



SPEC[®] CFP2006 Result

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Itaotec

SPECfp[®]_rate2006 = 136

Servidor Itaotec MX224 (Intel Xeon X5675)

SPECfp_rate_base2006 = 132

CPU2006 license: 9001

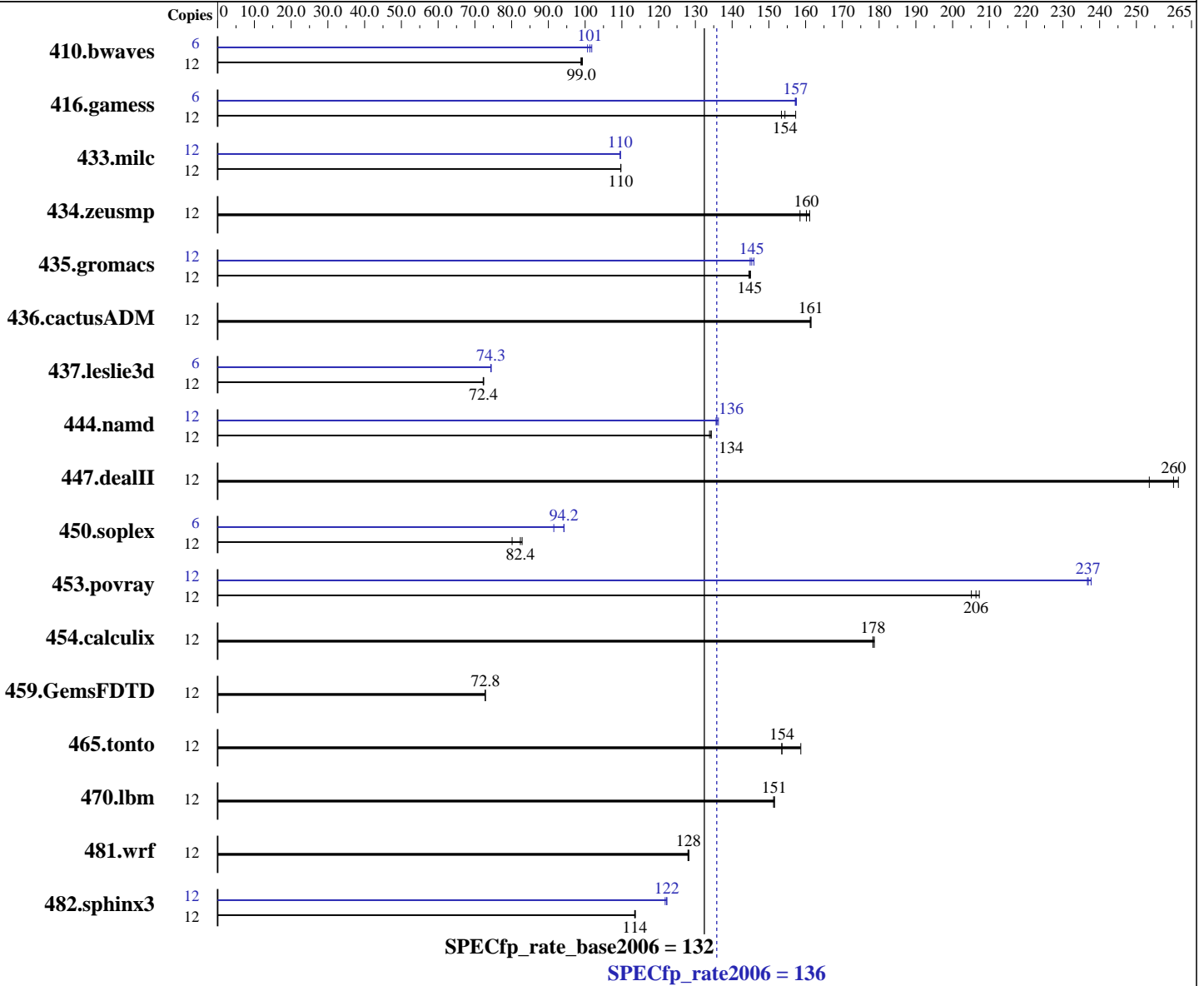
Test sponsor: Itaotec

Tested by: Itaotec

Test date: Nov-2011

Hardware Availability: Jul-2011

Software Availability: Aug-2011



Hardware

CPU Name: Intel Xeon X5675
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
 CPU MHz: 3067
 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 SP1 (x86_64), Kernel 2.6.32.12-0.7-default
 Compiler: C/C++/Fortran: Version 12.1.0 of Intel Compiler XE Build 20110811
 Auto Parallel: No
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit

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L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 24 GB (6 x 4 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x 500 GB SAS, 15000 RPM
Other Hardware: None

Other Software: None

Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|---------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------|-------------|------------|------------|------------|-------------|-------------|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 12 | 1643 | 99.3 | 1647 | 99.0 | 1650 | 98.9 | 6 | 801 | 102 | 805 | 101 | 810 | 101 |
| 416.gamess | 12 | 1522 | 154 | 1494 | 157 | 1532 | 153 | 6 | 747 | 157 | 747 | 157 | 746 | 157 |
| 433.milc | 12 | 1004 | 110 | 1004 | 110 | 1004 | 110 | 12 | 1006 | 110 | 1005 | 110 | 1005 | 110 |
| 434.zeusmp | 12 | 682 | 160 | 678 | 161 | 689 | 158 | 12 | 682 | 160 | 678 | 161 | 689 | 158 |
| 435.gromacs | 12 | 592 | 145 | 591 | 145 | 593 | 145 | 12 | 587 | 146 | 589 | 145 | 591 | 145 |
| 436.cactusADM | 12 | 889 | 161 | 888 | 161 | 888 | 161 | 12 | 889 | 161 | 888 | 161 | 888 | 161 |
| 437.leslie3d | 12 | 1559 | 72.4 | 1561 | 72.3 | 1559 | 72.4 | 6 | 757 | 74.5 | 759 | 74.3 | 759 | 74.3 |
| 444.namd | 12 | 716 | 134 | 719 | 134 | 717 | 134 | 12 | 706 | 136 | 710 | 136 | 708 | 136 |
| 447.dealII | 12 | 525 | 261 | 542 | 254 | 528 | 260 | 12 | 525 | 261 | 542 | 254 | 528 | 260 |
| 450.soplex | 12 | 1215 | 82.4 | 1249 | 80.1 | 1208 | 82.9 | 6 | 547 | 91.5 | 531 | 94.3 | 531 | 94.2 |
| 453.povray | 12 | 308 | 207 | 311 | 205 | 309 | 206 | 12 | 269 | 238 | 269 | 237 | 270 | 237 |
| 454.calculix | 12 | 555 | 178 | 555 | 178 | 554 | 179 | 12 | 555 | 178 | 555 | 178 | 554 | 179 |
| 459.GemsFDTD | 12 | 1749 | 72.8 | 1748 | 72.8 | 1748 | 72.8 | 12 | 1749 | 72.8 | 1748 | 72.8 | 1748 | 72.8 |
| 465.tonto | 12 | 744 | 159 | 769 | 154 | 769 | 153 | 12 | 744 | 159 | 769 | 154 | 769 | 153 |
| 470.lbm | 12 | 1088 | 151 | 1088 | 152 | 1090 | 151 | 12 | 1088 | 151 | 1088 | 152 | 1090 | 151 |
| 481.wrf | 12 | 1047 | 128 | 1045 | 128 | 1046 | 128 | 12 | 1047 | 128 | 1045 | 128 | 1046 | 128 |
| 482.sphinx3 | 12 | 2057 | 114 | 2060 | 114 | 2061 | 113 | 12 | 1913 | 122 | 1920 | 122 | 1914 | 122 |

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.
Large pages were not enabled for this run

Platform Notes

Data Reuse disabled in BIOS.



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General Notes

This result was measured on the Servidor Itaotec MX224.
The Servidor Itaotec MX203+, Servidor Itaotec MX223+ and the Servidor Itaotec MX224 are electronically equivalent.

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 -ansi-alias

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

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Base Optimization Flags (Continued)

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

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



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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) -prof-use(pass 2) -static -auto-ilp32

470.lbm: basepeak = yes

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

C++ benchmarks:

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

447.dealIII: basepeak = yes

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

410.bwaves: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: basepeak = yes

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) -prof-use(pass 2) -opt-prefetch
-static -auto-ilp32

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Itautec

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Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Itautec-Intel-Linux64-Platform.html>

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-linux64.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Itautec-Intel-Linux64-Platform.xml>

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-linux64.xml>

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

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