# TRUST **N** SOFT

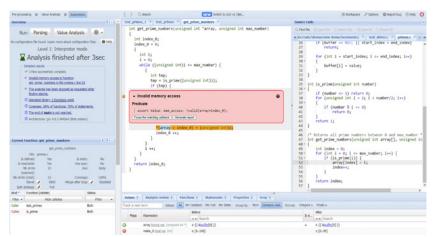




# Zero Bug Software with Exhaustive Static Analysis

TrustInSoft Analyzer is an award-winning exhaustive static C and C++ source code analyzer that ensures the safety, robustness and security of the source code by providing mathematical / formal guarantees. It utilizes abstract interpretation to facilitate the analysis of C and C++ programs. This includes a range of capabilities such as:

- · Exhaustive undefined behavior detection e.g. buffer overflows, uninitialized memory, use after free, integer overflow
- · Root cause investigation with interactive exploration of variable values across all execution paths
- · Powerful control-flow and data-flow analysis showing execution paths and functional dependencies



## TRUSTINSOFT ANALYZER

As a hybrid code analyzer, TrustInSoft combines advanced static and dynamic analysis techniques with formal methods to provide customers with a mathematically guaranteed C/C++ code quality/security/safety

### Figure 1:

TrustInSoft Analyzer Dashboard

The TrustInSoft Analyzer mathematically guarantees the absence of coding errors, ensuring that the software is completely free of vulnerabilities that could be exploited by hackers or bugs that could impact the safety or robustness of the software (make software crash or introduce nondeterministic behavior). It integrates seamlessly into both Agile and V model workflows, allowing developers and testers to use it for code testing before a new code push or as part of comprehensive test campaigns in the software delivery life cycle. This tool is particularly well-suited for embedded software and is designed to be as simple to use as running tests while providing exhaustive coverage. It covers all possible input values, significantly boosting test coverage and speed in achieving up to 100% code coverage, thus confidently ensuring the software's quality, robustness, security, and safety.

#### CUSTOMER ADDED VALUE

- · In-house expertise to ease the integration of TrustinSoft tools and SYSGO operating software PikeOS
- Assistance in achieving the highest certification (e.g. Automotive ISO 26262 ASIL B, Railway EN 50128 or EN 50657 SIL 2)
- · Reduced effort in the qualification and certification process for Safety and Security expertise

**About TrustInSoft** - TrustInSoft provides tools and services to exhaustively analyze and formally verify C and C++ source code, allowing for mathematical guarantees on its clients' software quality. Its analysis solutions allow for guarantees of the security and reliability of source code without the need to modify the development process. TrustInSoft's solutions are currently in use for software designers and integrators in aeronautic, automotive, telecom, space, and IoT industries. Contact us at contact@trust-in-soft.com

**About SYSGO** - Founded in 1991, SYSGO became a trusted advisor for Embedded Operating Systems and is the European leader in hypervisorbased OS technology offering worldwide product life cycle support. We are well positioned to meet customer needs in all industries and offer tailor-made solutions with highest expectations in Safety & Security. Contact us at sales@sysgo.com

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