SPEC® CFP2006 Result
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Acer Incorporated

Acer AT110 F2, (Intel Xeon E3-1280 v2, 3.60 GHz)

$SPECfp^{®}\_rate2006 = 128$

$SPECfp\_rate\_base2006 = 125$

CPU2006 license: 97	**Test date:** Jun-2012
Test sponsor: Acer Incorporated	**Hardware Availability:** Jan-2012
Tested by: Acer Incorporated	**Software Availability:** Dec-2011

Copies

Benchmark	Copies	Value
410.bwaves	4	96.5
	8	94.6
416.gamess	8	170
	8	165
433.milc	8	96.7
	8	96.6
434.zeusmp	8	144
435.gromacs	8	131
	8	131
436.cactusADM	8	147
437.leslie3d	4	66.6
	8	62.0
444.namd	8	129
	8	130
447.dealII	8	259
450.soplex	4	85.2
	8	70.5
453.povray	8	262
	8	226
454.calculix	8	212
	8	212
459.GemsFDTD	4	58.7
	8	60.5
465.tonto	8	151
	8	146
470.lbm	8	125
481.wrf	8	114
	8	113
482.sphinx3	8	116
	8	114

SPECfp_rate_base2006 = 125

SPECfp_rate2006 = 128

Hardware

CPU Name:	Intel Xeon E3-1280 v2
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

Continued on next page

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:	No
File System:	ext3

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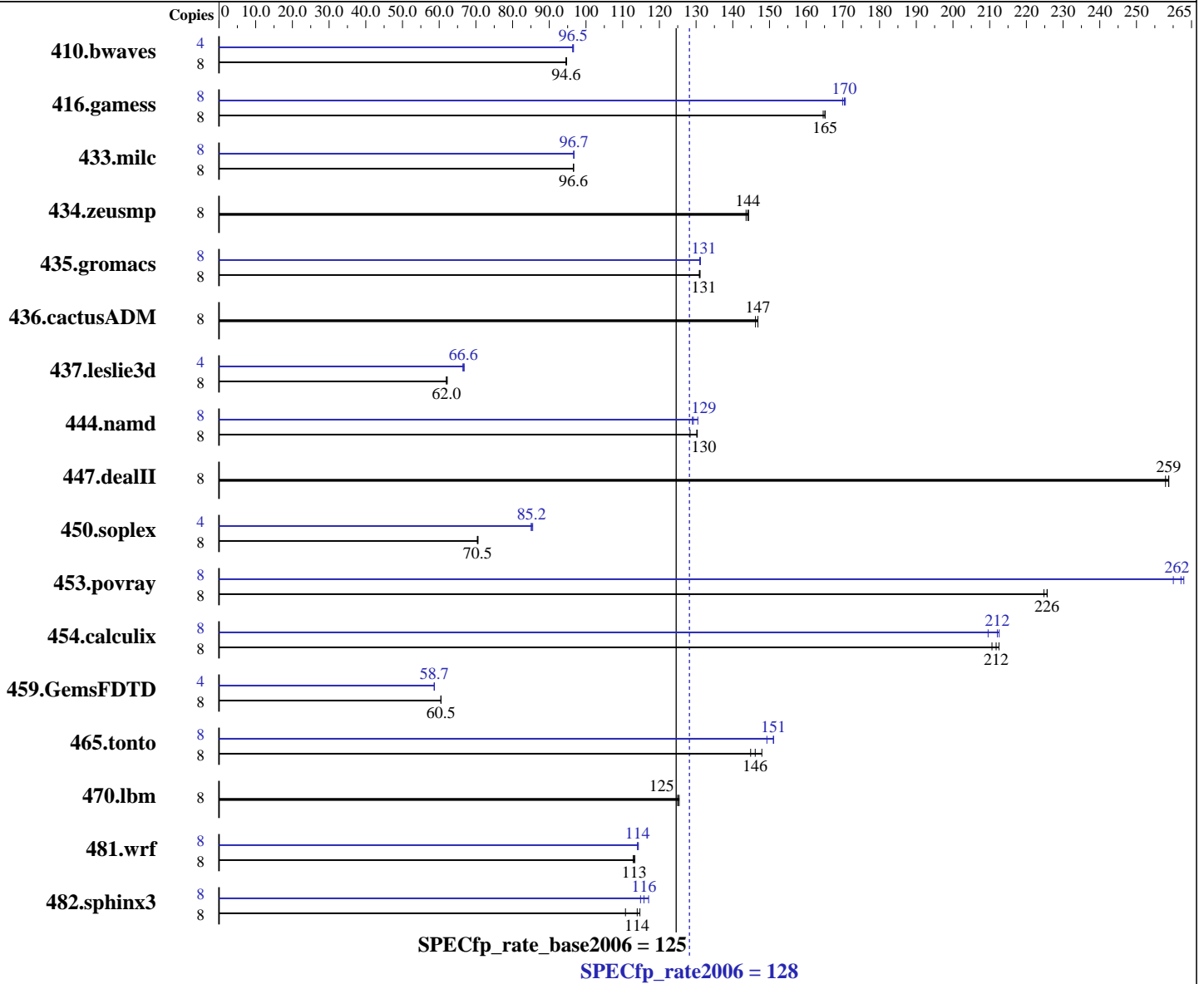SPECfp_rate_base2006 = 125

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Test date: Jun-2012
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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: 32/64-bit
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	8	1148	94.7	**1149**	**94.6**	1150	94.6	4	564	96.4	563	96.6	**563**	**96.5**
416.gamess	8	948	165	**949**	**165**	951	165	8	918	171	922	170	**919**	**170**
433.milc	8	760	96.6	**760**	**96.6**	760	96.6	8	**759**	**96.7**	760	96.7	759	96.7
434.zeusmp	8	**505**	**144**	507	144	504	144	8	**505**	**144**	507	144	504	144
435.gromacs	8	436	131	436	131	**436**	**131**	8	435	131	436	131	**436**	**131**
436.cactusADM	8	**651**	**147**	651	147	654	146	8	**651**	**147**	651	147	654	146
437.leslie3d	8	1209	62.2	**1213**	**62.0**	1214	61.9	4	**564**	**66.6**	566	66.5	563	66.8
444.namd	8	500	128	**493**	**130**	492	130	8	492	130	497	129	**496**	**129**
447.dealII	8	**354**	**259**	355	258	354	259	8	**354**	**259**	355	258	354	259
450.soplex	8	945	70.6	948	70.4	**947**	**70.5**	4	**392**	**85.2**	392	85.1	390	85.5
453.povray	8	189	225	189	226	**189**	**226**	8	162	263	164	260	**162**	**262**
454.calculix	8	311	213	313	211	**312**	**212**	8	315	210	310	213	**311**	**212**
459.GemsFDTD	8	**1403**	**60.5**	1403	60.5	1404	60.5	4	723	58.7	724	58.6	**723**	**58.7**
465.tonto	8	532	148	**539**	**146**	543	145	8	521	151	527	149	**521**	**151**
470.lbm	8	877	125	879	125	**879**	**125**	8	877	125	879	125	**879**	**125**
481.wrf	8	789	113	**790**	**113**	792	113	8	782	114	783	114	**783**	**114**
482.sphinx3	8	1359	115	1408	111	**1368**	**114**	8	1332	117	1357	115	**1346**	**116**

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

Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset commands to bind each copy to a specific processor. For details, please see the config file.

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 Wed Jun 27 21:05:34 2012

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Platform Notes (Continued)

```
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 V2 @ 3.60GHz
      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:        16437044 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 27 11:04

SPEC is set to: /user/cpu2006
   Filesystem     Type     Size   Used Avail Use% Mounted on
   /dev/sda2      ext3     197G    25G  163G  13% /

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)
```

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General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/user/cpu2006/libs/32:/user/cpu2006/libs/64"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RHEL5.5
 Transparent Huge Pages disabled with:
 echo never  > /sys/kernel/mm/redhat_transparent_hugepage/enabled
```

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 -opt-prefetch -auto-p32`
    `-ansi-alias -opt-mem-layout-trans=3`
Continued on next page

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Base Optimization Flags (Continued)

C++ benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3
```

Fortran benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch
```

Benchmarks using both Fortran and C:
```
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3
```

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
465.tonto: -DSPEC_CPU_LP64
```

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Peak Portability Flags (Continued)

    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
              -opt-mem-layout-trans=3

      470.lbm: basepeak = yes

   482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2

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

    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(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) -unroll2
              -inline-level=0 -scalar-rep- -static

    434.zeusmp: basepeak = yes

    437.leslie3d: -xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

  459.GemsFDTD: -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

     465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto
              -inline-calloc -opt-malloc-options=3

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Peak Optimization Flags (Continued)

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 -opt-mem-layout-trans=3

    436.cactusADM: basepeak = yes

    454.calculix: -xAVX -ipo -O3 -no-prec-div -static -auto-ilp32
                  -opt-mem-layout-trans=3

    481.wrf: Same as 454.calculix

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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