AutoCrypt Security Analyzer

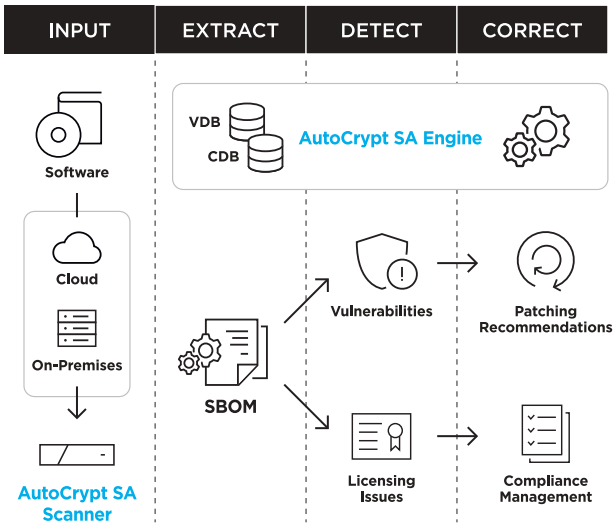
Automated SBOM generation and OSS vulnerability analysis

AUTOCRYPT provides a composition analysis and vulnerability management platform for automotive software, implementable at all stages of the software development lifecycle.

Modern vehicles are software-defined, each containing an average of 100 million lines of code, developed by a diverse range of software providers and vendors. Given that large parts of embedded automotive software contain open-source code, an open-source software (OSS) composition analysis and vulnerability management solution is a must.

AutoCrypt® Security Analyzer is an automated OSS vulnerability analysis tool made for the automotive environment, accurately identifying and listing all OSS components into a "software bill of materials" (SBOM*), allowing for the precise detection of vulnerabilities and licensing issues.

*SBOM : a nested inventory that make up software components, termed by CISA



Highly accurate SBOM generation based on patented CENTRIS® technology

Generates in both SPDX & CycloneDX formats

Function-level (code-level) analysis using patented VUDDY® technology

Only function-level analysis tool in the market, enables precise detection of vulnerabilities and patching, with zero false-positives

Identification of Licensing Issues

Retrieves licensing information through component-level analysis

Continuous vulnerability management through user-defined policies

Vulnerability and compliance management through issue registration and user-defined governance policies

• Deployment Options

On-Premises
Installation on client's servers

Cloud
Delivered online via the cloud

• Privacy Protection

Source code copies are encrypted and uploaded using CLI tools, stored securely in an encrypted file

• Supported Environments

Package Managers

Languages

CI/DI

AUTOCRYPT
Confidence in Mobility

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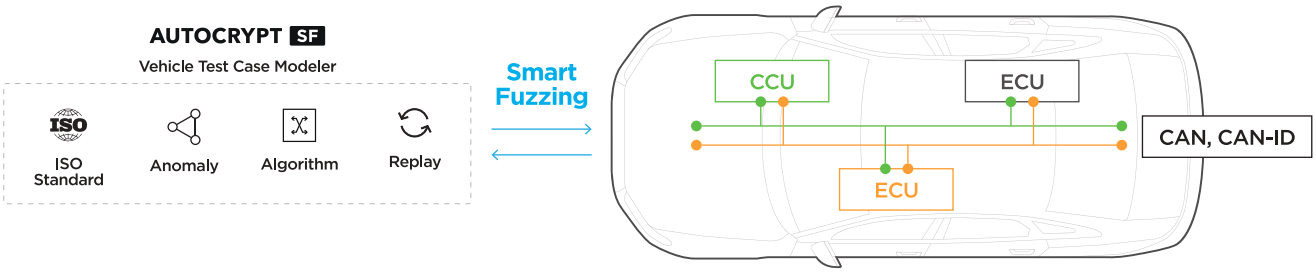
AutoCrypt Security Fuzzer

Smart fuzz testing for automotive software

AUTOCRYPT's automated smart fuzzing tool uses AI-generated, randomized test cases to search for hidden coding errors and implementation flaws in automotive software.

As mandated by WP.29 and standardized by ISO/SAE 21434, software testing has become a pivotal process of vehicle manufacturing. Among various testing methods, fuzzing is a powerful software testing technique that explores and identifies undiscovered coding errors and implementation flaws by repeatedly injecting invalid and unexpected inputs into the selected program until it crashes. The crashed cases are then flagged for review, allowing for quick identification of vulnerabilities.

AutoCrypt® Security Fuzzer is a one-of-a-kind smart fuzzing tool optimized for the automotive ecosystem. Its input generator utilizes machine learning to generate semi-random test cases that are adjusted based on learning the characteristics of the selected program, greatly reducing testing time and increasing crash detection probability.



Instead of generating fully randomized packets, **AutoCrypt® Security Fuzzer** analyzes the architecture and sequence of the communication protocols of the in-vehicle software, then generates test cases by randomly modifying only parts of a message that could potentially be defaced, leaving the remaining parts untouched.

1. Target Selection
2. Test Case Generation
3. Test Case Delivery
4. Results and Feedback

Real-Time Monitoring

Allows users to access the internal systems throughout the CAN buses during fuzzing, making it clearly visible which ECUs reacted to a test case

Crash Replication

Provides a replication of flagged cases, allowing users to review ambiguous cases in detail, avoiding unnecessary searches

Automated Fuzzing

Automatically restarts testing after a crash, allowing for continuous fuzzing without interruption

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