



# SPEC® CFP2006 Result

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## Itaotec

SPECfp®\_rate2006 = 87.7

### Servidor Itaotec MX223 (Intel Xeon E5620)

SPECfp\_rate\_base2006 = 84.7

CPU2006 license: 9001

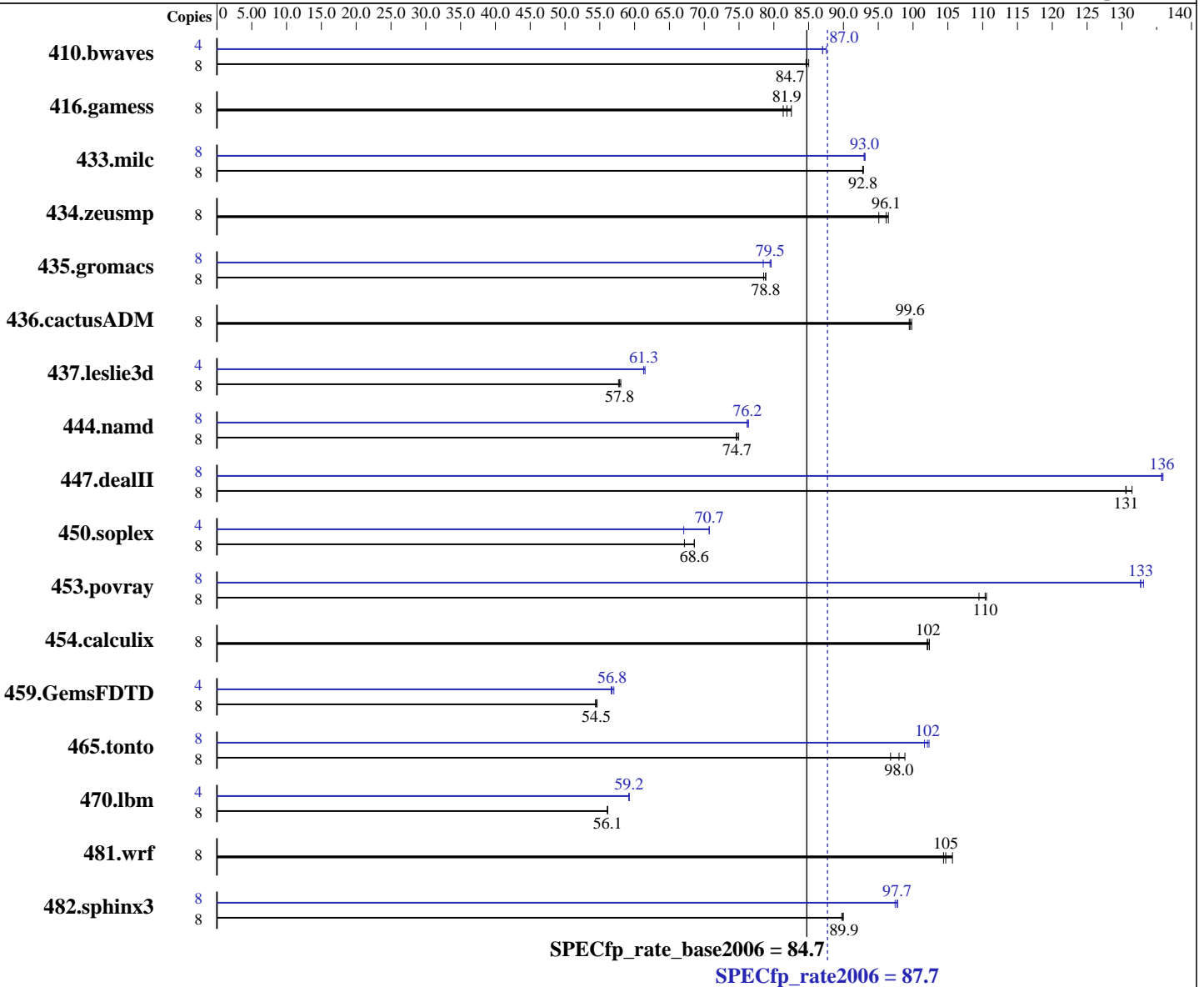
Test sponsor: Itaotec

Tested by: Itaotec

Test date: Jun-2010

Hardware Availability: Apr-2010

Software Availability: Apr-2010



#### Hardware

CPU Name: Intel Xeon E5620  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.66 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 1, 2 chips  
 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-smp  
 Compiler: Intel C++ and Fortran Professional Compiler 11.1 for Linux  
 Build 20100414 Package ID: l\_cproc\_p\_11.1.072, l\_cprof\_p\_11.1.072  
 Auto Parallel: No  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)

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L3 Cache: 12 MB I+D on chip per chip  
Other Cache: None  
Memory: 24 GB (6 x 4GB, DDR3-1066, Dual Rank, CL 7, ECC)  
Disk Subsystem: 1 x 160 GB SATA-2, 7200 RPM  
Other Hardware: None

Base Pointers: 64-bit  
Peak Pointers: 32/64-bit  
Other Software: None

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	1279	85.0	<u>1283</u>	<u>84.7</u>	1285	84.6	4	625	87.0	621	87.5	<u>625</u>	<u>87.0</u>
416.gamess	8	<u>1913</u>	<u>81.9</u>	1898	82.5	1926	81.3	8	<u>1913</u>	<u>81.9</u>	1898	82.5	1926	81.3
433.milc	8	792	92.8	791	92.9	<u>791</u>	<u>92.8</u>	8	<u>789</u>	<u>93.0</u>	789	93.1	790	93.0
434.zeusmp	8	<u>757</u>	<u>96.1</u>	755	96.5	766	95.1	8	<u>757</u>	<u>96.1</u>	755	96.5	766	95.1
435.gromacs	8	724	78.8	<u>725</u>	<u>78.8</u>	727	78.5	8	<u>719</u>	<u>79.5</u>	728	78.5	717	79.6
436.cactusADM	8	<u>960</u>	<u>99.6</u>	958	99.8	961	99.5	8	<u>960</u>	<u>99.6</u>	958	99.8	961	99.5
437.leslie3d	8	1304	57.7	1296	58.0	<u>1300</u>	<u>57.8</u>	4	611	61.5	<u>613</u>	<u>61.3</u>	613	61.3
444.namd	8	<u>859</u>	<u>74.7</u>	860	74.6	856	75.0	8	840	76.4	<u>842</u>	<u>76.2</u>	842	76.2
447.dealII	8	<u>701</u>	<u>131</u>	696	131	701	131	8	674	136	673	136	<u>674</u>	<u>136</u>
450.soplex	8	994	67.2	973	68.6	<u>973</u>	<u>68.6</u>	4	497	67.1	<u>472</u>	<u>70.7</u>	472	70.7
453.povray	8	385	111	<u>386</u>	<u>110</u>	389	109	8	<u>321</u>	<u>133</u>	320	133	321	133
454.calculix	8	<u>646</u>	<u>102</u>	647	102	645	102	8	<u>646</u>	<u>102</u>	647	102	645	102
459.GemsFDTD	8	<u>1557</u>	<u>54.5</u>	1554	54.6	1561	54.4	4	<u>748</u>	<u>56.8</u>	744	57.0	749	56.6
465.tonto	8	<u>803</u>	<u>98.0</u>	813	96.8	797	98.8	8	769	102	<u>771</u>	<u>102</u>	774	102
470.lbm	8	1958	56.1	<u>1959</u>	<u>56.1</u>	1960	56.1	4	929	59.2	928	59.2	<u>928</u>	<u>59.2</u>
481.wrf	8	846	106	856	104	<u>854</u>	<u>105</u>	8	846	106	856	104	<u>854</u>	<u>105</u>
482.sphinx3	8	1737	89.8	1733	90.0	<u>1734</u>	<u>89.9</u>	8	1600	97.4	<u>1596</u>	<u>97.7</u>	1595	97.8

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.  
numactl was used to bind copies to the cores

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run.

## General Notes

This result was measured on the Servidor Itaotec MX223.  
The Servidor Itaotec MX203 and the Servidor Itaotec MX223 are electronically equivalent.



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Servidor Itautec MX223 (Intel Xeon E5620)

SPECfp\_rate\_base2006 = 84.7

CPU2006 license: 9001  
Test sponsor: Itautec  
Tested by: Itautec

Test date: Jun-2010  
Hardware Availability: Apr-2010  
Software Availability: Apr-2010

## 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:  
-xSSE4.2 -ipo -O3 -no-prec-div -static

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static

Fortran benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static

Benchmarks using both Fortran and C:  
-xSSE4.2 -ipo -O3 -no-prec-div -static



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Software Availability: Apr-2010

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

482.sphinx3: icc -m32

C++ benchmarks (except as noted below):

icpc -m64

450.soplex: icpc -m32

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

## 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  
437.leslie3d: -DSPEC\_CPU\_LP64  
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  
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: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-fno-alias -opt-prefetch

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-opt-malloc-options=3 -ansi-alias -auto-ilp32

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Software Availability: Apr-2010

## Peak Optimization Flags (Continued)

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2

### C++ benchmarks:

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

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

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

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

### Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div -static

459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll2 -Ob0

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

### Benchmarks using both Fortran and C:

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

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes



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The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Itautec-Intel-ic11.1-linux64-revE.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Itautec-Intel-ic11.1-linux64-revE.xml>

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

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