# SPEC® CFP2006 Result

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## NEC Corporation

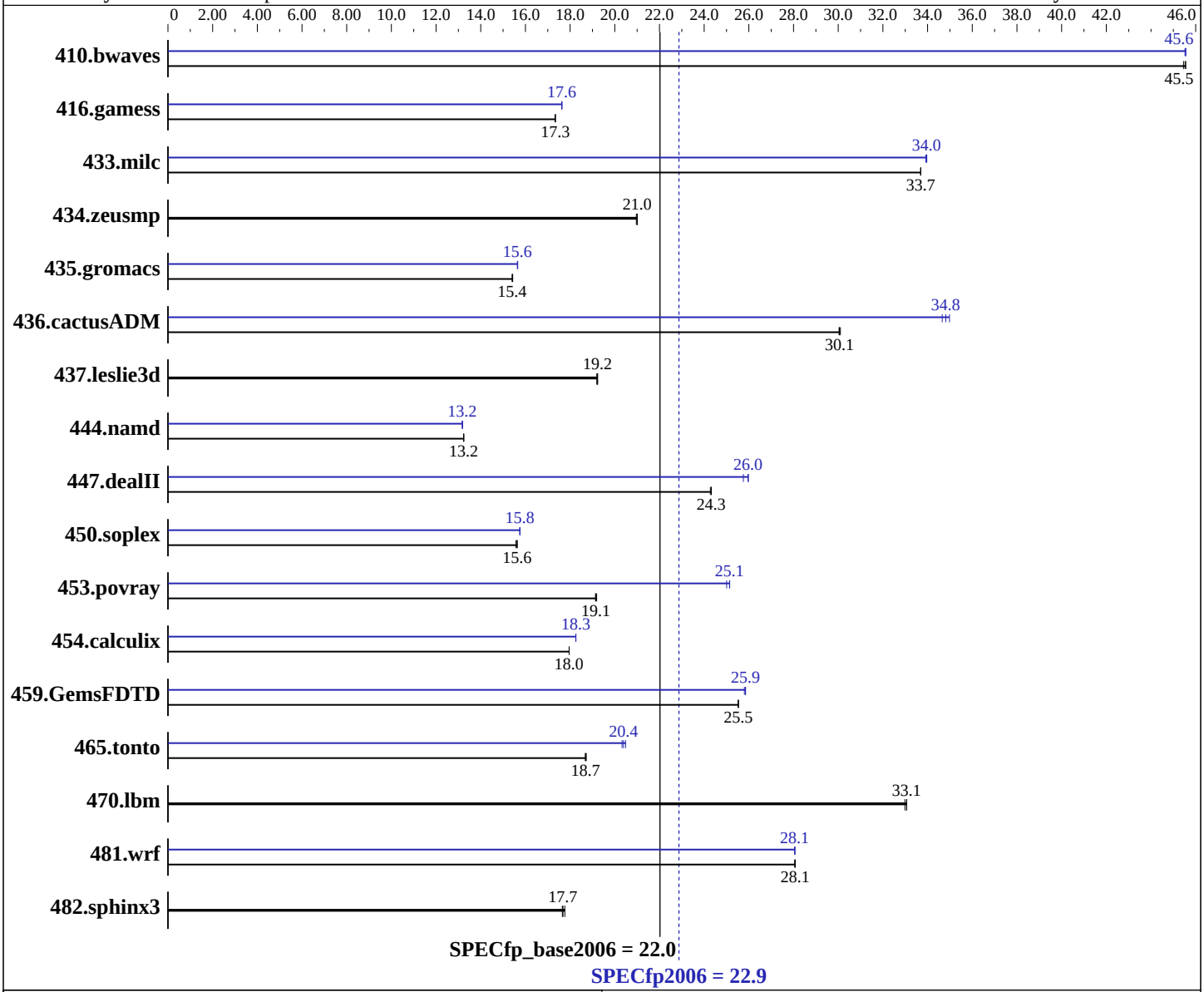
Express5800/E110b-1
(Intel Celeron G1101)

SPECfp®2006 = 22.9

SPECfp_base2006 = 22.0

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

**Test date:** Jun-2010
**Hardware Availability:** Apr-2010
**Software Availability:** Dec-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 20091130 Package ID: l_cproc_p_11.1.064, l_cprof_p_11.1.064 |
| 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: 16 GB (4 x 4 GB PC3-10600E, 2 rank, CL9, ECC, 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 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 299 | 45.5 | **299** | **45.5** | 298 | 45.6 | 299 | 45.5 | 298 | 45.6 | **298** | **45.6** |
| 416.gamess | **1129** | **17.3** | 1129 | 17.3 | 1130 | 17.3 | **1110** | **17.6** | 1111 | 17.6 | 1110 | 17.6 |
| 433.milc | **272** | **33.7** | 272 | 33.7 | 272 | 33.7 | 270 | 34.0 | 271 | 33.9 | **270** | **34.0** |
| 434.zeusmp | 433 | 21.0 | **433** | **21.0** | 434 | 21.0 | 433 | 21.0 | **433** | **21.0** | 434 | 21.0 |
| 435.gromacs | 463 | 15.4 | 463 | 15.4 | **463** | **15.4** | 456 | 15.7 | 456 | 15.6 | **456** | **15.6** |
| 436.cactusADM | 397 | 30.1 | 398 | 30.0 | **398** | **30.1** | **343** | **34.8** | 345 | 34.7 | 342 | 35.0 |
| 437.leslie3d | 490 | 19.2 | 489 | 19.2 | **489** | **19.2** | 490 | 19.2 | 489 | 19.2 | **489** | **19.2** |
| 444.namd | **606** | **13.2** | 606 | 13.2 | 606 | 13.2 | 608 | 13.2 | **609** | **13.2** | 609 | 13.2 |
| 447.dealII | 470 | 24.3 | **470** | **24.3** | 471 | 24.3 | 440 | 26.0 | **441** | **26.0** | 444 | 25.8 |
| 450.soplex | 533 | 15.6 | **534** | **15.6** | 536 | 15.6 | **530** | **15.8** | 530 | 15.7 | 529 | 15.8 |
| 453.povray | 277 | 19.2 | 278 | 19.1 | **278** | **19.1** | 212 | 25.1 | **212** | **25.1** | 213 | 25.0 |
| 454.calculix | 459 | 18.0 | 459 | 18.0 | **459** | **18.0** | 452 | 18.3 | **452** | **18.3** | 452 | 18.3 |
| 459.GemsFDTD | **416** | **25.5** | 416 | 25.5 | 416 | 25.5 | 411 | 25.8 | 410 | 25.9 | **410** | **25.9** |
| 465.tonto | 526 | 18.7 | 527 | 18.7 | **526** | **18.7** | 480 | 20.5 | **483** | **20.4** | 484 | 20.3 |
| 470.lbm | **416** | **33.1** | 417 | 33.0 | 416 | 33.1 | **416** | **33.1** | 417 | 33.0 | 416 | 33.1 |
| 481.wrf | **398** | **28.1** | 398 | 28.1 | 398 | 28.1 | 398 | 28.1 | 398 | 28.0 | **398** | **28.1** |
| 482.sphinx3 | 1104 | 17.7 | 1097 | 17.8 | **1102** | **17.7** | 1104 | 17.7 | 1097 | 17.8 | **1102** | **17.7** |

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

## 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 -parallel -opt-prefetch

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

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

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

## 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: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3
-no-prec-div -static -fno-alias

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3
-no-prec-div -static -fno-alias -auto-ilp32

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

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3
-no-prec-div -static -opt-malloc-options=3 -auto-ilp32

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
-parallel

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# Peak Optimization Flags (Continued)

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: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSSE3 -ipo -O3 -no-prec-div -static -unroll2 -Ob0 -opt-prefetch -parallel`

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`

481.wrf: `-xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch -parallel -auto-ilp32`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100609.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100609.xml`


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