Intel Corporation
Asus P5E3 Premium (Intel Core 2 Extreme QX9770)

SPECfp®_rate2006 = 53.3
SPECfp_rate_base2006 = 51.2

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Hardware
CPU Name: Intel Core 2 Extreme QX9770
CPU Characteristics: 3.20 GHz 1600 FSB
CPU MHz: 3200
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
CPU(s) orderable: 1 chip
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

Software
Operating System: Windows Vista64 Ultimate
Compiler: Intel C++ Compiler for IA32 version 10.1
Build 20070913 Package ID: w_cc_p_10.1.011
Intel Fortran Compiler for IA32 version 10.1
Build 20070913 Package ID: w_fc_p_10.1.011
Microsoft Visual Studio 2005 SP1 (for libraries)
Auto Parallel: No
File System: NTFS
System State: Default
SPEC CFP2006 Result

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L3 Cache: None
Other Cache: None
Memory: 4 GB (4x1GB Corsair TWIN3X2048-1333C9DHX DDR3-1333 CL9)
Disk Subsystem: Seagate 320GB NCQ SATA, 16MB cache, 7200 RPM
Other Hardware: None

Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: SmartHeap Library Version 8.1 from http://www.microquill.com/

Results Table

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</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

General Notes
Tested systems can be used with Shin-G ATX case, Antec NeoPower 480W power supply
Product description located as of 9/2008:
The system bus runs at 1600 MHz
System was configured with Asus EN8800GTX discrete graphics card
Binaries were built on Windows Vista32
The following VS 2005 SP1 updates were applied: KB926601 and KB932232

C benchmarks:
icl -Qvc8 -Qc99

Base Compiler Invocation

Continued on next page
Intel Corporation

Asus P5E3 Premium (Intel Core 2 Extreme QX9770)

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CPU2006 license: 13
Test date: Nov-2007
Test sponsor: Intel Corporation
Hardware Availability: Apr-2008
 Tested by: Intel Corporation
Software Availability: Nov-2007

Base Compiler Invocation (Continued)

C++ benchmarks:
    icl -Qvc8

Fortran benchmarks:
    ifort

Benchmarks using both Fortran and C:
    icl -Qvc8 -Qc99 ifort

Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Base Optimization Flags

C benchmarks:
    -fast /F1000000000

C++ benchmarks:
    -fast -Qcxx_features /F1000000000 shlw32m.lib
    -link /FORCE:MULTIPLE

Fortran benchmarks:
    -fast /F1000000000

Benchmarks using both Fortran and C:
    -fast /F1000000000

Peak Compiler Invocation

C benchmarks:
    icl -Qvc8 -Qc99

C++ benchmarks:
    icl -Qvc8

Fortran benchmarks:
    ifort

Continued on next page
Intel Corporation

Asus P5E3 Premium (Intel Core 2 Extreme QX9770)

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Peak Compiler Invocation (Continued)

Benchmarks using both Fortran and C:
icl -Qvc8 -Qc99 ifort

Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Peak Optimization Flags

C benchmarks:
433.milc: -fast -Qunroll12 -Oa /F1000000000
470.lbm: -fast -Qunroll12 -Qscalar-rep -Qprefetch /F1000000000
482.sphinx3: -fast -Qunroll12 /F1000000000

C++ benchmarks:
444.namd: -fast -Oa -Qcxx_features /F1000000000 shlw32m.lib
- link /FORCE:MULTIPLE
447.dealII: -fast -Qunroll12 -Qprefetch -Qcxx_features /F1000000000
shlw32m.lib -link /FORCE:MULTIPLE
450.soplex: -fast -Qcxx_features /F1000000000 shlw32m.lib
- link /FORCE:MULTIPLE
453.povray: -fast -Qunroll14 -Qansi-alias -Qcxx_features /F1000000000
shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
410.bwaves: basepeak = yes
416.gamess: -fast -Qunroll12 -Ob0 -Qansi-alias -Qscalar-rep-
/F1000000000
434.zeusmp: -Qxt -O2 -Qprec-div -Qunroll10 -Qscalar-rep /F1000000000
## Intel Corporation

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### CPU2006 license: 13
- Test sponsor: Intel Corporation
- Tested by: Intel Corporation
- Test date: Nov-2007
- Hardware Availability: Apr-2008
- Software Availability: Nov-2007

### Peak Optimization Flags (Continued)

- **437.leslie3d**: `-fast -Qprefetch /F1000000000`
- **459.GemsFDTD**: `-fast -Qunroll12 -Ob0 -Qprefetch /F1000000000`
- **465.tonto**: `-fast -Qunroll14 -Qauto /F1000000000`

#### Benchmarks using both Fortran and C:

- **435.gromacs**: `-fast -Oa -Qprefetch /F1000000000`
- **436.cactusADM**: `-fast -Qunroll12 -Qprefetch /F1000000000`
- **454.calculix**: `-fast -Qunroll-aggressive /F1000000000`
- **481.wrf**: basepeak = yes

The flags file that was used to format this result can be browsed at [http://www.spec.org/cpu2006/flags/Intel-ic10.1-win32-revC.html](http://www.spec.org/cpu2006/flags/Intel-ic10.1-win32-revC.html)

You can also download the XML flags source by saving the following link:

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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