

# Axivion for CUDA

Unlock the Full Potential of Your CUDA Applications



## Automated Static Code Analysis and Architecture Verification for Your CUDA Applications



### Ensure Compliance

Include CUDA code when checking for compliance with leading coding guidelines and industry standards.



### Enhance Maintainability

Reduce time needed to fix technical debt by 33% and identify issues before they cause problems.



### Maximize Efficiency

Save up to 15% in development costs by making sure your software architecture is easy to understand.

- ☒ Architecture Verification
- ☒ Clone Detection and Management
- ☒ Metric Monitoring
- ☒ Coding Guidelines & Defect Detection
- ☒ Dead Code Analysis
- ☒ Cycle Detection

### Minimize Technical Debt

Axivion for CUDA helps you reduce existing technical debt, and prevents new debt from developing. It integrates seamlessly into your current development environment and offers the flexibility to adapt and scale with your evolving needs.

### Contact us

Do you have questions?

Are you interested in a demo?



[www.qt.io/axivion-for-cuda](http://www.qt.io/axivion-for-cuda)

### Detect Blind Spots in Your Analysis

Axivion for CUDA includes your CUDA code when checking for compliance with key industry standards and guidelines such as MISRA, CWE, ISO 26262, IEC 61508, and IEC 62304. It is ideal for developing applications in safety-critical environments.

# Your All-In-One Tool for C, C++ and CUDA

Axivion helps you streamline every project, whether you're developing GPU-specific code or adapting existing software to leverage CUDA-enabled GPUs. It keeps your code maintainable and aligned with leading standards and guidelines.

## Why use Axivion for CUDA?



### Detect bugs at an early stage



### Reduce your team's workload



### Profit from faster time-to-market

## Architecture Verification

Keep your software architecture clear and maintainable by automatically detecting deviations from the intended structure after each code change. Existing architecture debt can be addressed through targeted refactoring, with progress tracked in detailed result reports.

## Static Code Analysis

Axivion Static Code Analysis is ideal for developing safety-critical software. It automates repetitive, full-scale checks and delivers reliable results through comprehensive reports. By detecting issues early, Axivion helps prevent technical debt, conserve resources, and maintain high code quality.

## Key Technical Specifications

Languages	CUDA® C++, C, C++
Compilers	Blackfin, Clang, Codevision, CodeWarrior®, Cosmic, Green Hills Software®, GNU, IAR™, Keil™, Microchip®, Microsoft®, NVIDIA nvcc, Renesas, Tasking, TI, Windriver, Others
Host OS	Windows® / Windows® Server®, GNU/Linux®/Linux® ARM, macOS®/macOS® ARM
Browsers	Microsoft® Edge, Mozilla Firefox®, Google Chrome™
IDE plugins	Qt Creator, CLion, Eclipse™, Eclipse-based (e.g. e² Studio, Atollic TrueSTUDIO®, CodeWarrior®, DAVE™, STM32CubeIDE, TI Code Composer Studio™), Microsoft® Visual Studio®, Microsoft® Visual Studio Code®, Generic plugins
CI/DevOps plugins	Azure® DevOps, Jenkins®, Integration for e.g. Bitbucket®, GitLab®, GitHub
Version Control System	Borland®/Inprise®/MicroFocus® StarTeam®, CVS, Fossil, Git™, IBM® Rational® ClearCase®, IBM® Rational®, Team Concert®, Mercurial, Microsoft® Team Foundation Server®, Microsoft® Visual SourceSafe®, MKS Source Integrity®, Perforce®, Perforce®/Seapine® Surround®, Plastic, PTC Integrity®, Serena® Dimensions®, Serena®, PVCS®, Subversion®
UML® Tools	IBM Rational Rhapsody, Sparx Enterprise Architect (via XMI or .qea-files), PlantUML
Coding Guidelines	MISRA C/MISRA C++, AUTOSAR C++14, CERT C/CERT C++, CWE, ISO / IEC TS 17961, Qt Framework, Custom rules
Quality Guidelines	ISO 26262, IEC 61508, IEC 62304, EN 50128, EN 50628

**Note:** The above specifications apply to Axivion 7.10 and are not exhaustive. For a complete list of specifications, please contact us. Technical data is subject to change without prior notice. All rights reserved. All company and/or product names are trademarks and/or registered trademarks of their respective manufacturers in their markets and/or countries. We are constantly making efforts to deliver the latest status of data to our partners. Specifications may change in the time between the product release and the release of this document. © Qt Group | 202505