SPEC® CFP2006 Result

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NEC Corporation

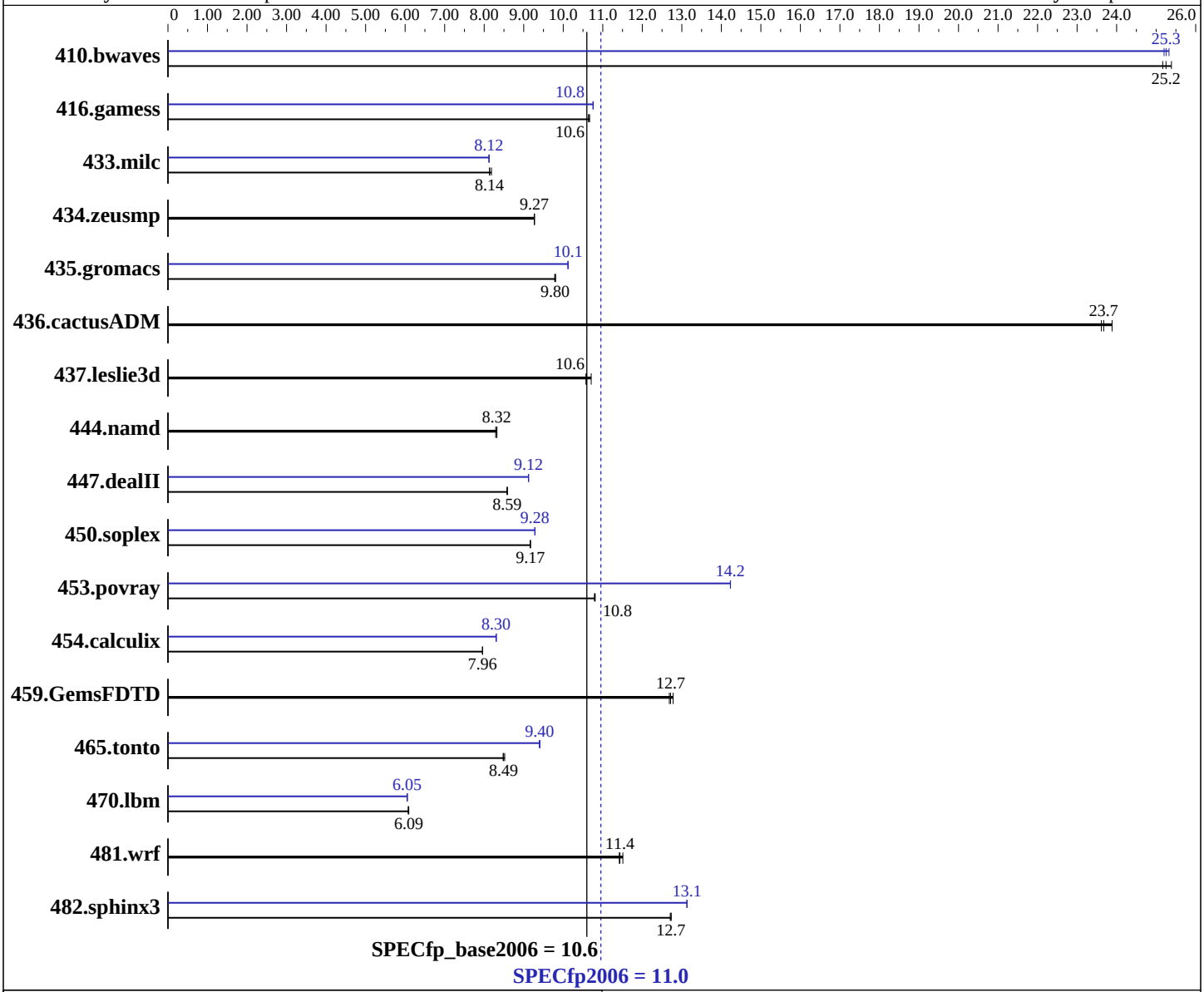
Express5800/i120Rg-1
(Intel Xeon processor 5110)

SPECfp®2006 = 11.0

SPECfp_base2006 = 10.6

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, 4MB L2, 1066MHz 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	System State:	Default
Other Cache:	None	Base Pointers:	64-bit
Memory:	8 GB (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)	Peak Pointers:	64-bit
Disk Subsystem:	1x80 GB SATAII, 7200RPM	Other Software:	None
Other Hardware:	None		

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	535	25.4	**538**	**25.2**	540	25.2	**538**	**25.3**	539	25.2	537	25.3
416.gamess	1836	10.7	1840	10.6	**1840**	**10.6**	**1820**	**10.8**	1821	10.8	1819	10.8
433.milc	1122	8.18	1128	8.14	**1128**	**8.14**	1130	8.12	**1130**	**8.12**	1130	8.12
434.zeusmp	981	9.27	**982**	**9.27**	982	9.27	981	9.27	**982**	**9.27**	982	9.27
435.gromacs	728	9.81	730	9.78	**729**	**9.80**	**705**	**10.1**	706	10.1	705	10.1
436.cactusADM	500	23.9	506	23.6	**505**	**23.7**	500	23.9	506	23.6	**505**	**23.7**
437.leslie3d	878	10.7	889	10.6	**888**	**10.6**	878	10.7	889	10.6	**888**	**10.6**
444.namd	967	8.29	964	8.32	**965**	**8.32**	967	8.29	964	8.32	**965**	**8.32**
447.dealII	1334	8.58	1332	8.59	**1333**	**8.59**	1254	9.12	1254	9.12	**1254**	**9.12**
450.soplex	**910**	**9.17**	910	9.17	910	9.17	**898**	**9.28**	898	9.28	898	9.29
453.povray	493	10.8	492	10.8	**493**	**10.8**	374	14.2	374	14.2	**374**	**14.2**
454.calculix	1037	7.96	1037	7.96	**1037**	**7.96**	**993**	**8.30**	993	8.30	993	8.30
459.GemsFDTD	830	12.8	**834**	**12.7**	836	12.7	830	12.8	**834**	**12.7**	836	12.7
465.tonto	1155	8.52	**1159**	**8.49**	1161	8.48	**1047**	**9.40**	1046	9.41	1047	9.40
470.lbm	2262	6.08	2256	6.09	**2256**	**6.09**	2270	6.05	**2270**	**6.05**	2270	6.05
481.wrf	971	11.5	978	11.4	**977**	**11.4**	971	11.5	978	11.4	**977**	**11.4**
482.sphinx3	1534	12.7	1531	12.7	**1531**	**12.7**	1484	13.1	1484	13.1	**1484**	**13.1**

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-cpu2006-ic91-win-flags.html`

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