**GET A FREE TRIAL**
https://www.parasoft.com/ctest

**ANALYZE HOST-BASED AND TARGET-BASED C AND C++ CODE**

**Increase the Quality of Complex Embedded C/C++ Software**
Reduce the risk of complex embedded software, leveraging comprehensive C and C++ coding best practices (e.g. MISRA C/C++, AUTOSAR C++, JSF) and a powerful unit testing framework for both your host and target platforms.

**Mitigate the Security Risk from Connected IoT Devices**
Ensure the consistent application of security best practices (CERT, CWE, OWASP), and integrate with API-level attacks to uncover security issues deep within the application. Create a robust software development process, with comprehensive reporting and qualification kits, using TÜV-certified C/C++test.

**Automate the Testing Process**
Reduce the time and effort required for testing by seamlessly integrating Parasoft C/C++test into your CI/CD pipeline.

**Deliver C and C++ software that’s robust, predictable, and secure.**
Manage risk and costs by building better software. Static analysis and unit testing are critical for application quality, security, and safety, and the cornerstone of any connected-application development initiative today.

Parasoft C/C++test is a unified testing solution that helps you identify defects earlier and reduce the overall burden of achieving compliance with standards such as AUTOSAR, MISRA, ISO 26262, DO-178B/C, IEC 61508, and IEC 62304. C/C++test helps organizations reduce risk, cut costs, increase productivity, and achieve industry compliance goals by automating a critical set of software testing needs. C/C++test can be used in both host-based and target-based code analysis and test flows, critical for embedded and cross-platform development.

**FUNCTIONAL SAFETY AND COMPLIANCE**
Parasoft C/C++test provides everything you need to comply with industry standards:

**CERTIFIED SOFTWARE**
Parasoft C/C++test is certified by TÜV SÜD for functional safety according to IEC 61508, IEC 62304, and ISO 26262 standards, helping development teams achieve the desired safety integrity level (SIL/ASIL).

**QUALIFICATION KITS**
To streamline the process of tool verification, C/C++test Qualification Kits are available for DO-178B/C, DO-330, ED-12B/C, ISO-26262, IEC-61508, and EN-50128, and other safety standards. These kits are customized for your specific environment and usage requirements, ensuring you have all the documentation required for verification.

“By deploying C/C++test as the coding standard analysis tool, Mobile solution project in the SW Center of Samsung Electronics has decreased the amount of coding violations by 80%; a significant improvement on their development/testing process."
STATIC ANALYSIS AND SECURITY TESTING

Static analysis in Parasoft C/C++test accurately exposes the industry’s broadest range of defects and non-compliance issues.

- Helps you quickly find and fix code defects with complete path analysis for accurate violation detection.
- Supports both Preventative (Pattern) and Detection (Flow-Based) Static Analysis techniques, along with a comprehensive set of Metrics for code structure.
- Supports custom rule creation with a dedicated RuleWizard.
- Centralized reporting and compliance auditing, including dedicated compliance reporting and process management for coding standards.
- Ease of deployment: easy to configure, easy to automate, non-intrusive and scalable across multiple teams.

UNIT AND INTEGRATION TESTING

Parasoft C/C++test minimizes the complex and time-consuming challenges associated with creating and maintaining unit and integration tests, by providing a unified test environment for test creation and management, isolation of the code under test, and advanced coverage reporting to ensure the application has been thoroughly tested. A TÜV-certified tool, Parasoft C/C++test allows you to test both on and off target, supporting today’s embedded, connected devices.

- A rich, IDE-based graphical environment for creating and managing test cases, via both UI-driven editors and directly in source code.
- Automated stubbing framework for easily isolating code under test.
- Advanced code coverage reporting, supporting multiple metrics, including Function, Line, Statement, Block, Path, Decision, Simple Condition, MC/DC, Call.
- Ability to capture coverage and report results from open-source testing frameworks, such as CppUnit and CppUTest.
- Centralized reporting with Parasoft DTP for aggregation of coverage for both manual and automated testing, providing per-test coverage and reports of trending results across builds.
- Support for on-target testing with a broad set of development environments, such as ARM, IAR, Green Hills, Tasking, and Wind River.

C/C++test supports runtime error detection for embedded C applications, helping you identify security vulnerabilities and serious runtime defects.

In addition to unit and integration tests, C/C++test enables you to capture the same broad set of coverage metrics for tests that are executed outside the unit testing framework, such as in manual testing efforts.

With the ability to associate tests, source code, and code coverage with requirements, the reporting dashboard provides full detail of requirements implementation status and traceability required by functional safety standards.

SUPPORTED HOST PLATFORMS
- Windows
- Linux

SUPPORTED TOOL CHAINS / ENVIRONMENTS
- ARM
- Eclipse IDE for C/C++ Developers
- GreenHills
- IAR Keil
- Microsoft
- QNX
- Renasas
- Texas Instruments
- WindRiver

BUILD MANAGEMENT
- GNU make
- Bazel
- Sun make
- Microsoft nmake
- ElectricAccelerator

CONTINUOUS INTEGRATION
- Bamboo
- Jenkins
- Docker containers
- TeamCity

SOURCE CONTROL
- AccuRev SCM
- Borland StarTeam
- CVS
- Git
- IBM Rational ClearCase
- IBM Rational Synergy
- Mercurial
- Microsoft Team Foundation Server
- Microsoft Visual SourceSafe
- Perforce SCM
- Serena Dimensions
- Subversion (SVN)

COVERAGE METRIC GENERATION
- Function
- Call Line
- Statement
- Block
- Path
- Decision
- Simple Condition
- MC/DC

Parasoft Corporation
101 E Huntington Drive
Monrovia, CA 91016 USA
Sales: 1-888-305-0041 | International Sales: +1-626-256-3680
www.parasoft.com

© Parasoft Corporation. All rights reserved. Parasoft and all Parasoft products and services listed within are trademarks or registered trademarks of Parasoft Corporation. All other products, registered trademarks, or servicemarks of their respective holders in the US and/or other countries.