



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

SPECfp<sup>®</sup>2006 = **53.5**

Express5800/R110g-1E (Intel Pentium G3240)

SPECfp\_base2006 = **52.9**

CPU2006 license: 9006

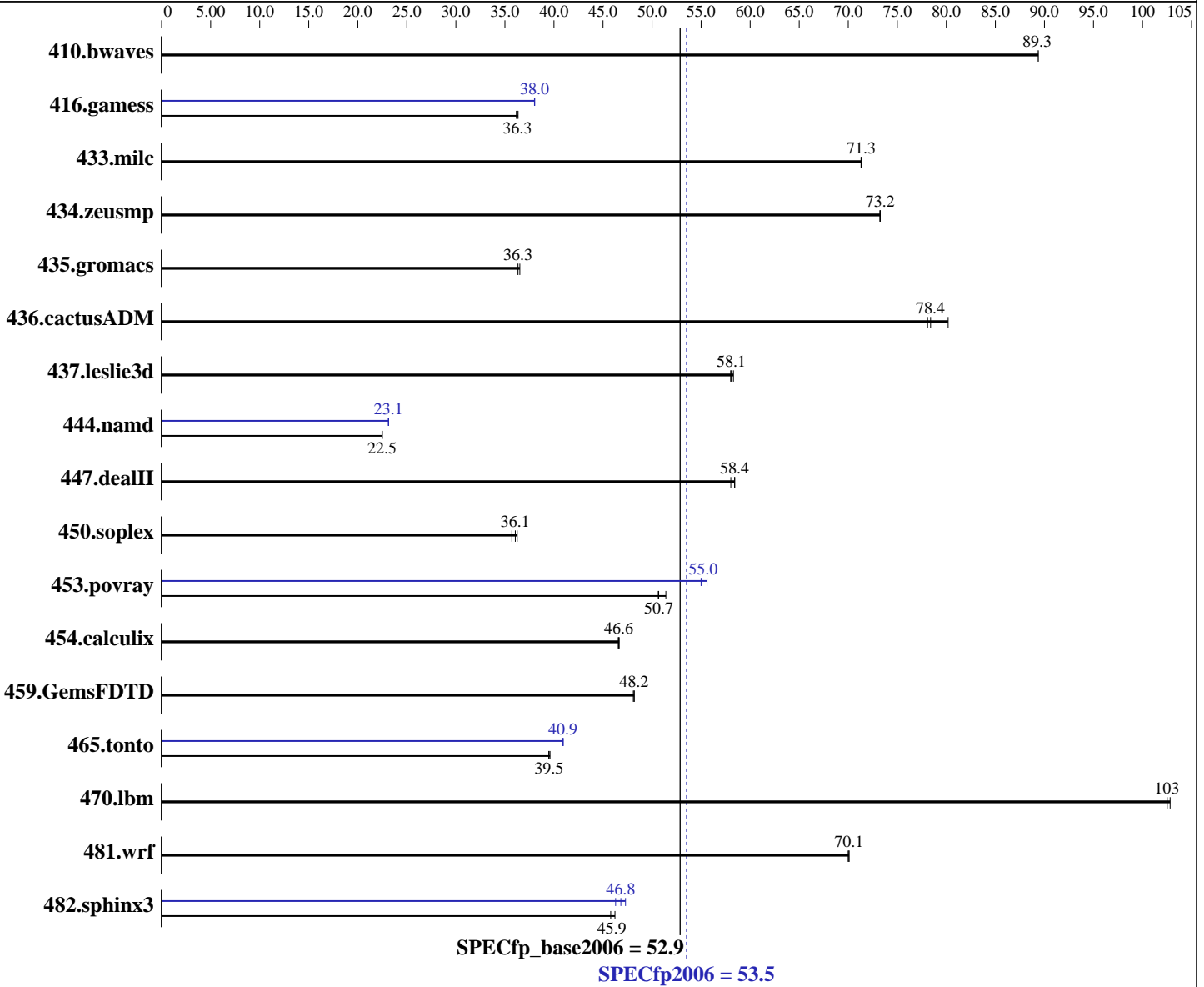
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jul-2014

Hardware Availability: Jul-2014

Software Availability: Jan-2014



### Hardware

CPU Name: Intel Pentium G3240  
 CPU Characteristics:  
 CPU MHz: 3100  
 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

Continued on next page

### 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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

SPECfp2006 = **53.5**

Express5800/R110g-1E (Intel Pentium G3240)

SPECfp\_base2006 = **52.9**

CPU2006 license: 9006

Test date: Jul-2014

Test sponsor: NEC Corporation

Hardware Availability: Jul-2014

Tested by: NEC Corporation

Software Availability: Jan-2014

L3 Cache: 3 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 250 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	152	89.3	152	89.4	<u>152</u>	<u>89.3</u>	152	89.3	152	89.4	<u>152</u>	<u>89.3</u>
416.gamess	539	36.3	<u>540</u>	<u>36.3</u>	541	36.2	515	38.0	515	38.0	<u>515</u>	<u>38.0</u>
433.milc	<u>129</u>	<u>71.3</u>	129	71.3	129	71.4	<u>129</u>	<u>71.3</u>	129	71.3	129	71.4
434.zeusmp	<u>124</u>	<u>73.2</u>	124	73.2	124	73.2	<u>124</u>	<u>73.2</u>	124	73.2	124	73.2
435.gromacs	<u>197</u>	<u>36.3</u>	196	36.5	197	36.3	<u>197</u>	<u>36.3</u>	196	36.5	197	36.3
436.cactusADM	<u>152</u>	<u>78.4</u>	153	78.1	149	80.2	<u>152</u>	<u>78.4</u>	153	78.1	149	80.2
437.leslie3d	161	58.3	<u>162</u>	<u>58.1</u>	162	58.0	161	58.3	<u>162</u>	<u>58.1</u>	162	58.0
444.namd	357	22.5	357	22.5	<u>357</u>	<u>22.5</u>	<u>347</u>	<u>23.1</u>	347	23.1	347	23.1
447.dealII	197	58.0	<u>196</u>	<u>58.4</u>	196	58.4	197	58.0	<u>196</u>	<u>58.4</u>	196	58.4
450.soplex	<u>231</u>	<u>36.1</u>	230	36.3	234	35.7	<u>231</u>	<u>36.1</u>	230	36.3	234	35.7
453.povray	<u>105</u>	<u>50.7</u>	105	50.6	103	51.4	96.7	55.0	95.7	55.6	<u>96.7</u>	<u>55.0</u>
454.calculix	177	46.7	<u>177</u>	<u>46.6</u>	177	46.5	177	46.7	<u>177</u>	<u>46.6</u>	177	46.5
459.GemsFDTD	221	48.1	<u>220</u>	<u>48.2</u>	220	48.2	221	48.1	<u>220</u>	<u>48.2</u>	220	48.2
465.tonto	249	39.6	<u>249</u>	<u>39.5</u>	249	39.5	241	40.9	<u>240</u>	<u>40.9</u>	240	40.9
470.lbm	<u>134</u>	<u>103</u>	134	103	134	103	<u>134</u>	<u>103</u>	134	103	134	103
481.wrf	160	70.0	<u>159</u>	<u>70.1</u>	159	70.1	160	70.0	<u>159</u>	<u>70.1</u>	159	70.1
482.sphinx3	<u>424</u>	<u>45.9</u>	422	46.2	426	45.8	421	46.3	<u>416</u>	<u>46.8</u>	412	47.3

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"

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 53.5

Express5800/R110g-1E (Intel Pentium G3240)

SPECfp\_base2006 = 52.9

CPU2006 license: 9006

Test date: Jul-2014

Test sponsor: NEC Corporation

Hardware Availability: Jul-2014

Tested by: NEC Corporation

Software Availability: Jan-2014

## General Notes (Continued)

Added glibc-static-2.12-1.132.el6.x86\_64.rpm  
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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 53.5

Express5800/R110g-1E (Intel Pentium G3240)

SPECfp\_base2006 = 52.9

CPU2006 license: 9006

Test date: Jul-2014

Test sponsor: NEC Corporation

Hardware Availability: Jul-2014

Tested by: NEC Corporation

Software Availability: Jan-2014

## 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`

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 53.5

Express5800/R110g-1E (Intel Pentium G3240)

SPECfp\_base2006 = 52.9

CPU2006 license: 9006

Test date: Jul-2014

Test sponsor: NEC Corporation

Hardware Availability: Jul-2014

Tested by: NEC Corporation

Software Availability: Jan-2014

## 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>



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 53.5

Express5800/R110g-1E (Intel Pentium G3240)

SPECfp\_base2006 = 52.9

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jul-2014

Hardware Availability: Jul-2014

Software Availability: Jan-2014

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Tue Aug 26 18:09:31 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 26 August 2014.