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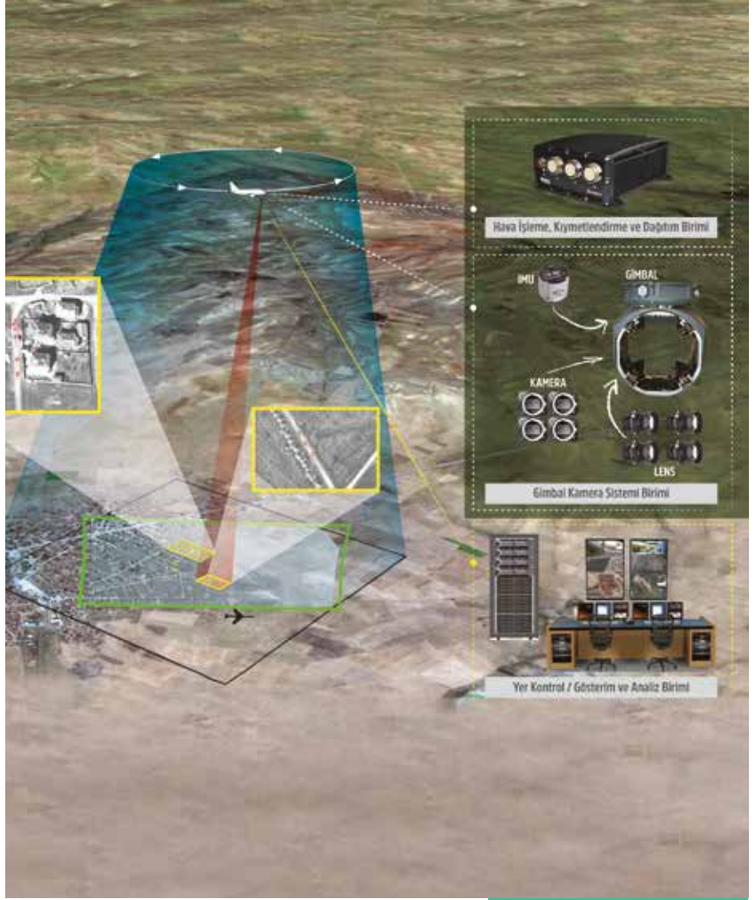

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AIRBORNE WIDE AREA SURVEILLANCE SYSTEM (AWAS)

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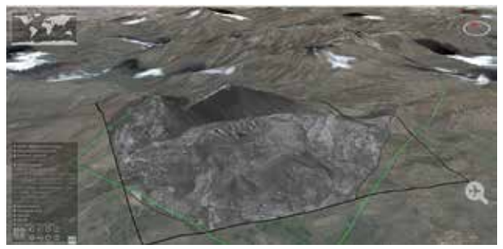
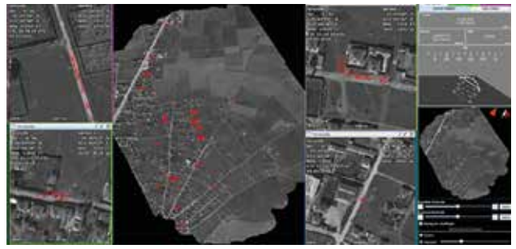
ESEN Wide Area Surveillance System (AWAS) provides coninuous real-time surveillance from an aerial platform. Compared to traditional aerial surveillance systems, it can display up to 100 times of the area at a comparable resolution.





Svstem Overview

	ESEN-AWAS-116P/C, ESEN-AWAS-86C16M
Airborne Real-time Processing Capabilities (*)	- Moving target detection of vehicles, humans etc. - Vehicle tracking - Vehicle dismount detection - Proven high performance over a variety of terrain (ranging from urban to mountainous) - More than 3000 simultaneous detections/tracks - Ortho-rectification - Better than 30 meters geo-registration accuracy - Lossless on-board imagery and data recording - Live feed of areas of interest (chipout) - Live feed of all metadata and detection/tracking results - Simultaneous dissemination of up to 30 live chipouts via data link (dependent on bandwidth allocation) - Seek, pause, search and replay during flight
Coverage Area / Ground Sampling Distance (**)	- EO Solution: 5km^{2}coverage /21 cm GSD @ 18.000 ft - EO+IR Solution: - EO: 4.5 km^{2}coverage / 21 cm GSD @ 18.000 ft - IR: 1.5 km^{2}coverage / 33 cm GSD @ 18.000 ft
Data Link	- Interoperability with common bi-directional data link systems (typically 2 – 40Mbit/s) - Optionally, 8 MBit/s 200km range, L/S/C band data link system (made in Turkey) can be provided with the system.

(*) All software is developed in house. Any customization per new operational needs can be performed.

(**) Coverage area and ground sampling distance can be customized with different lens options and adapted to different mission altitudes.

Visualization, Control and Analysis

Data Management	- Petabyte level scalable storage of imagery, metadata and tracking results - Indexing, compression and data aging - Authentication and authorization-based access control
Dissemination	- Dissemination of imagery and tracking results through wide area networks, 3G, LTE and satellite etc. to remote locations. - Multi-client dissemination support
System Control	- Camera system control - Real time update of PED Unit exploitation parameters - Monitoring health status of airborne units
Real-Time Wide Area Motion Imagery Display	- Operator interface supports multiple simultaneous chipouts, each with independent zoom and pan, track information display and target tracking - Track information and track history display - Play back of on-board recorded data during flight - User annotation features - Presentation of wide area motion imagery and track information on 3-D geographical information system (GIS) to create enhanced situational awareness - FLIR cueing and display of FLIR imagery
Analysis	- Search archived images by location, time and track information - Replay (at different speeds) and perform forensic analysis - Show track history, seek to time of a history point, seek to first action in any area - Track filter (speed, track length, region of interest, etc.) - Track merging, and false alarm removal - Add event marks and place marks - Definition of alarm and interest regions - Re-exploitation of archived imagery with different exploitation parameters
Fusion (*)	- Data fusion with additional data sources - Pattern of life analysis - Anomaly detection

(*): ESEN's Big Data & Fusion capability offers advanced analysis and identification capabilities using AWAS System's exploitation results and additional data sources.