AIR, SYSTEMS

(ES) Airborne Electronic Attack (AEA)

(Established in November 2019)

For Public Release

PROJECT DESCRIPTION

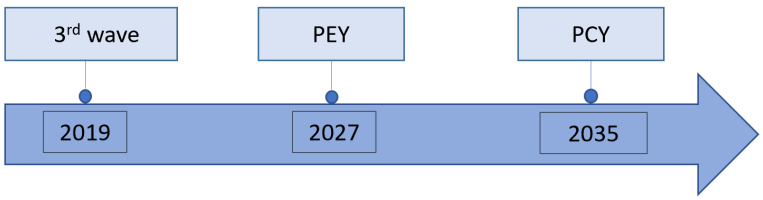
The Airborne Electronic Attack needs the ability to locate, record, replay, and jam hostile communications while tracking across a broad frequency range. Maintaining the ability to communicate with allied forces while operating jamming electronics is another critical requirement. The Electronic Attack integrated inside the aircraft or in a pod mounted system shall implement a highly efficient Phased Array based jamming system with powerful, efficient and wideband gallium-nitride (GaN) technology. The escort system would be able to mask an entire fleet of airships from a medium to long range. The system shall be designed to break the acquisition cycle of radar installations since the search or early-warning phase of detection. S-band radar installations are the threat most often considered, as they are used in most surface-to-air (SAM) missile systems and other Anti- Access/Area Denial (A2/AD) systems. The presence of threats in the ultra-high-frequency (UHF) to X-band range, and their spread in operational frequency and instantaneous bandwidth shall also be considered.

OBJECTIVES/PRODUCTS

The project covers the design, development and testing of a multi jamming capability (including Stand-off, Stand-in and Escort jamming), that will be based in state-of-the-art existing technological cores at European industries level, including the future capability to work in communication band. The system should follow a modular development approach, able to be integrated inside the aircraft or in a pod configuration, in order to be compatible with different aircrafts, manned and unmanned, of interest of the EU Member States. The goal of the system is to enable a platform for Airborne Electronic Attack (AEA) missions that could adapt to the latest in EW requirements, which include (soft) suppression of enemy air defences, escort/modified-escort role, non-traditional electronic attack, self-protected/time-critical strike support, and continuous capability enhancement. This capability will allow European and NATO air forces to safely operate within EU territories and the projection of the force in other potential areas of operations. The system shall be interoperable with the existing and planned EU Member States assets and in cross-domain operations.

INDICATORS

Project Execution Year (PEY) and Project Completion Year (PCY):



DELIVERABLES ACHIEVED

- CONOPS
- System Requirement Specification
- System Simulation Platform
- Preliminary Design Review (PDR)

ES, FR, SE

IT

IDEATION
INCUBATION
EXECUTION
CLOSING

Contribution to the more binding commitments

Yes

Capability Perspective

EU CDP priority
Air Superiority

CARD references
Electronic Warfare Systems

Operational Viewpoint

HICG
Electronic Warfare

EDA support

No

CRITERIA FOR SUCCESS

Success is foreseen to be achieved during the EDF phase with the manufacture of different Building Blocks (BBs) capable to be adapted to different platforms and functionalities that will be tested on a prototype on flight tests.