



SPEC[®] CFP2006 Result

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Acer Incorporated
(Test Sponsor: Acer Incorporation)

SPECfp[®]_rate2006 = 123

Acer AR320 F2 (Xeon E3-1280)

SPECfp_rate_base2006 = 119

CPU2006 license: 97

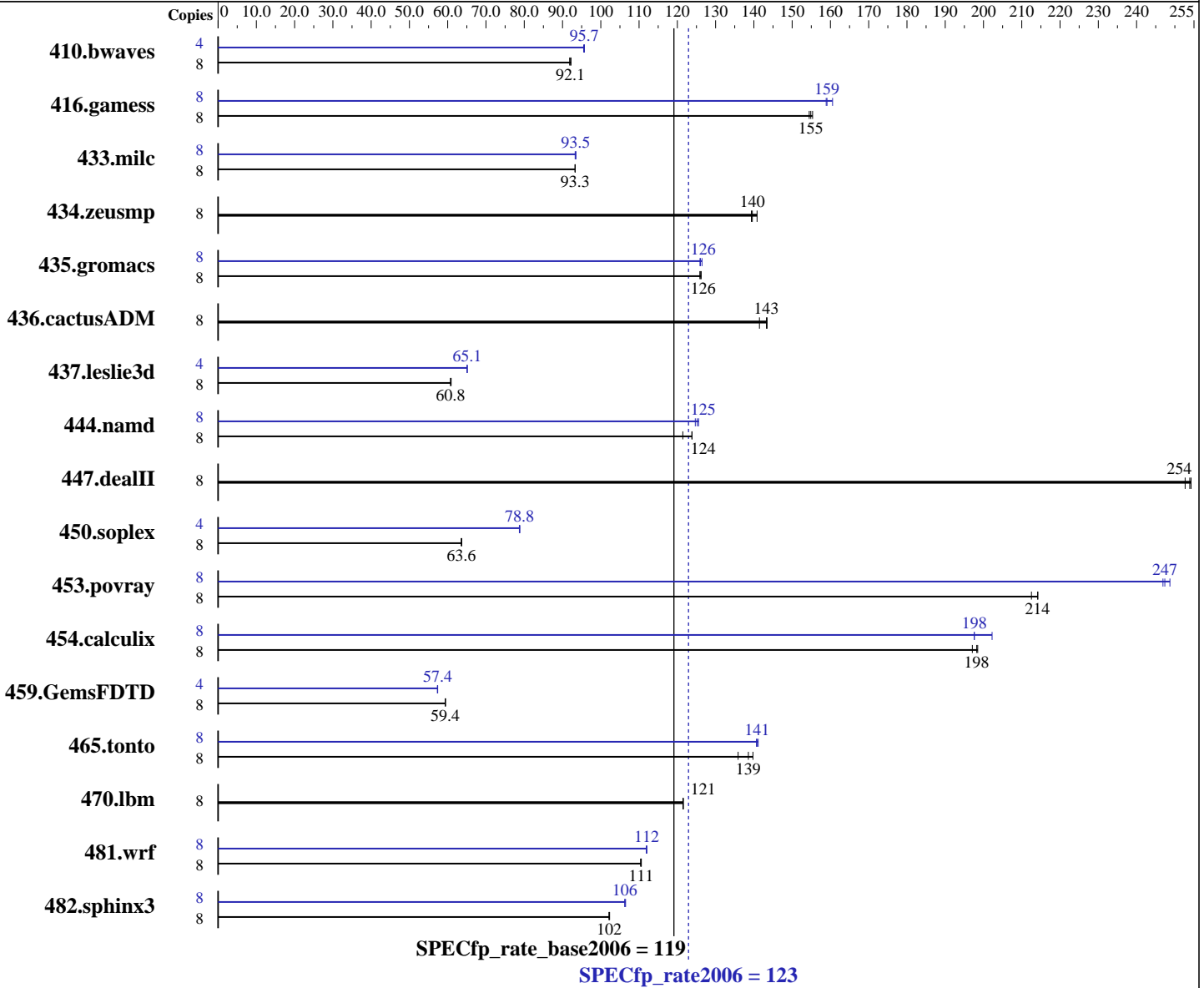
Test date: Dec-2011

Test sponsor: Acer Incorporation

Hardware Availability: Jan-2012

Tested by: Acer Incorporation

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E3-1280
 CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz
 CPU MHz: 3500
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
 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: No
 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 500 GB SATA, 7200 RPM
Other Hardware: None

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

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	1184	91.9	1179	92.2	<u>1181</u>	<u>92.1</u>	4	<u>568</u>	<u>95.7</u>	568	95.7	569	95.5
416.gamess	8	<u>1011</u>	<u>155</u>	1014	154	1008	155	8	976	161	986	159	<u>985</u>	<u>159</u>
433.milc	8	<u>787</u>	<u>93.3</u>	787	93.3	787	93.3	8	<u>786</u>	<u>93.5</u>	787	93.3	786	93.5
434.zeusmp	8	517	141	522	139	<u>521</u>	<u>140</u>	8	517	141	522	139	<u>521</u>	<u>140</u>
435.gromacs	8	452	126	454	126	<u>453</u>	<u>126</u>	8	454	126	452	126	<u>453</u>	<u>126</u>
436.cactusADM	8	676	141	666	143	<u>667</u>	<u>143</u>	8	676	141	666	143	<u>667</u>	<u>143</u>
437.leslie3d	8	1235	60.9	<u>1237</u>	<u>60.8</u>	1238	60.7	4	<u>578</u>	<u>65.1</u>	578	65.1	577	65.1
444.namd	8	<u>518</u>	<u>124</u>	528	121	518	124	8	511	126	<u>512</u>	<u>125</u>	515	125
447.dealII	8	360	254	362	253	<u>360</u>	<u>254</u>	8	360	254	362	253	<u>360</u>	<u>254</u>
450.soplex	8	1050	63.5	1048	63.7	<u>1049</u>	<u>63.6</u>	4	423	78.9	<u>424</u>	<u>78.8</u>	424	78.7
453.povray	8	200	213	199	214	<u>199</u>	<u>214</u>	8	171	249	<u>172</u>	<u>247</u>	172	247
454.calculix	8	333	198	<u>333</u>	<u>198</u>	335	197	8	<u>334</u>	<u>198</u>	334	198	326	202
459.GemsFDTD	8	1429	59.4	1430	59.4	<u>1429</u>	<u>59.4</u>	4	741	57.3	740	57.4	<u>740</u>	<u>57.4</u>
465.tonto	8	579	136	563	140	<u>568</u>	<u>139</u>	8	<u>559</u>	<u>141</u>	560	141	558	141
470.lbm	8	904	122	<u>905</u>	<u>121</u>	905	121	8	904	122	<u>905</u>	<u>121</u>	905	121
481.wrf	8	<u>808</u>	<u>111</u>	810	110	808	111	8	799	112	<u>798</u>	<u>112</u>	798	112
482.sphinx3	8	<u>1526</u>	<u>102</u>	1524	102	1526	102	8	1467	106	<u>1467</u>	<u>106</u>	1464	106

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

Submit Notes

numactl was used to bind copies to the cores
The config file option 'submit' was used.

Operating System Notes

Large pages were disabled for this run.

General Notes

Binaries compiled on RHEL5.5



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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:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias

Fortran benchmarks:

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

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

```
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32  
-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  
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:

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Peak Optimization Flags (Continued)

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

470.lbm: basepeak = yes

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

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: -xAVX(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

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(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static

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

459.GemsFDTD: -xAVX(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

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

Benchmarks using both Fortran and C:

435.gromacs: -xAVX(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

436.cactusADM: basepeak = yes

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Peak Optimization Flags (Continued)

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

481.wrf: Same as 454.calculix

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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