SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/iR110a-1H
(Intel Core 2 Duo P8400)

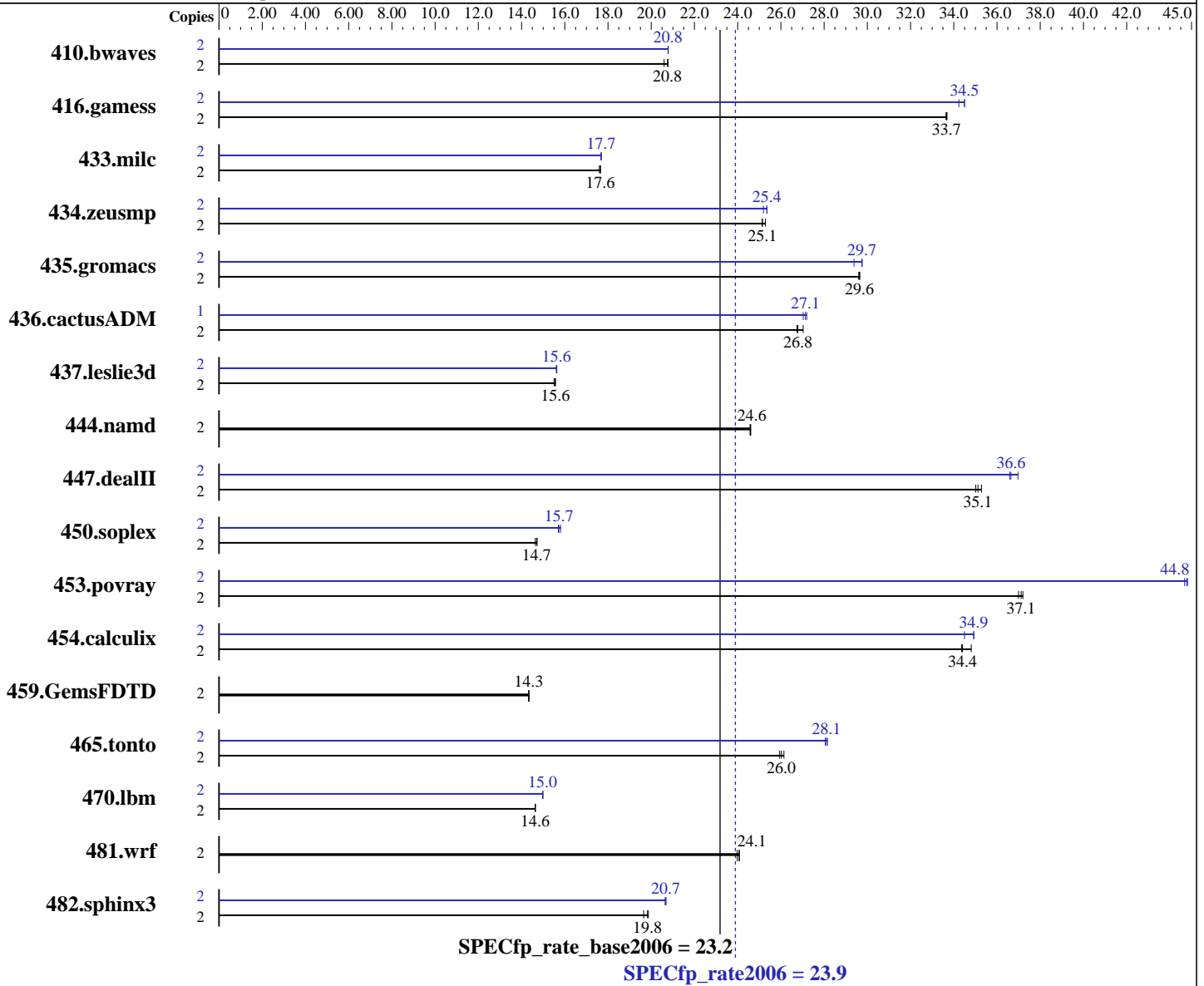$SPECfp®\_rate2006 =$ 23.9

$SPECfp\_rate\_base2006 =$ 23.2

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

Copies — graph scale: 0 2.00 4.00 6.00 8.00 10.0 12.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 42.0 45.0

Benchmark	Copies	Result
410.bwaves	2	20.8
410.bwaves	2	20.8
416.gamess	2	34.5
416.gamess	2	33.7
433.milc	2	17.7
433.milc	2	17.6
434.zeusmp	2	25.4
434.zeusmp	2	25.1
435.gromacs	2	29.7
435.gromacs	2	29.6
436.cactusADM	1	27.1
436.cactusADM	2	26.8
437.leslie3d	2	15.6
437.leslie3d	2	15.6
444.namd	2	24.6
447.dealII	2	36.6
447.dealII	2	35.1
450.soplex	2	15.7
450.soplex	2	14.7
453.povray	2	44.8
453.povray	2	37.1
454.calculix	2	34.9
454.calculix	2	34.4
459.GemsFDTD	2	14.3
465.tonto	2	28.1
465.tonto	2	26.0
470.lbm	2	15.0
470.lbm	2	14.6
481.wrf	2	24.1
482.sphinx3	2	20.7
482.sphinx3	2	19.8

SPECfp_rate_base2006 = 23.2

SPECfp_rate2006 = 23.9

Hardware

CPU Name:	Intel Core 2 Duo P8400
CPU Characteristics:	1066 MHz system bus
CPU MHz:	2266
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:	3 MB I+D on chip per chip

Continued on next page

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
Compiler:	Intel C++ and Fortran Compiler Professional 11.0 for Linux Build 20090131 Package ID: l_cproc_p_11.0.081, l_cprof_p_11.0.081
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Run level 3 (multi-user)

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/iR110a-1H
(Intel Core 2 Duo P8400)

SPECfp_rate2006 =   23.9

SPECfp_rate_base2006 =   23.2

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

L3 Cache:	None	Base Pointers:	64-bit
Other Cache:	None	Peak Pointers:	32/64-bit
Memory:	8 GB (4x2 GB PC2-5300P, 1 rank, CL5-5-5, ECC)	Other Software:	Binutils 2.18.50.0.7.20080502
Disk Subsystem:	1x73.2 GB SAS, 15000 RPM		
Other Hardware:	None		

Results Table

Benchmark	Copies	**Base** Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	**Peak** Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	1320	20.6	**_1310_**	**_20.8_**	1308	20.8	2	1307	20.8	1308	20.8	**_1308_**	**_20.8_**
416.gamess	2	1164	33.6	**_1163_**	**_33.7_**	1163	33.7	2	**_1135_**	**_34.5_**	1144	34.2	1135	34.5
433.milc	2	1043	17.6	1040	17.7	**_1040_**	**_17.6_**	2	1038	17.7	1038	17.7	**_1038_**	**_17.7_**
434.zeusmp	2	720	25.3	**_724_**	**_25.1_**	724	25.1	2	723	25.2	**_718_**	**_25.4_**	718	25.4
435.gromacs	2	**_482_**	**_29.6_**	482	29.7	482	29.6	2	**_480_**	**_29.7_**	480	29.8	486	29.4
436.cactusADM	2	894	26.7	884	27.0	**_892_**	**_26.8_**	1	**_440_**	**_27.1_**	442	27.0	439	27.2
437.leslie3d	2	1213	15.5	**_1208_**	**_15.6_**	1208	15.6	2	1203	15.6	**_1203_**	**_15.6_**	1205	15.6
444.namd	2	652	24.6	**_652_**	**_24.6_**	653	24.6	2	652	24.6	**_652_**	**_24.6_**	653	24.6
447.dealII	2	653	35.0	**_652_**	**_35.1_**	649	35.3	2	619	37.0	**_624_**	**_36.6_**	625	36.6
450.soplex	2	**_1135_**	**_14.7_**	1133	14.7	1140	14.6	2	1062	15.7	**_1060_**	**_15.7_**	1055	15.8
453.povray	2	286	37.2	288	37.0	**_287_**	**_37.1_**	2	237	44.8	**_238_**	**_44.8_**	238	44.7
454.calculix	2	474	34.8	**_480_**	**_34.4_**	480	34.4	2	472	34.9	**_473_**	**_34.9_**	478	34.5
459.GemsFDTD	2	**_1481_**	**_14.3_**	1479	14.3	1481	14.3	2	**_1481_**	**_14.3_**	1479	14.3	1481	14.3
465.tonto	2	**_756_**	**_26.0_**	753	26.1	759	25.9	2	**_700_**	**_28.1_**	702	28.1	699	28.2
470.lbm	2	1878	14.6	1878	14.6	**_1878_**	**_14.6_**	2	1834	15.0	1834	15.0	**_1834_**	**_15.0_**
481.wrf	2	**_928_**	**_24.1_**	932	24.0	928	24.1	2	**_928_**	**_24.1_**	932	24.0	928	24.1
482.sphinx3	2	1984	19.7	**_1966_**	**_19.8_**	1962	19.9	2	1888	20.6	1885	20.7	**_1885_**	**_20.7_**

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 was 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
   OMP_NUM_THREADS set to number of cores
   KMP_AFFINITY set to "physical,0"
   KMP_STACKSIZE set to 64M
```

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/iR110a-1H
(Intel Core 2 Duo P8400)

SPECfp_rate2006 =   23.9

SPECfp_rate_base2006 = 23.2

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Nov-2009

Hardware Availability: Jul-2009

Software Availability: Feb-2009

Platform Notes

```
    Bios settings:
    Hardware Prefetcher:            Enabled
    Adjacent Cache Line Prefetch:   Enabled
```

Base Compiler Invocation

C benchmarks:
     icc

C++ benchmarks:
     icpc

Fortran benchmarks:
     ifort

Benchmarks using both Fortran and C:
     icc ifort

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:
     -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:
     -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Continued on next page

SPEC CFP2006 Result

NEC Corporation

Express5800/iR110a-1H
(Intel Core 2 Duo P8400)

$SPECfp\_rate2006 =$ 23.9

$SPECfp\_rate\_base2006 =$ 23.2

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

Base Optimization Flags (Continued)

Fortran benchmarks:
```
-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
```

Benchmarks using both Fortran and C:
```
-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
```

Peak Compiler Invocation

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

```
482.sphinx3: /opt/intel/Compiler/11.0/081/bin/ia32/icc
        -L/opt/intel/Compiler/11.0/081/ipp/ia32/lib
        -I/opt/intel/Compiler/11.0/081/ipp/ia32/include
```

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

```
450.soplex: /opt/intel/Compiler/11.0/081/bin/ia32/icpc
        -L/opt/intel/Compiler/11.0/081/ipp/ia32/lib
        -I/opt/intel/Compiler/11.0/081/ipp/ia32/include
```

Fortran benchmarks (except as noted below):
```
ifort
```

```
437.leslie3d: /opt/intel/Compiler/11.0/081/bin/ia32/ifort
        -L/opt/intel/Compiler/11.0/081/ipp/ia32/lib
        -I/opt/intel/Compiler/11.0/081/ipp/ia32/include
```

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

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
      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
```

NEC Corporation

Express5800/iR110a-1H
(Intel Core 2 Duo P8400)

SPECfp_rate2006 =   23.9

SPECfp_rate_base2006 =   23.2

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

Peak Portability Flags (Continued)

```
  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) -xSSE4.1 -ipo -O3
             -no-prec-div -static -fno-alias

    470.lbm: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
             -auto-ilp32

 482.sphinx3: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2
```

C++ benchmarks:

```
   444.namd: basepeak = yes

  447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
              -no-prec-div -static -unroll2 -ansi-alias -scalar-rep-

  450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
              -no-prec-div -static -opt-malloc-options=3

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

Fortran benchmarks:

```
   410.bwaves: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

   416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
               -no-prec-div -static -unroll2 -Ob0 -ansi-alias
               -scalar-rep-

   434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
               -no-prec-div -static

  437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
                -no-prec-div -static -opt-malloc-options=3 -opt-prefetch

  459.GemsFDTD: basepeak = yes

   465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
              -no-prec-div -static -unroll4 -auto
```

NEC Corporation

Express5800/iR110a-1H
(Intel Core 2 Duo P8400)

SPECfp_rate2006 = 23.9

SPECfp_rate_base2006 = 23.2

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

Test date: Nov-2009
Hardware Availability: Jul-2009
Software Availability: Feb-2009

Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

> 435.gromacs: `-prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3`
> `-no-prec-div -static -opt-prefetch -auto-ilp32`

> 436.cactusADM: `-prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3`
> `-no-prec-div -static -unroll2 -opt-prefetch -parallel`
> `-auto-ilp32`

> 454.calculix: `-xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32`

> 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-ic11.0-fp-linux64-revH.html
http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revE.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revH.xml
http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revE.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 05:53:18 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 February 2010.