SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

Acer AR360 F2 (Xeon E5-2670)

$SPECfp^{®}2006 =$ 83.5

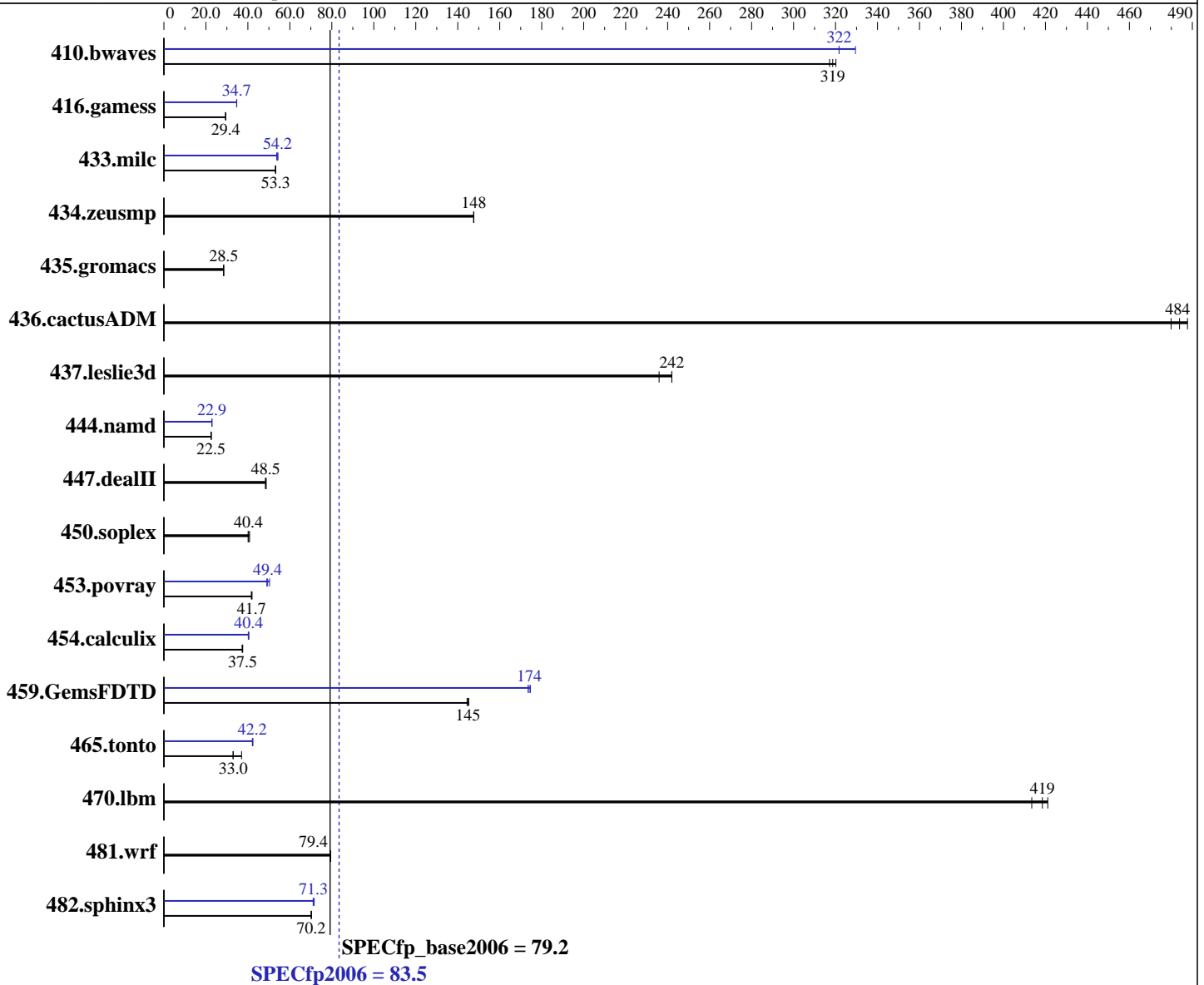$SPECfp\_base2006 =$ 79.2

CPU2006 license: 97
Test sponsor: Acer Incorporated
Tested by: Acer Incorporated

Test date: Sep-2012
Hardware Availability: Jun-2012
Software Availability: Dec-2011

Benchmark	Base	Peak
410.bwaves	319	322
416.gamess	29.4	34.7
433.milc	53.3	54.2
434.zeusmp	148	
435.gromacs	28.5	
436.cactusADM	484	
437.leslie3d	242	
444.namd	22.5	22.9
447.dealII	48.5	
450.soplex	40.4	
453.povray	41.7	49.4
454.calculix	37.5	40.4
459.GemsFDTD	145	174
465.tonto	33.0	42.2
470.lbm	419	
481.wrf	79.4	
482.sphinx3	70.2	71.3

SPECfp_base2006 = 79.2
SPECfp2006 = 83.5

Hardware

CPU Name: Intel Xeon E5-2670
CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
CPU MHz: 2600
FPU: Integrated
CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable: 1,2 chips
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 6.2 (Santiago)
2.6.32-220.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: ext4
Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

Acer AR360 F2 (Xeon E5-2670)

SPECfp2006 =	83.5
SPECfp_base2006 =	79.2

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Sep-2012

Hardware Availability: Jun-2012

Software Availability: Dec-2011

L3 Cache:	20 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (16 x 8 GB 2Rx4 PC3L-10600R-9, ECC)
Disk Subsystem:	1 x 600 GB SAS, 10K 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	42.4	320	**42.6**	**319**	42.8	317	41.2	329	42.2	322	**42.2**	**322**
416.gamess	667	29.4	665	29.4	**666**	**29.4**	564	34.7	**565**	**34.7**	565	34.6
433.milc	172	53.3	**172**	**53.3**	173	53.1	169	54.3	171	53.7	**169**	**54.2**
434.zeusmp	61.6	148	**61.6**	**148**	61.6	148	61.6	148	**61.6**	**148**	61.6	148
435.gromacs	251	28.5	**251**	**28.5**	251	28.4	251	28.5	251	28.5	251	28.4
436.cactusADM	24.9	480	24.5	488	**24.7**	**484**	24.9	480	24.5	488	**24.7**	**484**
437.leslie3d	38.8	242	39.8	236	**38.8**	**242**	38.8	242	39.8	236	**38.8**	**242**
444.namd	356	22.5	**356**	**22.5**	356	22.5	351	22.9	351	22.9	**351**	**22.9**
447.dealII	235	48.7	**236**	**48.5**	236	48.4	235	48.7	**236**	**48.5**	236	48.4
450.soplex	**207**	**40.4**	204	40.8	208	40.1	**207**	**40.4**	204	40.8	208	40.1
453.povray	127	42.0	128	41.7	**127**	**41.7**	106	50.3	109	49.0	**108**	**49.4**
454.calculix	220	37.5	222	37.2	**220**	**37.5**	204	40.4	205	40.2	**204**	**40.4**
459.GemsFDTD	**73.3**	**145**	73.5	144	73.1	145	61.2	174	60.8	175	**61.0**	**174**
465.tonto	**298**	**33.0**	266	37.0	299	33.0	**233**	**42.2**	232	42.4	233	42.2
470.lbm	**32.8**	**419**	32.6	421	33.2	413	**32.8**	**419**	32.6	421	33.2	413
481.wrf	141	79.3	141	79.4	**141**	**79.4**	141	79.3	141	79.4	**141**	**79.4**
482.sphinx3	278	70.2	277	70.3	**278**	**70.2**	272	71.6	**273**	**71.3**	274	71.1

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.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on spec Wed Sep 12 19:47:02 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 E5-2670 0 @ 2.60GHz
```

Acer Incorporated

Acer AR360 F2 (Xeon E5-2670)

$SPECfp2006 =$ 83.5

$SPECfp\_base2006 =$ 79.2

CPU2006 license: 97
Test sponsor: Acer Incorporated
Tested by: Acer Incorporated

Test date: Sep-2012
Hardware Availability: Jun-2012
Software Availability: Dec-2011

Platform Notes (Continued)

```
      2 "physical id"s (chips)
      32 "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 : 8
      siblings  : 16
      physical 0: cores 0 1 2 3 4 5 6 7
      physical 1: cores 0 1 2 3 4 5 6 7
   cache size : 20480 KB

 From /proc/meminfo
   MemTotal:       132269728 kB
   HugePages_Total:        0
   Hugepagesize:        2048 kB

 /usr/bin/lsb_release -d
   Red Hat Enterprise Linux Server release 6.2 (Santiago)

 From /etc/*release* /etc/*version*
   redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
   system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

 uname -a:
   Linux spec 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13 EST 2011 x86_64
   x86_64 x86_64 GNU/Linux

 run-level 3 Sep 10 11:48

 SPEC is set to: /usr/cpu2006
   Filesystem     Type    Size  Used Avail Use% Mounted on
   /dev/sda1      ext4    397G   65G  312G  18% /

 Additional information from dmidecode:
   Memory:
     14x Hynix Semiconducto HMT31GR7CFR4A 8 GB 1333 MHz 1 rank
     2x Hynix Semiconductor HMT31GR7CFR4A- 8 GB 1333 MHz 1 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 = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"
OMP_NUM_THREADS = "16"

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

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

Acer AR360 F2 (Xeon E5-2670)

$SPECfp2006 =$ 83.5

$SPECfp\_base2006 =$ 79.2

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Sep-2012

Hardware Availability: Jun-2012

Software Availability: Dec-2011

General Notes (Continued)

```
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
The Acer AR360 F2 and AR380 F2 are electronically equivalent.
This result was measured on Acer AR380 F2.
```

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
```

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

Acer AR360 F2 (Xeon E5-2670)

SPECfp2006 =   83.5

SPECfp_base2006 =   79.2

CPU2006 license: 97
Test sponsor: Acer Incorporated
Tested by: Acer Incorporated

Test date: Sep-2012
Hardware Availability: Jun-2012
Software Availability: Dec-2011

Base Optimization Flags (Continued)

C++ benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias
```

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:

Continued on next page

Acer Incorporated	$SPECfp2006 =$	83.5
Acer AR360 F2 (Xeon E5-2670)	$SPECfp\_base2006 =$	79.2

CPU2006 license: 97
Test sponsor: Acer Incorporated
Tested by: Acer Incorporated

Test date: Sep-2012
Hardware Availability: Jun-2012
Software Availability: Dec-2011

Peak Optimization Flags (Continued)

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: 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

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

Acer AR360 F2 (Xeon E5-2670)

SPECfp2006 = 83.5

SPECfp_base2006 = 79.2

CPU2006 license: 97
Test sponsor: Acer Incorporated
Tested by: Acer Incorporated

Test date: Sep-2012
Hardware Availability: Jun-2012
Software Availability: Dec-2011

SPEC and SPECfp are registered trademarks of the Standard Performance
Evaluation Corporation. All other brand and product names appearing in
this result are trademarks or registered trademarks of their respective
holders.

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 12:47:22 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 October 2012.