SPEC® CFP2006 Result
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NEC Corporation

Express5800/GT110b-S
(Intel Pentium G6950)

$SPECfp^{®}\_rate2006 =$ 41.1
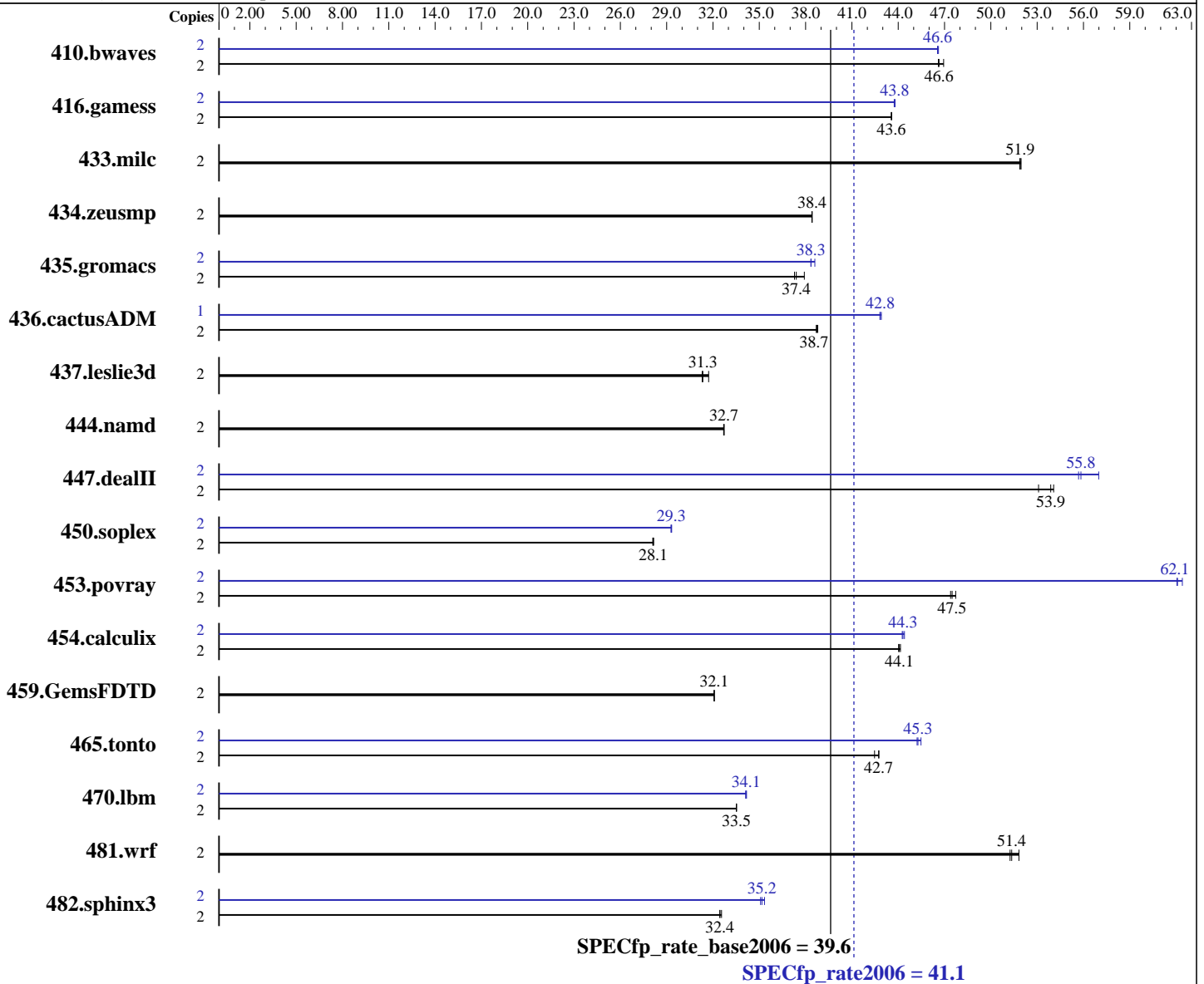
SPECfp_rate_base2006 = 39.6

CPU2006 license: 9006	**Test date:** Feb-2010
Test sponsor: NEC Corporation	**Hardware Availability:** Apr-2010
Tested by: NEC Corporation	**Software Availability:** Nov-2009

SPECfp_rate_base2006 = 39.6

SPECfp_rate2006 = 41.1

Hardware		**Software**	
CPU Name:	Intel Pentium G6950	Operating System:	SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
CPU Characteristics:		Compiler:	Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1
CPU MHz:	2800		Build 20091012 Package ID: l_cproc_p_11.1.059,
FPU:	Integrated		l_cprof_p_11.1.059
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip	Auto Parallel:	Yes
CPU(s) orderable:	1 chip	File System:	ext3
Primary Cache:	32 KB I + 32 KB D on chip per core	System State:	Run level 3 (multi-user)
Secondary Cache:	256 KB I+D on chip per core		
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L3 Cache:	3 MB I+D on chip per chip	Base Pointers:	64-bit
Other Cache:	None	Peak Pointers:	32/64-bit
Memory:	8 GB (4 x 2 GB PC3-10600E running at 1066 MHz)	Other Software:	None
Disk Subsystem:	1x160 GB SATA, 7200 RPM		
Other Hardware:	None		

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	579	46.9	583	46.6	**583**	**46.6**	2	**584**	**46.6**	584	46.5	583	46.6
416.gamess	2	899	43.6	899	43.6	**899**	**43.6**	2	895	43.7	894	43.8	**895**	**43.8**
433.milc	2	354	51.9	353	52.0	**354**	**51.9**	2	354	51.9	353	52.0	**354**	**51.9**
434.zeusmp	2	**474**	**38.4**	474	38.4	474	38.4	2	**474**	**38.4**	474	38.4	474	38.4
435.gromacs	2	377	37.9	**382**	**37.4**	383	37.3	2	**372**	**38.3**	370	38.6	372	38.3
436.cactusADM	2	618	38.7	616	38.8	**617**	**38.7**	1	279	42.8	279	42.9	**279**	**42.8**
437.leslie3d	2	593	31.7	601	31.3	**600**	**31.3**	2	593	31.7	601	31.3	**600**	**31.3**
444.namd	2	**490**	**32.7**	490	32.7	491	32.7	2	**490**	**32.7**	490	32.7	491	32.7
447.dealII	2	**425**	**53.9**	423	54.1	431	53.1	2	411	55.7	401	57.0	**410**	**55.8**
450.soplex	2	592	28.2	594	28.1	**593**	**28.1**	2	569	29.3	**569**	**29.3**	569	29.3
453.povray	2	225	47.4	223	47.7	**224**	**47.5**	2	**171**	**62.1**	171	62.1	170	62.4
454.calculix	2	374	44.1	**374**	**44.1**	375	44.0	2	372	44.4	**372**	**44.3**	373	44.3
459.GemsFDTD	2	**661**	**32.1**	661	32.1	662	32.1	2	**661**	**32.1**	661	32.1	662	32.1
465.tonto	2	**461**	**42.7**	463	42.5	460	42.8	2	435	45.2	**435**	**45.3**	433	45.5
470.lbm	2	820	33.5	820	33.5	**820**	**33.5**	2	804	34.2	**805**	**34.1**	805	34.1
481.wrf	2	436	51.2	**435**	**51.4**	431	51.8	2	436	51.2	**435**	**51.4**	431	51.8
482.sphinx3	2	1201	32.4	**1201**	**32.4**	1197	32.6	2	1103	35.3	1111	35.1	**1108**	**35.2**

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.

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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`

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Peak Optimization Flags

C benchmarks:

        433.milc: basepeak = yes

        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: -xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch

      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

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

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Peak Optimization Flags (Continued)

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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