

COGITO

ENABLING SECURITY IN CYBER-PHYSICAL SYSTEMS

KEY BENEFITS

COGITO is a low cost and easy to implement solution that ensures the integrity of your applications against physical attacks.

Standardized cryptosystems aim at protecting sensitive data. However, embedded systems are also highly vulnerable to side-channel and fault attacks that can steal your knowledge. In these systems, counter-measures are usually manually implemented by dedicated security specialists, an operation that needs to be repeated for each new component or architecture, which is error-prone, money and time consuming.

COGITO is a software solution to your security needs, you can benefit from its numerous assets:

- Low cost development
- Time-saving implementation
- Easily tunable and adaptable
- Fully reconfigurable

HOW DOES IT WORK?

COGITO is a compiler. It automatically inserts software counter-measures into applications to fix the security breaches in which physical attacks easily step into.

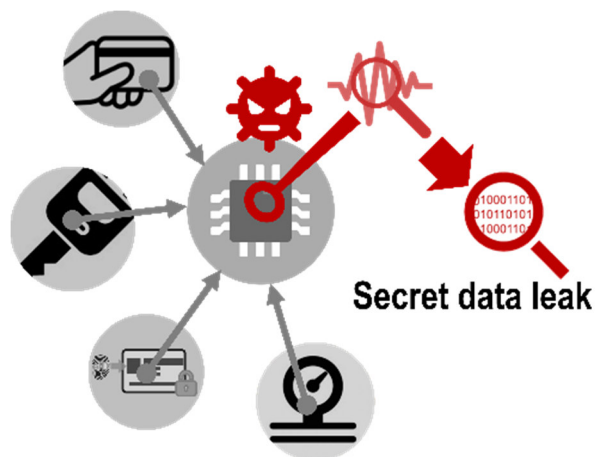
Counter-measures are implemented in your source code during compilation and are easily configurable to:

- Protection level of your application
- Execution time of your application

APPLICATIONS

COGITO combines several protection schemes that can be adapted to your needs. The counter-measures are a suitable solution for many applications including:

- IoT – ultra low power smart object
- Automotive
- Smart manufacturing
- Mobile devices

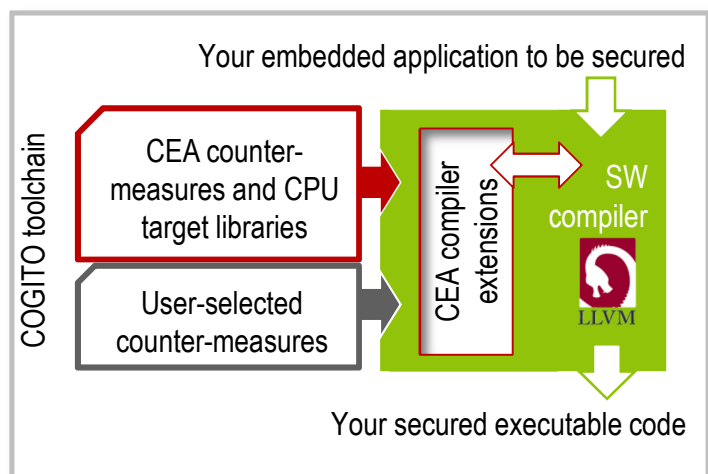
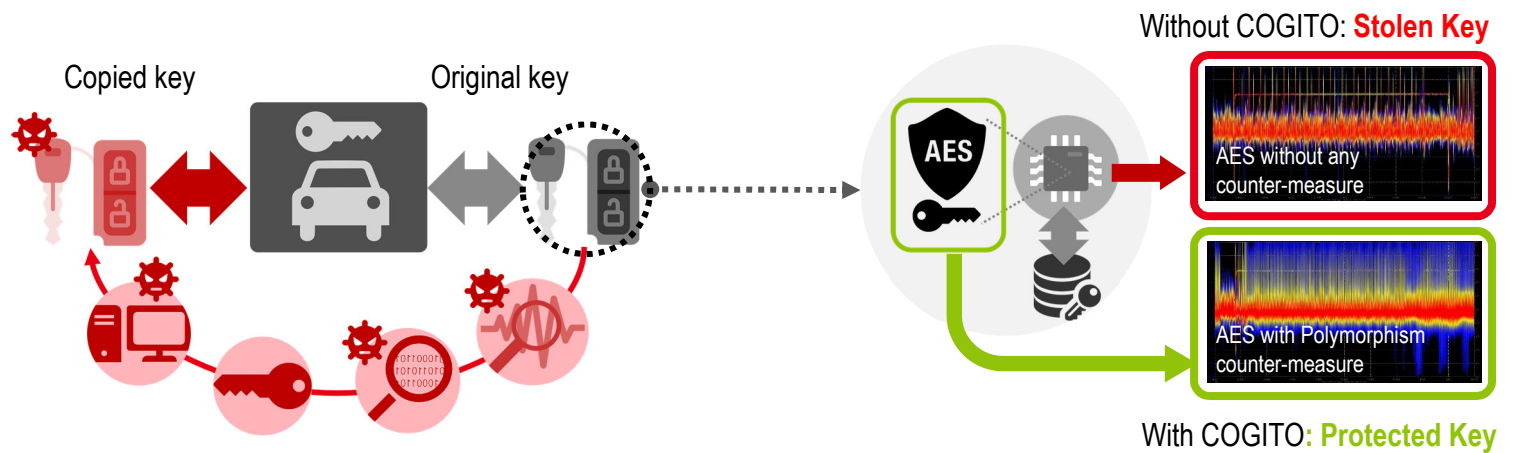
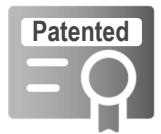




■ HIGH PERFORMANCE SOLUTION

The secured code is generated by a compiler based on the industry-grade, state-of-the-art LLVM framework.

- Protection against **fault attacks**:
 - **Fault tolerance**: code remains reliable and secure despite faults occurrence
 - **Fault detection**: enables preventive reactions
- Protection against **side-channel attacks** with polymorphism
- **Control flow integrity**



■ BUSINESS MODEL

Partnership:

- Service to secure your application
- Co-development of specific security features

Commercial use license:

- Business exploitation
- License price depending on the selected CEA IPs and your business model