



# SPEC<sup>®</sup> CFP2006 Result

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## IBM Corporation

SPECfp<sup>®</sup>2006 = **22.6**

### IBM System x3250 M3 (Intel Celeron G1101)

SPECfp\_base2006 = **21.9**

CPU2006 license: 11

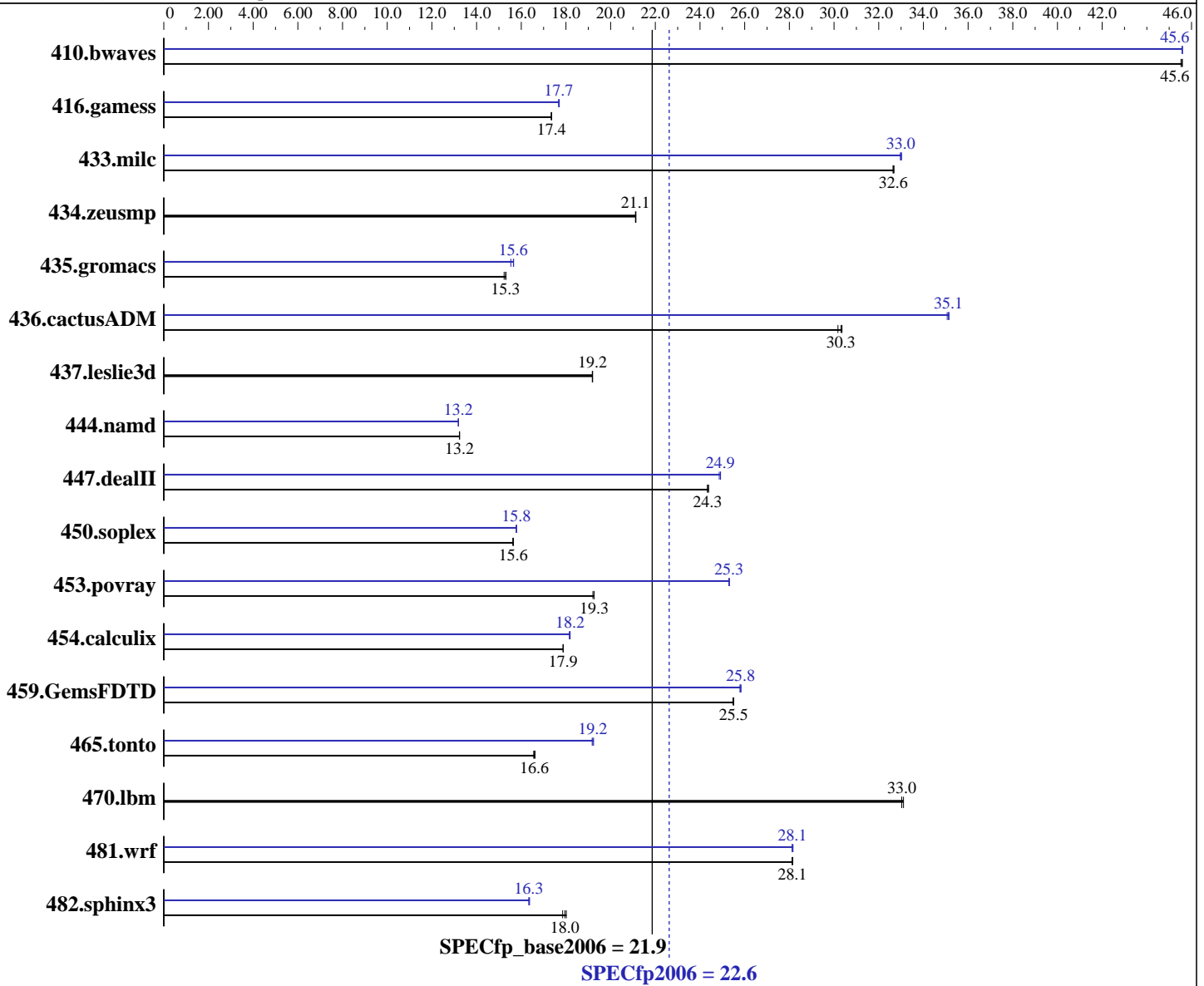
Test date: May-2010

Test sponsor: IBM Corporation

Hardware Availability: Jan-2010

Tested by: IBM Corporation

Software Availability: Jan-2010



**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 CL9, 2 Rank)  
 Disk Subsystem: 1 x 73 GB SAS, 15000 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	298	45.6	<b>298</b>	<b>45.6</b>	298	45.6	298	45.6	<b>298</b>	<b>45.6</b>
416.gamess	1128	17.4	<b>1128</b>	<b>17.4</b>	1129	17.3	1108	17.7	<b>1107</b>	<b>17.7</b>	1106	17.7
433.milc	281	32.7	<b>281</b>	<b>32.6</b>	281	32.6	278	33.0	278	33.0	<b>278</b>	<b>33.0</b>
434.zeusmp	431	21.1	431	21.1	<b>431</b>	<b>21.1</b>	431	21.1	431	21.1	<b>431</b>	<b>21.1</b>
435.gromacs	466	15.3	<b>467</b>	<b>15.3</b>	469	15.2	456	15.7	460	15.5	<b>456</b>	<b>15.6</b>
436.cactusADM	396	30.2	<b>394</b>	<b>30.3</b>	394	30.4	341	35.1	<b>340</b>	<b>35.1</b>	340	35.1
437.leslie3d	490	19.2	490	19.2	<b>490</b>	<b>19.2</b>	490	19.2	490	19.2	<b>490</b>	<b>19.2</b>
444.namd	606	13.2	<b>606</b>	<b>13.2</b>	606	13.2	608	13.2	<b>608</b>	<b>13.2</b>	608	13.2
447.dealII	469	24.4	<b>470</b>	<b>24.3</b>	470	24.3	460	24.9	<b>459</b>	<b>24.9</b>	459	24.9
450.soplex	533	15.7	<b>533</b>	<b>15.6</b>	534	15.6	528	15.8	529	15.8	<b>528</b>	<b>15.8</b>
453.povray	<b>276</b>	<b>19.3</b>	276	19.3	277	19.2	<b>210</b>	<b>25.3</b>	210	25.3	210	25.3
454.calculix	461	17.9	<b>461</b>	<b>17.9</b>	462	17.9	455	18.2	454	18.2	<b>454</b>	<b>18.2</b>
459.GemsFDTD	<b>416</b>	<b>25.5</b>	417	25.5	416	25.5	411	25.8	411	25.8	<b>411</b>	<b>25.8</b>
465.tonto	592	16.6	<b>593</b>	<b>16.6</b>	594	16.6	512	19.2	<b>512</b>	<b>19.2</b>	513	19.2
470.lbm	415	33.1	<b>416</b>	<b>33.0</b>	416	33.0	415	33.1	<b>416</b>	<b>33.0</b>	416	33.0
481.wrf	397	28.2	397	28.1	<b>397</b>	<b>28.1</b>	397	28.2	<b>397</b>	<b>28.1</b>	397	28.1
482.sphinx3	1082	18.0	<b>1086</b>	<b>18.0</b>	1092	17.9	<b>1193</b>	<b>16.3</b>	1193	16.3	1190	16.4

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

## Platform Notes

Turbo Mode Enable  
 Turbo Boost set to Traditional  
 CPU C State Enable

## General Notes

Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502  
 'ulimit -s unlimited' was used to set the stack size to unlimited prior to run  
 OMP\_NUM\_THREADS set to number of cores  
 KMP\_AFFINITY set to granularity=fine,scatter  
 KMP\_STACKSIZE set to 200M



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## 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.lelie3d: -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



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## 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: -xSSSE3 -ipo -O3 -no-prec-div -static -auto-ilp32  
-unroll2

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:

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## Peak Optimization Flags (Continued)

410.bwaves: -xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch  
-parallel

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.20100601.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.20100601.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.

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