Development Tools

CodeWarrior™ Development Studio

for NINTENDO GAMECUBE™

Overview

Ship your title quickly and efficiently using CodeWarrior for NINTENDO GAMECUBE™! CodeWarrior brings together the highest level of performance and accessibility for the NINTENDO GAMECUBE. The CodeWarrior tools consist of a highly optimized C/C++ compiler and an assembler designed for the Gekko* processor, and a wide array of debugging support including C++ browsing for all available GAMECUBE development systems. By using the CodeWarrior IDE, you can create and compile relocatable modules. Relocatable modules (RELs) let you break your application into separate pieces, thereby allowing you to load a piece of the application you need, when you need it!

In addition, CodeWarrior provides an API for integrating 3rd party tools such as Microsoft Visual Studio. CodeWarrior enables you to quickly compile and easily debug your game using a familiar windows environment.

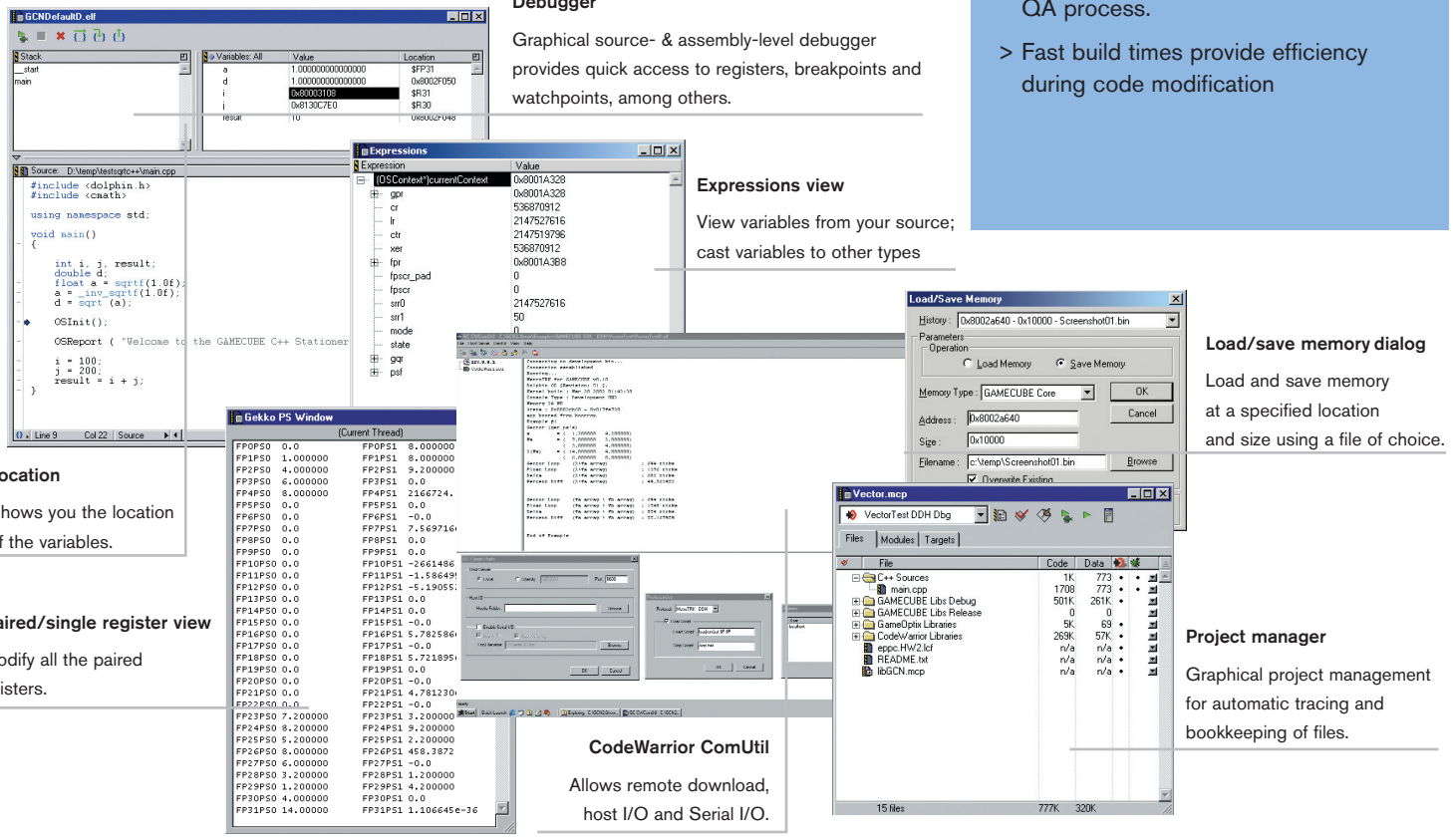
Benefits

> NINTENDO GAMECUBE OS was built with CodeWarrior tools, so your code will integrate seamlessly, saving valuable development time.

> Linker upgrade results in a significant reduction in the size of final .elf files, considerable decrease in link time and link memory usage. The upgrade saves significant time during development.

> CodeWarrior Analysis Tools** are available for the NINTENDO GAMECUBE platform, so you can find performance bottlenecks and ensure adequate test suite coverage during the QA process.

> Fast build times provide efficiency during code modification



Debugger

Graphical source- & assembly-level debugger provides quick access to registers, breakpoints and watchpoints, among others.

Expressions view

View variables from your source; cast variables to other types

Load/save memory dialog

Load and save memory at a specified location and size using a file of choice.

Location

Shows you the location of the variables.

Gekko paired/single register view

View & modify all the paired single registers.

CodeWarrior ComUtil

Allows remote download, host I/O and Serial I/O.

Project manager

Graphical project management for automatic tracing and bookkeeping of files.

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Warrior Development Studio for NINTENDO GAMECUBE

Features

Compilers, Linkers, Assemblers
> Vectorized paired singles supported through C Intrinsics
> Relocatable Module Support
> Relocatable Module Interface upgrades
> Improved C/C++ FrontEnd Compiler with fast link and compile times
> Supports function-level, inline and stand-alone assembly
> Single precision FPU libraries optimized for PowerPC®
> Linker aggressively dead strips unused library functions
> Linker command file supports user-defined sections
> Optimization Guide in product documentation
> Fast compile times by utilizing concurrent compiles on multi-processor systems
> Fast Trig Routines
> Command line tool adapters
> CodeWarrior assembler provides Gekko-specific assembler instructions

CodeWarrior IDE
> Customizable toolbars and key bindings
> Improved Find dialog/engine search
> User preferences/window layout can be saved
> Improved built-in context menus in the Editor
> Shielded folders/find-and-compare operation on project folders during builds
> IDESpy: displays version information of all components — invaluable when seeking technical support
> Code completion for C and C++
> Event Points – Conditional breakpoints that perform specific tasks without program halting. Supported points include pause, script, skip, sound and log
> Docking windows
> Workspaces

CodeWarrior Communication Utility
> Remote download of code and data through a connected Win32 server. Client/server architecture
> Remote debugging available soon
> Host I/O, Serial I/O

Debugger
> GAMECUBE OS integration
> Relocatable Module System debugging support
> Debugger Serial output
> Load, save and fill memory option
> Thread aware support
> Gekko Special Purpose Registers, paired single register views
> Source/Assembly/mixed-mode view
> Auxiliary RAM (ARAM) Memory Viewer
> CodeWarrior C/C++ compiler generates highly-optimized code for Gekko and intrinsic Gekko paired single vectors.

C/C++ Symbolics Browser
> View symbols and macro definitions

C++ Hierarchy Browser
> View classes, methods, member functions, data members and other structures
> Graphically display hierarchy of classes

Editor and Code Navigation System
> Pop-up menus for quick navigation and access to functions and header in each project
> Drag-and-drop editing in IDE for source code

File Compare and Merge Tool
> Graphically compare two text files within the Project Editor, with highlighted content differences
> Recursive comparison of contents between folders

Project Manager and Build System
> Integrated Development Environment (IDE)
> Project Manager with easy-to-use graphical user interface
> Multi-threaded architecture
> Multiple target builds per project
> Supports debug and release builds in one project
> Full support for all Nintendo emulation hardware

Plug-ins/Integration
> VSS and CVS plug-ins
> Support for Visual Studio .NET
> Open API for Integrating Third-Party Tools
> Import/Export IDE settings in XML

* NINTENDO GAMECUBE console is built on the custom IBM PowerPC 750 processor named "Gekko".

** CodeWarrior Analysis Tools for NINTENDO GAMECUBE console are available from Freescale and sold separately from CodeWarrior development tools.

System Requirements

Host
> Windows® 2000/XP
> 1.5 GHz or faster Intel® Pentium® IV processor or AMD equivalent
> 512 MB RAM
> 400 MB plus space for user projects and source code
> CD-ROM drive

For complete GAMECUBE development, you must obtain the following components directly from Nintendo:

> GAMECUBE Development Hardware (DDH) or GDEV-NPDP Hardware
> GAMECUBE Operating system CD

Freescale Developer Technology Game Organization Services and Technical Support

> Freescale online support is available 24 hours a day, 7 days a week and provides the ability to:
  - download product updates
  - check the status of support requests
  - view your account information
  - access online knowledge base for frequently asked questions
> Technical support is available via telephone and email during regular business hours

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

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