SPEC® CFP2006 Result

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NEC Corporation

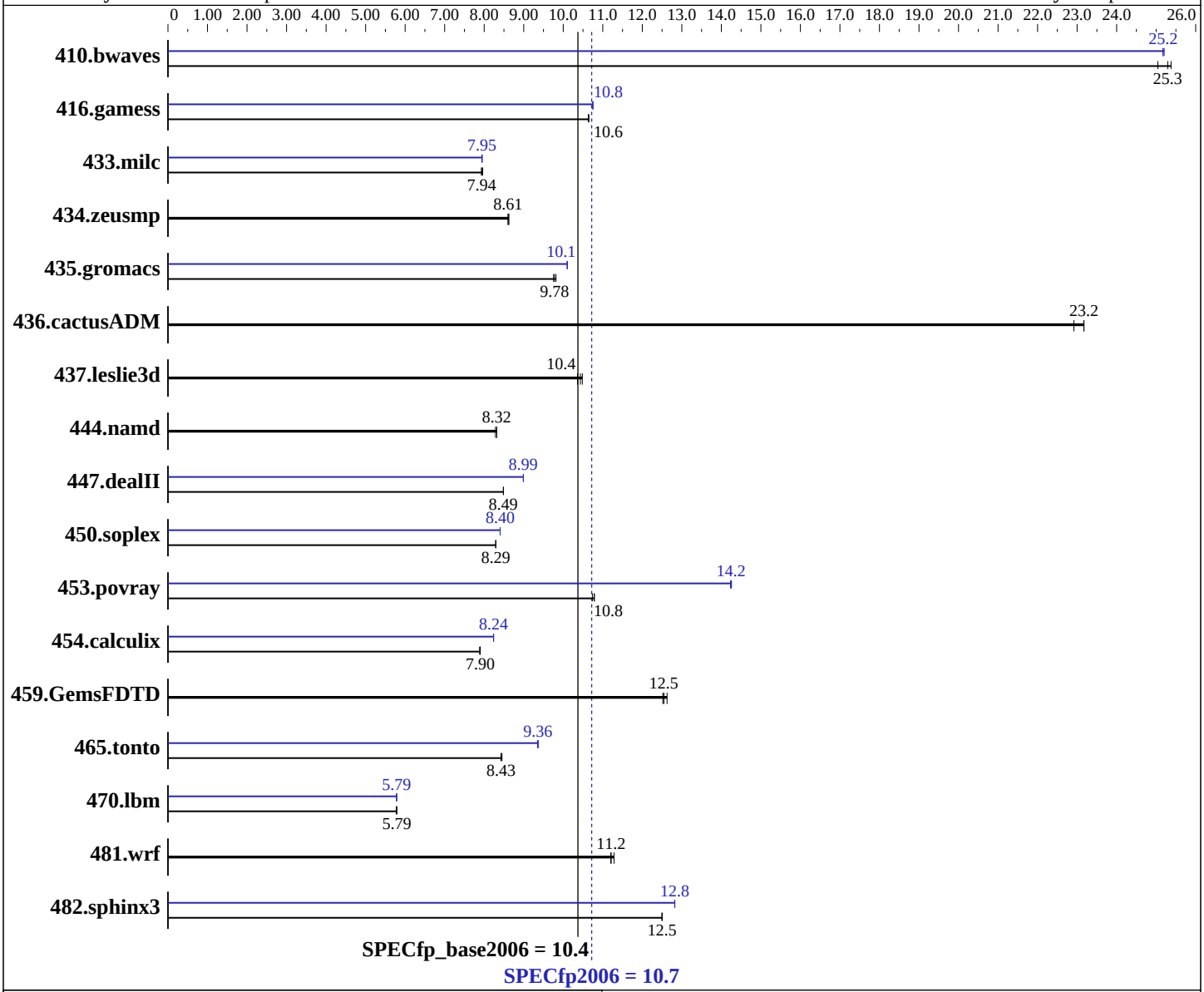
Express5800/120Li
(Intel Xeon processor 5110)

SPECfp®2006 = 10.7

SPECfp_base2006 = 10.4

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Nov-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 (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x36.3 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	**537**	**25.3**	536	25.4	543	25.0	539	25.2	540	25.2	**540**	**25.2**
416.gamess	**1841**	**10.6**	1838	10.7	1841	10.6	**1821**	**10.8**	1821	10.8	1822	10.7
433.milc	**1157**	**7.94**	1153	7.96	1157	7.93	1155	7.95	**1155**	**7.95**	1155	7.95
434.zeusmp	**1057**	**8.61**	1058	8.61	1055	8.63	**1057**	**8.61**	1058	8.61	1055	8.63
435.gromacs	**730**	**9.78**	727	9.82	732	9.76	707	10.1	707	10.1	**707**	**10.1**
436.cactusADM	516	23.2	**516**	**23.2**	521	22.9	516	23.2	**516**	**23.2**	521	22.9
437.leslie3d	897	10.5	**901**	**10.4**	907	10.4	897	10.5	**901**	**10.4**	907	10.4
444.namd	964	8.32	968	8.29	**964**	**8.32**	964	8.32	968	8.29	**964**	**8.32**
447.dealII	**1348**	**8.49**	1348	8.49	1348	8.48	1272	8.99	**1272**	**8.99**	1272	8.99
450.soplex	**1006**	**8.29**	1005	8.29	1006	8.29	**992**	**8.40**	992	8.40	992	8.40
453.povray	495	10.7	493	10.8	**493**	**10.8**	374	14.2	**373**	**14.2**	373	14.3
454.calculix	1046	7.88	1044	7.90	**1044**	**7.90**	1001	8.24	**1002**	**8.24**	1002	8.24
459.GemsFDTD	840	12.6	**846**	**12.5**	848	12.5	840	12.6	**846**	**12.5**	848	12.5
465.tonto	1164	8.45	1168	8.43	**1168**	**8.43**	1051	9.37	1053	9.35	**1051**	**9.36**
470.lbm	2380	5.77	2373	5.79	**2373**	**5.79**	2375	5.79	**2375**	**5.79**	2375	5.79
481.wrf	990	11.3	997	11.2	**996**	**11.2**	990	11.3	997	11.2	**996**	**11.2**
482.sphinx3	**1559**	**12.5**	1559	12.5	1559	12.5	1520	12.8	**1520**	**12.8**	1520	12.8

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
```

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.

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