



# SPEC® CFP2006 Result

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Acer Incorporated

**SPECfp®\_rate2006 = 63.0**

Gateway GT110 F2 (Xeon E3-1220L)

**SPECfp\_rate\_base2006 = 62.6**

CPU2006 license: 97

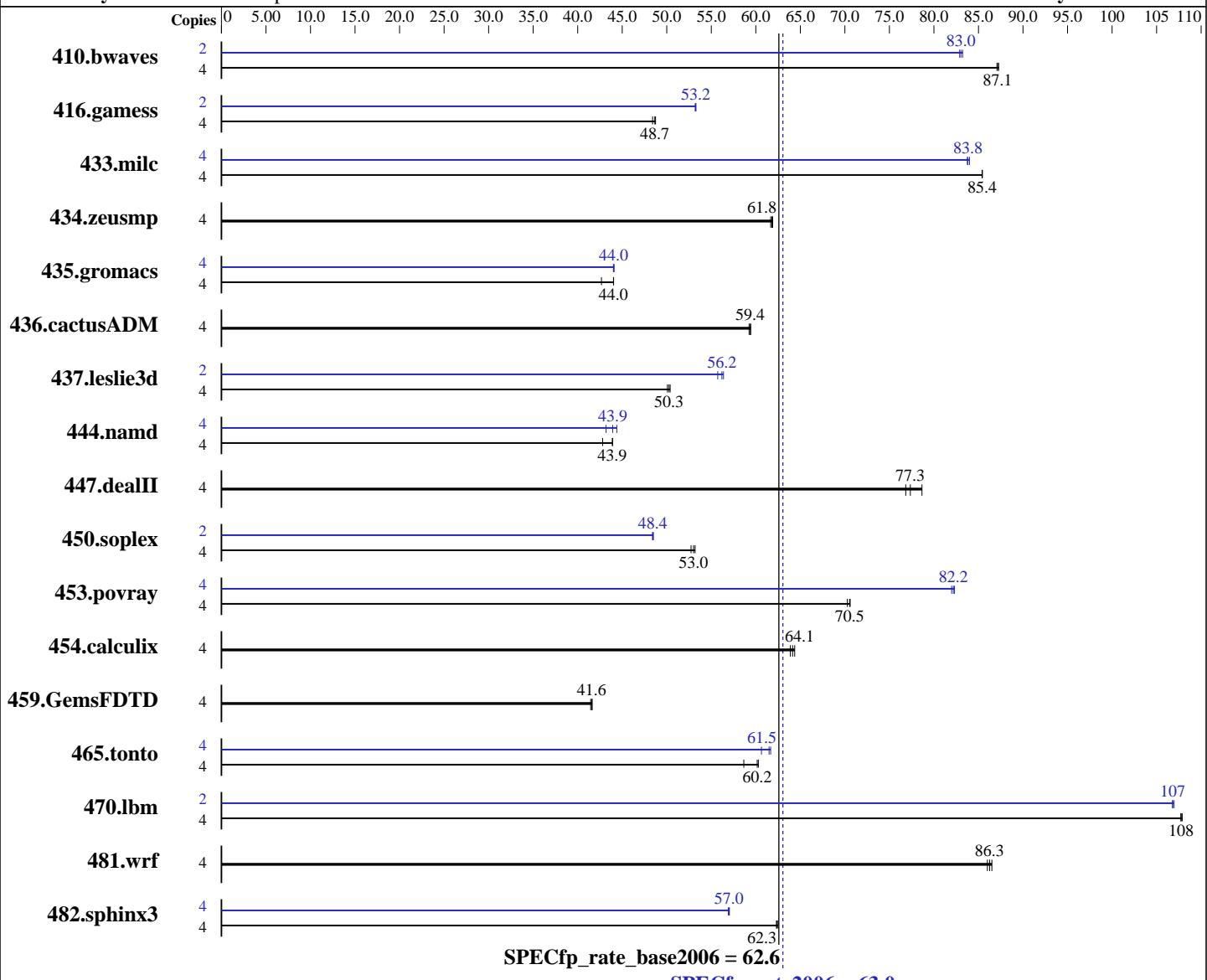
Test date: Mar-2011

Test sponsor: Acer Incorporated

Hardware Availability: Apr-2011

Tested by: Acer Incorporated

Software Availability: Jan-2011



## Hardware

CPU Name: Intel Xeon E3-1220L  
CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz  
CPU MHz: 2200  
FPU: Integrated  
CPU(s) enabled: 2 cores, 1 chip, 2 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

## 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: 3 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 16 GB (4 x 4 GB 2Rx8 PC3-10600E-9,ECC)  
 Disk Subsystem: 1 x 640 GB SATA, 7200 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	4	623	87.3	<b>624</b>	<b>87.1</b>	624	87.1	2	327	83.2	<b>327</b>	<b>83.0</b>	328	82.9
416.gamess	4	1607	48.7	1618	48.4	<b>1610</b>	<b>48.7</b>	2	736	53.2	<b>735</b>	<b>53.2</b>	735	53.3
433.milc	4	430	85.4	430	85.4	<b>430</b>	<b>85.4</b>	4	438	83.7	437	84.0	<b>438</b>	<b>83.8</b>
434.zeusmp	4	588	61.9	590	61.7	<b>589</b>	<b>61.8</b>	4	588	61.9	590	61.7	<b>589</b>	<b>61.8</b>
435.gromacs	4	649	44.0	669	42.7	<b>649</b>	<b>44.0</b>	4	649	44.0	648	44.1	<b>649</b>	<b>44.0</b>
436.cactusADM	4	804	59.4	807	59.2	<b>805</b>	<b>59.4</b>	4	804	59.4	807	59.2	<b>805</b>	<b>59.4</b>
437.leslie3d	4	<b>748</b>	<b>50.3</b>	746	50.4	751	50.1	2	<b>335</b>	<b>56.2</b>	337	55.7	334	56.4
444.namd	4	749	42.8	<b>731</b>	<b>43.9</b>	730	43.9	4	<b>730</b>	<b>43.9</b>	743	43.2	723	44.4
447.dealII	4	<b>592</b>	<b>77.3</b>	582	78.7	596	76.8	4	<b>592</b>	<b>77.3</b>	582	78.7	596	76.8
450.soplex	4	<b>629</b>	<b>53.0</b>	633	52.7	627	53.2	2	<b>345</b>	48.4	344	48.5	<b>344</b>	<b>48.4</b>
453.povray	4	303	70.3	301	70.6	<b>302</b>	<b>70.5</b>	4	<b>259</b>	<b>82.2</b>	260	82.0	259	82.3
454.calculix	4	513	64.4	517	63.9	<b>515</b>	<b>64.1</b>	4	513	64.4	517	63.9	<b>515</b>	<b>64.1</b>
459.GemsFDTD	4	1024	41.5	<b>1021</b>	<b>41.6</b>	1019	41.6	4	1024	41.5	<b>1021</b>	<b>41.6</b>	1019	41.6
465.tonto	4	653	60.3	671	58.6	<b>654</b>	<b>60.2</b>	4	638	61.7	<b>640</b>	<b>61.5</b>	649	60.6
470.lbm	4	509	108	510	108	<b>510</b>	<b>108</b>	2	257	107	<b>257</b>	<b>107</b>	257	107
481.wrf	4	520	86.0	517	86.5	<b>518</b>	<b>86.3</b>	4	520	86.0	517	86.5	<b>518</b>	<b>86.3</b>
482.sphinx3	4	1251	62.3	1248	62.5	<b>1251</b>	<b>62.3</b>	4	1367	57.0	<b>1368</b>	<b>57.0</b>	1370	56.9

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

## General Notes

Binaries compiled on RHEL5.5  
 This result was measured on the Gateway GT110 F2.  
 The Acer AT110 F2 is electronically equivalent.



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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 -ansi-alias

C++ benchmarks:

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

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

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



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## 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

## 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

470.lbm: -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  
-ansi-alias -opt-prefetch -auto-ilp32

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## Peak Optimization Flags (Continued)

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll12

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.dealII: 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  
-B /usr/share/libhugetlbfss/ -Wl,-hugetlbfss-link=BDT

453.povray: -xAVX(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: -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) -unroll12  
-inline-level=0 -scalar-rep -static

434.zeusmp: basepeak = yes

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

459.GemsFDTD: basepeak = yes

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

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

454.calculix: basepeak = yes

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## Peak Optimization Flags (Continued)

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-icl2.0-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-icl2.0-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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