

WIND RIVER LINUX PERFORMANCE STUDIO FOR INTEL® ARCHITECTURE

Optimize Your Code to Get the Most from Your Hardware

Wind River Linux Performance Studio for Intel Architecture integrates the latest generation of powerful Intel development tools with Wind River Linux 4 Update Pack 2 and higher to deliver dramatic performance and productivity enhancements for teams developing Linux applications on embedded Intel Architecture platforms.

Performance Studio consists of the following:

- Intel® C/C++ Compiler
 - Multi-threading capabilities
 - Optimized performance libraries
 - Error checking and security
 - Profiling tools
- Intel® Integrated Performance Primitives
 - Thousands of basic and frequently used algorithms and code samples
 - Highly optimized software and primitives
 - Communications, signal, data, image and video processing, and cryptography applications
 - 32-bit and 64-bit Intel Architecture multi-core platforms optimization
- Intel® VTune™ Amplifier XE
 - Hotspot, concurrency, and profile analysis
 - Low-overhead data collection
 - No special builds
 - Tuning threaded and non-threaded code

BENEFITS

- Simplifies compiler configuration using the Wind River Linux build system
- Optimizes code performance on Intel dual and multi-core architectures
- Provides the needed algorithms to optimize bandwidth-hungry applications
- Reduces power consumption by speeding up the software
- Integrates VTune with Wind River Workbench to provide complete visibility into system performance
- Improves productivity and accelerates product development

SUPPORT

Support and maintenance are available from Wind River's award-winning global support team. Support terms are consistent with the Wind River licensing models. Customers under active support and maintenance are entitled to receive product fixes and updates.

HOW TO PURCHASE

To purchase Wind River Linux Performance Studio for Intel Architecture, visit www.windriver.com/company/contact/ to find your local Wind River sales representative or call 800-545-9463 or write to inquiries@windriver.com.

USE CASES: WHEN PERFORMANCE COUNTS

Data Processing for Secure Networked Devices

Today, even in security-conscious industries such as medical devices and financial services, sensitive private information is routinely carried across the Internet. Connectivity requires the encryption and decryption of personal data, but these services can take a big toll on network performance. Using optimized data processing algorithms from Intel Integrated Performance Primitives, applications can process more packets per second, restoring optimal throughput.

Image Processing for Streaming Video

Between such now-essential applications as 3D gaming, GPS, and surveillance, the volume and size of video files delivered via Internet is huge. Even with the latest dual and multi-core chips, though, encoding and decoding these supersize video files is bandwidth-intensive, causing delays that negatively impact user experience. Optimized video compression algorithms from Intel Integrated Performance Primitives used with Intel C/C++ Compiler and Intel VTune Amplifier enable stutter-free video streaming.

Signal Processing for Voice Recognition

Speech-to-text conversion, voice-activated control systems, audio interface with mobile phones—today, everybody wants them. But these services are only differentiators when they work right. Achieving high performance and accurate results eats up system resources and too often fails to satisfy user expectations. Optimized speech and coding algorithms compiled and fine-tuned with VTune help produce natural speech results in communications devices, for a satisfying user experience.

SAMPLE BENCHMARKS

Sample benchmarks were obtained using the Phoronix Test Suite and Wind River Linux 4.2. Results may vary and are not guaranteed. Details regarding processor and benchmark configuration are available from Wind River.

Benchmark	Processor	Result using ICC/IPP
Himeno 3.0: CPU performance on MFLOPS; compares GCC and ICC	Intel® Xeon™ processor	2.2X boost
C-Ray: Ray tracing and anti-aliasing of pixels, CPU performance; compares GCC and ICC	Intel Xeon processor	1.9X boost
Open SSL: Encode/decode; compares native and IPP-enhanced performance	Intel Xeon processor	1.3X boost

TECHNICAL SPECIFICATIONS

- Target processor support: Intel® Core, Atom, and Xeon (refer to the Wind River Linux 4 BSP list for all supported platforms)
- Programming languages: C/C++ development
- Host operating systems: Microsoft Windows, Linux
- System requirements: Wind River Linux 4.2 (and beyond) working installation, Wind River Workbench 3.3.1 (optional)

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