



# SPEC® CFP2006 Result

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## Acer Incorporated

SPECfp®2006 = **76.8**

## Altos C100 F3 (Intel Xeon E3-1280 v3)

SPECfp\_base2006 = **75.6**

CPU2006 license: 97

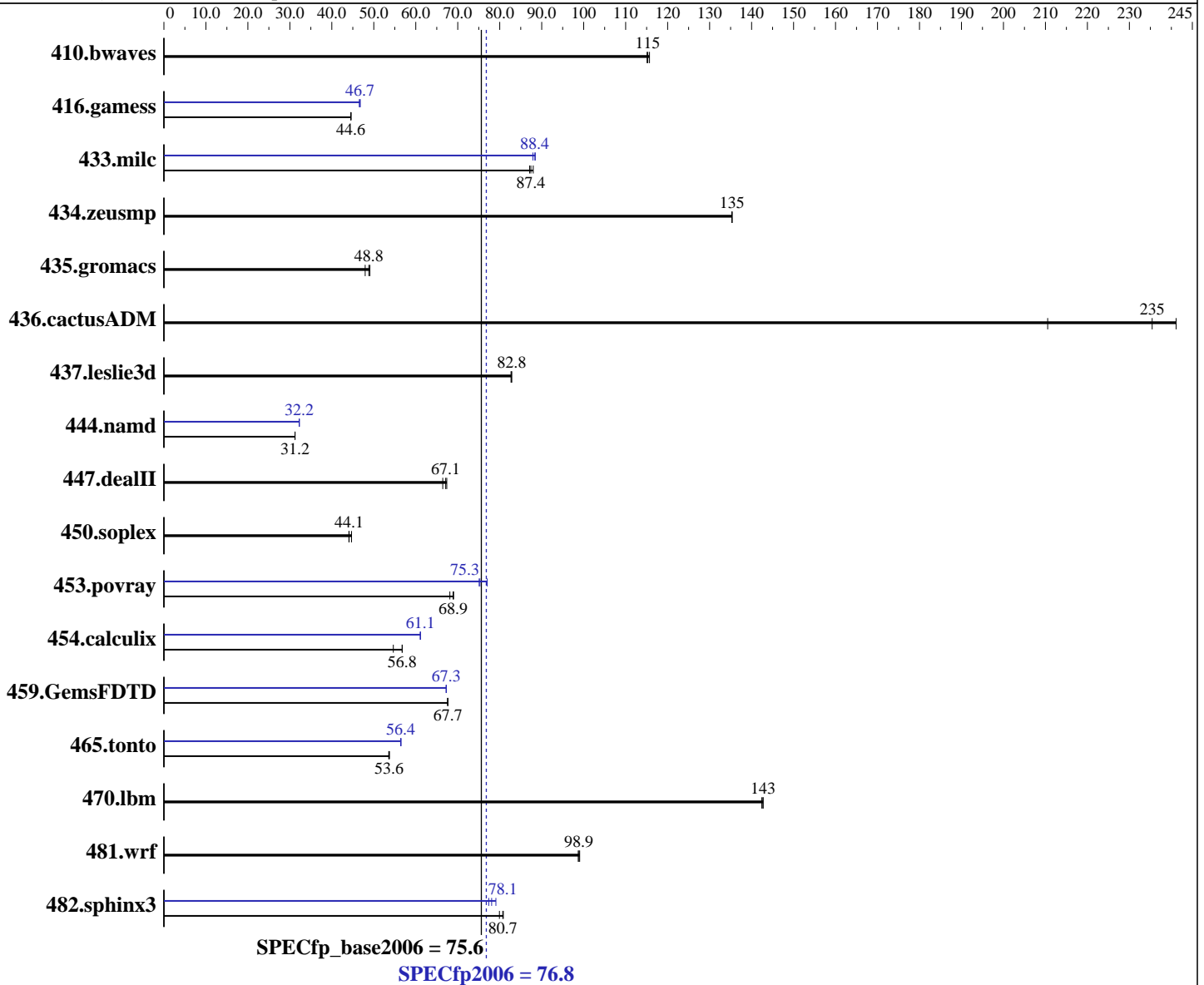
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Nov-2013

Hardware Availability: Jan-2014

Software Availability: Nov-2013



### Hardware

CPU Name: Intel Xeon E3-1280 v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 4.00 GHz  
 CPU MHz: 3600  
 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 6.4 (Santiago)  
 2.6.32-358.el6.x86\_64  
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux;  
 Fortran: Version 14.0.0.080 of Intel Fortran Studio XE for Linux  
 Auto Parallel: Yes  
 File System: ext4

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L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 16 GB (2 x 8 GB 2Rx8 PC3L-12800E-11, ECC)  
Disk Subsystem: 1 x 1 TB SATA, 7200 RPM  
Other Hardware: None

System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 32/64-bit  
Other Software: None

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	118	115	<b><u>118</u></b>	<b><u>115</u></b>	117	116	118	115	<b><u>118</u></b>	<b><u>115</u></b>	117	116
416.gamess	439	44.6	440	44.5	<b><u>439</u></b>	<b><u>44.6</u></b>	<b><u>419</u></b>	<b><u>46.7</u></b>	421	46.5	419	46.7
433.milc	104	88.0	<b><u>105</u></b>	<b><u>87.4</u></b>	105	87.1	104	88.5	104	87.9	<b><u>104</u></b>	<b><u>88.4</u></b>
434.zeusmp	<b><u>67.2</u></b>	<b><u>135</u></b>	67.2	135	67.2	135	<b><u>67.2</u></b>	<b><u>135</u></b>	67.2	135	67.2	135
435.gromacs	146	49.1	<b><u>146</u></b>	<b><u>48.8</u></b>	149	47.9	146	49.1	<b><u>146</u></b>	<b><u>48.8</u></b>	149	47.9
436.cactusADM	49.6	241	56.8	211	<b><u>50.8</u></b>	<b><u>235</u></b>	49.6	241	56.8	211	<b><u>50.8</u></b>	<b><u>235</u></b>
437.leslie3d	<b><u>113</u></b>	<b><u>82.8</u></b>	114	82.7	113	82.8	<b><u>113</u></b>	<b><u>82.8</u></b>	114	82.7	113	82.8
444.namd	257	31.2	257	31.2	<b><u>257</u></b>	<b><u>31.2</u></b>	249	32.2	<b><u>249</u></b>	<b><u>32.2</u></b>	249	32.2
447.dealII	<b><u>170</u></b>	<b><u>67.1</u></b>	170	67.4	172	66.4	<b><u>170</u></b>	<b><u>67.1</u></b>	170	67.4	172	66.4
450.soplex	<b><u>189</u></b>	<b><u>44.1</u></b>	187	44.7	189	44.1	<b><u>189</u></b>	<b><u>44.1</u></b>	187	44.7	189	44.1
453.povray	78.1	68.1	77.1	69.0	<b><u>77.2</u></b>	<b><u>68.9</u></b>	69.1	77.0	<b><u>70.7</u></b>	<b><u>75.3</u></b>	70.8	75.1
454.calculix	151	54.7	145	56.8	<b><u>145</u></b>	<b><u>56.8</u></b>	135	61.1	<b><u>135</u></b>	<b><u>61.1</u></b>	135	61.1
459.GemsFDTD	<b><u>157</u></b>	<b><u>67.7</u></b>	157	67.7	157	67.6	<b><u>158</u></b>	<b><u>67.3</u></b>	158	67.3	158	67.3
465.tonto	184	53.6	183	53.7	<b><u>184</u></b>	<b><u>53.6</u></b>	174	56.5	<b><u>174</u></b>	<b><u>56.4</u></b>	175	56.4
470.lbm	<b><u>96.3</u></b>	<b><u>143</u></b>	96.3	143	96.5	142	<b><u>96.3</u></b>	<b><u>143</u></b>	96.3	143	96.5	142
481.wrf	113	98.7	113	99.0	<b><u>113</u></b>	<b><u>98.9</u></b>	113	98.7	113	99.0	<b><u>113</u></b>	<b><u>98.9</u></b>
482.sphinx3	241	80.9	244	79.9	<b><u>241</u></b>	<b><u>80.7</u></b>	<b><u>250</u></b>	<b><u>78.1</u></b>	246	79.1	252	77.4

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

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Platform Notes

Sysinfo program /usr/cpu2006/config/sysinfo.rev6818  
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191  
running on localhost.localdomain Mon Nov 25 18:25:12 2013

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:  
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

From /proc/cpuinfo  
model name : Intel(R) Xeon(R) CPU E3-1280 v3 @ 3.60GHz  
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## Platform Notes (Continued)

```

1 "physical id"s (chips)
8 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
caution.)
  cpu cores : 4
  siblings  : 8
  physical 0: cores 0 1 2 3
cache size : 8192 KB

From /proc/meminfo
MemTotal:      16258880 kB
HugePages_Total:    0
Hugepagesize:    2048 kB

/usr/bin/lsb_release -d
  Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
Linux localhost.localdomain 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41
EST 2013 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 25 18:23

SPEC is set to: /usr/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda2       ext4      886G  11G  831G   2% /

Additional information from dmidecode:
BIOS Acer D09 11/15/2013
Memory:
  2x 8 GB
  2x Kingston ACR16D3LE1EFG/8G 8 GB 1600 MHz 2 rank

(End of data from sysinfo program)

```

## General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"  
OMP\_NUM\_THREADS = "4"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB  
memory using RedHat EL 6.4  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled

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## General Notes (Continued)

runspec command invoked through numactl i.e.:  
numactl --interleave=all runspec <etc>

## 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:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch  
-ansi-alias

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

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## Base Optimization Flags (Continued)

Fortran benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch  
-ansi-alias

## 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: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-auto-ilp32 -ansi-alias

470.lbm: basepeak = yes

482.sphinx3: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias  
-parallel

C++ benchmarks:

444.namd: -xCORE-AVX2(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

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## Peak Optimization Flags (Continued)

447.deallI: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xCORE-AVX2(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: basepeak = yes

416.gamess: -xCORE-AVX2(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-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130716.html>

<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130716.xml>

<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.xml>



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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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