



SPEC® CFP2006 Result

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Acer Incorporated

SPECfp®2006 = 57.7

Acer AT110 F2, (Intel Xeon E3-1220 v2, 3.10 GHz)

SPECfp_base2006 = 56.6

CPU2006 license: 97

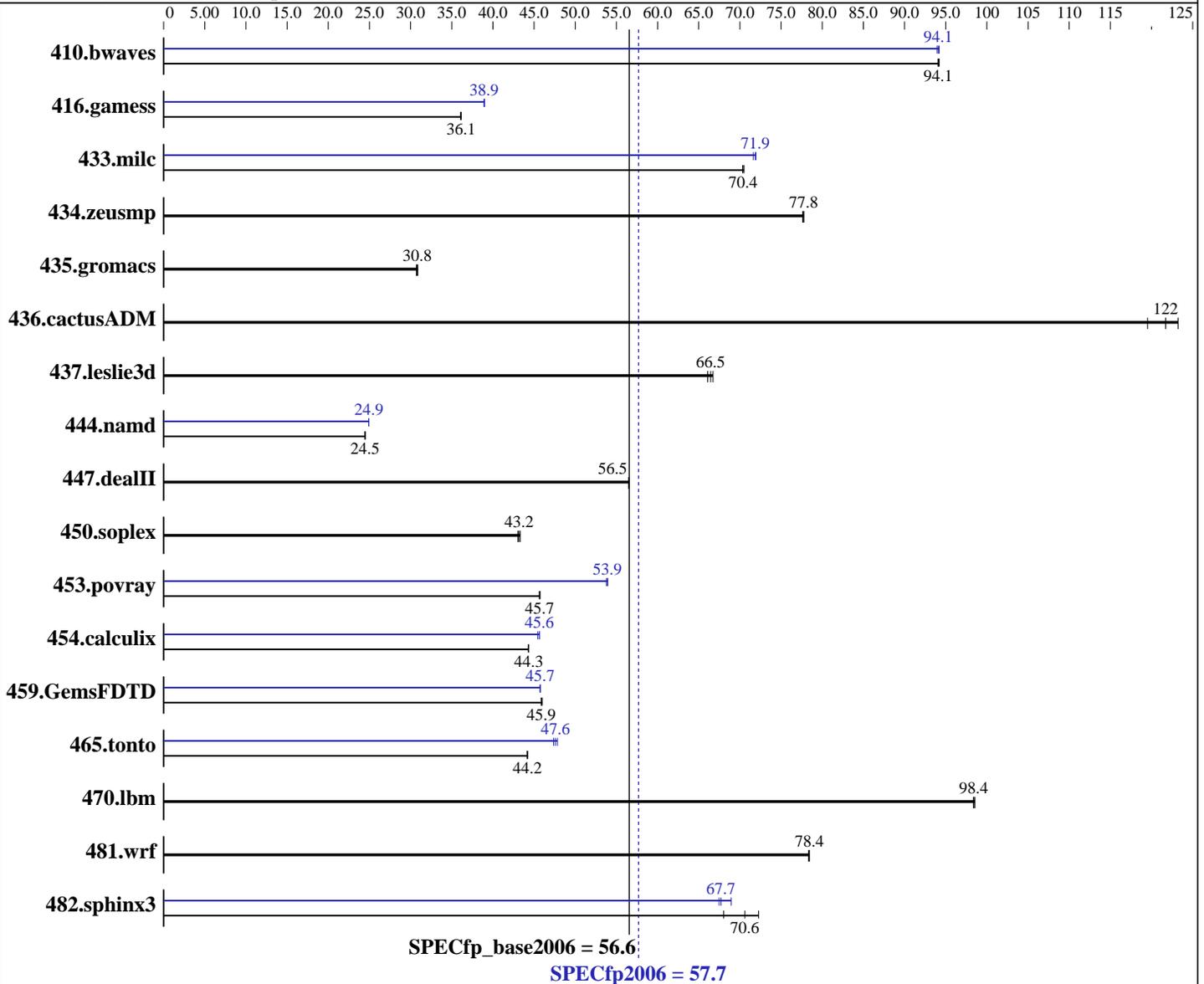
Test date: Jun-2012

Test sponsor: Acer Incorporated

Hardware Availability: Jan-2012

Tested by: Acer Incorporated

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E3-1220 v2
 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 6.0 (Santiago)
 2.6.32-71.el6.x86_64
 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: Yes
 File System: ext3

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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-10600E-9-11-E0, ECC)
 Disk Subsystem: 1 x 500 GB SATAII, 7200RPM
 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	144	94.2	144	94.1	144	94.1	145	94.0	144	94.1	144	94.2
416.gamess	543	36.1	542	36.1	542	36.1	503	38.9	502	39.0	503	38.9
433.milc	130	70.5	130	70.4	131	70.3	128	71.6	128	71.9	128	71.9
434.zeusmp	117	77.8	117	77.6	117	77.8	117	77.8	117	77.6	117	77.8
435.gromacs	232	30.8	231	30.9	233	30.7	232	30.8	231	30.9	233	30.7
436.cactusADM	98.2	122	97.0	123	100	120	98.2	122	97.0	123	100	120
437.leslie3d	141	66.7	141	66.5	142	66.1	141	66.7	141	66.5	142	66.1
444.namd	328	24.5	328	24.5	328	24.5	322	24.9	322	24.9	322	24.9
447.dealII	202	56.6	203	56.5	203	56.5	202	56.6	203	56.5	203	56.5
450.soplex	193	43.3	194	43.0	193	43.2	193	43.3	194	43.0	193	43.2
453.povray	116	45.7	117	45.6	116	45.7	98.7	53.9	98.6	53.9	98.9	53.8
454.calculix	186	44.3	186	44.3	186	44.3	182	45.5	181	45.6	181	45.7
459.GemsFDTD	231	45.9	231	46.0	231	45.9	232	45.8	232	45.7	232	45.7
465.tonto	223	44.2	223	44.2	223	44.1	206	47.8	208	47.4	207	47.6
470.lbm	140	98.4	139	98.5	140	98.4	140	98.4	139	98.5	140	98.4
481.wrf	142	78.4	143	78.3	142	78.4	142	78.4	143	78.3	142	78.4
482.sphinx3	276	70.6	286	68.0	270	72.3	289	67.5	288	67.7	283	69.0

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 /user/cpu2006/config/sysinfo.rev6800
 \$Rev: 6800 \$ \$Date:: 2011-10-11 #\$ 6f2ebdff5032aaa42e583f96b07f99d3
 running on localhost.localdomain Tue Jun 26 17:30:48 2012

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 V2 @ 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:      16437540 kB
HugePages_Total:    0
Hugepagesize:    2048 kB

/usr/bin/lsb_release -d
  Red Hat Enterprise Linux Server release 6.0 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.0 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.0 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
Linux localhost.localdomain 2.6.32-71.el6.x86_64 #1 SMP Wed Sep 1 01:33:01
EDT 2010 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jun 22 17:56

SPEC is set to: /user/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda2       ext3      197G   21G  167G  12% /

Additional information from dmidecode:
BIOS Acer D22 06/18/2012
Memory:
  2x 830B NT8GC72C8PB0NF-CG 8 GB 1333 MHz 2 rank

(End of data from sysinfo program)

```

General Notes

Environment variables set by runspec before the start of the run:

```

KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/user/cpu2006/libs/32:/user/cpu2006/libs/64"
OMP_NUM_THREADS = "2"

```

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
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:

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

C++ benchmarks:

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

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Base Optimization Flags (Continued)

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

`-xAVX -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: `-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
-ansi-alias`

470.lbm: `basepeak = yes`

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

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`

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Peak Optimization Flags (Continued)

447.deallI: basepeak = yes

450.soplex: basepeak = yes

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 -ipo -O3 -no-prec-div -opt-prefetch -parallel
-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: basepeak = yes

459.GemsFDTD: -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 -opt-prefetch -parallel

465.tonto: -xAVX(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: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes

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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