



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Rg-1
(Intel Xeon processor 5160)

SPECfp®2006 = 17.3

SPECfp_base2006 = 16.8

CPU2006 license: 9006

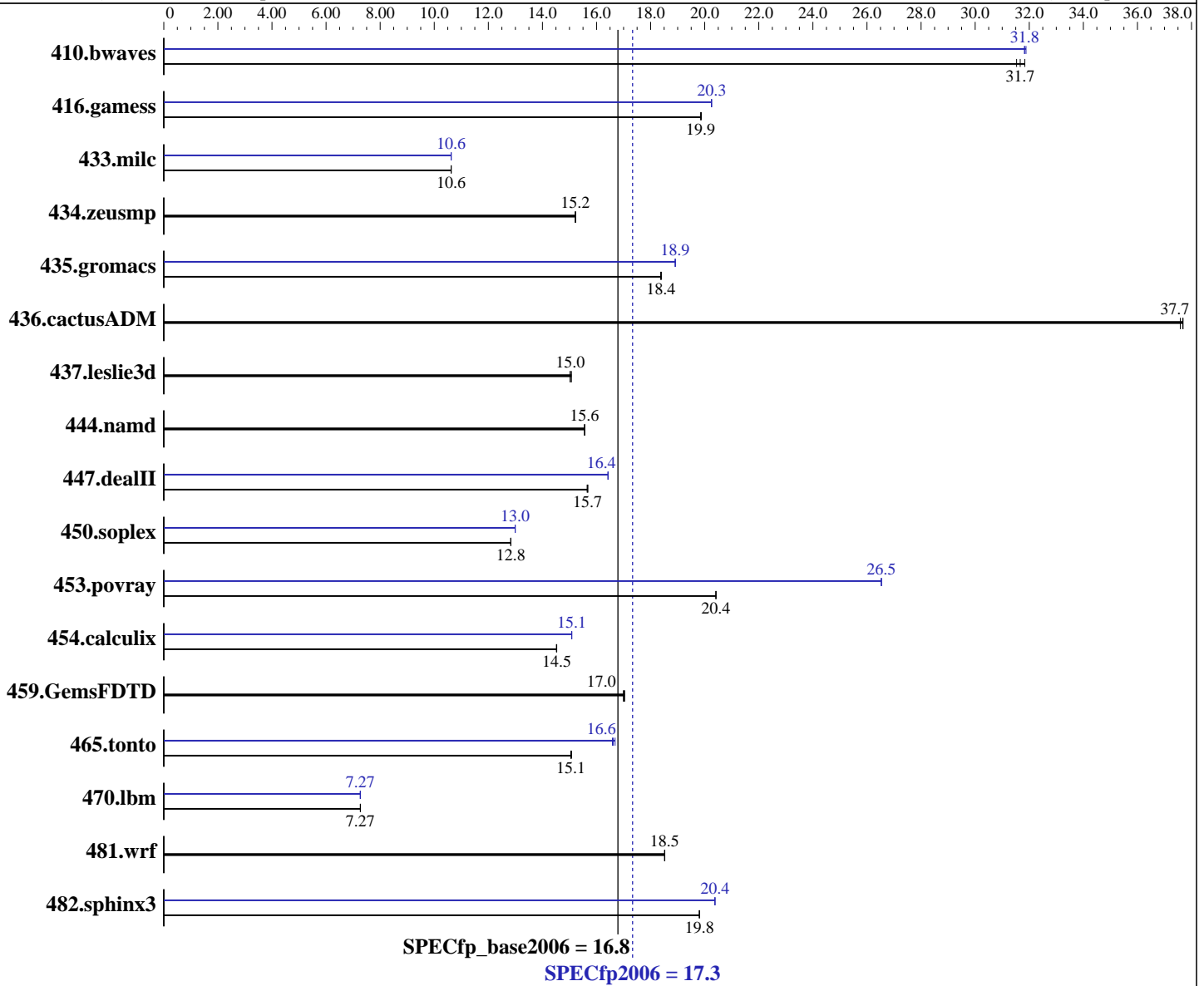
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: May-2007

Hardware Availability: May-2007

Software Availability: Apr-2007



Hardware

CPU Name: Intel Xeon 5160
 CPU Characteristics: 3.00 GHz, 4MB L2, 1333MHz bus
 CPU MHz: 3000
 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
 Compiler: Intel C++ Compiler for EM64T version 9.1
 Build 20070109, Package-ID W_CC_C_9.1.034
 Intel Fortran Compiler for EM64T version 9.1
 Build 20070109, Package-ID W_FC_C_9.1.034
 Microsoft Visual Studio 2005 (libr. & linker)
 Auto Parallel: Yes
 File System: NTFS
 System State: Default

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L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x73.2 GB SAS, 15000RPM
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: MicroQuill SmartHeap Library 8.1

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<u>429</u>	<u>31.7</u>	427	31.8	431	31.5	427	31.8	426	31.9	<u>427</u>	<u>31.8</u>
416.gamess	986	19.9	985	19.9	<u>986</u>	<u>19.9</u>	<u>967</u>	<u>20.3</u>	967	20.3	967	20.2
433.milc	864	10.6	864	10.6	<u>864</u>	<u>10.6</u>	864	10.6	<u>864</u>	<u>10.6</u>	864	10.6
434.zeusmp	598	15.2	598	15.2	<u>598</u>	<u>15.2</u>	598	15.2	598	15.2	<u>598</u>	<u>15.2</u>
435.gromacs	388	18.4	<u>388</u>	<u>18.4</u>	389	18.4	<u>378</u>	<u>18.9</u>	378	18.9	378	18.9
436.cactusADM	318	37.6	<u>317</u>	<u>37.7</u>	317	37.7	318	37.6	<u>317</u>	<u>37.7</u>	317	37.7
437.leslie3d	<u>625</u>	<u>15.0</u>	624	15.1	626	15.0	<u>625</u>	<u>15.0</u>	624	15.1	626	15.0
444.namd	515	15.6	<u>515</u>	<u>15.6</u>	515	15.6	515	15.6	<u>515</u>	<u>15.6</u>	515	15.6
447.dealII	730	15.7	731	15.7	<u>730</u>	<u>15.7</u>	<u>696</u>	<u>16.4</u>	696	16.4	696	16.4
450.soplex	<u>650</u>	<u>12.8</u>	650	12.8	650	12.8	642	13.0	<u>642</u>	<u>13.0</u>	642	13.0
453.povray	261	20.4	261	20.4	<u>261</u>	<u>20.4</u>	201	26.5	201	26.5	<u>201</u>	<u>26.5</u>
454.calculix	<u>568</u>	<u>14.5</u>	568	14.5	568	14.5	547	15.1	<u>547</u>	<u>15.1</u>	547	15.1
459.GemsFDTD	<u>624</u>	<u>17.0</u>	624	17.0	623	17.0	<u>624</u>	<u>17.0</u>	624	17.0	623	17.0
465.tonto	<u>654</u>	<u>15.1</u>	653	15.1	654	15.0	590	16.7	<u>592</u>	<u>16.6</u>	593	16.6
470.lbm	1890	7.27	<u>1890</u>	<u>7.27</u>	1890	7.27	1891	7.27	1891	7.27	<u>1891</u>	<u>7.27</u>
481.wrf	603	18.5	603	18.5	<u>603</u>	<u>18.5</u>	603	18.5	603	18.5	<u>603</u>	<u>18.5</u>
482.sphinx3	984	19.8	984	19.8	<u>984</u>	<u>19.8</u>	956	20.4	<u>956</u>	<u>20.4</u>	956	20.4

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

General Notes

The Express5800/120Rg-1 and the Express5800/120Ri-2 models are electronically equivalent.
The results have been measured on a Express5800/120Ri-2 model.

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

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 shlw32M.lib

C++ benchmarks:

-fast -Qparallel -Qcxx-features -F950000000 shlw32M.lib

Fortran benchmarks:

-fast -Qparallel -F950000000 shlw32M.lib

Benchmarks using both Fortran and C:

-fast -Qparallel -F950000000 shlw32M.lib



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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

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

-Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -F950000000 sh1W32M.lib

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx-features
-F950000000 sh1W32M.lib

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 sh1W32M.lib

416.gamess: -fast -F950000000 sh1W32M.lib

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

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Peak Optimization Flags (Continued)

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

435.gromacs: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -F950000000
sh1W32M.lib

436.cactusADM: basepeak = yes

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-cpu2006-ic91-flags.html>

You can also download the XML flags source by saving the following link:
<http://www.spec.org/cpu2006/flags/NEC-cpu2006-ic91-flags.xml>

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

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