



# SPEC<sup>®</sup> CFP2006 Result

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## Itaotec

### SPECfp<sup>®</sup>\_rate2006 = 161

### Servidor Itaotec MX223 (Intel Xeon E5620)

### SPECfp\_rate\_base2006 = 152

CPU2006 license: 9001

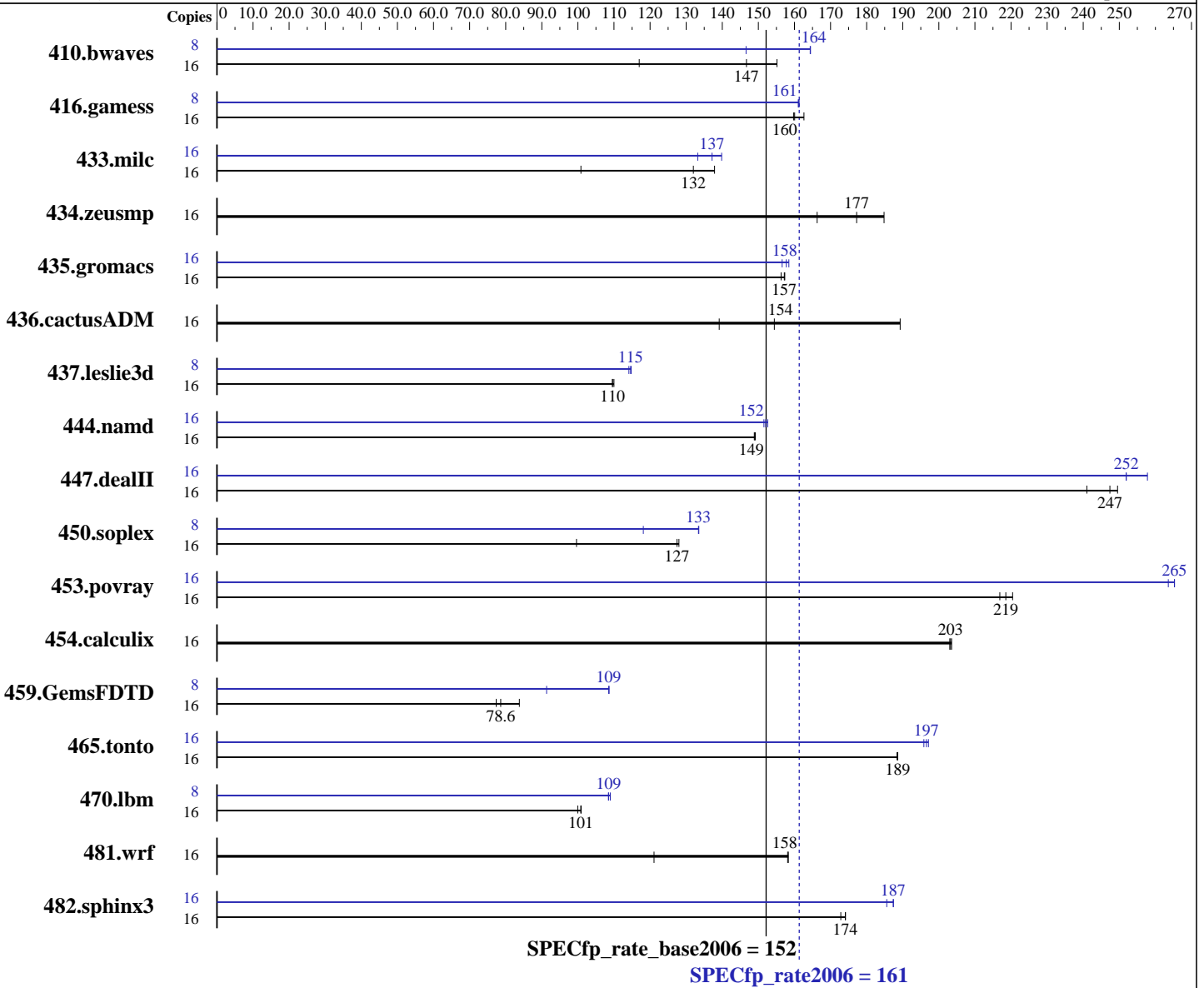
Test date: Jun-2010

Test sponsor: Itaotec

Hardware Availability: Apr-2010

Tested by: Itaotec

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: 8 cores, 2 chips, 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	16	1859	117	<b><u>1482</u></b>	<b><u>147</u></b>	1401	155	8	<b><u>662</u></b>	<b><u>164</u></b>	742	147	661	164
416.gamess	16	1926	163	1961	160	<b><u>1957</u></b>	<b><u>160</u></b>	8	971	161	<b><u>972</u></b>	<b><u>161</u></b>	973	161
433.milc	16	1457	101	<b><u>1113</u></b>	<b><u>132</u></b>	1065	138	16	<b><u>1071</u></b>	<b><u>137</u></b>	1050	140	1103	133
434.zeusmp	16	876	166	788	185	<b><u>822</u></b>	<b><u>177</u></b>	16	876	166	788	185	<b><u>822</u></b>	<b><u>177</u></b>
435.gromacs	16	<b><u>727</u></b>	<b><u>157</u></b>	726	157	731	156	16	721	158	<b><u>724</u></b>	<b><u>158</u></b>	730	157
436.cactusADM	16	1374	139	<b><u>1238</u></b>	<b><u>154</u></b>	1010	189	16	1374	139	<b><u>1238</u></b>	<b><u>154</u></b>	1010	189
437.leslie3d	16	1373	110	<b><u>1372</u></b>	<b><u>110</u></b>	1367	110	8	655	115	659	114	<b><u>656</u></b>	<b><u>115</u></b>
444.namd	16	<b><u>861</u></b>	<b><u>149</u></b>	862	149	860	149	16	847	152	841	153	<b><u>844</u></b>	<b><u>152</u></b>
447.dealII	16	759	241	<b><u>740</u></b>	<b><u>247</u></b>	734	250	16	727	252	710	258	<b><u>727</u></b>	<b><u>252</u></b>
450.soplex	16	1340	99.6	<b><u>1047</u></b>	<b><u>127</u></b>	1043	128	8	565	118	500	134	<b><u>500</u></b>	<b><u>133</u></b>
453.povray	16	<b><u>389</u></b>	<b><u>219</u></b>	386	220	392	217	16	323	264	<b><u>321</u></b>	<b><u>265</u></b>	321	265
454.calculix	16	649	204	650	203	<b><u>649</u></b>	<b><u>203</u></b>	16	649	204	650	203	<b><u>649</u></b>	<b><u>203</u></b>
459.GemsFDTD	16	2194	77.4	<b><u>2159</u></b>	<b><u>78.6</u></b>	2026	83.8	8	929	91.3	<b><u>782</u></b>	<b><u>109</u></b>	781	109
465.tonto	16	835	189	<b><u>835</u></b>	<b><u>189</u></b>	836	188	16	<b><u>801</u></b>	<b><u>197</u></b>	804	196	799	197
470.lbm	16	2199	100	2179	101	<b><u>2181</u></b>	<b><u>101</u></b>	8	1008	109	1013	108	<b><u>1013</u></b>	<b><u>109</u></b>
481.wrf	16	1476	121	<b><u>1130</u></b>	<b><u>158</u></b>	1129	158	16	1476	121	<b><u>1130</u></b>	<b><u>158</u></b>	1129	158
482.sphinx3	16	1804	173	<b><u>1791</u></b>	<b><u>174</u></b>	1791	174	16	1680	186	1664	187	<b><u>1664</u></b>	<b><u>187</u></b>

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 Itautec MX223.  
The Servidor Itautec MX203 and the Servidor Itautec MX223 are electronically equivalent.



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SPECfp\_rate2006 = 161

Servidor Itautec MX223 (Intel Xeon E5620)

SPECfp\_rate\_base2006 = 152

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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## 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: -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/Itaotec-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/Itaotec-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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