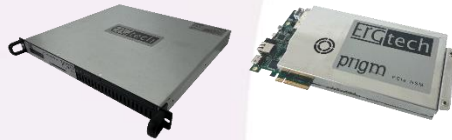# ERARGE & ERGTECH

Dual Core Secure Processor and HW-based Cyber-Physical Resilience Solution Family

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Company at a glance

We are a Research-Oriented SME working in the following fields since 1975
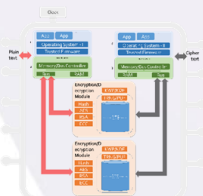
Some selected products of honour:

EAL4+

PRIGM™ Network/Cloud / PCI Hardware Security Module
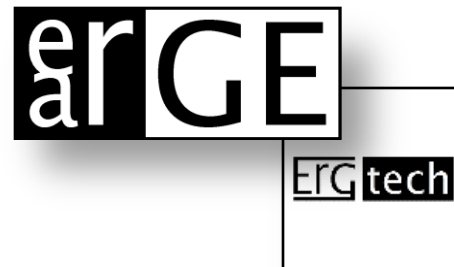
PRIGM Midi Series Secure Gateways

Rastgele™ True Random Number Generators chips (12 patents) **Chaos™**

Dual Core Secure Microprocessor (Crypto-accelerator) based on RISC-V

Our offices accross Europe and Turkey

Why you may prefer working with us

Research-oriented ambition for Application-to-Industry

12 PCT patents in various domains

150+ papers in top journals/proceedings

3 international best paper awards

ERARGE's European Project C³PO awarded twice (ITEA Award of Excellence 2018 – Highest Business Impact & Most Innovative Project Award in Altın Karınca Contest)

BIMy received the same award in 2021 (ITEA Award of Excellence 2021)

Experience in international projects (2 Horizon Europe (HEU), 1 HEU-KDT, 2 H2020, 1 H2020-ECSEL, 4 ITEA, 3 TEYDEB, 1 KOBİGEL)

3 PHDs, 1 PHD candidate ~70 employees (25% research staff)

Strong network with end users & industry

End products available in the market (ERINOX, PRIGM, Sentation, Rastgele, Chaos, 5D Kent Platform,...)

Deep Knowledge & Technology provider

AENEAS Member

RISC-V®

Company's Activities

New

HORIZON 2020

horizon europe

KDT JU KEY DIGITAL TECHNOLOGIES JOINT UNDERTAKING

ECSEL Joint Undertaking

HORIZON 2020

HORIZON 2020

ITEA3

ITEA3

ITEA2

OPtimization of Electric Vehicle Autonomy

VALU3S

VALU3S – Verification and Validation of Automated Systems' Safety and Security

CRITICAL CHAINS

Critical-Chains – IoT- & Blockchain-Enabled Security Framework for New Generation Critical Cyber-Physical Systems in Finance Sector

SAFETY4RAILS

Data-based analysis for SAFETY and security protection FOR detection, prevention, mitigation and response in trans-modal metro and RAILway networkS

TIoCPS

TIoCPS – Trustworthy and Smart Communities of Cyber-Physical Systems

BIMy

BIMy – Building Information Modelling in City

C3PO

C^{3}PO – Collaborative City Co-Design Platform

Most Innovative Project Award (2018, 2021)

New

TEKNOLOJİ ODAKLI SANAYİ HAMLESİ

horizon europe

horizon europe

NEW

ITEA4

NEW

ESCALATE

Powering EU Net Zero Future by Escalating Zero Emission HDVs and Logistic Intelligence

Power electronics, controller
Charger
Battery
Sensors
E-Motor
Thermal management

TEAMING

e-powerTrain prEdictive mAintenance using physics inforMed learnING

Sa4CPS

Secure situational awareness for critical cyber-physical systems

YEHO
New Generation Electrical, Connected and Autonomous Mobility (Supported by the Turkish Ministry of Transportation and Infrastructure)

Collaboration Expectations

Collaborative project of interest to you	*Chips JU, Clean Hydrogen, 6GSNS, Horizon Europe, Eureka Clusters*
Scope	*Technology Development, Prototyping and Application to Industry*
Project idea	*Energy-efficient and Trustworthy Chip Practices strengthened with Green Circularity- and Sustainability-by-design in the Manufacturing Chain (can be integrated with other consortia)*
Project impact	• *Reduce the GHG emissions* • *Improve the production and manufacturing life cycle, reduce the costs* • *Improve the cyber-physical resilience and trustworthiness in Industry5.0*
Project consortium	*Partners showing interest to our approach: Nokia, NXP, Weidmüller, EnerjiSA, CWEnergy, Otokar, Sweco, RISE, CERTH, MDU, Analog Device*
Other information (e.g. project budget, duration)	*Looking for being a part of a consortium Or open to <20-partner well-dedicated project that can be prepared for the upcoming call TBD*

Offered Innovations by ERARGE&ERGTECH (based on legacy and ongoing projects)
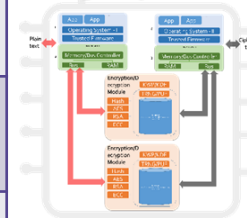
a Dual Core Secure Processor (DCSP) with RISC-V architecture (looking for investment/project for IC prototyping)
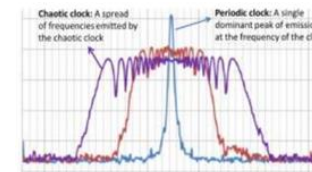
RISC-V®

Low-Energy RISC-V-compliant Chaotic Clock against Side Channel Attacks and for EMC compliance used in cyber-physical resilience

True Random Number Generators TRNG-on-chip for central processing units and conventional architectures
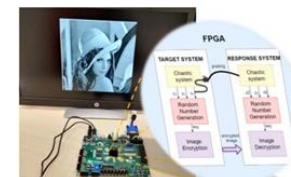
Verification and Validation of Cryptosystems for cryptanalysis by formal methods

Digital Product Passport Research for Decentralised Industry 5.0 and Society 5.0 strengthened with IoT-enabled and AI-powered blockchain ecosystem