



SPEC[®] CFP2006 Result

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Acer Incorporated
(Test Sponsor: Acer Incorporation)

SPECfp[®]2006 = 54.5

Acer AR320 F2 (Xeon E3-1220)

SPECfp_base2006 = 53.4

CPU2006 license: 97

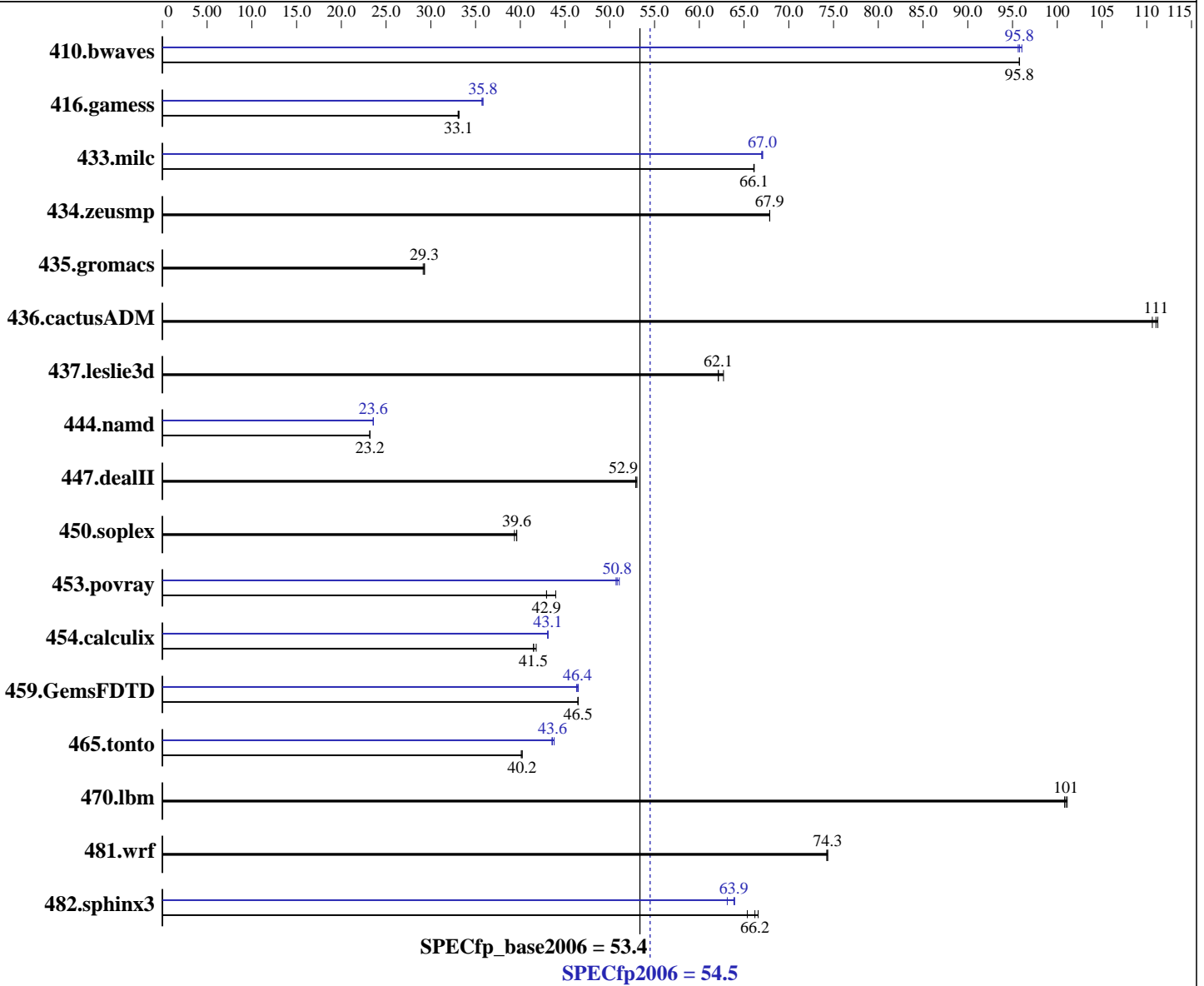
Test sponsor: Acer Incorporation

Tested by: Acer Incorporation

Test date: Dec-2011

Hardware Availability: Jan-2012

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E3-1220
 CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz
 CPU MHz: 3100
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 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: Red Hat Enterprise Linux Server release 6.1
 Kernel 2.6.32-131.0.15.el6.x86_64-default
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux;
 Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext3
 System State: Run level 3 (multi-user)

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L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 2Rx8 PC3-10600E-9,ECC)
Disk Subsystem: 1 x 250 GB SATA, 7200 RPM
Other Hardware: None

Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V9.01

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<u>142</u>	<u>95.8</u>	142	95.8	142	95.8	142	96.0	142	95.6	<u>142</u>	<u>95.8</u>
416.gamess	593	33.0	<u>592</u>	<u>33.1</u>	591	33.2	547	35.8	<u>547</u>	<u>35.8</u>	548	35.7
433.milc	139	66.1	<u>139</u>	<u>66.1</u>	139	66.1	137	67.1	137	67.0	<u>137</u>	<u>67.0</u>
434.zeusmp	<u>134</u>	<u>67.9</u>	134	67.9	134	67.9	<u>134</u>	<u>67.9</u>	134	67.9	134	67.9
435.gromacs	244	29.3	<u>244</u>	<u>29.3</u>	245	29.1	244	29.3	<u>244</u>	<u>29.3</u>	245	29.1
436.cactusADM	108	111	<u>108</u>	<u>111</u>	107	111	108	111	<u>108</u>	<u>111</u>	107	111
437.leslie3d	<u>151</u>	<u>62.1</u>	150	62.7	151	62.1	<u>151</u>	<u>62.1</u>	150	62.7	151	62.1
444.namd	346	23.2	346	23.2	<u>346</u>	<u>23.2</u>	340	23.6	340	23.6	<u>340</u>	<u>23.6</u>
447.dealII	216	52.9	<u>216</u>	<u>52.9</u>	216	53.0	216	52.9	<u>216</u>	<u>52.9</u>	216	53.0
450.soplex	211	39.6	<u>211</u>	<u>39.6</u>	212	39.3	211	39.6	<u>211</u>	<u>39.6</u>	212	39.3
453.povray	<u>124</u>	<u>42.9</u>	124	42.9	121	44.0	104	51.1	105	50.7	<u>105</u>	<u>50.8</u>
454.calculix	<u>199</u>	<u>41.5</u>	199	41.5	197	41.8	192	43.1	<u>191</u>	<u>43.1</u>	191	43.1
459.GemsFDTD	228	46.5	229	46.4	<u>228</u>	<u>46.5</u>	<u>229</u>	<u>46.4</u>	228	46.5	229	46.3
465.tonto	245	40.2	<u>245</u>	<u>40.2</u>	245	40.1	<u>226</u>	<u>43.6</u>	225	43.8	226	43.5
470.lbm	<u>136</u>	<u>101</u>	136	101	136	101	<u>136</u>	<u>101</u>	136	101	136	101
481.wrf	150	74.3	150	74.2	<u>150</u>	<u>74.3</u>	150	74.3	150	74.2	<u>150</u>	<u>74.3</u>
482.sphinx3	298	65.4	293	66.6	<u>294</u>	<u>66.2</u>	305	64.0	<u>305</u>	<u>63.9</u>	309	63.1

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

Operating System Notes

Large pages were disabled for this run.

General Notes

Binaries compiled on RHEL5.5

Base Compiler Invocation

C benchmarks:
icc -m64

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Base Compiler Invocation (Continued)

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:

-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Fortran benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias



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Peak Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
-ansi-alias

470.lbm: basepeak = yes

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel

C++ benchmarks:

444.namd: -xAVX(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: basepeak = yes

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

Fortran benchmarks:

410.bwaves: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -parallel
-static

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Peak Optimization Flags (Continued)

416.gamess: -xAVX(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: basepeak = yes

459.GemsFDTD: -xAVX(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 -opt-prefetch -parallel

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

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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