



SPEC[®] CFP2006 Result

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Itaotec

SPECfp[®]_rate2006 = 36.3

Servidor Itaotec MX221 (Intel Xeon E5405)

SPECfp_rate_base2006 = 34.0

CPU2006 license: 9001

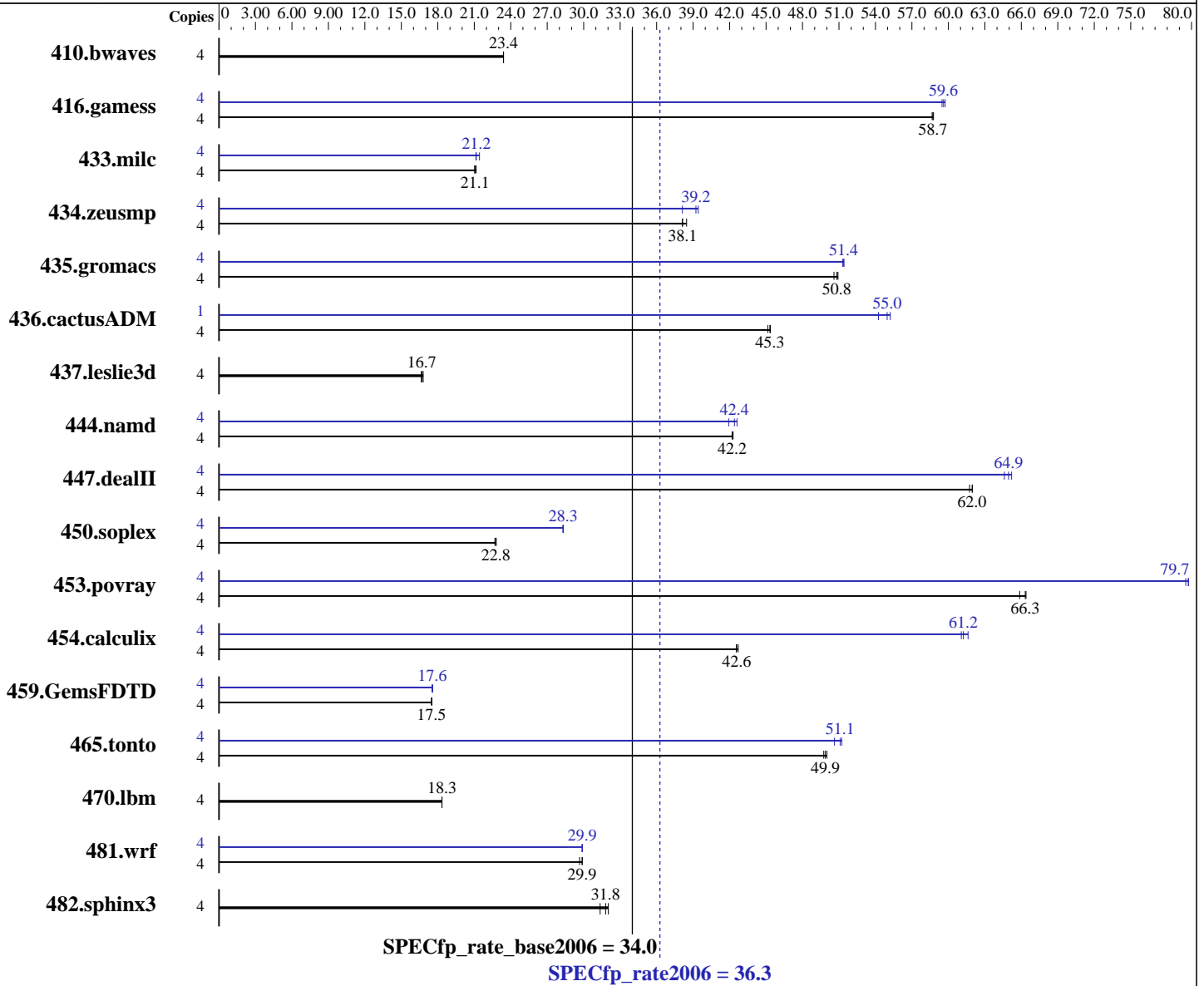
Test date: Apr-2008

Test sponsor: Itaotec

Hardware Availability: Dec-2007

Tested by: Itaotec

Software Availability: Jan-2008



Hardware

CPU Name: Intel Xeon E5405
 CPU Characteristics:
 CPU MHz: 2000
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

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Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: Intel C++ and Fortran Compiler for Linux version 10.1
 Build 20080112 Package ID: l_cc_p_10.1.012, l_fc_p_10.1.012
 Auto Parallel: Yes
 File System: ReiserFS
 System State: Run Level 3 (multi-user)

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8 * 2 GB PC2-5300 FBDIMM, CL-5-5-5, ECC)
Disk Subsystem: 1 x SCSI, 73GB, 15000 RPM
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: Binutils 2.17.10.50

Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
410.bwaves	4	2323	23.4	<u>2323</u>	<u>23.4</u>	2322	23.4	4	2323	23.4	<u>2323</u>	<u>23.4</u>	2322	23.4		
416.gamess	4	1335	58.7	1333	58.8	<u>1334</u>	<u>58.7</u>	4	1317	59.5	1311	59.7	<u>1314</u>	<u>59.6</u>		
433.milc	4	1736	21.2	1746	21.0	<u>1743</u>	<u>21.1</u>	4	<u>1735</u>	<u>21.2</u>	1714	21.4	1738	21.1		
434.zeusmp	4	<u>955</u>	<u>38.1</u>	955	38.1	946	38.5	4	<u>928</u>	<u>39.2</u>	923	39.4	955	38.1		
435.gromacs	4	<u>562</u>	<u>50.8</u>	565	50.6	561	50.9	4	557	51.3	556	51.4	<u>556</u>	<u>51.4</u>		
436.cactusADM	4	1059	45.1	<u>1055</u>	<u>45.3</u>	1054	45.4	1	216	55.2	220	54.2	<u>217</u>	<u>55.0</u>		
437.leslie3d	4	2259	16.6	2238	16.8	<u>2253</u>	<u>16.7</u>	4	2259	16.6	2238	16.8	<u>2253</u>	<u>16.7</u>		
444.namd	4	759	42.3	760	42.2	<u>760</u>	<u>42.2</u>	4	<u>757</u>	<u>42.4</u>	753	42.6	765	41.9		
447.dealII	4	<u>739</u>	<u>62.0</u>	738	62.0	741	61.7	4	702	65.2	708	64.6	<u>705</u>	<u>64.9</u>		
450.soplex	4	<u>1465</u>	<u>22.8</u>	1463	22.8	1470	22.7	4	1180	28.3	1177	28.3	<u>1178</u>	<u>28.3</u>		
453.povray	4	323	65.9	321	66.4	<u>321</u>	<u>66.3</u>	4	<u>267</u>	<u>79.7</u>	267	79.7	268	79.5		
454.calculix	4	775	42.6	<u>775</u>	<u>42.6</u>	773	42.7	4	540	61.1	<u>539</u>	<u>61.2</u>	536	61.6		
459.GemsFDTD	4	<u>2426</u>	<u>17.5</u>	2426	17.5	2425	17.5	4	2422	17.5	2415	17.6	<u>2417</u>	<u>17.6</u>		
465.tonto	4	787	50.0	791	49.7	<u>789</u>	<u>49.9</u>	4	<u>770</u>	<u>51.1</u>	777	50.6	768	51.2		
470.lbm	4	2997	18.3	<u>2997</u>	<u>18.3</u>	2996	18.3	4	2997	18.3	<u>2997</u>	<u>18.3</u>	2996	18.3		
481.wrf	4	<u>1496</u>	<u>29.9</u>	1495	29.9	1506	29.7	4	1496	29.9	1495	29.9	<u>1495</u>	<u>29.9</u>		
482.sphinx3	4	2434	32.0	<u>2451</u>	<u>31.8</u>	2487	31.4	4	2434	32.0	<u>2451</u>	<u>31.8</u>	2487	31.4		

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

Compiler Invocation Notes

OMP_NUM_THREADS set to number of cores
KMP_STACK_SIZE set to 64M
KMP_AFFINITY set to physical,0

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run.
'/usr/bin/taskset' used to bind benchmark copies to processors, except for 436.cactusADM at peak.



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Platform Notes

BIOS configuration:
Hardware Prefetch Disabled

General Notes

This result was measured on the Servidor Itaotec MX201.
The Servidor Itaotec MX221 and the Servidor Itaotec MX201 are electronically equivalent.

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

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



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Base Optimization Flags

C benchmarks:
-fast

C++ benchmarks:
-fast

Fortran benchmarks:
-fast

Benchmarks using both Fortran and C:
-fast

Peak Compiler Invocation

C benchmarks:
icc

C++ benchmarks (except as noted below):
icpc

450.soplex: /opt/intel/cc/10.1.012/bin/icpc -L/opt/intel/cc/10.1.012/lib
-I/opt/intel/cc/10.1.012/include

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

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

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Peak Portability Flags (Continued)

481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Peak Optimization Flags

C benchmarks:

433.milc: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast
-opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4
-ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: basepeak = yes

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32

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Itautec

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Peak Optimization Flags (Continued)

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-prefetch -parallel -auto-ilp32

454.calculix: -fast -unroll-aggressive -auto-ilp32

481.wrf: -fast -auto-ilp32

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

<http://www.spec.org/cpu2006/flags/Itautec-ic10.1-FP-intel64-linux-flags.20090713.00.html>

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

<http://www.spec.org/cpu2006/flags/Itautec-ic10.1-FP-intel64-linux-flags.20090713.00.xml>

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For other inquiries, please contact webmaster@spec.org.

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