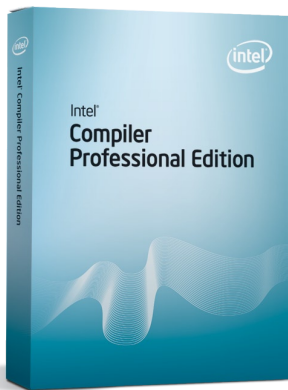




# Intel® Fortran Compiler 11.0 Professional Edition for Windows\*

## Product Brief

Intel® Fortran Compiler 11.0 Professional Edition for Windows\*



## Get High Performance with Intel® Fortran Compiler for Windows\* Professional Edition

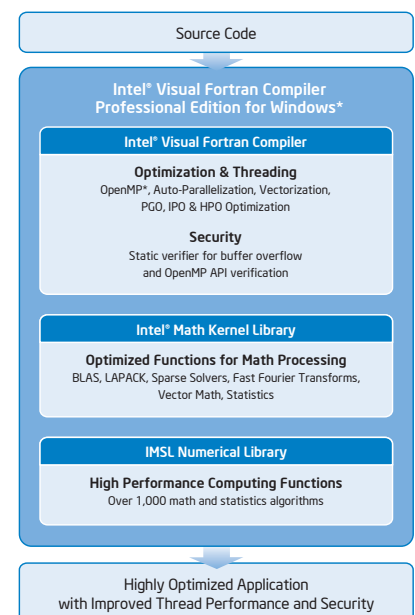
The Intel® Visual Fortran Compiler for Windows\* unleashes the vast potential of next generation multicore Intel® processors. The Professional Edition not only comes with the compiler's breadth of advanced optimization, multi-threading, and processor support, including automatic processor dispatch, vectorization, and data prefetching, it provides an optimized math processing library as well. The Intel® Professional Edition creates a strong foundation for building robust, high performance parallel code at significant price savings.

## Professional Editions

**The Professional Edition** combines a high performance Fortran compiler with the Intel® Math Kernel Library (MKL). MKL allows you to boost application performance with a set of highly optimized, thread-safe, mathematical functions for engineering, scientific and financial applications requiring high performance on Intel® platforms.

**The Professional Edition with IMSL® Fortran Numerical Library** combines the compiler with both Intel MKL and IMSL. The IMSL Fortran Library for Windows provides over 1,000 mathematical and statistical algorithms covering numerical optimization, nonlinear equations, LAPACK, BLAS and more.

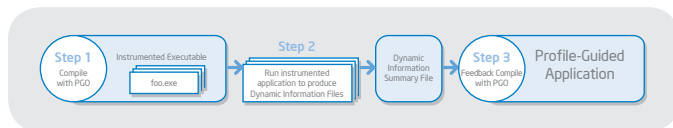
**Intel® Compiler Suite Professional Edition for Windows** includes all the features of the Intel Visual Fortran Compiler Professional Edition, but also includes the Intel C++ Compiler for Windows, Intel Threading Building Blocks, and Intel Integrated Performance Primitives for a more complete solution at significant price savings.



## Advanced Optimization Features

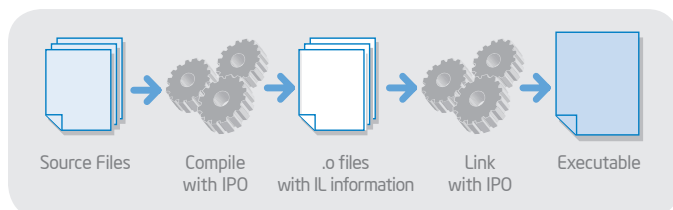
Software compiled using the Intel® Visual Fortran Compiler for Windows benefits from advanced optimization features, including:

- **High Performance Parallel Optimizer (HPO)** offers an improved ability to analyze, optimize, and parallelize more loop nests. This revolutionary capability combines vectorization, parallelization, and loop transformations into a single pass which is faster, more effective, and more reliable than prior discrete phases.
- **Automatic Vectorizer** analyzes loops and determines when it is safe and effective to execute several iterations of the loop in parallel.
- **Profile-Guided Optimization (PGO)** improves application performance by reducing instruction-cache thrashing, reorganizing code layout, shrinking code size, and reducing branch mispredictions.



The profile-guided optimization process

- **Interprocedural Optimization (IPO)** dramatically improves performance of small- or medium-sized functions that are used frequently, especially programs that contain calls within loops.



The interprocedural optimization process

## More Features

### Microsoft Visual Studio\* 2005 Premier Partner Edition

Provide complete Fortran support by bringing Intel hardware expertise into the latest Microsoft integrated development environment. (Not included in Intel Compiler Suite Professional Edition.)

### Multi-Threaded Application Support

OpenMP\* and auto-parallelization help convert serial applications into parallel applications, allowing you to take full advantage of multicore technology

### Developer Focused Benefits

Offers additional features from Fortran 2003 including Interoperability features that make it easier to develop mixed-language applications.

## Compatibility

The Intel® Visual Fortran Compiler is designed to work with Microsoft\* development products and depends on certain components of these. It integrates with Microsoft Visual Studio\* 2005 or 2008, as well as Visual Studio .NET\* 2003, and provides expanded 32-bit and 64-bit multicore processor support.

The Intel Visual Fortran Compiler 11.0 for Windows fully supports the Fortran 95 language standard, as well as the previous standards: Fortran 90, Fortran 77 and Fortran IV. It also includes many features from the Fortran 2003 language standard, as well as numerous popular language extensions.

## System Requirements

Please refer to [www.intel.com/software/products/compilers/fwin](http://www.intel.com/software/products/compilers/fwin) for details on hardware and software requirements.

## Support

Every purchase of an Intel® Software Development Product includes a year of support services, which provides access to Intel® Premier Support and all product updates during that time. Intel Premier Support gives you online access to technical notes, application notes, and documentation.

## Intel® Software Development Products

Intel Software Development Products help you create the fastest software possible by offering a full suite of tools:

- Intel® Compilers
- Intel® VTune™ Performance Analyzers
- Intel® Performance Libraries
- Intel® Threading Analysis Tools
- Intel® Cluster Tools

Visit our Web site at [www.intel.com/software/products](http://www.intel.com/software/products) for details about our entire line of products.

“We tried an early copy of the Intel Visual Fortran Compiler for Windows and our application built right out of the box. We noticed immediately that Intel improved compile-time and we really like the command- and source-compatibility with Compaq Visual Fortran\*. The compiler also has strong Fortran 95 support. The new Intel Visual Fortran Compiler did all that I expected of it. It is an impressive accomplishment.”<sup>§</sup>

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