SPEC® CFP2006 Result

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NEC Corporation

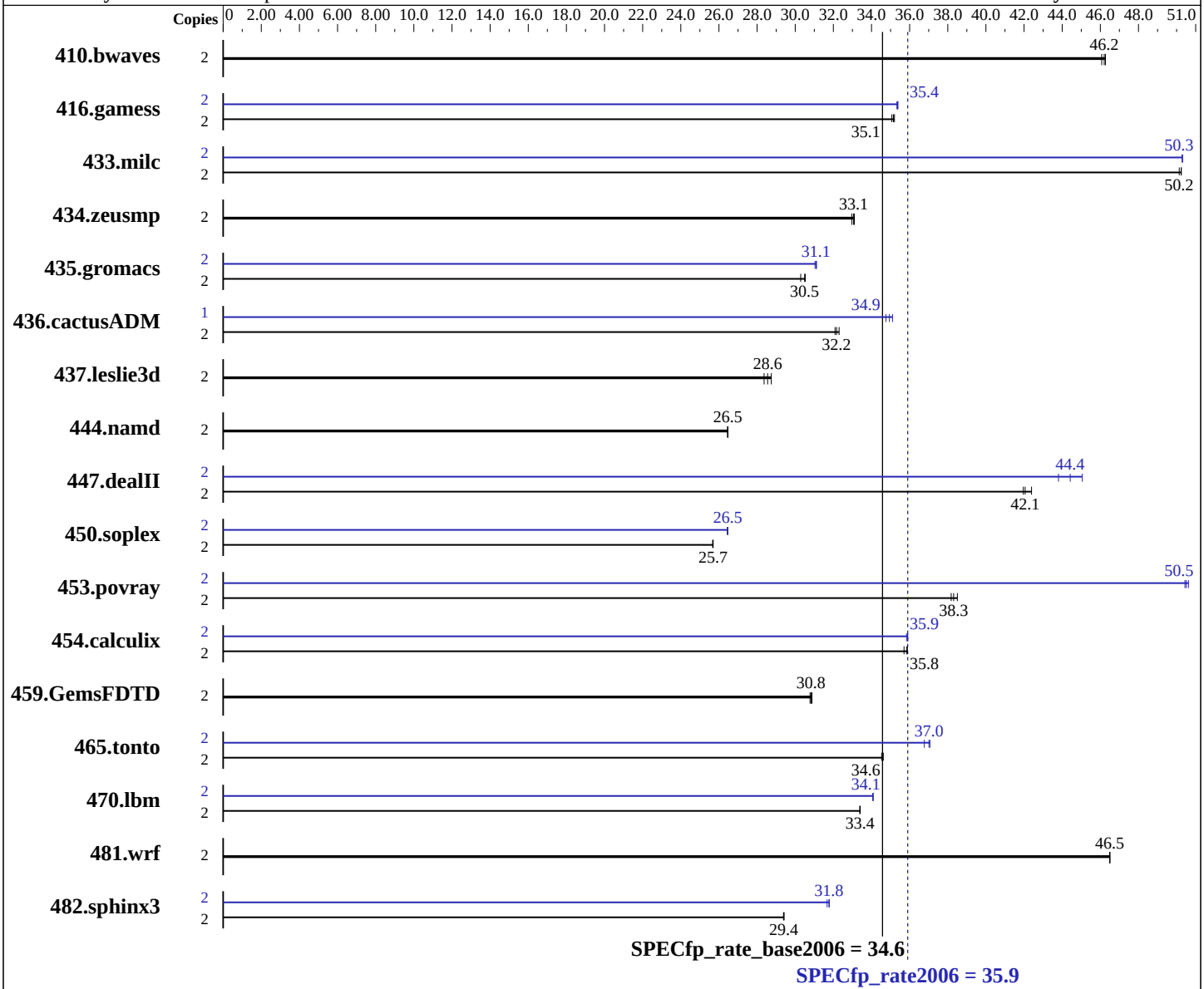
Express5800/GT110b
(Intel Celeron G1101)

SPECfp®_rate2006 = 35.9

SPECfp_rate_base2006 = 34.6

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

Test date: Mar-2010
Hardware Availability: Apr-2010
Software Availability: Nov-2009



Hardware

CPU Name:	Intel Celeron G1101
CPU Characteristics:	
CPU MHz:	2267
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core

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Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
Compiler:	Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091012 Package ID: l_cproc_p_11.1.059, l_cprof_p_11.1.059
Auto Parallel:	Yes
File System:	ext3
System State:	Run level 3 (multi-user)

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L3 Cache: 2 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (4 x 2 GB PC3-10600E running at 1066 MHz)
Disk Subsystem: 1x160 GB SATA, 7200 RPM
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	587	46.3	590	46.1	**588**	**46.2**	2	587	46.3	590	46.1	**588**	**46.2**
416.gamess	2	1112	35.2	**1114**	**35.1**	1117	35.1	2	1107	35.4	1108	35.3	**1107**	**35.4**
433.milc	2	365	50.2	366	50.1	**365**	**50.2**	2	365	50.3	365	50.3	**365**	**50.3**
434.zeusmp	2	**550**	**33.1**	552	33.0	550	33.1	2	**550**	**33.1**	552	33.0	550	33.1
435.gromacs	2	468	30.5	471	30.3	**468**	**30.5**	2	**459**	**31.1**	460	31.0	459	31.1
436.cactusADM	2	745	32.1	**743**	**32.2**	740	32.3	1	340	35.1	**342**	**34.9**	344	34.8
437.leslie3d	2	663	28.4	654	28.7	**658**	**28.6**	2	663	28.4	654	28.7	**658**	**28.6**
444.namd	2	606	26.4	**606**	**26.5**	606	26.5	2	606	26.4	**606**	**26.5**	606	26.5
447.dealII	2	540	42.4	545	42.0	**544**	**42.1**	2	508	45.1	**515**	**44.4**	522	43.8
450.soplex	2	649	25.7	**649**	**25.7**	650	25.7	2	631	26.4	630	26.5	**630**	**26.5**
453.povray	2	**278**	**38.3**	276	38.5	279	38.2	2	**211**	**50.5**	211	50.4	210	50.6
454.calculix	2	460	35.9	**460**	**35.8**	462	35.7	2	460	35.8	**460**	**35.9**	460	35.9
459.GemsFDTD	2	**688**	**30.8**	690	30.8	687	30.9	2	**688**	**30.8**	690	30.8	687	30.9
465.tonto	2	**569**	**34.6**	570	34.5	568	34.6	2	535	36.8	531	37.1	**532**	**37.0**
470.lbm	2	823	33.4	**823**	**33.4**	823	33.4	2	**806**	**34.1**	806	34.1	807	34.1
481.wrf	2	**481**	**46.5**	480	46.5	481	46.5	2	**481**	**46.5**	480	46.5	481	46.5
482.sphinx3	2	1327	29.4	1325	29.4	**1326**	**29.4**	2	1231	31.7	**1227**	**31.8**	1226	31.8

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

Submit Notes

```
The config file option 'submit' was used.
 taskset has been used to bind processes to cores except
 for 436.cactusADM peak
```

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
```

Platform Notes

```
Default BIOS settings were used.
```

General Notes

```
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M
```

Base Compiler Invocation

C benchmarks:
```
icc   -m64
```

C++ benchmarks:
```
icpc  -m64
```

Fortran benchmarks:
```
ifort -m64
```

Benchmarks using both Fortran and C:
```
icc   -m64 ifort -m64
```

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
```
-xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch
```

C++ benchmarks:
```
-xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch
```

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Base Optimization Flags (Continued)

Fortran benchmarks:
`-xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch`

Benchmarks using both Fortran and C:
`-xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch`

Peak Compiler Invocation

C benchmarks (except as noted below):
`icc -m64`

482.sphinx3: `icc -m32`

C++ benchmarks (except as noted below):
`icpc -m64`

450.soplex: `icpc -m32`

Fortran benchmarks:
`ifort -m64`

Benchmarks using both Fortran and C:
`icc -m64 ifort -m64`

Peak Portability Flags

410.bwaves: `-DSPEC_CPU_LP64`
416.gamess: `-DSPEC_CPU_LP64`
433.milc: `-DSPEC_CPU_LP64`
434.zeusmp: `-DSPEC_CPU_LP64`
435.gromacs: `-DSPEC_CPU_LP64 -nofor_main`
436.cactusADM: `-DSPEC_CPU_LP64 -nofor_main`
437.leslie3d: `-DSPEC_CPU_LP64`
444.namd: `-DSPEC_CPU_LP64`
447.dealII: `-DSPEC_CPU_LP64`
453.povray: `-DSPEC_CPU_LP64`
454.calculix: `-DSPEC_CPU_LP64 -nofor_main`
459.GemsFDTD: `-DSPEC_CPU_LP64`
465.tonto: `-DSPEC_CPU_LP64`
470.lbm: `-DSPEC_CPU_LP64`
481.wrf: `-DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

433.milc: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSSE3 -ipo -O3 -no-prec-div -static -fno-alias`

470.lbm: `-xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch -auto-ilp32`

482.sphinx3: `-xSSSE3 -ipo -O3 -no-prec-div -static -unroll2`

C++ benchmarks:

444.namd: `basepeak = yes`

447.dealII: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSSE3 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias -scalar-rep-`

450.soplex: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSSE3 -ipo -O3 -no-prec-div -static -opt-malloc-options=3`

453.povray: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSSE3 -ipo -O3 -no-prec-div -static -unroll4 -ansi-alias`

Fortran benchmarks:

410.bwaves: `basepeak = yes`

416.gamess: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSSE3 -ipo -O3 -no-prec-div -static -unroll2 -Ob0 -ansi-alias -scalar-rep-`

434.zeusmp: `basepeak = yes`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `basepeak = yes`

465.tonto: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSSE3 -ipo -O3 -no-prec-div -static -unroll4 -auto`

Benchmarks using both Fortran and C:

435.gromacs: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch -auto-ilp32`

436.cactusADM: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSSE3 -ipo -O3 -no-prec-div -static -unroll2 -opt-prefetch -parallel -auto-ilp32`

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Peak Optimization Flags (Continued)

454.calculix: `-xSSSE3 -ipo -O3 -no-prec-div -static -auto-ilp32`

481.wrf: `basepeak = yes`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-fp-linux64-revE.20100302.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-fp-linux64-revE.20100302.xml`

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