



# SPEC<sup>®</sup> CFP2006 Result

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## Itaotec

### SPECfp<sup>®</sup>\_rate2006 = 131

### Servidor Itaotec MX203+ (Intel Xeon X5680)

### SPECfp\_rate\_base2006 = 127

CPU2006 license: 9001

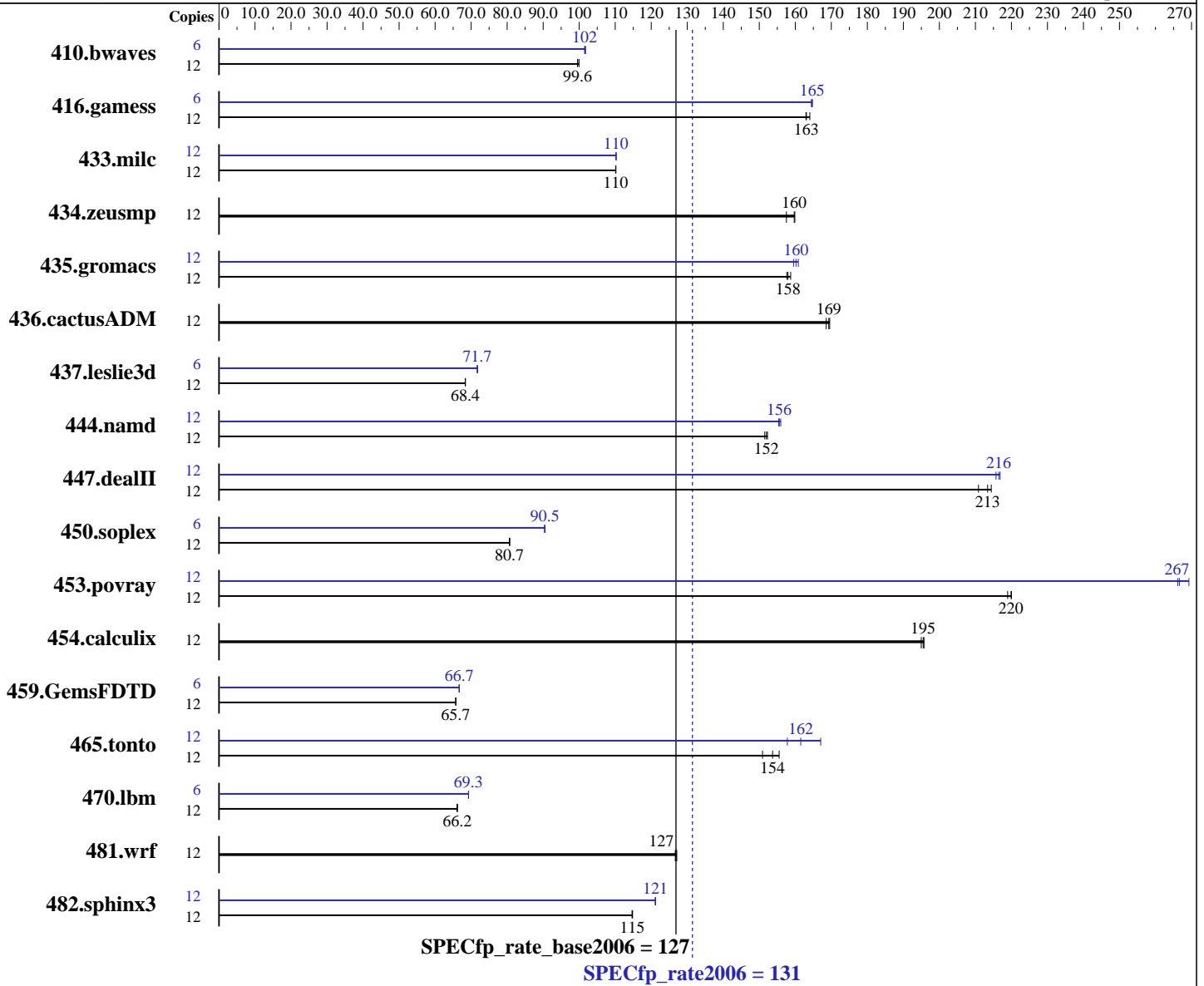
Test date: Aug-2010

Test sponsor: Itaotec

Hardware Availability: Apr-2010

Tested by: Itaotec

Software Availability: Apr-2010



#### Hardware

CPU Name: Intel Xeon X5680  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz  
 CPU MHz: 3333  
 FPU: Integrated  
 CPU(s) enabled: 6 cores, 1 chip, 6 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: ext3  
 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, DDR3-1333, Dual Rank, CL 9, 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: Binutils 2.18.50.0.7.20080502

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	12	1631	100	<b><u>1637</u></b>	<b><u>99.6</u></b>	1639	99.5	6	803	102	801	102	<b><u>803</u></b>	<b><u>102</u></b>
416.gamess	12	1442	163	1432	164	<b><u>1441</u></b>	<b><u>163</u></b>	6	<b><u>713</u></b>	<b><u>165</u></b>	713	165	714	164
433.milc	12	<b><u>1000</u></b>	<b><u>110</u></b>	1000	110	1000	110	12	<b><u>999</u></b>	<b><u>110</u></b>	999	110	999	110
434.zeusmp	12	683	160	693	158	<b><u>684</u></b>	<b><u>160</u></b>	12	683	160	693	158	<b><u>684</u></b>	<b><u>160</u></b>
435.gromacs	12	540	159	<b><u>542</u></b>	<b><u>158</u></b>	544	158	12	<b><u>535</u></b>	<b><u>160</u></b>	533	161	537	160
436.cactusADM	12	851	169	846	170	<b><u>847</u></b>	<b><u>169</u></b>	12	851	169	846	170	<b><u>847</u></b>	<b><u>169</u></b>
437.leslie3d	12	1650	68.4	1649	68.4	<b><u>1650</u></b>	<b><u>68.4</u></b>	6	787	71.7	785	71.8	<b><u>787</u></b>	<b><u>71.7</u></b>
444.namd	12	<b><u>633</u></b>	<b><u>152</u></b>	635	152	632	152	12	<b><u>619</u></b>	<b><u>156</u></b>	619	155	617	156
447.dealII	12	640	214	651	211	<b><u>643</u></b>	<b><u>213</u></b>	12	633	217	<b><u>634</u></b>	<b><u>216</u></b>	636	216
450.soplex	12	1240	80.7	<b><u>1241</u></b>	<b><u>80.7</u></b>	1241	80.7	6	<b><u>553</u></b>	<b><u>90.5</u></b>	553	90.5	554	90.4
453.povray	12	292	219	<b><u>290</u></b>	<b><u>220</u></b>	290	220	12	240	266	<b><u>239</u></b>	<b><u>267</u></b>	237	269
454.calculix	12	506	196	508	195	<b><u>506</u></b>	<b><u>195</u></b>	12	506	196	508	195	<b><u>506</u></b>	<b><u>195</u></b>
459.GemsFDTD	12	1936	65.8	1937	65.7	<b><u>1937</u></b>	<b><u>65.7</u></b>	6	954	66.7	<b><u>954</u></b>	<b><u>66.7</u></b>	956	66.6
465.tonto	12	759	156	783	151	<b><u>768</u></b>	<b><u>154</u></b>	12	748	158	707	167	<b><u>731</u></b>	<b><u>162</u></b>
470.lbm	12	2492	66.2	<b><u>2492</u></b>	<b><u>66.2</u></b>	2493	66.1	6	1190	69.3	<b><u>1190</u></b>	<b><u>69.3</u></b>	1190	69.3
481.wrf	12	<b><u>1057</u></b>	<b><u>127</u></b>	1055	127	1058	127	12	<b><u>1057</u></b>	<b><u>127</u></b>	1055	127	1058	127
482.sphinx3	12	<b><u>2038</u></b>	<b><u>115</u></b>	2037	115	2039	115	12	1929	121	<b><u>1930</u></b>	<b><u>121</u></b>	1931	121

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 MX223+, the Servidor Itaotec MX224 and the Servidor Itaotec MX203+ are electronically equivalent.



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SPECfp\_rate\_base2006 = 127

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

Test date: Aug-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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## 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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Tested by: Itautec

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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: -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 -ansi-alias -scalar-rep-

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

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## Peak Optimization Flags (Continued)

481.wrf: basepeak = yes

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

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