



# SPEC® CFP2006 Result

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Acer Incorporated

**SPECfp®\_rate2006 = 207**

Acer AR360 F1 (Intel Xeon L5640)

**SPECfp\_rate\_base2006 = 203**

CPU2006 license: 97

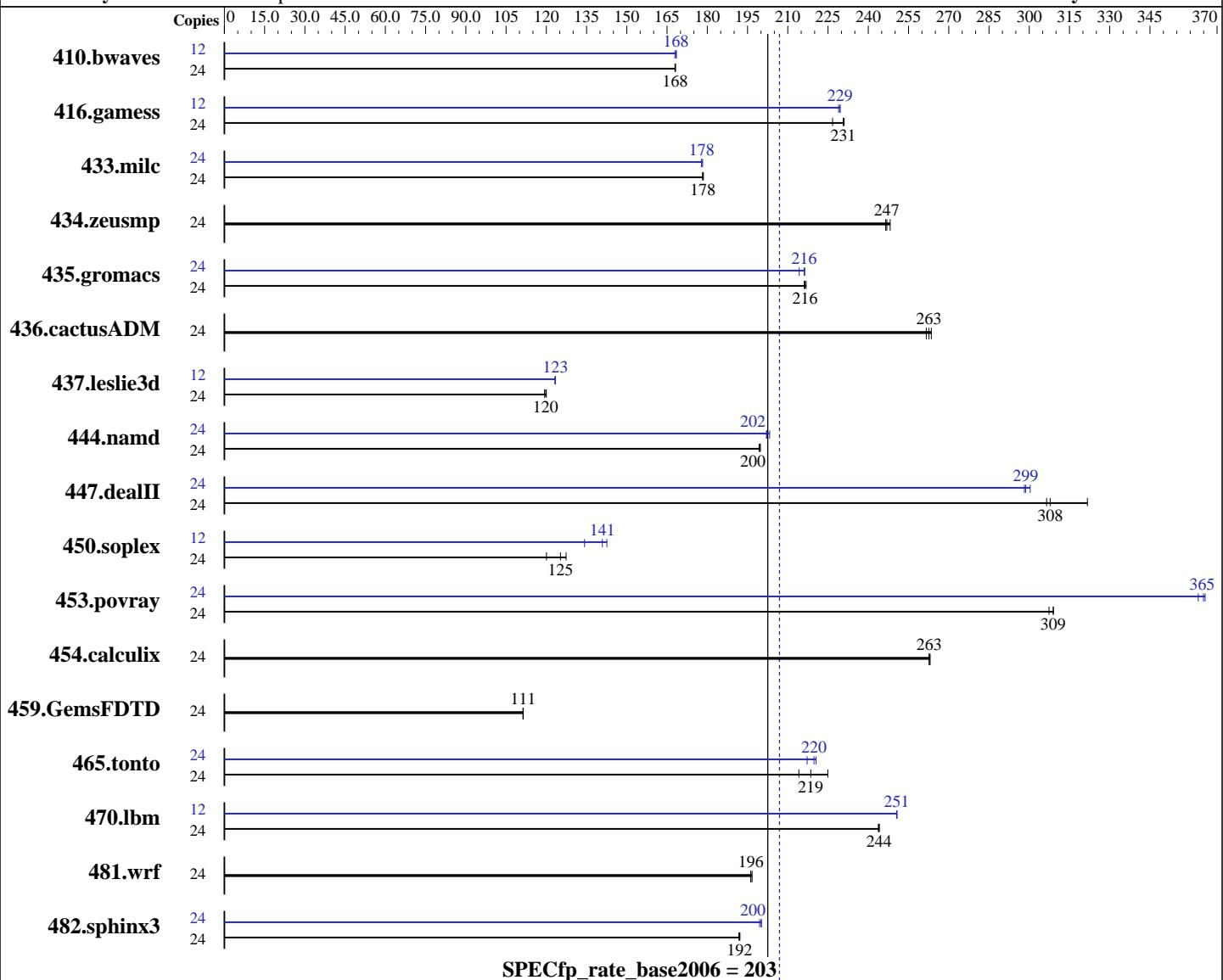
Test date: Jun-2011

Test sponsor: Acer Incorporated

Hardware Availability: Apr-2010

Tested by: Acer Incorporated

Software Availability: Jan-2011



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## Hardware

CPU Name: Intel Xeon L5640  
CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
CPU MHz: 2267  
FPU: Integrated  
CPU(s) enabled: 12 cores, 2 chips, 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

## Software

Operating System: SUSE Linux Enterprise server 11 (x86\_64) SP1, Kernel 2.6.32.12-0.7-default  
Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12.0.1.116 Build 20101116  
Auto Parallel: No  
File System: ext3  
System State: Run level 3 (multi-user)  
Base Pointers: 64-bit

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L3 Cache: 12 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (12 x 4 GB 2Rx8 PC3-10600R-9, ECC)  
 Disk Subsystem: 1 x 300 GB SATA, 10000 RPM  
 Other Hardware: None

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	24	<b>1941</b>	<b>168</b>	1942	168	1940	168	12	971	168	<b>969</b>	<b>168</b>	968	168
416.gamess	24	2034	231	2073	227	<b>2037</b>	<b>231</b>	12	1026	229	1024	230	<b>1024</b>	<b>229</b>
433.milc	24	<b>1236</b>	<b>178</b>	1236	178	1234	179	24	1239	178	<b>1238</b>	<b>178</b>	1236	178
434.zeusmp	24	880	248	<b>885</b>	<b>247</b>	886	246	24	880	248	<b>885</b>	<b>247</b>	886	246
435.gromacs	24	<b>792</b>	<b>216</b>	790	217	793	216	24	792	216	<b>793</b>	<b>216</b>	800	214
436.cactusADM	24	<b>1092</b>	<b>263</b>	1088	263	1096	262	24	<b>1092</b>	<b>263</b>	1088	263	1096	262
437.leslie3d	24	1880	120	1891	119	<b>1884</b>	<b>120</b>	12	914	123	915	123	<b>914</b>	<b>123</b>
444.namd	24	966	199	<b>964</b>	<b>200</b>	963	200	24	947	203	953	202	<b>952</b>	<b>202</b>
447.dealII	24	<b>892</b>	<b>308</b>	854	322	896	306	24	<b>919</b>	<b>299</b>	914	300	921	298
450.soplex	24	1571	127	1667	120	<b>1598</b>	<b>125</b>	12	745	134	<b>710</b>	<b>141</b>	702	143
453.povray	24	<b>413</b>	<b>309</b>	413	309	415	307	24	352	363	<b>350</b>	<b>365</b>	349	366
454.calculix	24	753	263	754	263	<b>754</b>	<b>263</b>	24	753	263	754	263	<b>754</b>	<b>263</b>
459.GemsFDTD	24	2288	111	<b>2286</b>	<b>111</b>	2286	111	24	2288	111	<b>2286</b>	<b>111</b>	2286	111
465.tonto	24	<b>1080</b>	<b>219</b>	1050	225	1103	214	24	1071	221	<b>1075</b>	<b>220</b>	1087	217
470.lbm	24	1351	244	1353	244	<b>1352</b>	<b>244</b>	12	658	251	<b>658</b>	<b>251</b>	658	251
481.wrf	24	1363	197	1367	196	<b>1366</b>	<b>196</b>	24	1363	197	1367	196	<b>1366</b>	<b>196</b>
482.sphinx3	24	<b>2435</b>	<b>192</b>	2435	192	2439	192	24	<b>2338</b>	<b>200</b>	2345	199	2337	200

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 environment stack size  
 Large pages were disabled for this run

## Platform Notes

BIOS Settings:  
 Fan speed = full speed (Default = Balanced)  
 Data Reuse = Disabled (Default = Enabled)



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## General Notes

Binaries compiled on RHEL5.5

This result was measured on the Gateway GR380 F1.

The Acer AR360 F1, AR380 F1, Gateway GR360 F1 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: -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  
-ansi-alias -opt-prefetch -static -auto-ilp32

482.sphinx3: -xsse4.2 -ipo -O3 -no-prec-div -unroll12

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.dealII: -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

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/libhugetlbfss/ -Wl,-hugetlbfss-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) -unroll14 -ansi-alias  
-B /usr/share/libhugetlbfss/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfss-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) -unroll12  
-inline-level=0 -scalar-rep -static

434.zeusmp: basepeak = yes

437.leslie3d: -xsse4.2 -ipo -O3 -no-prec-div  
-B /usr/share/libhugetlbfss/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfss-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll14 -auto  
-inline-alloc -opt-malloc-options=3  
-B /usr/share/libhugetlbfss/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfss-link=BDT

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## Peak Optimization Flags (Continued)

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
```

```
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/Acer-Intel-Linux-Settings-flags.20110608.html>  
<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html>

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

<http://www.spec.org/cpu2006/flags/Acer-Intel-Linux-Settings-flags.20110608.xml>  
<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.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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