



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/140Re-4
(Intel Xeon processor 7140M)

SPECfp®2006 = 13.3

SPECfp_base2006 = 12.6

CPU2006 license: 9006

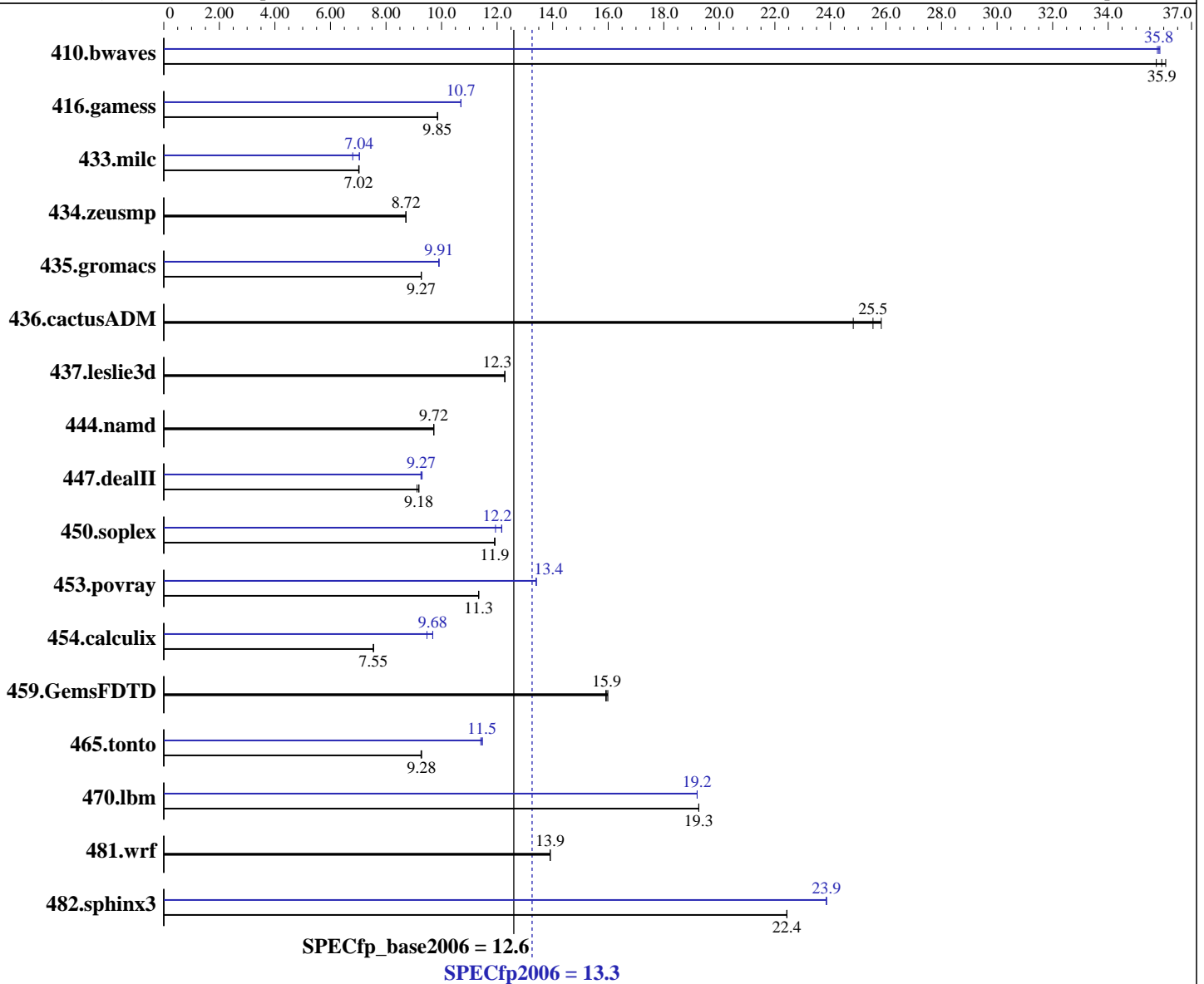
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Sep-2007

Hardware Availability: Oct-2006

Software Availability: Apr-2007



Hardware

CPU Name: Intel Xeon 7140M
 CPU Characteristics: 3.40 GHz, 800MHz bus
 CPU MHz: 3400
 FPU: Integrated
 CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2,4 chips
 Primary Cache: 12 K micro-ops I + 16 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per core

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Software

Operating System: Windows Server 2003, Enterprise 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: 16 MB I+D on chip per chip
Other Cache: None
Memory: 32 GB (16x2 GB PC2-3200R, 2 rank, CL3-3-3, ECC)
Disk Subsystem: 1x146.5 GB SAS, 15000RPM
Other Hardware: None

System State: Default
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	380	35.7	378	35.9	377	36.1	379	35.9	380	35.8	379	35.8
416.gamess	1987	9.85	1985	9.86	1987	9.85	1830	10.7	1830	10.7	1830	10.7
433.milc	1305	7.03	1308	7.02	1308	7.02	1350	6.80	1304	7.04	1304	7.04
434.zeusmp	1044	8.72	1044	8.72	1043	8.72	1044	8.72	1044	8.72	1043	8.72
435.gromacs	770	9.27	770	9.27	770	9.27	721	9.90	721	9.91	721	9.91
436.cactusADM	468	25.5	463	25.8	481	24.8	468	25.5	463	25.8	481	24.8
437.leslie3d	766	12.3	765	12.3	765	12.3	766	12.3	765	12.3	765	12.3
444.namd	825	9.72	825	9.72	825	9.72	825	9.72	825	9.72	825	9.72
447.dealII	1246	9.18	1246	9.18	1255	9.12	1230	9.30	1236	9.26	1234	9.27
450.soplex	699	11.9	700	11.9	700	11.9	686	12.2	698	11.9	685	12.2
453.povray	469	11.3	469	11.3	469	11.3	397	13.4	397	13.4	397	13.4
454.calculix	1093	7.55	1094	7.54	1092	7.55	852	9.68	871	9.47	852	9.68
459.GemsFDTD	667	15.9	665	15.9	664	16.0	667	15.9	665	15.9	664	16.0
465.tonto	1061	9.28	1063	9.26	1061	9.28	859	11.5	862	11.4	858	11.5
470.lbm	713	19.3	713	19.3	713	19.3	716	19.2	716	19.2	716	19.2
481.wrf	803	13.9	803	13.9	803	13.9	803	13.9	803	13.9	803	13.9
482.sphinx3	869	22.4	869	22.4	869	22.4	817	23.9	817	23.9	817	23.9

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

General Notes

The Express5800/140Hf and the Express5800/140Re-4 models are electronically equivalent.
The results have been measured on a Express5800/140Re-4 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
-link -FORCE:MULTIPLE

C++ benchmarks:

-fast -Qparallel -Qcxx-features -F950000000 shlw32M.lib
-link -FORCE:MULTIPLE

Fortran benchmarks:

-fast -Qparallel -F950000000 shlw32M.lib
-link -FORCE:MULTIPLE

Benchmarks using both Fortran and C:

-fast -Qparallel -F950000000 shlw32M.lib
-link -FORCE:MULTIPLE



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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 shlw32M.lib
-link -FORCE:MULTIPLE

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx-features
-F950000000 shlw32M.lib -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 shlw32M.lib -link -FORCE:MULTIPLE

416.gamess: -fast -F950000000 shlw32M.lib
-link -FORCE:MULTIPLE

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

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Peak Optimization Flags (Continued)

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
shlW32M.lib -link -FORCE:MULTIPLE

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-ic91-FP-win-flags.20090714.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.20090714.xml>

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

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