR
Frame Rate	2 fps	2 fps
Number of Pixels	228 MPixels	6.5 MPixels
Communication	Data and Video over Fiber	Data and Video over Fiber
Health Monitor	PBIT, CBIT, IBIT	PBIT, CBIT, IBIT

*Configurable to customer needs

Airborne Real Time Processing Capabilities

- ✓ Persistent surveillance over wide area
- ✓ Moving target detection (vehicles and human sized objects)
- ✓ Vehicle tracking
- ✓ Better than 30 meters geo-registration accuracy
- ✓ Live feed of areas of interest (chipout)
- ✓ Capability of selecting different parts of wide area imagery among the multiple chipouts
- ✓ Chipout has independent zoom and pan, track information display and target tracking features.
- ✓ Lossless imagery and data recording



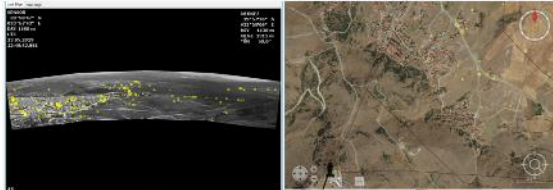
Analysis (Real time or offline)

- ✓ Presents WAMI and track information on 3-D geographical information system (GIS) to create enhanced situational awareness.
- ✓ Search archived images by location, time and track information.
- ✓ Replay and rewind (at various speeds) and perform forensic analysis and find destinations and origin of travel.
- ✓ Disseminates imagery and tracking results through wide area network.
- ✓ Multiple operators can monitor different parts of wide area imagery simultaneously.
- ✓ Definition of alarms and interest regions. Alarms can be visual and audio.
- ✓ Add event marks and place marks.
- ✓ Cross-cueing capabilities for partner sensors (Full motion video from EO/IR, PTZ, etc.).



Fusion

- ✓ Data fusion with additional data sources
- ✓ Pattern of life analysis
- ✓ Anomaly detection



Storage

- ✓ One month of archive capacity (The duration can be extended as the system has a scalable structure)

