SPEC® CFP2006 Result

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NEC Corporation

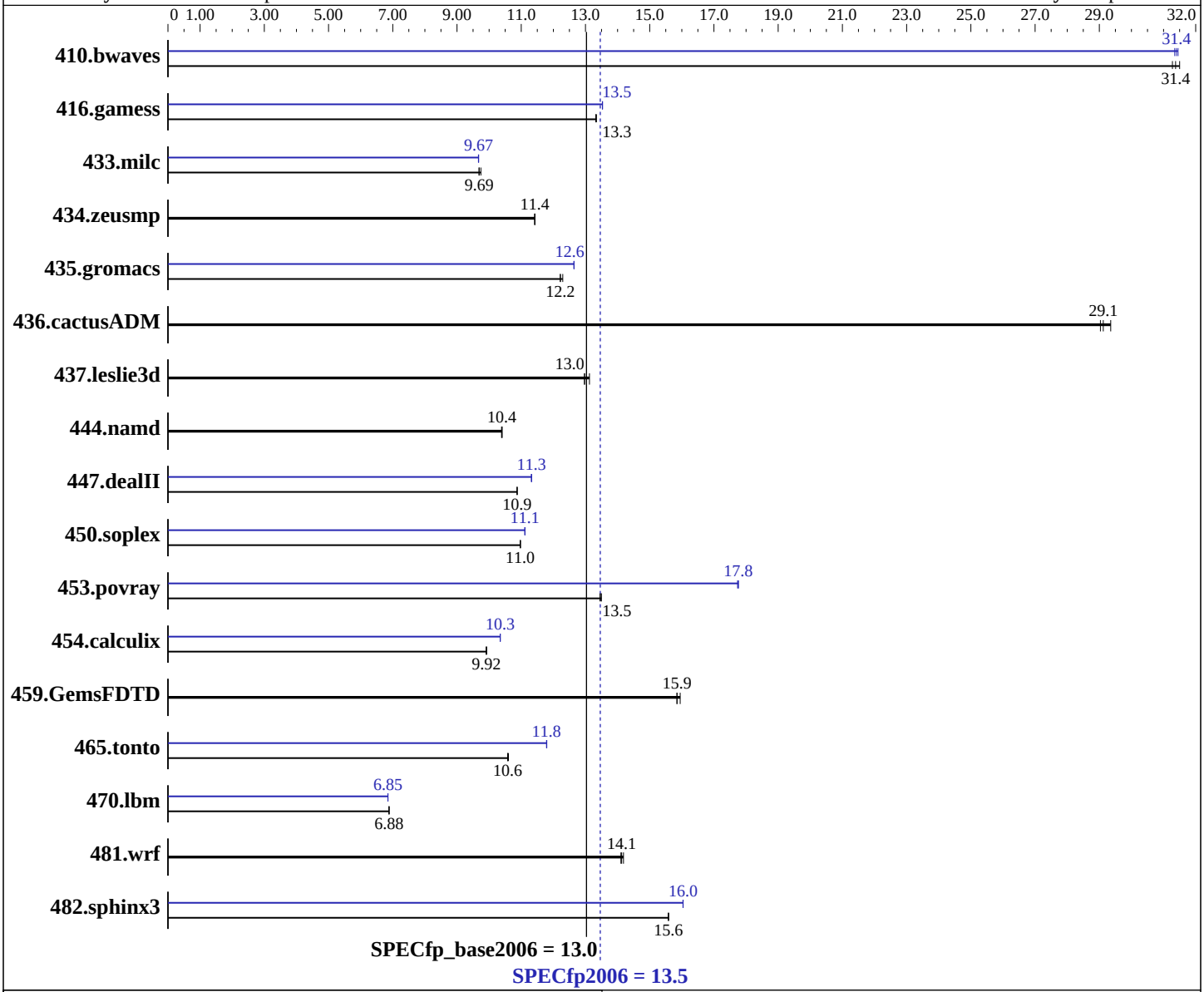
Express5800/120Ri-2
(Intel Xeon processor 5130)

SPECfp®2006 = 13.5

SPECfp_base2006 = 13.0

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 5130
CPU Characteristics:	2.00 GHz, 4 MB L2, 1333 MHz bus
CPU MHz:	2000
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 (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1x73.2 GB SAS, 15000RPM
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	431	31.5	**433**	**31.4**	435	31.3	**433**	**31.4**	434	31.3	432	31.5
416.gamess	1468	13.3	**1469**	**13.3**	1470	13.3	1447	13.5	**1447**	**13.5**	1448	13.5
433.milc	942	9.74	948	9.69	**947**	**9.69**	950	9.67	949	9.67	**949**	**9.67**
434.zeusmp	796	11.4	**797**	**11.4**	797	11.4	796	11.4	**797**	**11.4**	797	11.4
435.gromacs	581	12.3	**584**	**12.2**	585	12.2	565	12.6	**565**	**12.6**	565	12.6
436.cactusADM	407	29.4	412	29.0	**410**	**29.1**	407	29.4	412	29.0	**410**	**29.1**
437.leslie3d	716	13.1	725	13.0	**725**	**13.0**	716	13.1	725	13.0	**725**	**13.0**
444.namd	772	10.4	771	10.4	**771**	**10.4**	772	10.4	771	10.4	**771**	**10.4**
447.dealII	1053	10.9	**1052**	**10.9**	1052	10.9	1011	11.3	**1011**	**11.3**	1010	11.3
450.soplex	760	11.0	760	11.0	**760**	**11.0**	**750**	**11.1**	750	11.1	750	11.1
453.povray	395	13.5	394	13.5	**394**	**13.5**	300	17.8	**300**	**17.8**	300	17.7
454.calculix	833	9.91	832	9.92	**832**	**9.92**	**797**	**10.3**	797	10.3	798	10.3
459.GemsFDTD	665	15.9	**669**	**15.9**	670	15.8	665	15.9	**669**	**15.9**	670	15.8
465.tonto	928	10.6	930	10.6	**930**	**10.6**	834	11.8	835	11.8	**835**	**11.8**
470.lbm	1996	6.88	**1996**	**6.88**	1996	6.88	2006	6.85	**2006**	**6.85**	2006	6.85
481.wrf	788	14.2	**791**	**14.1**	792	14.1	788	14.2	**791**	**14.1**	792	14.1
482.sphinx3	1250	15.6	**1251**	**15.6**	1251	15.6	1215	16.0	**1215**	**16.0**	1215	16.0

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

General Notes

```
The Express5800/120Rg-1(Intel Xeon Prosessor 5130) and
the Express5800/120Ri-2(Intel Xeon Prosessor 5130) models are electronically equivalent.
The results have been measured on a Express5800/120Ri-2(Intel Xeon Prosessor 5130) model.
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc8 -Qc99
```

C++ benchmarks:

```
icl -Qvc8
```

Continued on next page

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 -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

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

Continued on next page

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

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