



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®2006 = 8.35

Lenovo ThinkPad T43 (Intel Pentium M 780)

SPECfp_base2006 = 8.22

CPU2006 license: 13

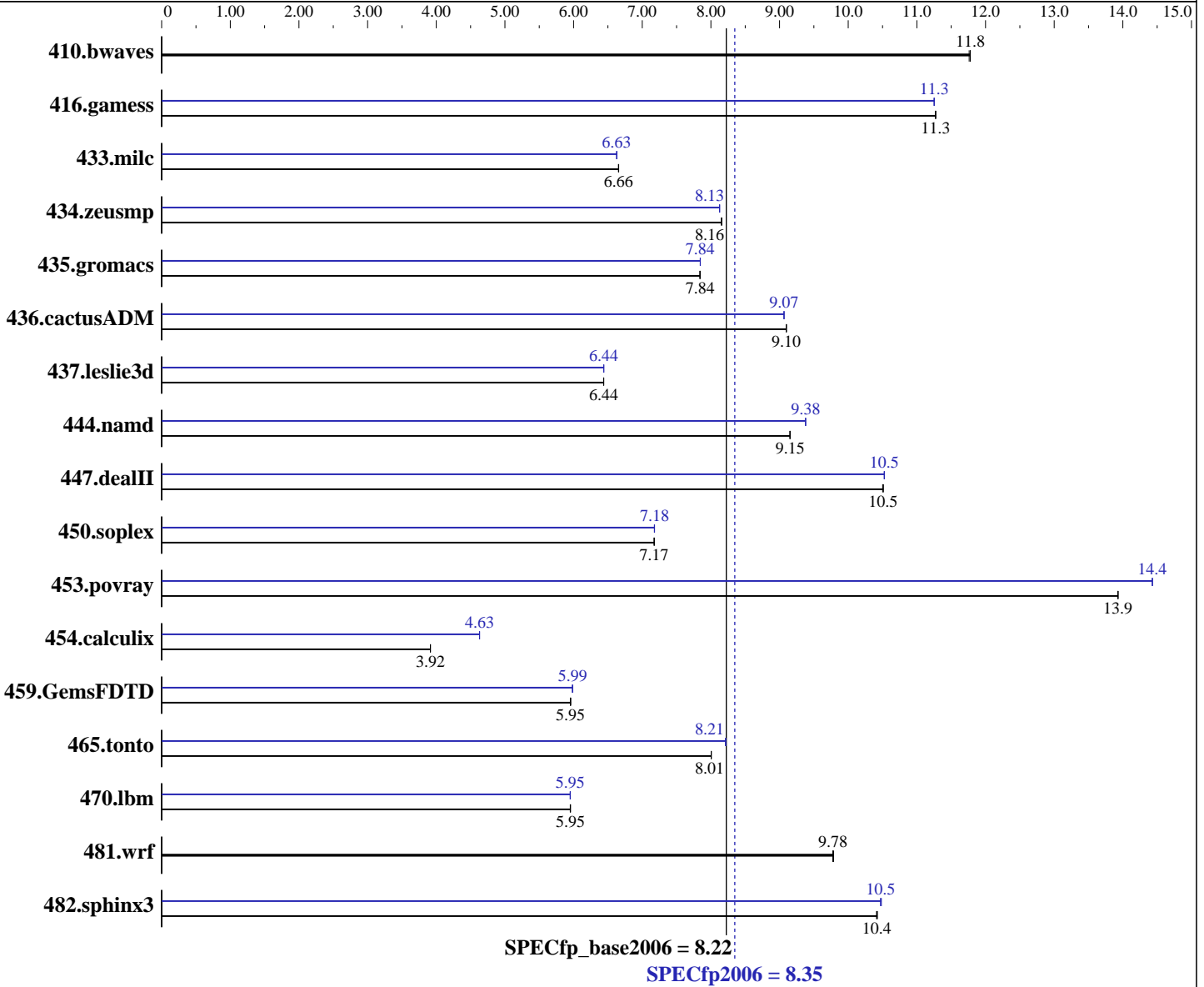
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Dec-2007

Hardware Availability: Jan-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Pentium M 780
 CPU Characteristics:
 CPU MHz: 2266
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per chip
 Secondary Cache: 2 MB I+D on chip per chip

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Software

Operating System: Windows Vista Ultimate (32-bit)
 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

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L3 Cache: None
Other Cache: None
Memory: 2 GB (2x1GB Hynix DDR2-667 CL5)
Disk Subsystem: Hitachi 100 GB SATA, 7200 RPM
Other Hardware: None

Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: None
SmartHeap Library Version 8.1 from <http://www.microquill.com/>

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	1154	11.8	1155	11.8	<u>1154</u>	<u>11.8</u>	1154	11.8	1155	11.8	<u>1154</u>	<u>11.8</u>
416.gamess	1736	11.3	<u>1737</u>	<u>11.3</u>	1737	11.3	<u>1740</u>	<u>11.3</u>	1740	11.3	1740	11.3
433.milc	1380	6.65	<u>1379</u>	<u>6.66</u>	1379	6.66	1385	6.63	<u>1385</u>	<u>6.63</u>	1385	6.63
434.zeusmp	<u>1116</u>	<u>8.16</u>	1116	8.16	1116	8.15	<u>1120</u>	<u>8.13</u>	1120	8.13	1120	8.13
435.gromacs	911	7.84	<u>910</u>	<u>7.84</u>	910	7.84	<u>910</u>	<u>7.84</u>	910	7.84	910	7.85
436.cactusADM	1314	9.10	1313	9.10	<u>1313</u>	<u>9.10</u>	1318	9.07	<u>1318</u>	<u>9.07</u>	1318	9.06
437.leslie3d	1460	6.44	<u>1460</u>	<u>6.44</u>	1460	6.44	1460	6.44	<u>1460</u>	<u>6.44</u>	1460	6.44
444.namd	876	9.15	876	9.15	<u>876</u>	<u>9.15</u>	855	9.38	<u>855</u>	<u>9.38</u>	855	9.38
447.dealII	<u>1088</u>	<u>10.5</u>	1088	10.5	1089	10.5	1087	10.5	1087	10.5	<u>1087</u>	<u>10.5</u>
450.soplex	1163	7.17	<u>1162</u>	<u>7.17</u>	1162	7.18	<u>1162</u>	<u>7.18</u>	1162	7.18	1162	7.18
453.povray	382	13.9	<u>382</u>	<u>13.9</u>	382	13.9	<u>369</u>	<u>14.4</u>	369	14.4	369	14.4
454.calculix	2108	3.91	<u>2107</u>	<u>3.92</u>	2107	3.92	<u>1782</u>	<u>4.63</u>	1781	4.63	1782	4.63
459.GemsFDTD	<u>1782</u>	<u>5.95</u>	1782	5.95	1780	5.96	1772	5.99	<u>1772</u>	<u>5.99</u>	1774	5.98
465.tonto	<u>1229</u>	<u>8.01</u>	1229	8.00	1229	8.01	1198	8.21	<u>1198</u>	<u>8.21</u>	1198	8.22
470.lbm	2309	5.95	<u>2307</u>	<u>5.95</u>	2307	5.95	2309	5.95	<u>2309</u>	<u>5.95</u>	2308	5.95
481.wrf	<u>1142</u>	<u>9.78</u>	1143	9.78	1141	9.79	<u>1142</u>	<u>9.78</u>	1143	9.78	1141	9.79
482.sphinx3	<u>1871</u>	<u>10.4</u>	1872	10.4	1870	10.4	<u>1861</u>	<u>10.5</u>	1861	10.5	1859	10.5

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

General Notes

The system bus runs at 533 MHz
Binaries were built on Windows Vista (32-bit)
The following VS 2005 SP1 updates were applied: KB926601 and KB932232

Base Compiler Invocation

C benchmarks:
icl -Qvc8 -Qc99

C++ benchmarks:
icl -Qvc8

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Base Compiler Invocation (Continued)

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:

-QxB -Qipo -O3 -Qprec-div- /F1000000000

C++ benchmarks:

-QxB -Qipo -O3 -Qprec-div- -Qcxx_features /F1000000000 shlw32m.lib

-link /FORCE:MULTIPLE

Fortran benchmarks:

-QxB -Qipo -O3 -Qprec-div- /F1000000000

Benchmarks using both Fortran and C:

-QxB -Qipo -O3 -Qprec-div- /F1000000000

Peak Compiler Invocation

C benchmarks:

icl -Qvc8 -Qc99

C++ benchmarks:

icl -Qvc8

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc8 -Qc99 ifort



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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: -QxB -Qipo -O3 -Qprec-div- -Qunroll2 -Oa /F1000000000
470.lbm: -QxB -Qipo -O3 -Qprec-div- -Qunroll2 -Qscalar-rep-
-Qprefetch /F1000000000
482.sphinx3: -QxB -Qipo -O3 -Qprec-div- -Qunroll2 /F1000000000

```

C++ benchmarks:

```

444.namd: -QxB -Qipo -O3 -Qprec-div- -Oa -Qcxx_features
/F1000000000 shlw32m.lib -link /FORCE:MULTIPLE
447.dealII: -QxB -Qipo -O3 -Qprec-div- -Qunroll2 -Qprefetch
-Qcxx_features /F1000000000 shlw32m.lib
-link /FORCE:MULTIPLE
450.soplex: -QxB -Qipo -O3 -Qprec-div- -Qcxx_features /F1000000000
shlw32m.lib -link /FORCE:MULTIPLE
453.povray: -QxB -Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias
-Qcxx_features /F1000000000 shlw32m.lib
-link /FORCE:MULTIPLE

```

Fortran benchmarks:

```

410.bwaves: basepeak = yes
416.gamess: -QxB -Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias
-Qscalar-rep- /F1000000000
434.zeusmp: -QxB -O2 -Qprec-div- -Qunroll10 -Qscalar-rep- /F1000000000
437.leslie3d: -QxB -Qipo -O3 -Qprec-div- -Qprefetch /F1000000000
459.GemsFDTD: -QxB -Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qprefetch
/F1000000000

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Peak Optimization Flags (Continued)

465.tonto: -QxB -Qipo -O3 -Qprec-div- -Qunroll4 -Qauto /F1000000000

Benchmarks using both Fortran and C:

435.gromacs: -QxB -Qipo -O3 -Qprec-div- -Oa -Qprefetch /F1000000000

436.cactusADM: -QxB -Qipo -O3 -Qprec-div- -Qunroll2 -Qprefetch /F1000000000

454.calculix: -QxB -Qipo -O3 -Qprec-div- -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-ia32-intel64-linux-flags.20090714.09.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.09.xml>

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For other inquiries, please contact webmaster@spec.org.

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