

Software Development Tools

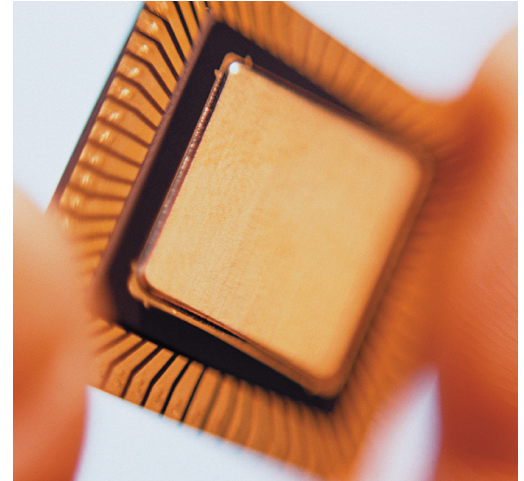
CodeWarrior™ Development Studio ColdFire™ ISA, Linux® Platform Edition

Overview

CodeWarrior Development Studio for ColdFire™ ISA, Platform Edition is the most comprehensive solution available to accelerate embedded Linux Development targeted to ColdFire processors. The Platform Edition tools offer unique features throughout all software development stages. The Platform Edition tools provide the features professional embedded Linux developers need, from board bring-up capabilities, through development of kernel, driver, stacks, and applications.

The CodeWarrior Platform Edition is an all-inclusive tool suite for Linux development. Hosted on Linux OS, this suite of tools gives you the ability to deploy and debug a Linux kernel, in addition to creating Linux applications. You can simultaneously debug an application process while using a JTAG

connection to debug the kernel — all with source code views and visibility into the memory translations associated with the Linux OS. The Flash Programmer and Board Diagnostics functionality integrated into the development environment, while giving you the ability to use a source code debugger for the boot loader, is unique to CodeWarrior. Functionality doesn't stop there — we offer the ability to debug existing ELF symbolics compiled prior to using CodeWarrior and automatically configure all the source browsing information for immediate source code debugging of an existing package. Furthermore, for those migrating from other RTOS solutions, we offer a familiar project manager that avoids the need for understanding gmake — accelerating developers into embedded Linux application development quickly.



CodeWarrior Development Studio for ColdFire ISA, Linux Platform Edition increases productivity

Enhanced Flexibility

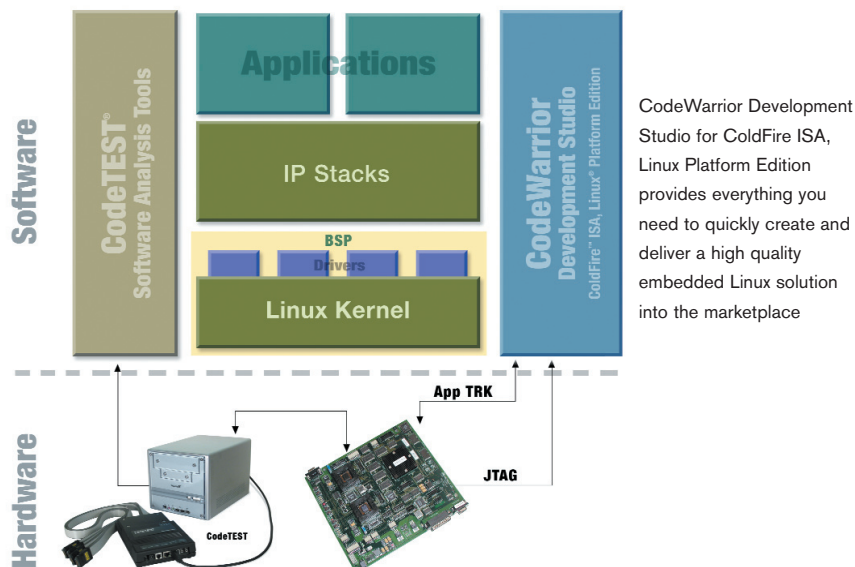
- > Show the state of individual kernel threads
- > Source files can be modified while debugging (original is cached)

Increased Control

- > Browser support in the Debugger
- > Post Mortem trace of the kernel when real trace is not possible

Improved Visibility — Graphical views of:

- > “Always on” stack crawl and local variables
- > Breakpoints – hardware and software



CodeWarrior Development Studio ColdFire ISA, Linux Platform Edition

Product Features

The CodeWarrior Development Studio for ColdFire ISA, Linux Platform Edition tool suite includes the same award-winning CodeWarrior project manager, source-level debug, build system, compiler and search engine used world-wide.

Key Features:

- > GNU C++ Compiler (GCC)
- > Kernel command line parameter support
- > Thread awareness for fine-grained debug capability
- > Memory translation support
- > Loadable module support

Debugger

- > Host/target debug of ColdFire kernels
- > Source, assembly, and mixed source/assembly debugging
- > Shared library support enables troubleshooting libraries in common memory
- > Displays assembly, source, or mixed
- > Stdout redirect display target console output in CodeWarrior IDE
- > View multiple states simultaneously to enhance productivity

Editor and code navigation system

- > Key word highlighting
- > Syntax checker

Memory Display

- > Post linker processor to view debug symbols on host
- > Several memory display and view options
 - On-target memory view
 - Register display and modification

CodeWarrior Development Studio for ColdFire ISA, Linux Platform Edition tool suite functions in two modes to support application development and platform development with kernel level debug

Platform Development Features with Kernel Level Debug

- > View threads while debugging kernel
- > Monolithic kernel and kernel loadable module debugging
 - Abatron BDI support
 - Automated kernel download and boot
- > Linux Kernel support for M5272C3 EVB, M5282EVB and documentation to support other ColdFire architectures and evaluation boards

Application Development Features

- > Compiler and Linker:
 - Supports GNU Compiler Collection
 - Ability to integrate alternative GNU compilers
- > Application Debug – using Metrowerks AppTRK
 - Serial connectivity
 - Networking connectivity
- > Full multi-threading / multi-tasking application debugging
 - Individually control threads
 - Follow fork/child debugging
 - Full multi-process debug from one IDE
 - Step one thread while all others are stopped
 - Process and thread list

Recommended Host Target Interface:

- > Abatron BDI 2000

Linux Host System Requirements

- > Validated against RedHat 8.0 and 9.0

Support

- > Online help with online and hardbound documentation
- > New product purchase includes first year technical support

Product Part Numbers:

CWS-MCF-LLPLT-CX:
CodeWarrior Development Studio for ColdFire ISA, Linux Platform Edition

Related Linux development products Platform Creation Suite

Platform Creation Suite for Linux OS provides a complete development environment supporting each step of an embedded product's development cycle from concept to market. Fully integrated with Linux OS solutions for ColdFire architectures, PCS allows you to concentrate your efforts on creating custom applications, instead of dwelling on hardware, OS and development board issues. It also gives silicon and board vendors the ability to easily capture in-house Linux development efforts into a custom board support package (BSP) fully integrated with the Platform Creation Suite. This allows vendors to ship an integrated Linux tools and OS solution specific to the end product.

The Platform Creation Suite consists of two core components:

- > Target Wizard Tools—used to manage, configure, extend, build and deploy Linux software elements
- > Board Support Package(s)—includes all of the host and target elements that are required to build and deploy the operating system, device drivers and applications to specific target hardware

Recommended Software Verification Tool Set

CodeTEST Software Analysis Tools enable Linux developers to meet and exceed design requirements in mission and safety critical systems. CodeTEST provides detailed, Linux OS-aware visibility into the execution of an embedded system allowing developers to pinpoint performance bottlenecks, memory leaks, or dead code, and quickly eliminate these performance robbing problems. In one complete suite, CodeTEST provides detailed analysis tools for software execution trace, memory analysis, performance profiling, and code coverage. Hosted on Linux; targeting embedded Linux with your option of connection method: native, software in-circuit or hardware in-circuit.

Learn More For more information about Freescale products, please visit www.freescale.com/codewarrior