

ESEN



E Matris-TA

AEROSTAT WIDE AREA SURVEILLANCE SYSTEM

www.esensi.com.tr

Aerostat Wide Area Surveillance System

ESEN EMatris-TA System provides persistent surveillance capability over city-sized areas. It enables tools to see the big picture and helps to gain situational awareness all over the region and create actionable intelligence and improved use of resources.

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

The system enables access to both real time and archived imagery. It provides many useful analysis opportunities with its advanced search capability (location, time, track information at any time; live or offline). The scalable structure of the system with extension possibility of the duration of archiving.

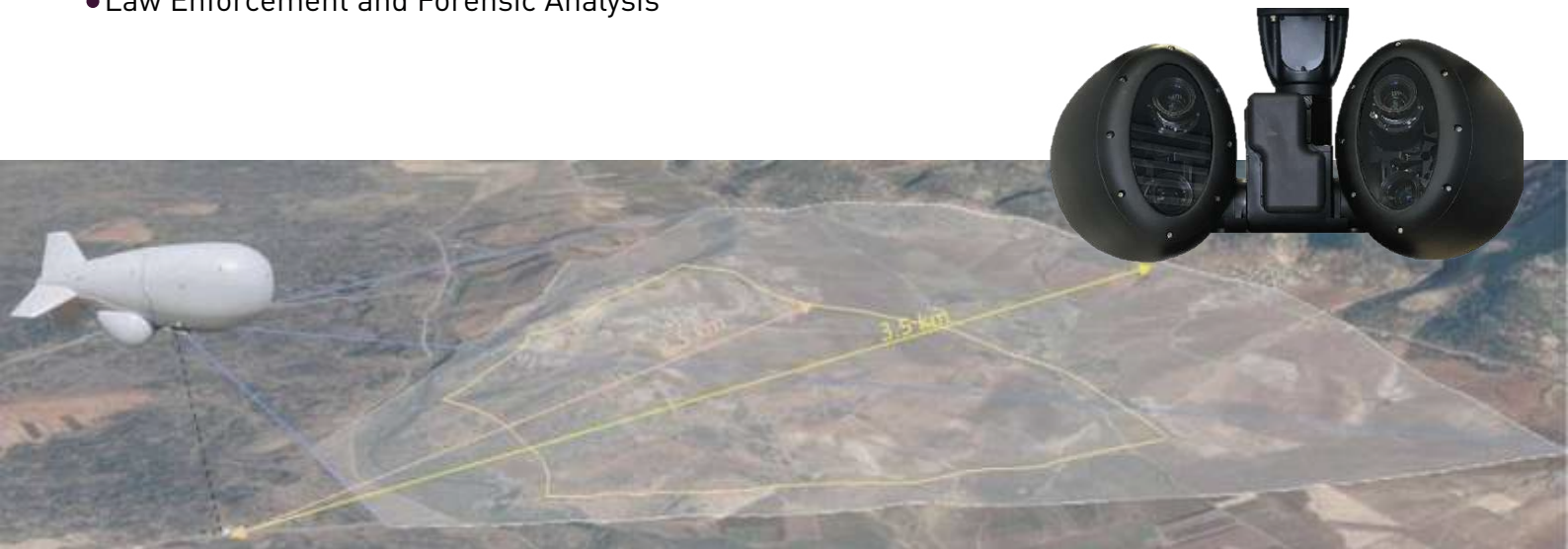
ESEN EMatris-TA also offers pattern of life analysis and anomaly detection by integrating, transforming external sources of data with data fusion capabilities. This capability will enhance operator analysis as it provides automatic detection of abnormal activities.

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

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

ESEN EMatris-TA can be used for

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



Technical Specifications

	Day Time*	Night Time*
Field of View (Horizontal)	75°	43°
Coverage Area	8 km (instantaneously)	1.75 km (instantaneously)
Max Range (Tracking)	3.5 km	2.5 km
Scanning	360	360
Environmental	810 G	810 G
Operating Temperature	-30 C , +50 C	-30 C , +50 C
Detector Type	CMOS (Mono or Color)	Uncooler LWIR
Frame Range	2fps	2fps
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 Analysis (Real Time or Offline)

- 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 (chip-out)
- 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

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)

- 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 visual and audio alarms interest regions
- Add event marks and place marks.
- Cross-cueing capabilities for partner sensors (Full motion video from Eletro Optical/ Infrared, Pan-Tit-Zoom)

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