

ARCHYTTAS

ARCHitectures based on unconventional accelerators for dependable/energy efficient AI Systems

SELECTED PROJECTS EUROPEAN DEFENCE FUND (EDF) 2023

CALL TITLE:

Research actions on digital transformation

TOPIC TITLE:

Dedicated hardware architectures for energy-efficient AI

DURATION OF THE PROJECT:

36 months

TYPE(S) OF ACTIVITIES:

Integrating knowledge, Studies, Design

ESTIMATED TOTAL COST:

€ 19,976,637.23

MAXIMUM EU CONTRIBUTION :

€ 19,976,637.23



SHORT DESCRIPTION OF THE PROJECT:

The goal of ARCHYTTAS is to investigate non-conventional Artificial Intelligence (AI) accelerators for defence applications, using novel technologies at the device and package level.

The project aims to investigate and study the feasibility of non-conventional AI accelerators for defence applications that take advantage of novel technologies at the device and package level, such as optoelectronic-based accelerators, volatile and non-volatile processing-in-memory, and neuromorphic devices. The project distinctly addresses the challenges encountered in the defence use cases by proposing optimised solutions for efficient energy consumption, speed, and cost.



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**Members of the consortium and
country of establishment:**



 NAME OF THE ENTITY	 COUNTRY
IVECO DEFENCE VEHICLES SPA (Coordinator)	Italy
AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS	Spain
ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA	Italy
ARISTOTELIO PANEPISTIMIO THESSALONIKIS	Greece
BRIGHTELLIGENCE SP. Z O.O.	Poland
FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV	Germany
INSTRUMENTATION TECHNOLOGIES, ELEKTRONSKA INSTRUMENTACIJA IN PRODUKTI ZA PROCESIRANJE SIGNALOV DOO	Slovenia
JULIUS-MAXIMILIANS-UNIVERSITAT WURZBURG	Germany
MARITIME ROBOTICS AS	Norway
NAMLAB GGMBH	Germany
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STMICROELECTRONICS SRL	Italy
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