



# ERA MILITARY SOLUTIONS

Surveillance • Reconnaissance  
Military ATM • Command&Control Systems

SEES WITHOUT BEING SEEN



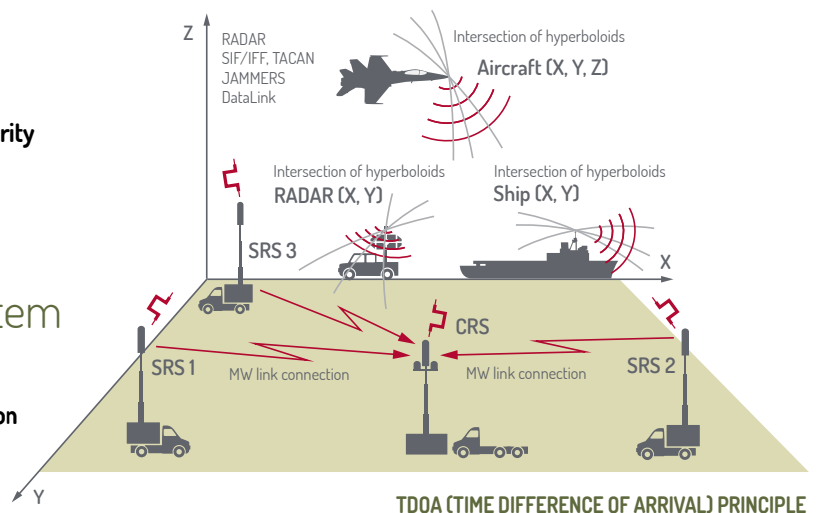
## SENSORS – SURVEILLANCE & RECONNAISSANCE

### VERA-NG – Passive ESM Tracker

VERA-NG addresses critical elements in today's military and security operations by providing the most advanced and state-of-the-art Passive Surveillance System designed for detection, location, identification and tracking of air, ground and naval targets.

### MSS – Multisensor Surveillance System

MSS is a surveillance system developed for Air Traffic Control, used also for military range surveillance, Wide Area Multilateration and Precision Approach Solution.



# SENSORS



## VERA-NG

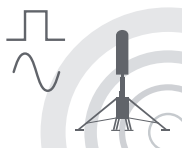
Unique, tried and tested world leading PET (Passive ESM Tracker)

**VERA-NG is Passive ESM (Electronic Support Measure) Tracker. VERA-NG uses advanced techniques to conduct cross-border and inland long-term and long-range surveillance without alerting neighbours. It effectively "sees without being seen". It emits zero electromagnetic energy making it invisible to anti-radar missile systems. VERA can be easily transported in general purpose vehicles.**

### SURVEILLANCE & RECONNAISSANCE



Air Surveillance



Electronic Warfare



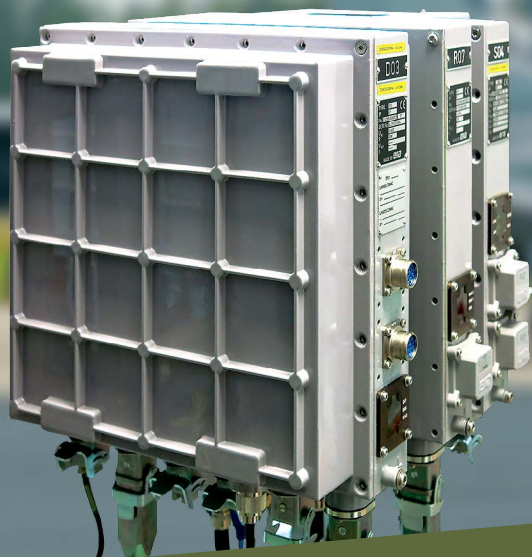
Air Defence

### FEATURES:

- 4 stations (1 central, 3 remote sites) and a Central Processing Station
- Stationary and/or deployable version available on 12 and 25 metre masts, tripod and tetrapode
- Frequency range 50 MHz – 18 GHz
- Tracking capacity 200 real time tracks, range up to 400 km
- Target library capacity 10,000 targets
- Overall weight 125 kg (UMM 85 + MWL 25 + AU 12 + lightning rod 3 kg)

### BENEFITS:

- ✓ Covert cross-border long-range surveillance
- ✓ ELINT (Electronic Intelligence) information and analysis
- ✓ 3D real-time geolocation, tracking and identification of airborne, naval and surface targets



## MSS – MULTISENSOR SURVEILLANCE SYSTEM

Tried and tested multilateration system for military applications

The MSS (Multisensor Surveillance System) by ERA, widely deployed for air traffic control, is a mature surveillance system providing high availability, maintainability and survivability in all operational environments for military applications amongst other things.

### MILITARY ATC SOLUTIONS



Enroute/Approach/Ground Surveillance



Precision Approach Solution

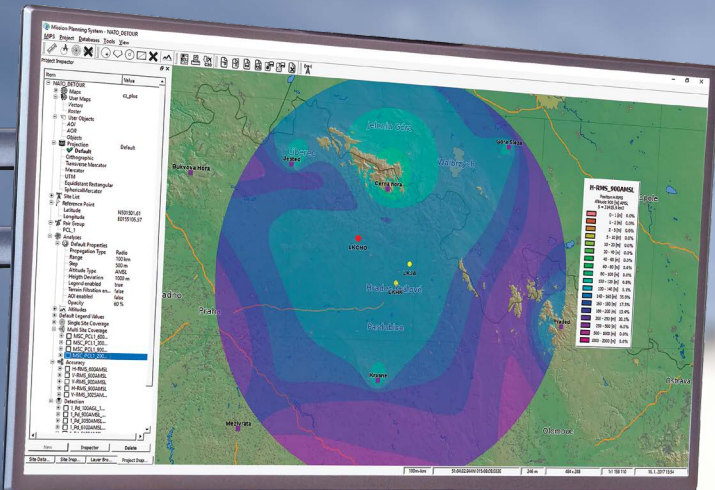
### FEATURES:

- Mode 1, 2, 3/A, C, Mode S
- Operating temperature  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$
- Relative humidity up to 100 %
- ASTERIX DATA format

### BENEFITS:

- ✓ Tried and tested solution in all weather conditions (IP67)
- ✓ Excellent performance - proven technology providing high reliability and safety
- ✓ Easy expandability for seamless surveillance
- ✓ Modular, robust system
- ✓ High update rate

# BEYOND THE SENSORS



## MORE THAN SENSORS

### ERIS (ERA Integrated Systems)

ERIS (ERA Integrated Systems) represents the ERA extended product portfolio for military solutions starting from Military Air Traffic Control to Comprehensive C2 systems.

### 3R (Record&Replay&InvestigatoR)

Modular, multi-source, multi-channel and non-stop recording&replay system with Technical and Investigation Client for filing, long-term storage and replay of audio, video & data recordings.

Data Fusion

Data Displays

Simulation/Analytical Tools

MasterCare - System Assurance Services

Consultancy/Training

Research & Development

# MORE THAN SENSORS



## 3R – RECORD, REPLAY, INVESTIGATOR SYSTEM

Non-stop recording & replay system with Technical and Investigation Client

**3R Record & Replay & Investigator** is an open and modular solution based on common HW and designed for filing, long-term storage and replay of audio, video & data recordings. Technical and Investigation Client (TIC) of 3R Recording System serves for analysis, monitoring and controlling of Recorders and Central Storage devices suitable for different users e.g. ANSP's Safety Department.

### FEATURES:

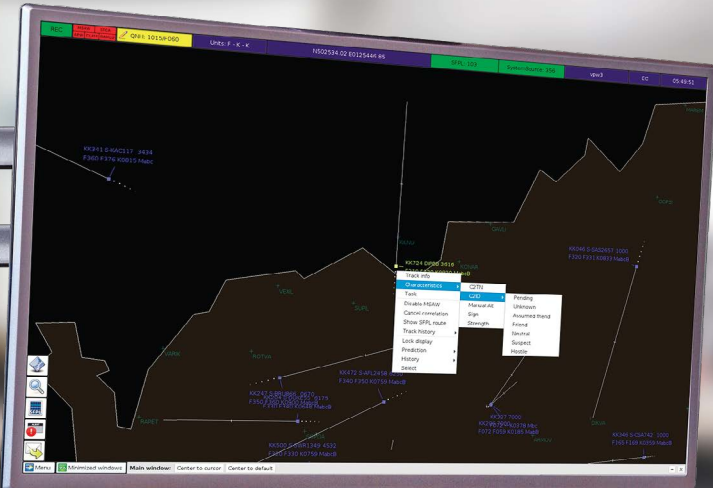
- Inputs (Analogue voice channels, Digital voice channels, Data streams, video channels)
- Full redundancy
- Linux-based software
- Central on-line storage
- Advanced user profile management and user activities log system

### BENEFITS:

- ✓ Shorter time of investigation files sharing across the team
- ✓ Based on COTS HW components
- ✓ Easy export of given sequence
- ✓ Independent Data Display for surveillance data
- ✓ Selected channels on-line monitoring support



Non-stop Recording Data



## ERIS – ERA INTEGRATED SYSTEMS

### Command and Control (C2) and Military ATM Systems

**ERIS is a modern sophisticated and modular design to meet all the requirements for Military ATM and C2 Systems. The system is tailored for the specific needs of the end user composed of standard modules both for Military ATM as well as C2 solutions. Thanks to the modularity and scalability of the system, ERIS can be configured from regional C2 posts to nation-wide C2 systems adaptable to any radar/sensor and to any national air defense needs including Air Traffic Control (ATC) functionalities.**



Command and Control

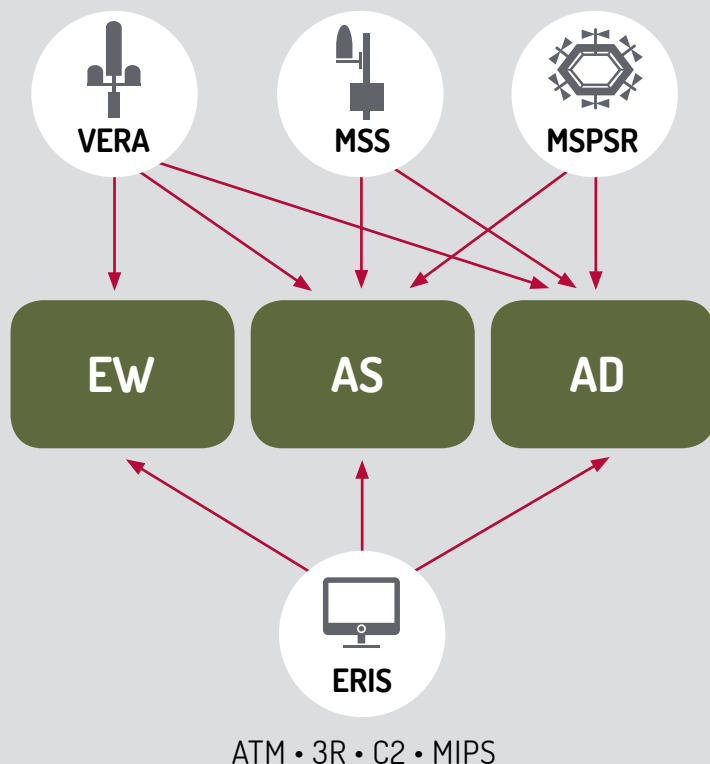
#### FEATURES:

- Modern Multi-sensor Surveillance Tracker
- User-friendly HMI
- Linux-based software
- Full redundancy
- TMC Technical Monitoring and Control
- ATC (Air Traffic Control) Server incl. safety nets

#### BENEFITS:

- ✓ Sophisticated and modular system design
- ✓ End to end solution from planning and execution up to analysis
- ✓ Compliance with NATO and non-NATO C2 procedures, data exchange and system architecture

# ERA CAPABILITY FOR A MODERN MILITARY CONCEPT



## Legend scheme:

- **DPET VERA-NG** – Deployable Passive Surveillance ESM Tracker
  - **MSS** – Multisensor Surveillance System
  - **MSPSR** – Multi Static Primary Surveillance Radar
  - **ERIS** – ERA Integrated Systems
  - **ATM** – Air Traffic Management
  - **3R** – Record&Replay&InvestigatoR system
  - **C2** – Control and Command
  - **MIPS** – Mission Planning System
  - **ESM** – Electronic Support Measures
- 
- **EW** – Electronic Warfare – ESM means supporting ISTAR and SIGINT operations
  - **AS** – Air Surveillance – means supporting AirC2 – (D)ARS
  - **AD** – Air Defence – means supporting GBAD – SAMOC/FDC
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- **ISTAR** – Intelligence, Surveillance, Target Acquisition, and Reconnaissance
  - **ARS** – Air Control Centre (**ACC**), Recognized Air Picture (**RAP**) Production Centre (**RPC**) and Sensor Fusion Post (**SFP**)
  - **GBAD** – Ground Base Air Defence
  - **SAMOC** – Surface to Air Missile Operation Centre
  - **FDC** – Fire Distribution Centre

## Basic info on ERA:

ERA a.s. (a member of Omnipol Group) is a pioneer and leading supplier of next-generation surveillance and flight tracking solutions for air traffic management, military, security and airport operations markets.

As one of the developers of the respected technologies of multilateration and ADS-B and thanks to the company's traditional products, ERA has more than 100 installations at a series of aerodromes, air traffic control centres and military organisations in over 60 countries on all continents except Antarctica: in Europe, the Middle East, Africa, the Americas and Asia.

For more than half a century ERA has built a proud heritage delivering multilateration based solutions such as wide area multilateration and surface surveillance to ATC controllers. Apart from systems for the civil sector, ERA has developed the unique passive radiolocation system VERA-NG – an essential part of any modern defence surveillance network and advanced border protection.

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