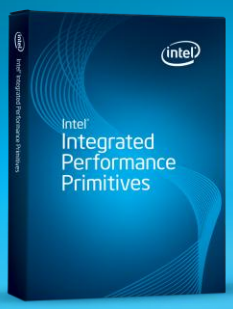


PERFORMANCE BUILDING BLOCKS TO HELP MAKE YOUR APPLICATIONS FASTER

Intel® Integrated Performance Primitives 7.1 Library

Product Brief

Top Features

- **Performance:** Optimized Building Blocks Perform Faster
- **Time To Market:** Intel Engineering Saves You Development Time
- **Cross Platform:** Supports Windows*, Linux*, and OS X*

Available in the following suites or standalone:

- Intel® Cluster Studio XE
- Intel® Parallel Studio XE
- Intel® C++ Studio XE
- Intel® Composer XE
- Intel® C++ Composer XE

OS Support:

- Windows
- Linux
- OS X

"Intel IPP provided a 300 percent improvement in the number of users who can simultaneously participate in a web cast."

Leo Vovlfson, President and Chief Technology Officer, Intecam, Inc.

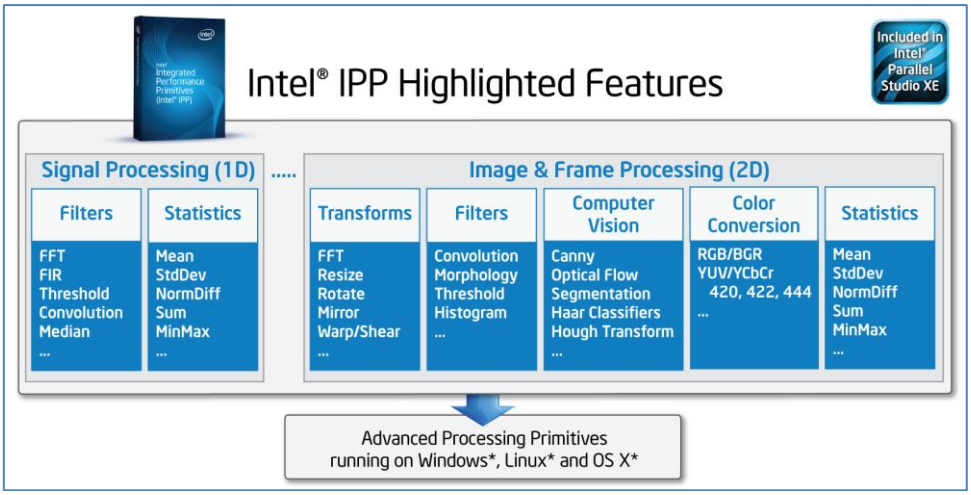
A Library of Highly Optimized Algorithmic Building Blocks for Media and Data Applications

Intel® Integrated Performance Primitives (Intel® IPP) is an extensive library of software functions to help you develop multimedia, data processing, and communications applications for Windows, Linux, and OS X environments.

Optimized for Performance: Intel® IPP software building blocks are highly optimized using SSE and Intel® AVX instruction sets so your application will perform faster than what an optimized compiler can produce alone.

Intel Engineered to Save You Time: Because Intel has done the engineering on these ready-to-use, royalty-free functions, you'll not only have more time to develop new features for your application, but in the long run you'll also save development, debug and maintenance time while knowing that the code you write today will run optimally on future generations of Intel processors.

Thousands of Frequently Used Functions: Intel® IPP offers thousands of optimized functions covering frequently used fundamental algorithms including those for creating digital media, enterprise, data, embedded, communications, and scientific / technical applications.



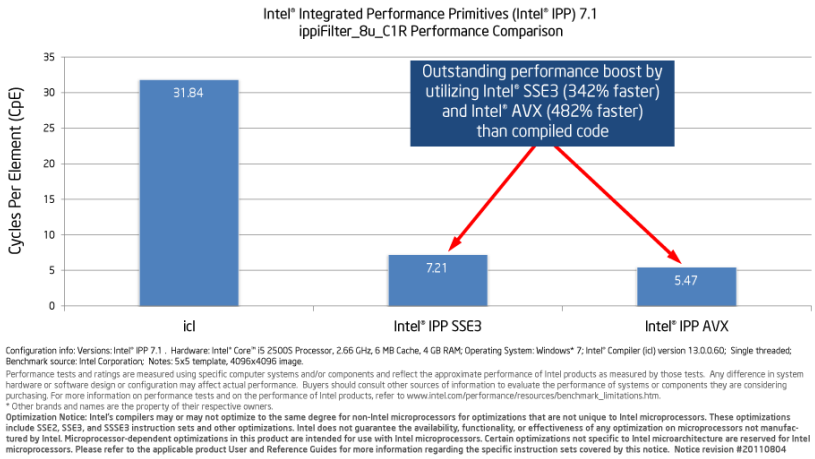
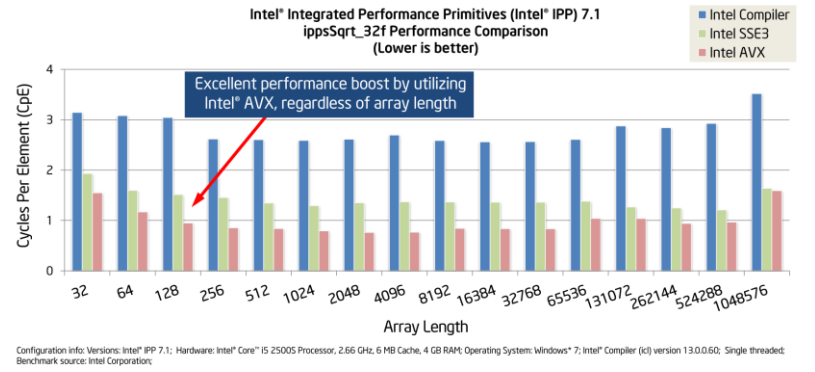
Available in Many Options to Suit Your Needs: Intel® IPP is available as a part of several different product packages with single and multi-user licenses as well as volume, academic, and student discounts available. See page 3 Purchase Options for details.

Try it Before You Buy It: Download a trial version of Intel IPP today at http://intel.ly/sw-tools-eval

Features and Benefits

Feature	Benefit
Pre-optimized Performance Primitives Delivers Performance	Intel IPP functions are highly optimized using SSE and Intel® AVX instruction sets enabling your compute heavy algorithms to achieve maximum performance, beyond what an optimized compiler could produce alone. For detailed performance data, visit the Intel IPP product web page at http://intel.ly/intel-ipp
Future Proof Optimizations	Intel® IPP enables you to code once now and then in the future simply relink with the latest version of Intel® IPP to realize future processor and instruction set performance gains. This instruction set future proofing saves you both time and money on future application development.
Royalty-free Redistribution Saves Money	Intel IPP allows you to redistribute unlimited copies of its runtime libraries with your application, saving you money long term.
Thousands of Pre-defined Functions Cover Your Needs	With thousands of functions provided, Intel® IPP speeds your application development letting you to focus on differentiating your application, not algorithmic optimization.
Source Code Usage Samples Jumpstart Your Application	Jumpstart your application development by taking advantage of Intel IPP source code samples. Additionally, there are samples showing how to use IPP in Java* and C#/.NET* applications.

A Closer Look at Intel® Integrated Performance Primitives

IPP Performance	Performance Comparison Details
	**ippiFilter** Performance is significantly faster than an optimized compiler with further improvements over multiple generations of SSE and Intel® AVX instruction sets.
	**ippsSqrt32f** Intel® Compiler vectorization makes a major difference in Sqrt performance alone, but Intel IPP provides significant performance boost over the Intel® Compiler.

What's New in Intel® Integrated Performance Primitives 7.1

Feature	Benefit
Intel® AVX & Intel® AVX2 Performance Optimizations	Achieve new performance optimizations for the Intel® AVX and Intel® AVX2 for faster floating-point and integer operations in the signal processing and image processing domains for Sandy Bridge (Intel AVX), Haswell (Intel AVX2), and later processors.
Enhanced Image Resize Performance Primitives	Dramatically improve your image resize performance with Intel's latest release.
Improved IPP footprint size	The kickoff of a multi-year effort to reduce the footprint size of IPP via deprecation of a portion of the library. See this webpage for more details and to report usage of any deprecated functionality: http://software.intel.com/sites/products/ipp-deprecated-features-feedback/index.php

Purchase Options: Language Specific Suites

Several suites are available combining the tools to build, verify and tune your application. The product covered in this product brief is highlighted in blue. Single or multi-user licenses along with volume, academic, and student discounts are available.

	Suites >>	Intel® Cluster Studio XE	Intel® Parallel Studio XE	Intel® C++ Studio XE	Intel® Fortran Studio XE	Intel® Composer XE	Intel® C++ Composer XE	Intel® Fortran Composer XE
Components	Intel® C / C++ Compiler	●	●	●		●	●	
	Intel® Fortran Compiler	●	●		●	●		●
	Intel® Integrated Performance Primitives[3]	●	●	●		●	●	
	Intel® Math Kernel Library[3]	●	●	●	●	●	●	●
	Intel® Cilk™ Plus	●	●	●		●	●	
	Intel® Threading Building Blocks	●	●	●		●	●	
	Intel® Inspector XE	●	●	●	●			
	Intel® VTune™ Amplifier XE	●	●	●	●			
	Intel® Advisor XE	●	●	●	●			
	Static Analysis	●	●	●	●			
	Intel® MPI Library	●						
	Intel® Trace Analyzer & Collector	●						
	Rogue Wave IMSL* Library[2]							●
	Operating System[1]	W, L	W, L	W, L	W, L	W, L	W, L, O	W, L, O

Note: [1] Operating System: W=Windows, L= Linux, O= OS X*. [2] Available in Intel® Visual Fortran Composer XE for Windows with IMSL*
[3] Not available individually on OS X, it is included in Intel® C++ & Fortran Composer XE suites for OS X

Technical Specifications

Specs at a Glance	
Processor Support	Validated for use with multiple generations of Intel and compatible processors including but not limited to: Intel® Xeon™ Processor, Intel® Core™ processor family and Intel® Atom™ processor family.
Operating Systems	Use the same API for application development on multiple operating systems: Windows*, Linux* and OS X*
Development Tools and Environments	Compatible with compilers from vendors that follow platform standards (e.g., Microsoft, GCC, Intel). Can be integrated with Microsoft Visual Studio* 2008, 2010 and 2012.
Programming Languages	Natively supports C++ development; cross language usage examples provided for C#/.NET*.
System Requirements	Refer to www.intel.com/software/products/systemrequirements/ for details on hardware and software requirements.
Support	All product updates, Intel® Premier Support services and Intel® Support Forums are included for one year. Intel Premier Support gives you secure, web-based, engineer-to-engineer support.
Community	Share experiences with other users of Intel® TBB and other parallel programming tools at the Intel moderated forum: http://software.intel.com/en-us/forums/

Learn more about Intel Integrated Performance Primitives

- Click or enter the link below: http://intel.ly/intel-ipp
- Or scan the QR code on the left

Download a free 30-day evaluation

- Click or enter the link below: http://intel.ly/sw-tools-eval
- Click on 'Compilers and Libraries' link

Optimization Notice Notice revision #20110804

Intel's compilers may or may not optimize to the same degree for non-Intel microprocessors for optimizations that are not unique to Intel microprocessors. These optimizations include SSE2, SSE3, and SSSE3 instruction sets and other optimizations. Intel does not guarantee the availability, functionality, or effectiveness of any optimization on microprocessors not manufactured by Intel. Microprocessor-dependent optimizations in this product are intended for use with Intel microprocessors. Certain optimizations not specific to Intel microarchitecture are reserved for Intel microprocessors. Please refer to the applicable product User and Reference Guides for more information regarding the specific instruction sets covered by this notice.