Development Tools for Advanced Multicore Architectures Running Multiple Operating Systems

Mentor® Embedded Sourcery™ CodeBench goes beyond the basic compiler to provide developers with powerful embedded C/C++ development tools to build, debug, and analyze sophisticated embedded systems. Sourcery CodeBench optimizes embedded software in heterogeneous architectures including ARM®, X86, and Power Architectures. Sourcery CodeBench delivers a powerful toolset that helps embedded software engineers to efficiently develop and optimize software for a variety of targets and various domains including automotive, industrial, medical, and mil/aero applications.

Gain valuable insight into your embedded system’s behavior and performance with the integrated Sourcery™ Analyzer technology.

The widespread use of this productivity suite has helped software engineers develop and optimize software for a variety of targets.

Sourcery CodeBench Highlights:

**Eclipse-based IDE with Performance Optimized Compiler (GCC)**
- Intuitive wizards for new project, board selection, and debug configuration
- Enhanced compilers for improved optimization and reliability
- Reduced application launch time and memory footprint
- Optimized runtime libraries for select targets including performance-enhanced, VFP-optimized libraries for ARM processors with hardware floating-point functionality

**Advanced Software Insight**
- Identify and correct functional, timing, and performance bottlenecks
- Execute Linux® kernel and user-space trace capture and analysis through supported Linux Trace Toolkit next generation (LTTng) trace markers

**PRODUCT FEATURES:**
- Fully integrated development environment
- Project creation, build, debug, and analysis are managed within Eclipse
- Performance optimized compiler and runtimes
- Debugging on multicore and heterogeneous configurations
- Advanced software insight and analysis

**BENEFITS:**
- Faster time to market
  With streamlined development for bare metal, Linux, Nucleus, Mentor Embedded Multicore Framework, and Mentor Embedded Hypervisor environments
- Quickly identify and solve issues
  Functional and performance issues are quickly located and fixed within complex multicore systems
- Access to professional services
  Mentor Graphics offers professional services for CPU, silicon, and OS vendors including comprehensive customization and support for embedded hardware and software

Sourcery CodeBench and integrated Sourcery Analyzer can be used to quickly identify and fix functional and performance issues in complex embedded systems.
Analyze and optimize video applications with GStreamer instrumented Agents
Analyze and optimize graphic applications with Qt® instrumented Agents

Debugging Multicore
- Simultaneously debug multiple operating systems or applications running on different cores
- Debug Linux kernel, kernel module, and user-space
- Debug using hardware breakpoint, backtrace, and multiple thread debugging support
- Cross-platform board initialization and interrupt handling on bare metal platforms, including ARM® EABI, and Power EABI

Simulators and Additional Utilities
- Dual-core ARM® Cortex®-A9 Vista™ Virtual Platform available as an add-on to Sourcery CodeBench Virtual Edition
- QEMU instruction set simulators for select platforms
- QEMU simulator for executing applications compiled for select non-x86 GNU/Linux platforms on x86 GNU/Linux hosts

Pre-silicon Software Development
- Sourcery CodeBench Virtual Edition seamlessly connects Vista™ virtual prototypes (OSCI, SystemC 2.0, QEMU, ARM Fast Models) with Mentor’s Veloce® emulation sessions
- Perform real-time and offline debugging of hybrid platforms composed of emulation and virtual prototypes
- Expand traditional software debug and gain control and visibility into the state of the hardware or model

Support and Updates
- Active user community interacts and discusses design and development questions with peers and Mentor engineers
- Technical support from open source experts
- Comprehensive documentation, detailed getting started guides

Professional Services
We offer professional services for CPU, silicon, and OS vendors, including comprehensive customization and support for embedded hardware and software. Some of our services include:

- Toolchain porting and optimization
- IDE support for software development kits (SDKs)
- Optimized performance libraries
- Advanced analysis tools

More about Mentor Embedded
The Mentor Graphics® Embedded Systems Division comprises the Mentor Embedded™ family of products and services, including embedded software IP, tools, and professional services to assist developers and silicon partners to optimize their products for design and cost efficiency.

For the latest product information, call us or visit: www.mentor.com/embedded

The registered trademark Linux® is used pursuant to a sublicense from LMI, the exclusive license of Linus Torvalds, owner of the mark on a worldwide basis. Android is a trademark of Google Inc. Use of this trademark is subject to Google Permissions. Qt is a registered trade mark of Digia Plc and/or its subsidiaries.