



# SPEC® CFP2006 Result

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## NEC Corporation

Express5800/120Bb-6  
(Intel Xeon processor 5110)

SPECfp®2006 = 10.8

SPECfp\_base2006 = 10.4

CPU2006 license: 9006

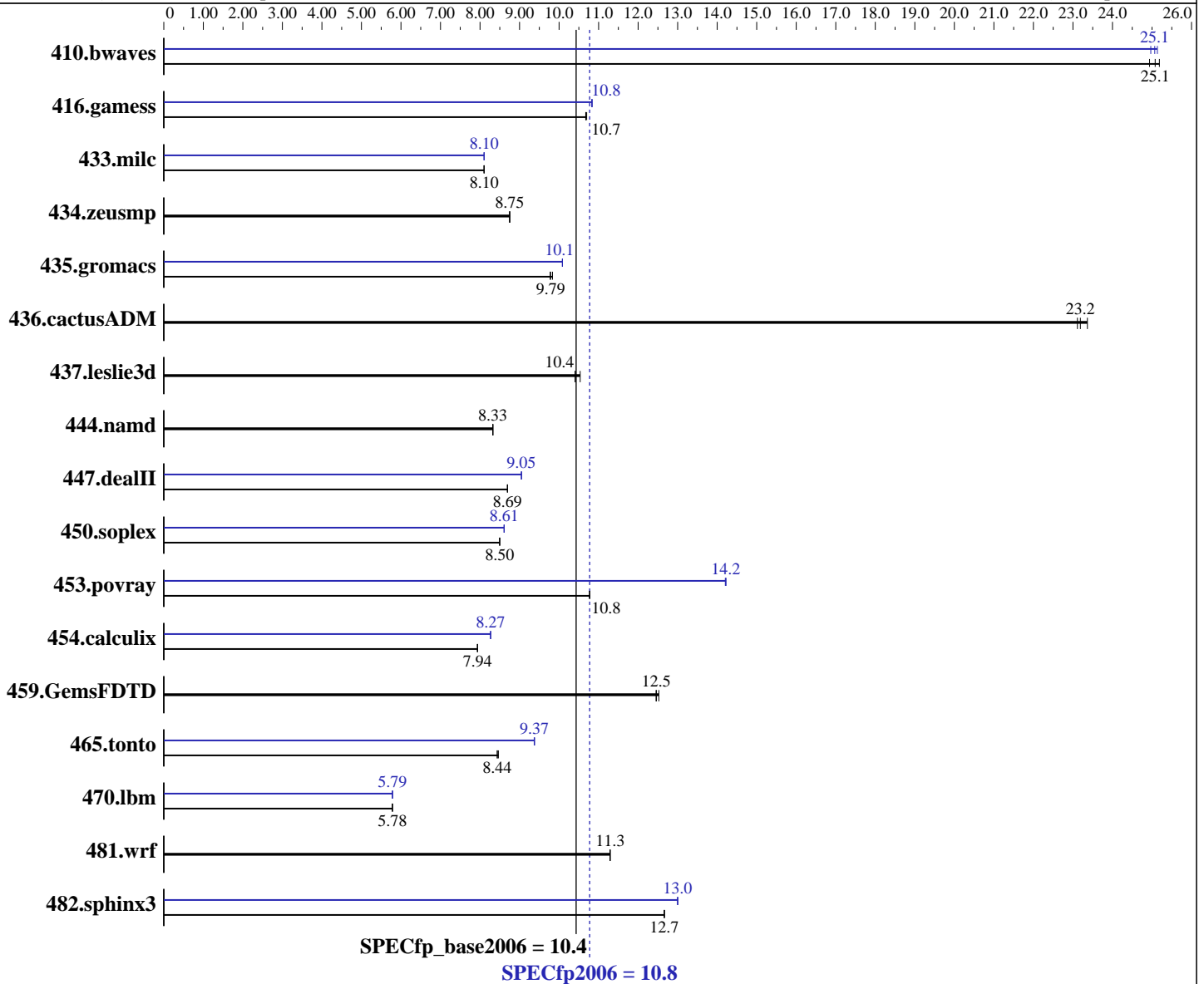
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Oct-2007

Hardware Availability: May-2007

Software Availability: Apr-2007



**Hardware**

CPU Name: Intel Xeon 5110  
 CPU Characteristics: 1.60 GHz, 4 MB L2, 1066 MHz bus  
 CPU MHz: 1600  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 4 MB I+D on chip per chip

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**Software**

Operating System: Windows Server 2003, Standard x64 Edition Service Pack1  
 Compiler: Intel C++ Compiler for EM64T version 9.1 Build 20070322, Package-ID W\_CC\_C\_9.1.037  
 Intel Fortran Compiler for EM64T version 9.1 Build 20070322, Package-ID W\_FC\_C\_9.1.037  
 Microsoft Visual Studio 2005 (libr. & linker)  
 Auto Parallel: Yes  
 File System: NTFS

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L3 Cache: None  
Other Cache: None  
Memory: 8 GB (4x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)  
Disk Subsystem: 1x146.5 GB SAS, 10000RPM  
Other Hardware: None

System State: Default  
Base Pointers: 64-bit  
Peak Pointers: 64-bit  
Other Software: None

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	540	25.2	<b>542</b>	<b>25.1</b>	545	24.9	541	25.1	<b>542</b>	<b>25.1</b>	544	25.0
416.gamess	1830	10.7	<b>1834</b>	<b>10.7</b>	1834	10.7	<b>1807</b>	<b>10.8</b>	1808	10.8	1807	10.8
433.milc	1132	8.11	<b>1133</b>	<b>8.10</b>	1133	8.10	1133	8.10	<b>1133</b>	<b>8.10</b>	1133	8.11
434.zeusmp	1040	8.75	<b>1040</b>	<b>8.75</b>	1040	8.75	1040	8.75	<b>1040</b>	<b>8.75</b>	1040	8.75
435.gromacs	726	9.83	730	9.77	<b>730</b>	<b>9.79</b>	<b>708</b>	<b>10.1</b>	708	10.1	708	10.1
436.cactusADM	511	23.4	<b>515</b>	<b>23.2</b>	517	23.1	511	23.4	<b>515</b>	<b>23.2</b>	517	23.1
437.leslie3d	892	10.5	903	10.4	<b>903</b>	<b>10.4</b>	892	10.5	903	10.4	<b>903</b>	<b>10.4</b>
444.namd	964	8.32	963	8.33	<b>963</b>	<b>8.33</b>	964	8.32	963	8.33	<b>963</b>	<b>8.33</b>
447.dealII	1316	8.69	1316	8.69	<b>1316</b>	<b>8.69</b>	1264	9.05	1264	9.05	<b>1264</b>	<b>9.05</b>
450.soplex	982	8.50	<b>981</b>	<b>8.50</b>	981	8.50	969	8.61	968	8.61	<b>969</b>	<b>8.61</b>
453.povray	494	10.8	494	10.8	<b>494</b>	<b>10.8</b>	375	14.2	374	14.2	<b>374</b>	<b>14.2</b>
454.calculix	1039	7.94	1040	7.93	<b>1039</b>	<b>7.94</b>	998	8.27	998	8.27	<b>998</b>	<b>8.27</b>
459.GemsFDTD	847	12.5	852	12.5	<b>851</b>	<b>12.5</b>	847	12.5	852	12.5	<b>851</b>	<b>12.5</b>
465.tonto	1162	8.46	1167	8.44	<b>1166</b>	<b>8.44</b>	1049	9.38	<b>1050</b>	<b>9.37</b>	1050	9.37
470.lbm	2375	5.78	2375	5.78	<b>2375</b>	<b>5.78</b>	2375	5.79	2375	5.79	<b>2375</b>	<b>5.79</b>
481.wrf	<b>989</b>	<b>11.3</b>	990	11.3	989	11.3	<b>989</b>	<b>11.3</b>	990	11.3	989	11.3
482.sphinx3	1540	12.7	1539	12.7	<b>1539</b>	<b>12.7</b>	<b>1499</b>	<b>13.0</b>	1499	13.0	1499	13.0

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

## Base 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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## Base Portability Flags

```

410.bwaves: -DSPEC_CPU_P64
416.gamess: -DSPEC_CPU_P64
433.milc: -D_Complex= -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -D_Complex= -DSPEC_CPU_P64
436.cactusADM: -D_Complex= -DSPEC_CPU_P64 -Qlowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -D_Complex= -DSPEC_CPU_P64 -DBOOST_NO_INTRINSIC_WCHAR_T
-DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
454.calculix: -D_Complex= -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER
-Qlowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -D_Complex= -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -D_Complex= -DSPEC_CPU_P64

```

## Base Optimization Flags

```

C benchmarks:
  -fast -Qparallel -F950000000 -link -FORCE:MULTIPLE

C++ benchmarks:
  -fast -Qparallel -Qcxx-features -F950000000
  -link -FORCE:MULTIPLE

Fortran benchmarks:
  -fast -Qparallel -F950000000 -link -FORCE:MULTIPLE

Benchmarks using both Fortran and C:
  -fast -Qparallel -F950000000 -link -FORCE:MULTIPLE

```

## Peak Compiler Invocation

```

C benchmarks:
  icl -Qvc8 -Qc99

C++ benchmarks:
  icl -Qvc8

Fortran benchmarks:
  ifort

```

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## Peak Compiler Invocation (Continued)

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

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

-Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -F950000000  
-link -FORCE:MULTIPLE

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qcxx-features  
-F950000000 -link -FORCE:MULTIPLE

450.soplex: Same as 447.dealII

453.povray: Same as 447.dealII

Fortran benchmarks:

410.bwaves: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qparallel  
-F950000000 -link -FORCE:MULTIPLE

416.gamess: -fast -F950000000 -link -FORCE:MULTIPLE

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

435.gromacs: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -F950000000  
-link -FORCE:MULTIPLE

436.cactusADM: basepeak = yes

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## Peak Optimization Flags (Continued)

454.calculix: Same as 435.gromacs

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/NEC-ic91-FP-win-flags.html>

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

<http://www.spec.org/cpu2006/flags/NEC-ic91-FP-win-flags.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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