# eShard

Introducing esDynamic:

The industry leading platform for crypto security testing.

Mastering cryptography is key to making sure your connected products and services are secure. Every algorithm can be probed and hacked by side−channel attacks. The choices you make are directly linked to the quality of the tests and analysis you conduct. We built esDynamic to solve exactly this challenge. Do the right tests and get the analysis you need to make the right choices and decisions.
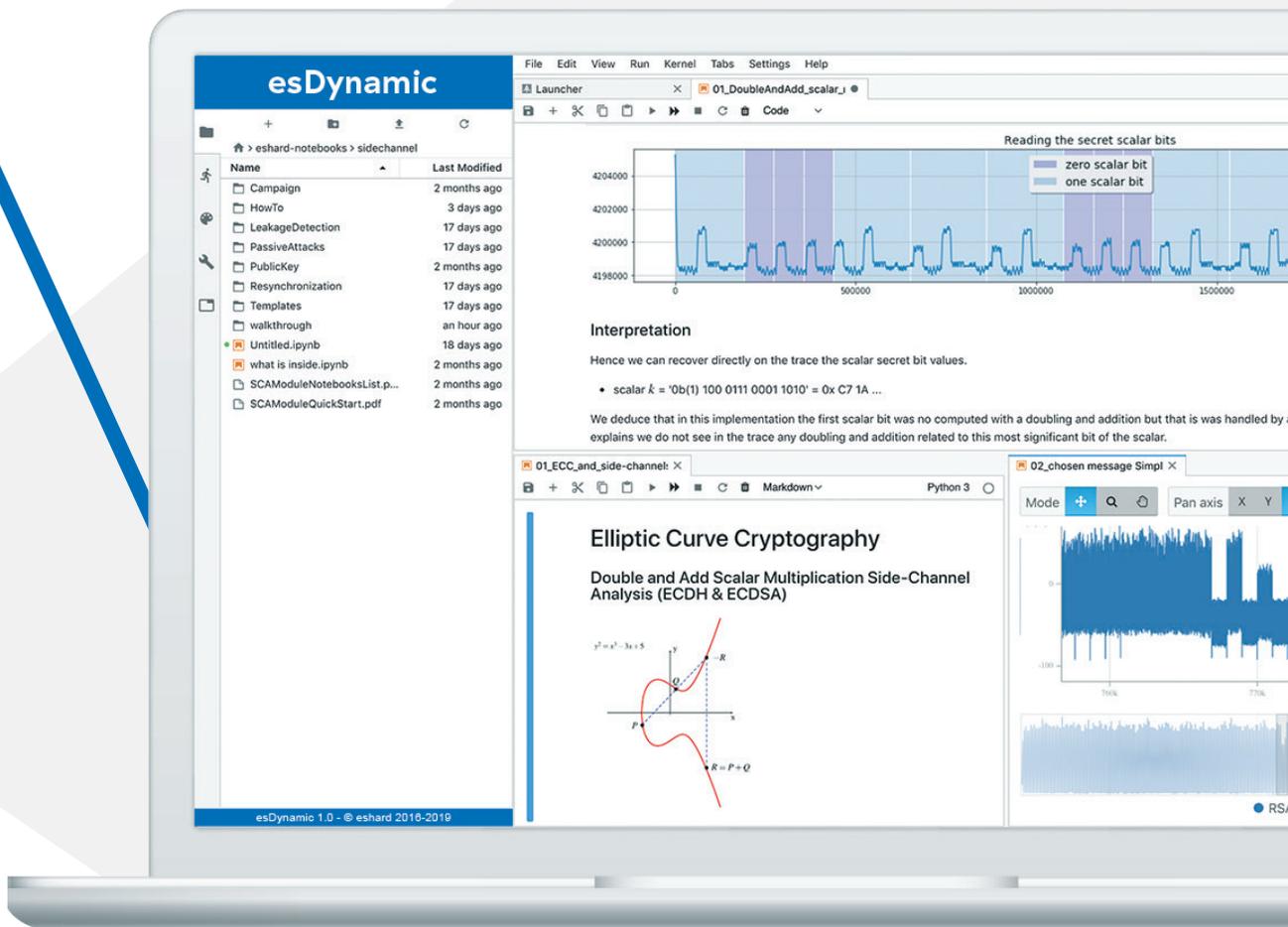
Why experts choose esDynamic:

Identify, manage and solve security challenges in mobile and connected devices.

The worlds most important companies use our industry leading platform and tools to make sure their mobile and connected products and services are appropriately secure. We help them de-risk their businesses and prepare for successful futures.

Our approach:

The platform has been specifically designed for your own talented experts to work in day-to-day, using tools and modules to complete tests and analyses as well as profiting from built in knowledge share, ease of use, collaboration tools and bespoke online learning modules.

The platform also delivers internal efficiencies and de-risks people movement. Every analyses are recorded, enabling a review of steps during a test, enabling multiple team members to follow and learn methods and techniques. Hard learnt expertise, stays on the system even if the people leave. esDynamic, the cyber security tool built by experts for experts.

Effective collaboration

Share, replay notebooks on one unique workspace

Side-Channel made efficient

Highly performant libraries and parallel computation

Grow your expertise

Create your own notebooks and build your proprietary library

Better manage your data

Evidence can be replayed and corporate know-how is preserved

Get the state-of-the-art

Complex attacks on algorithms, such as ECDSA, SM.x ready to use

Key features:

At its core, esDynamic is a web application platform. Access the core platform and add from a wide selection of tools and modules that match your needs.

esDynamic Analyst Development Kit (ADK) platform:

☑ The platform is built on best-in-breed technology classically used in Artificial Intelligence.

☑ Python is the core language offering an easy and flexible way to code your functions.

☑ Leverages Jupyterlab as collaboration framework, with notebooks complementing complex attack scripts.

☑ Build your own target, apply your specific processing requirements and connect your own equipment into the platform.

☑ We selected industry leading data trace format and optimised it to enhance its performance, delivering a user-friendly trace visualizer.

☑ If you have your own data format, it can be supported by the platform.

☑ Install as stand-alone or hub server configuration as per your needs.
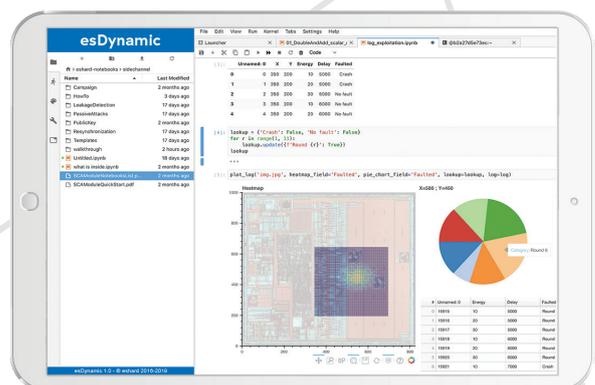
Modules:

esDynamic Bespoke modules

esDynamic also gives you the possibility to expand your knowledge and analysis capabilities with specific modules.

Core Side–Channel Analysis module

Core features to make sure that most popular attacks can be run efficiently, from signal processing to controlling hardware equipment.

Advanced Side–Channel Analysis module

Access a catalogue of state–of–the–art attacks, covering topics like Elliptic Curves, RSA, second order and Horizontal attacks.

Deep Learning module

Explore the recent developments in machine learning and deep learning that are being applied to side–channel.

Scatter module

Apply the scatter technique. Help overcome different levels of protections, including misalignment and masking countermeasures.

SMx module

Extend the side–channel framework with the latest Chinese algorithms. Indispensable for anyone looking for the state–of–the–art SMx algorithms used in a large range of products (IoT, Automotive, etc). Co–developed with OSR, industry reference.

Simulated Vulnerability Analysis module

The best and most efficient framework to analyse WhiteBox cryptography.

Ideal to validate a code binary before loading it into a device exposed to side–channel or fault injection attacks.

Laser Fault Injection module

Integrates ALPhANOV laser and optical station to perform high quality fault injection attacks.
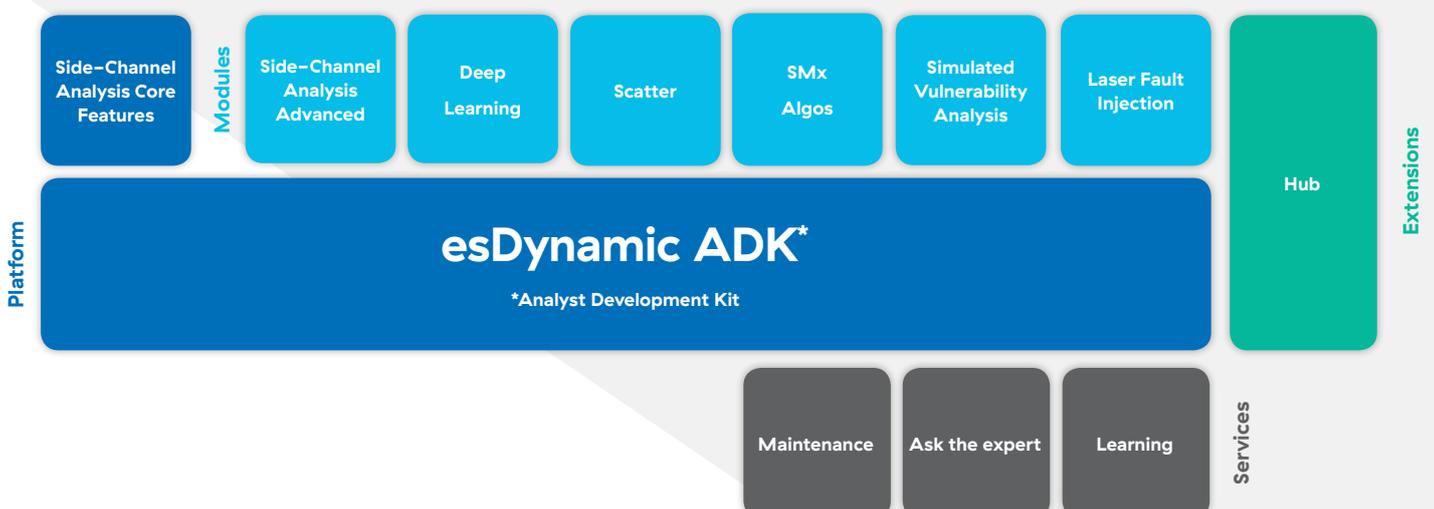
Services:

Maintenance — Regular software and content updates.

Ask the expert — Dedicated subscription to give you access to eShard experts to proficiently mentor your experts.

Learning — Discover new efficient ways of learning online. Learn by doing. Choose from a wide range of practical tutorials based on specific and targeted cyber security including side–channel cryptography, the security of mobile apps and attack techniques.

Extensions:

Hub — esDynamic can be deployed and expanding as a multi–user platform with multiple experts sharing the same workspace at the same time. Collaborate between remote teams, manage and retain expert knowledge within the platform and your organisation. Simply install the platform on your server, import your own insights and data, connect it to your existing labs and grant different access levels to different personal as needed.

Modules						
Side–Channel Analysis Core Features	Side–Channel Analysis Advanced	Deep Learning	Scatter	SMx Algos	Simulated Vulnerability Analysis	Laser Fault Injection

Platform

esDynamic ADK*

***Analyst Development Kit**

Extensions

Hub

Maintenance	Ask the expert	Learning

Services

eShard

About eShard:

At eShard we are dedicated to bringing the very best cyber security tools to the worlds security experts, empowering professionals to understand and manage the threats within any device that is connected.

We are committed to developing powerful, usable and innovative tools that enable security professionals and experts to master their cyber connectivity challenges, helping them find the solutions they need to prosper in their markets.

Our partners:

We have partnered with the leading experts in our industry to help us deliver esDynamic modules;

ALPhA NOV
Optics & Lasers Technology Center

OSR Open Security Research

Get in touch:

Contact.
contact@eshard.com

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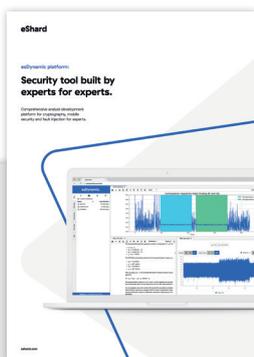in companies/eshard

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11 Avenue de Canteranne
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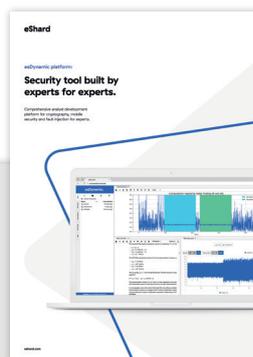**Marseille.**
7 Rue Gaston de Flotte
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5 Shenton Way — UIC Building #10–01
Singapore 068808 – Singapore

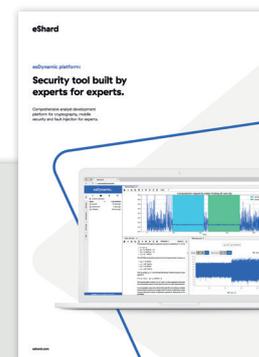### esDynamic Learning:

New efficient way of learning online.

Download

esDynamic SCA modules:

All you need for Side Channel Analysis.

Download

esDynamic SVA module:

Must have for WBC and validating code hosted on hardware.

Download

Empowering expertise.
Security tools by experts for experts.

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