



ELTGROUP

MARITIME SUPREMACY.

Full European technology at the service
of Maritime Supremacy.

WE ARE ELT GROUP

Safeguarding the globe
with unmatched EMS expertise.

For over seven decades, we have been a beacon of innovation, leading the charge in shaping a secure future. Operating across 11 countries in Europe, the Middle East, Asia, and the USA, our commitment to excellence is evident in our extensive history and unwavering dedication to innovation.

Over the past three years, our significant investments in cutting-edge technologies have propelled us to the forefront of the Electromagnetic Spectrum (EMS) realm.

Collaborating with esteemed research institutions and universities, we've cultivated an Innovation Ecosystem, fostering groundbreaking solutions for defense, cybersecurity, and EMS. Our identity, deeply rooted in a rich history, has evolved into a global force, participating in major defense programs, and contributing to the sixth-generation fighter GCAP.

From cybersecurity to pioneering EMS technologies, our relentless pursuit of innovation goes hand in hand with sustainability, reflecting our forward-looking approach to building a safer and more stable world.

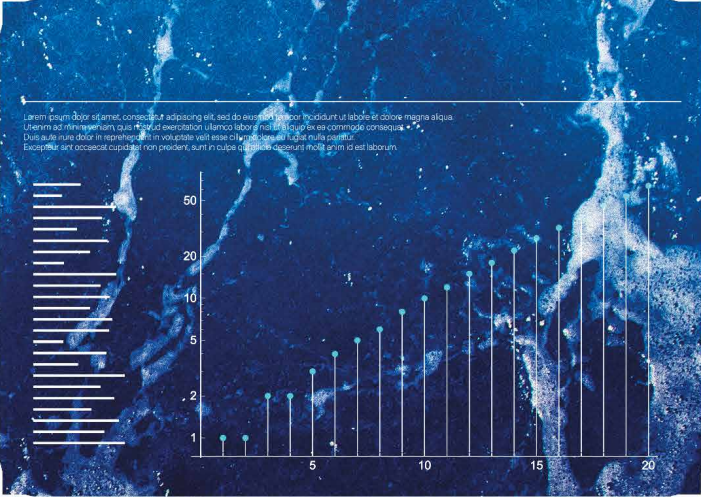
Our approach to Defense

Force Protection with integrated multi-domain solutions.

As a global leader in Electromagnetic Spectrum Operations (EMSO), our state-of-the-art technology portfolio features proprietary technologies and integrates various capabilities into software-defined systems. This enables our customers to engage in Electromagnetic Defense, Surveillance & Attack, Intelligence, Surveillance and Reconnaissance (ISR), Cyber Electro-Magnetic Activities (CEMA), Force Protection and Information Protection through a multi-domain approach. Defense remains at the heart of our operations, with a product line spanning Electromagnetic Warfare and Intelligence, serving the Armed Forces of 30 nations across 5 continents.

Embracing a turn-key, although tailored, solution approach, Global Sustainment complements our offerings, providing a complete EMSO experience through education, training, advanced simulation systems, operational support, and full Life Cycle Management.

Our commitment extends to enhancing platform defense with multi-spectral Electro-magnetic Defense and integrated Electro-magnetic Surveillance sensor solutions, in order to fulfill our greatest goal: protect personnel and assets.



/01.

ELECTRO-MAGNETIC DEFENSE

Cutting-edge technology to develop advanced solutions ensuring the resilience and protection of naval assets.

VIRGILIUS INTEGRATED SYSTEM

↳ Shield & Spear.



All in one.

Virgilius is the integrated system par excellence, where integrated means that its architecture is fully software definable to have RESM/RECM/CESM in one solution. Specific threat awareness, surveillance and jamming functions are provided to the Combat Management System in a fully automated and continuous cycle. It becomes a consequence that it is suitable for a wide range of types of naval platforms and missions, with a particular focus on operational roles such as Anti-Air Warfare, AntiSubmarine Warfare, Anti-Surface Warfare, Anti Ship (Ballistic) Missile Defense, Force Protection, etc. This powerful ability supports ISR operation with deep ELINT/COMINT features. All in one is perfectly witnessed by Virgilius integrated antenna system.

↳ [Virgilius RESM at a glance]

Virgilius is conceived to perform emitter detection, classification, identification and to counter a large threat variety including Multifunction and LPI Radars.

→ Early Warning in-deep signal extraction and classification/identification

→ Radar E.O.B. and Data Bases management and contribution

→ Picture Compilation and contribution to the tactical situation and situational awareness, fusing information in a uniquely integrated and synthetic Recognized Electro Magnetic Picture

→ Activation of "soft-kill" actions such as jamming and decoying

→ Advanced Emitter Identification featuresng



↳ [Virgilius RECM at a glance]

Virgilius provides outstanding jamming functions in full automated and continuous cycle through its integrated Rx-Tx technology.

- Modular Effective Radiated Power generation
- Intelligent programmable deception countermeasures
- Highly flexible, to be configured taking into account the multiple installation constraints
- Selected by several Navies worldwide

↳ [Virgilius CESM at a glance]

Virgilius can be extended in its surveillance range by the integration of ELT/332 CESM/COMINT system.

- Detection, localization (direction finding) and recognition/classification of radio emitters
- Support to radar and Comm E.O.B. build up and management
- Analysis and classification of exotic signals
- Multi-sensor coordination for specific SIGINT tasks





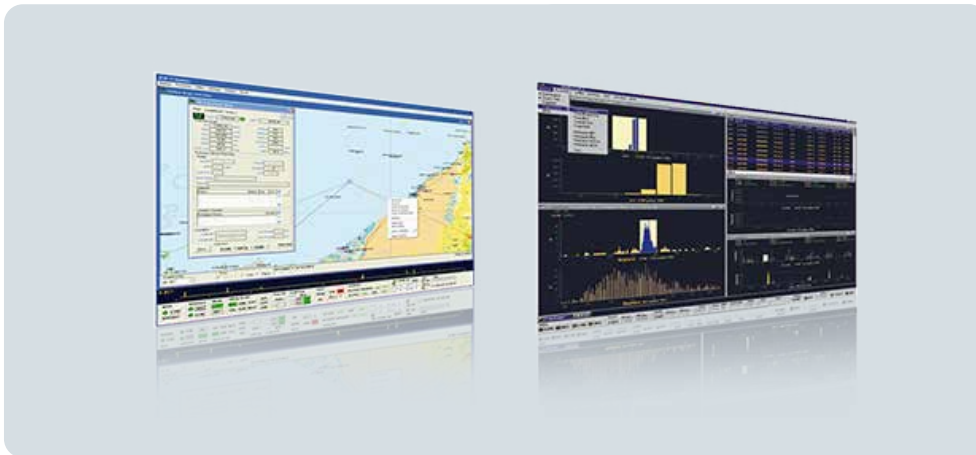
/02.

INTELLIGENCE SURVEILLANCE RECONNAISSANCE

Providing excellent state-of-the-art solutions for collecting, analyzing, and disseminating actionable intelligence to enhance situational awareness and decision-making capabilities in complex operational environments.

ELT/819

↳ The ISTAR star.



The ELT/819 is an ELINT and Surveillance family of systems provides an intelligence-gathering capability in a wide, contested and congested electromagnetic environment. The system has an RF coverage from C band to J band. Pending on operational scenarios, the coverage can be tailored to customer's requirements, extended down to A band (ELT/819 A), for low band search emitters, and up to K band (ELT/819 C).

ELT/819 is designed for advanced Signal Intelligence missions within ISTAR-EW platforms (airborne, ground based, maritime).

Its function is to collect electromagnetic emissions to determine their inherent features, including "fingerprinting" of the associated radar/weapons systems, in order to feed the intelligence cycle.

Its flexibility of employment makes it adaptable to many mission profiles, from tactical level Electro-magnetic Surveillance, to operational & Joint level ELINT campaigns, both on board of tactical combatants' units and Early Warning Helicopters/Aircrafts.

↳ [ELT/819 at a glance]

- | | |
|--|---|
| → Large RF coverage from A to K band | → Automatic and computer-aided analysis both at Interpulse and Intrapulse level |
| → Multiple receivers with extremely high sensitivity and high Probability Of Intercept (POI) | → Digital recording of all the acquired data |
| → Capability to operate in dense, complex and a priori unknown electromagnetic scenarios | → Capability to be tasked and interrogated (through the on-board communication facilities) by a remote command center in a Network-Centric architecture |
| → E.O.B. creation/updating and presentation on digital maps | |
| → Very accurate DOA measurements and emitter geolocation through several techniques | |

VIRGILIUS

↳ Shield & Spear - Feed the intelligence cycle.



Virgilius is designed for advanced Signal Intelligence missions within the on-board integrated EW suite. Its function is to collect electromagnetic emissions to determine their inherent features, including “fingerprinting” of shipborne systems in order to feed the “intelligence” cycle.

Its flexible deployment allows tactical employment during different phases of a Joint Operation, for example on airborne Early Warning (organic or not) assets.

↳ [Virgilius additional SIGINT at a glance]

- Wide instantaneous IF bandwidth
- Capability to operate in dense, complex and a priori unknown electromagnetic scenarios
- E.O.B. creation/updating and presentation on digital maps
- Very accurate DOA measurements
- Automatic and computer-aided fine analysis both at Interpulse and Intrapulse level
- Digital recording of all the acquired data (PdMs and Intrapulse analysis data)
- Capability to be tasked and interrogated (through the on-board communication facilities) by a remote command center in a Network-Centric Architecture

ELT/332

↳ Silent Sentinel.



When the mission requires thoughtful knowledge of the electromagnetic environment and you need to anticipate the enemy's behavior then you come to ELT/332.

ELT/332 is the perfect completion to the ESM ship's suite, by extending the Electro-magnetic surveillance to radio bands of interest. Not only monitoring and direction finding but, by mean of additional automatic features, nothing will go unnoticed and even the densest electromagnetic scenarios will be detected, demodulated and classified.

↳ [ELT/332 at a glance]

→ Detection and Direction Finding of very short emissions

→ Automatic warning of high priority emitters

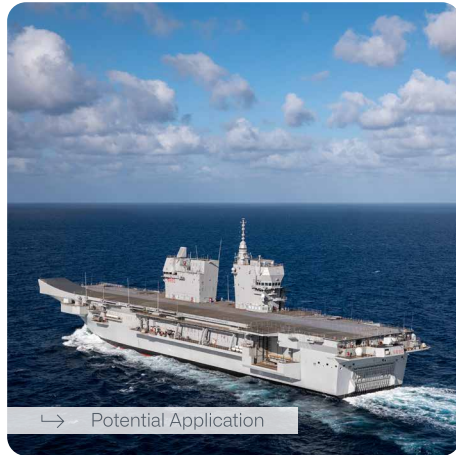
→ Operate also with raw data libraries (mission data)

→ Automatically analyze, classify, display and record also unknown emissions

→ Capability to operate as CESM controller that exploits/performs functions for multi-sensor coordination

ELT/335

↳ C-ECM.



The ELT/335 family of systems is designed to disrupt (C-ECM) radio communications in the HF, VHF, UHF and SHF frequency bands, implementing a large variety of techniques at spectrum and protocol level. The system is typically integrated with a DF/COMINT system (ELT/332 or others), but offers an intrinsic detection-discrimination-classification capability.

↳ [ELT/332 at a glance]

→ Wide band communication jammer, reducing adversary's tactical communication (in the VHF and UHF bands) and C2

→ Deny adversary's COMINT without interferences with friendly communications

→ Detection and measurement of adversary's active networks, communication emitters' waveforms in the EM spectrum and reaction thought programmed jamming waveforms

→ EMS monitoring

→ Mission planning, targets and related countermeasures definitions, guard channels, protected bands

→ Jamming reporting

ELT/225

↳ ESM/ELINT.



Belonging to ELT family of ESM/ELINT systems, it is designed to operate on naval or submarine platforms, where constraints in terms of size, weight and power are very demanding. The ELT/225 different configurations, with full frequency band coverage (C to J with option K band), enhanced sensitivity and DF accuracy performance, provide also the ELINT function.

↳ [ELT/225 at a glance]

→ Detection and Direction Finding of very short emissions

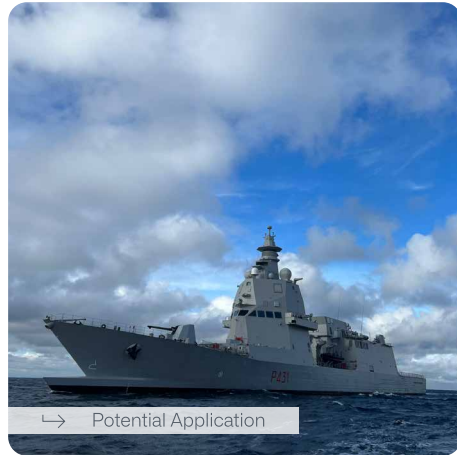
→ Automatic warning of high priority emitters

→ Operate also with raw data libraries (mission data)

→ Automatically analyze, classify, display and record also unknown emissions

ADRIAN

↳ Naval Counter Unmanned Aerial System.



ADRIAN (Anti-Drone Interception Acquisition Neutralization) is a family of Counter-UAV solutions designed to Intercept and Neutralize LSS (Low-Small-Slow) UAV (mini/micro/small) in multiple scenarios and environments. The family includes versions for fixed and transportable deployment, special naval configuration (alongside & underway) both stand-alone and fully integrated with warship's Combat System.

A modern and intuitive Command and Control, powered by AI-based algorithms, functionally integrates multispectral sensors and effectors:

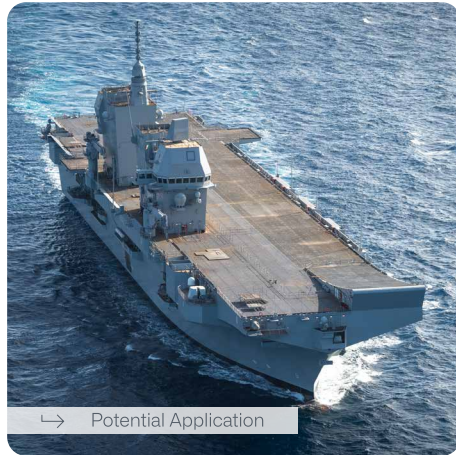
- 2D or 3D RADAR detection and tracking;
- Direction Finder for RF up/down link detection and tracking (drone and Radio Control) for detection, recognition and classification;
- EO/IR Cameras for detection, autotracking, visual confirmation, recognition, classification and post engagement assessment (BDA);
- Radio-link Demodulation and Decoding for protocol recognition;
- Real-time data fusion across all sensors;
- Radio-link smart jamming waveforms;
- GNSS navigation disruption techniques (jamming and spoofing);
- Cyber Electromagnetic Attack enabling UAV Hi-jacking ;
- Integration with Hard-Kill (Combat System integration).

↳ [ADRIAN at a glance]

- Multi sensors Counter Drone Surveillance, Detection, Localization, Tracking, Recognition, Classification and engagement
- Automatic Soft Kill engagement for ROEs restricted scenarios
- Layered self defense/extended self defense with Soft-Kill and Hard Kill disruption
- Automatic and stand alone features for full protection in port when alongside/at anchor
- Full integrability with Combat System to avoid Combat Management System treats saturation

DIRCM

↳ Direct Infra Red Counter Measure.



The ELT/577 DIRCM (Direct Infrared Counter Measure) triple band system belongs to ELT IR-based family of Countermeasures systems. The system, very compact in size and weight (20 kg), provides a reliable and effective protection of Sea-Helicopters and Naval platforms against surface to air missile threats (MANPADS - Man Portable Air Defense Systems).

The product is used as a component of a Self-Protection Suite of helicopters and aircrafts, to create jamming or deception effects against EO/IR guided missiles. When integrated in the Suite, the product generates the relevant jamming/deception techniques in a stand-alone mode or cooperating with passive decoys (flares) to enhance the effectiveness. It is based on Quantum Cascade Laser (QCL) solid state technology.

The Naval version provides anti ship missile defense and anti asymmetric warfare capabilities against small, short range EO/IR guided missiles threats, increasing survivability of the Unit in the littoral, brown waters operations, as well as Amphibious Operations.

↳ [DIRCM at a glance]

→ Fast, effective and reliable neutralization of present and future IR-guided missiles (adaptable to threat evolution)

→ Prompt and effective reaction to counter multiple, even simultaneous threats (ELT patent)

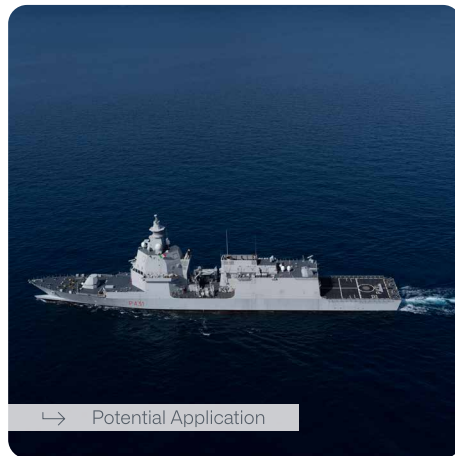
→ Rugged design for shipborne environment

→ Wide spatial coverage (well beyond the hemispherical sector) also with a single turret

→ Complete European Solution

ANTI-SAR ZENITHAL JAMMER

↳ A unique system in the field of Radar Countermeasures.



In modern multi-domain scenario operations, where stealthness is crucial to maintain naval superiority, the capability to counter enemy's air&space-based surveillance sensor's is going to give a disrupting operational advantage. The product is used in support to land and/or maritime operations by offering electromagnetic countermeasures (jamming, deception) against aerial platforms equipped by Synthetic Aperture Radars (SAR). The product is an all-in-one solution for search-track-countermeasure of aerial threats equipped by Synthetic Aperture Radars, in order to deny/degrade the use of the electromagnetic spectrum (jamming) as well as create false targets or obfuscate the real target with fake images/spots. The product is particularly effective in land/naval operations against aerial platforms equipped with radar imaging sensors, such as drones or satellites. The product is based on a solid-state AESA (Active Electronically Scanning Array) mono-pulse architecture, with receiving/transmitting capability, reprogrammable in terms of countermeasures techniques and wide operational bandwidth.

↳ [ANTI-SAR ZENITHAL JAMMER at a glance]

- | | |
|--|---|
| → Passive detection (ESM Electronic Support Measure) | → Availability for Naval Platform and Ground mounted platform |
| → Azimuth/Elevation Direction of Arrival Estimation | → Critical asset protection by means of image hiding |
| → Classification of SAR Target | → Deception capabilities (i.e. generations of customized false targets) |
| → ECM (Electronic Counter Measure) capability versus Satellite SAR systems | → Patented Jamming Architecture Solution |

Our solution

ELT Group is world leader in naval Electromagnetic-Surveillance, self-defense/extended self-defense and intelligence operations, with a state-of-the-art technology portfolio that integrates several capabilities into software defined systems. This allows to carry on Electro-magnetic Defense & Attack, ISR, Cyber Electro-magnetic Activities, Cyber Defense, Force Protection, counter unmanned aerial/surface systems, counter targeting in the full range of Maritime Domain & Joint Operation, with the same solution: full European technology at the service of naval supremacy. Our solutions are designed for all types of naval platforms, from surface ships to submarine, from special purposes vessels, to ASW/ASuW MPA airplanes & helicopters and Unmanned Aerial/Surface Systems. In the last decade we have been proudly selected by Navies from Europe, Asia, North Africa as their EW Provider, commissioning nearly 100 surface and submarine units.

Our equipments and systems are entirely conceived, developed and produced in-house and are all designed for exportability.

We offer the following capabilities in Electro-magnetic Warfare:

- Electro-magnetic Surveillance
- Electro-magnetic Defense
- Electro Optical & Infra Red Surveillance
- Intelligence Surveillance - Reconnaissance
- Homeland Security & Force Protection
- Global Sustainment

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