

VERA-NG

Passive ESM Tracker (PET)

PET VERA-NG is the most advanced Passive Surveillance System utilizing the multilateration Time Difference of Arrival (TDOA) principle. The unique system is designed for detection, localization, tracking and identification of the air, ground and naval targets as well as exceptional pulse and continuous wave signal analysis.

VERA-NG supports cross-border, long-term and long-range surveillance without alerting neighbouring nations. The system emits zero electromagnetic energy making it 'invisible', i. e. it sees without being seen. It also provides strategic ELINT (Electronic Intelligence) information to collect, process and evaluate the ESM data for reference database.

VERA-NG = 6 decades of pioneering in the field of passive radiolocation adapted to face modern threats.

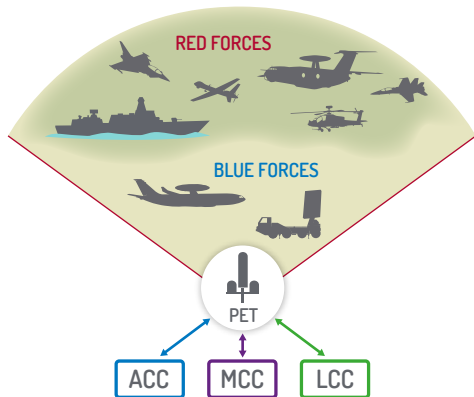
KEY FEATURES:

- ✓ Multistatic passive surveillance system
- ✓ High-accuracy target localization (2D, 3D) based on TDOA principle outperforming Direction Finders
- ✓ Real-time target tracking including Unmanned Aerial Systems (UAS)
- ✓ Precise signal parameters measurement
- ✓ Pulse and Continuous Wave (CW) signal processing
- ✓ ELINT analysis (inter & intra-pulse)
- ✓ Automatic identification of non-cooperative targets (NCTI)
- ✓ Interoperable with AirC2 and EWC2
- ✓ Full scale training provided by former military operators
- ✓ Remote control

USE CASES:

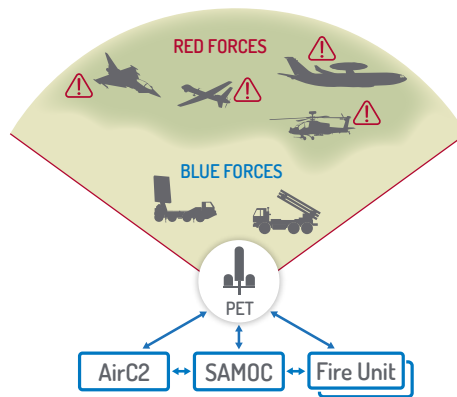
SURVEILLANCE

- Situational Awareness
- From air to ground
- Real-time target tracking in 2D/3D
- Non-Cooperative Targets Identification



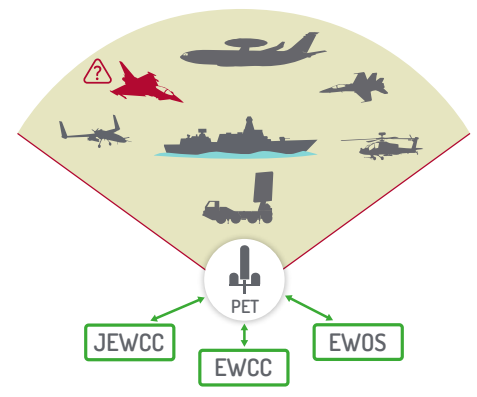
AIR DEFENCE

- Covert mode of operation
- Countering SEAD (ECCM)
- Supporting A2AD (IFF, ECM)
- Augmenting active sensors



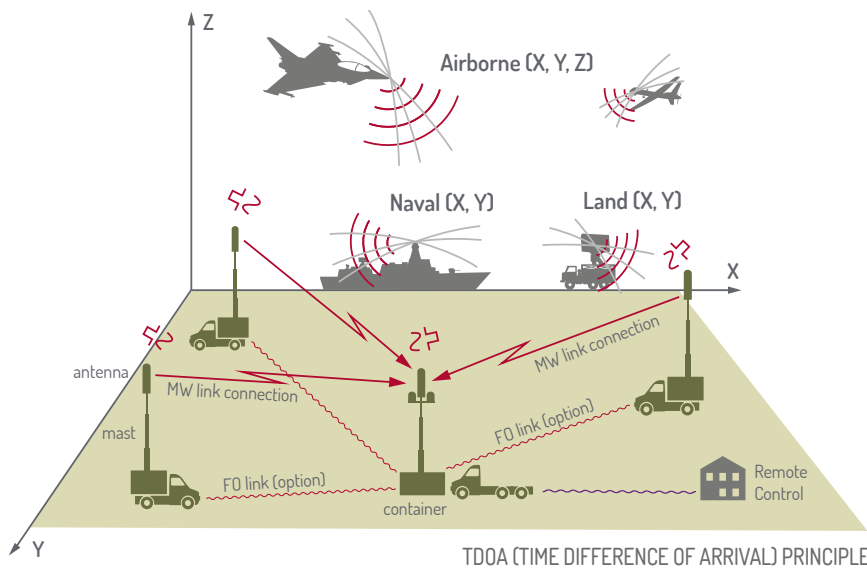
ELECTRONIC WARFARE

- Deep signal analysis (ELINT)
- Contributing to national Emitter Databases (EDB)
- Full support of EMO
- Significant contribution to EOB



SYSTEM PRINCIPLE:

The system consists of one central receiving and processing station and three side receiving stations, operator's workplace and utilizes the TDOA principle.



Legend:

- **ACC** - Air Component Command; • **MCC** - Maritime Component Command; • **LCC** - Land Component Command;
- **SAMOC** - Surface-to-Air Missile Operation Center; • **JEWCC** - Joint Electronic Warfare Coordination Cell; • **EWCC** - Electronic Warfare Coordination Cell; • **EWOS** - Electronic Warfare Operational Support; • **SEAD** - Suppression of Enemy Air Defence; • **ECCM** - Electronic Counter Counter Measure; • **A2AD** - Anti-Access Area-Denial;
- **IFF** - Identify Friend or Foe; • **ECM** - Electronic Counter Measures; • **EOB** - Electronic Order of Battle; • **EMO** - Electromagnetic Operations

SYSTEM PARAMETERS:

Frequency range	87,5 MHz – 18 GHz
Instantaneous bandwidth	max. 1 000 MHz
Range	Up to 400 km
Instantaneous Field of View	120° (Surveillance field of view 360°)
Azimuth accuracy	0.01°
Tracking capability	2D/3D
Tracking capacity	At least 200 real time tracks
Processed signals (emitters)	General Pulsed Signals (Radars, Data Links, etc.), Continuous Wave signals, jammers, SIF/IFF, ADS-B
System composition	Stationary/deployable
System interoperability	UFE (AST 248, 249), AST 34, 48, 62, XML (Spot report)
Environmental conditions	STANAG 4370 A1, A2, A3, B1, B2, B3, C0, C1
EMC	MIL-STD-461F