



SPEC[®] CFP2006 Result

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NEC Corporation

SPECfp[®]2006 = **48.9**

Express5800/GT110g (Intel Celeron G1840)

SPECfp_base2006 = **48.4**

CPU2006 license: 9006

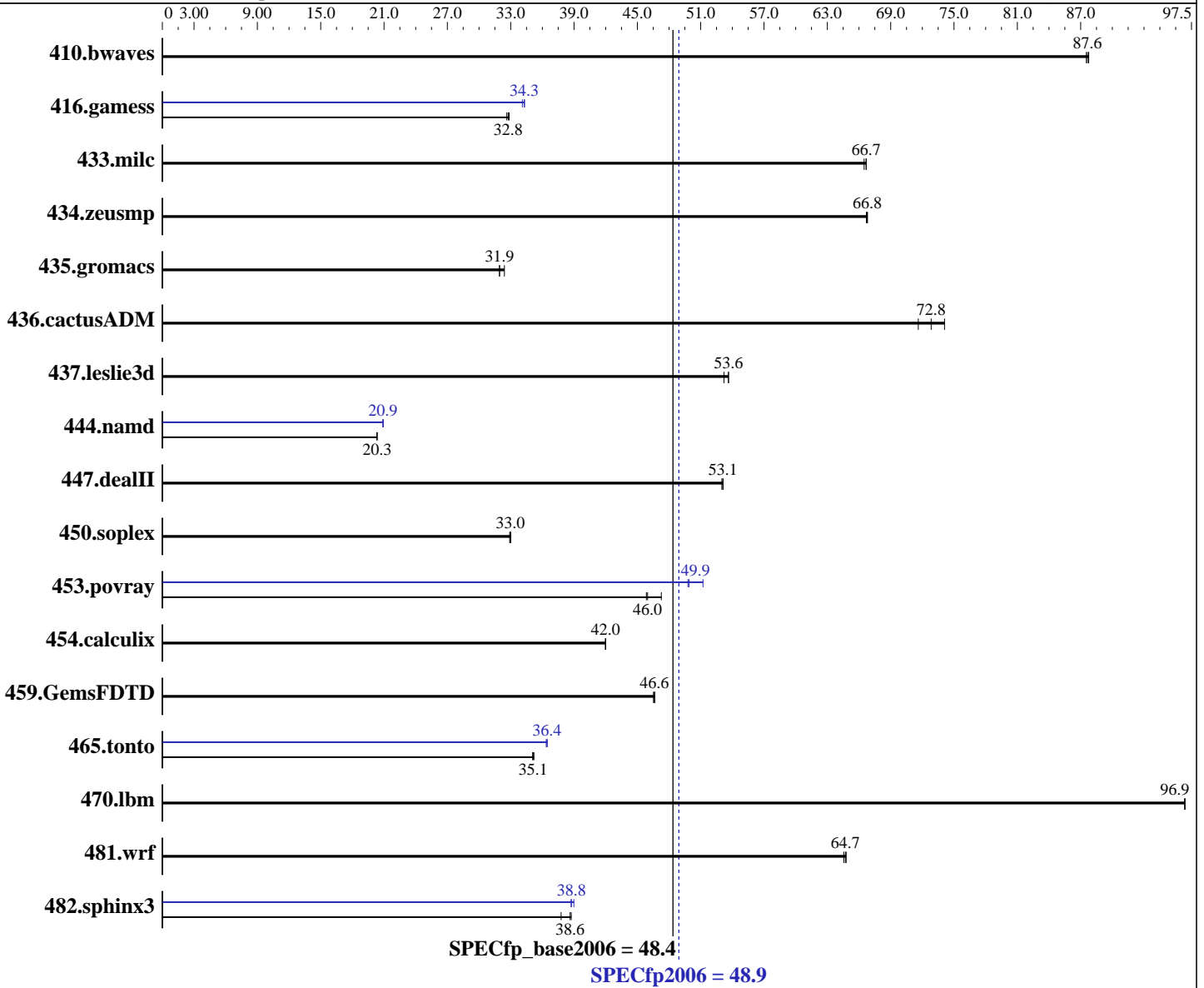
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Aug-2014

Hardware Availability: Jul-2014

Software Availability: Jan-2014



Hardware

CPU Name: Intel Celeron G1840
 CPU Characteristics:
 CPU MHz: 2800
 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: Red Hat Enterprise Linux Server release 6.5 (Santiago)
 Kernel 2.6.32-431.el6.x86_64
 Compiler: C/C++: Version 14.0.2.144 of Intel C++ Studio XE for Linux;
 Fortran: Version 14.0.2.144 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4

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L3 Cache: 2 MB I+D on chip per chip
 Other Cache: None
 Memory: 16 GB (2 x 8 GB 2Rx8 PC3-12800E-11, ECC, running at 1333 MHz and CL9)
 Disk Subsystem: 1 x 500 GB SATA, 7200 RPM
 Other Hardware: None

System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<u>155</u>	<u>87.6</u>	155	87.5	155	87.8	<u>155</u>	<u>87.6</u>	155	87.5	155	87.8
416.gamess	<u>598</u>	<u>32.8</u>	596	32.9	600	32.6	574	34.1	<u>571</u>	<u>34.3</u>	571	34.3
433.milc	<u>138</u>	<u>66.7</u>	138	66.5	138	66.7	<u>138</u>	<u>66.7</u>	138	66.5	138	66.7
434.zeusmp	136	66.7	136	66.8	<u>136</u>	<u>66.8</u>	136	66.7	136	66.8	<u>136</u>	<u>66.8</u>
435.gromacs	224	31.9	<u>224</u>	<u>31.9</u>	220	32.4	224	31.9	<u>224</u>	<u>31.9</u>	220	32.4
436.cactusADM	161	74.1	<u>164</u>	<u>72.8</u>	167	71.6	161	74.1	<u>164</u>	<u>72.8</u>	167	71.6
437.leslie3d	<u>175</u>	<u>53.6</u>	175	53.6	177	53.2	<u>175</u>	<u>53.6</u>	175	53.6	177	53.2
444.namd	394	20.3	<u>394</u>	<u>20.3</u>	394	20.3	<u>384</u>	<u>20.9</u>	384	20.9	384	20.9
447.dealII	215	53.1	<u>215</u>	<u>53.1</u>	216	53.0	215	53.1	<u>215</u>	<u>53.1</u>	216	53.0
450.soplex	253	33.0	<u>253</u>	<u>33.0</u>	253	32.9	253	33.0	<u>253</u>	<u>33.0</u>	253	32.9
453.povray	<u>116</u>	<u>46.0</u>	113	47.3	116	45.9	104	51.2	107	49.8	<u>107</u>	<u>49.9</u>
454.calculix	196	42.0	<u>196</u>	<u>42.0</u>	196	42.0	196	42.0	<u>196</u>	<u>42.0</u>	196	42.0
459.GemsFDTD	228	46.5	<u>228</u>	<u>46.6</u>	227	46.6	228	46.5	<u>228</u>	<u>46.6</u>	227	46.6
465.tonto	281	35.1	280	35.2	<u>280</u>	<u>35.1</u>	270	36.5	271	36.4	<u>270</u>	<u>36.4</u>
470.lbm	<u>142</u>	<u>96.9</u>	142	96.9	142	96.9	<u>142</u>	<u>96.9</u>	142	96.9	142	96.9
481.wrf	173	64.6	<u>173</u>	<u>64.7</u>	172	64.8	173	64.6	<u>173</u>	<u>64.7</u>	172	64.8
482.sphinx3	516	37.8	<u>505</u>	<u>38.6</u>	503	38.7	503	38.7	500	39.0	<u>503</u>	<u>38.8</u>

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

BIOS Settings:
Energy Performance: Performance

General Notes

Environment variables set by runspec before the start of the run:
 KMP_AFFINITY = "granularity=fine,compact,1,0"
 LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"
 OMP_NUM_THREADS = "2"

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General Notes (Continued)

Added glibc-static-2.12-1.132.el6.x86_64
to enable static linking
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

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.deallI: -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:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias

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Base Optimization Flags (Continued)

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Fortran benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias

Peak Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias
-auto-ilp32

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Peak Optimization Flags (Continued)

447.dealll: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
-opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html>
<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120-RevB.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>
<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120-RevB.xml>



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

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