



SPEC® CFP2006 Result

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Acer Incorporated

SPECfp®2006 = **69.5**

Altos T310 F3 (Intel Xeon E3-1220 v3)

SPECfp_base2006 = **68.3**

CPU2006 license: 97

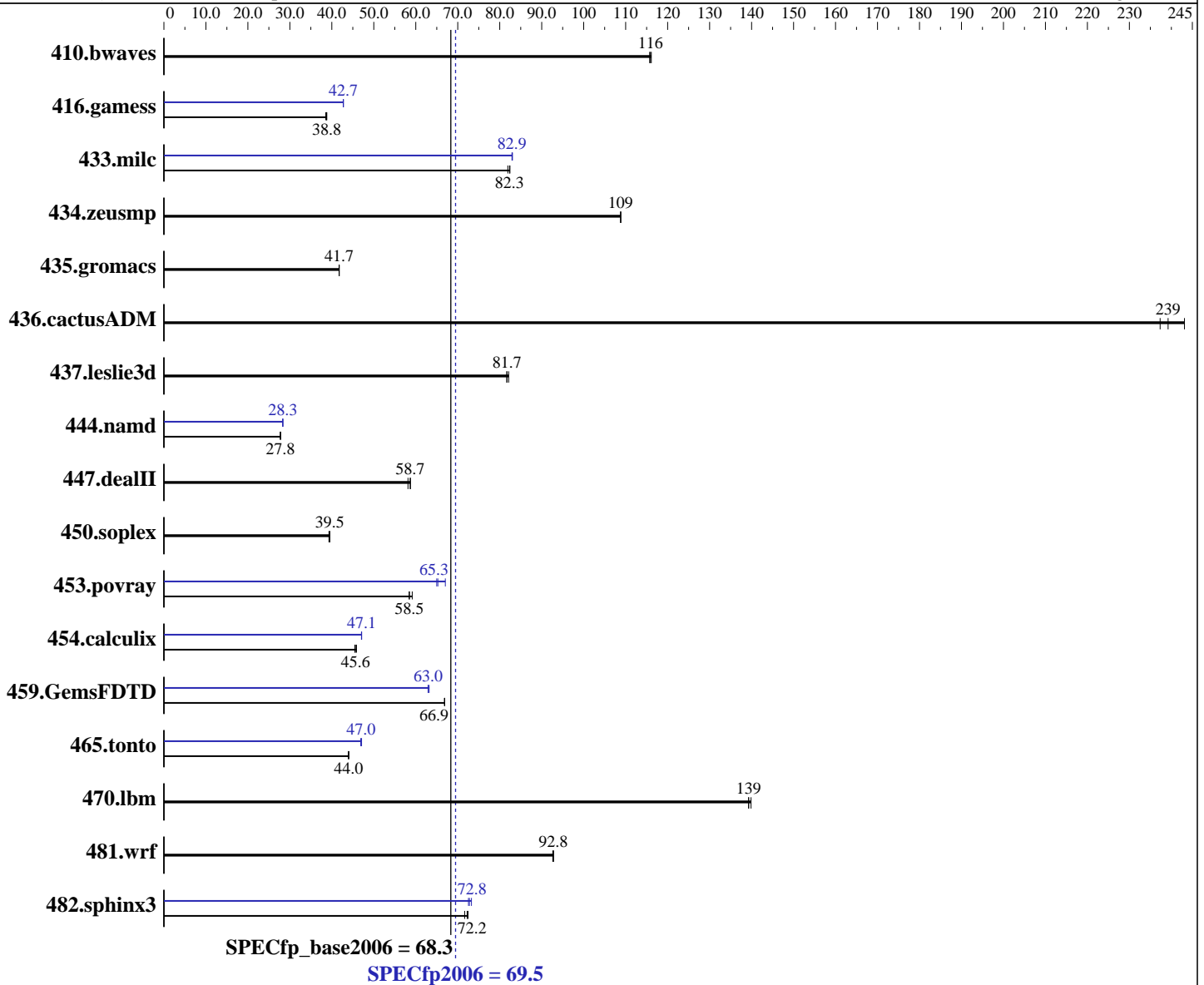
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Sep-2013

Hardware Availability: Sep-2013

Software Availability: Aug-2013



Hardware

CPU Name: Intel Xeon E3-1220 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 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 6.4 (Santiago)
 2.6.32-358.el6.x86_64
 Compiler: C/C++: Version 13.0.0.133 of Intel C++ Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32/64-bit

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L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 16 GB (2 x 8 GB 2Rx4 PC3L-12800E-11, ECC)
Disk Subsystem: 1 x 500 GB SATA, 7200 RPM
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.0

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	117	116	<u>117</u>	<u>116</u>	117	116	117	116	<u>117</u>	<u>116</u>	117	116
416.gamess	508	38.5	<u>505</u>	<u>38.8</u>	505	38.8	<u>458</u>	<u>42.7</u>	458	42.7	458	42.8
433.milc	<u>111</u>	<u>82.3</u>	111	82.4	112	81.9	111	83.0	<u>111</u>	<u>82.9</u>	111	82.9
434.zeusmp	83.6	109	83.6	109	<u>83.6</u>	<u>109</u>	83.6	109	83.6	109	<u>83.6</u>	<u>109</u>
435.gromacs	<u>171</u>	<u>41.7</u>	171	41.8	171	41.7	<u>171</u>	<u>41.7</u>	171	41.8	171	41.7
436.cactusADM	49.2	243	50.4	237	<u>50.0</u>	<u>239</u>	49.2	243	50.4	237	<u>50.0</u>	<u>239</u>
437.leslie3d	115	81.7	<u>115</u>	<u>81.7</u>	114	82.1	115	81.7	<u>115</u>	<u>81.7</u>	114	82.1
444.namd	289	27.7	289	27.8	<u>289</u>	<u>27.8</u>	283	28.3	<u>283</u>	<u>28.3</u>	283	28.3
447.dealII	<u>195</u>	<u>58.7</u>	197	58.1	195	58.7	<u>195</u>	<u>58.7</u>	197	58.1	195	58.7
450.soplex	<u>211</u>	<u>39.5</u>	211	39.5	212	39.3	<u>211</u>	<u>39.5</u>	211	39.5	212	39.3
453.povray	<u>90.9</u>	<u>58.5</u>	89.9	59.2	91.1	58.4	<u>81.5</u>	<u>65.3</u>	79.4	67.0	81.9	65.0
454.calculix	180	45.9	181	45.5	<u>181</u>	<u>45.6</u>	175	47.1	<u>175</u>	<u>47.1</u>	175	47.1
459.GemsFDTD	159	66.9	<u>159</u>	<u>66.9</u>	159	66.8	169	63.0	168	63.2	<u>169</u>	<u>63.0</u>
465.tonto	223	44.1	224	43.9	<u>224</u>	<u>44.0</u>	209	47.1	<u>209</u>	<u>47.0</u>	210	46.9
470.lbm	98.2	140	<u>98.6</u>	<u>139</u>	98.6	139	98.2	140	<u>98.6</u>	<u>139</u>	98.6	139
481.wrf	<u>120</u>	<u>92.8</u>	120	92.8	121	92.6	<u>120</u>	<u>92.8</u>	120	92.8	121	92.6
482.sphinx3	<u>270</u>	<u>72.2</u>	272	71.6	269	72.4	266	73.3	269	72.6	<u>268</u>	<u>72.8</u>

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 Fri Sep 6 21:32:56 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 E3-1220 v3 @ 3.10GHz
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Platform Notes (Continued)

```

1 "physical id"s (chips)
4 "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  : 4
  physical 0: cores 0 1 2 3
cache size : 8192 KB

From /proc/meminfo
MemTotal:      16282748 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 Sep 5 19:26

SPEC is set to: /usr/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/mapper/VolGroup-lv_root
ext3           50G   13G   34G  28% /

Additional information from dmidecode:
BIOS Acer P01 08/26/2013
Memory:
2x      8 GB
2x Hynix/Hyundai HMT41GU7AFR8A-PB 8 GB 1600 MHz 2 rank
2x [Empty] [Empty]

(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 RHEL5.5

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General Notes (Continued)

Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 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 -static -parallel -opt-prefetch
 -ansi-alias

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Base Optimization Flags (Continued)

C++ benchmarks:

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

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

`-xCORE-AVX2 -ipo -O3 -no-prec-div -static -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) -static
-auto-ilp32 -ansi-alias`

470.lbm: `basepeak = yes`

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

C++ benchmarks:

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Peak Optimization Flags (Continued)

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

447.dealIII: 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- -static

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/Acer-Platform-Settings-V1.2-revA.20130423.html>

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

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

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

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



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For other inquiries, please contact webmaster@spec.org.

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