SPEC® CFP2006 Result
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Acer Incorporated

Acer AW2000ht-AW170ht F1 (Intel Xeon L5609, 1.86 GHz)

$SPECfp®\_rate2006 =$ 127

SPECfp_rate_base2006 = 122

CPU2006 license: 97
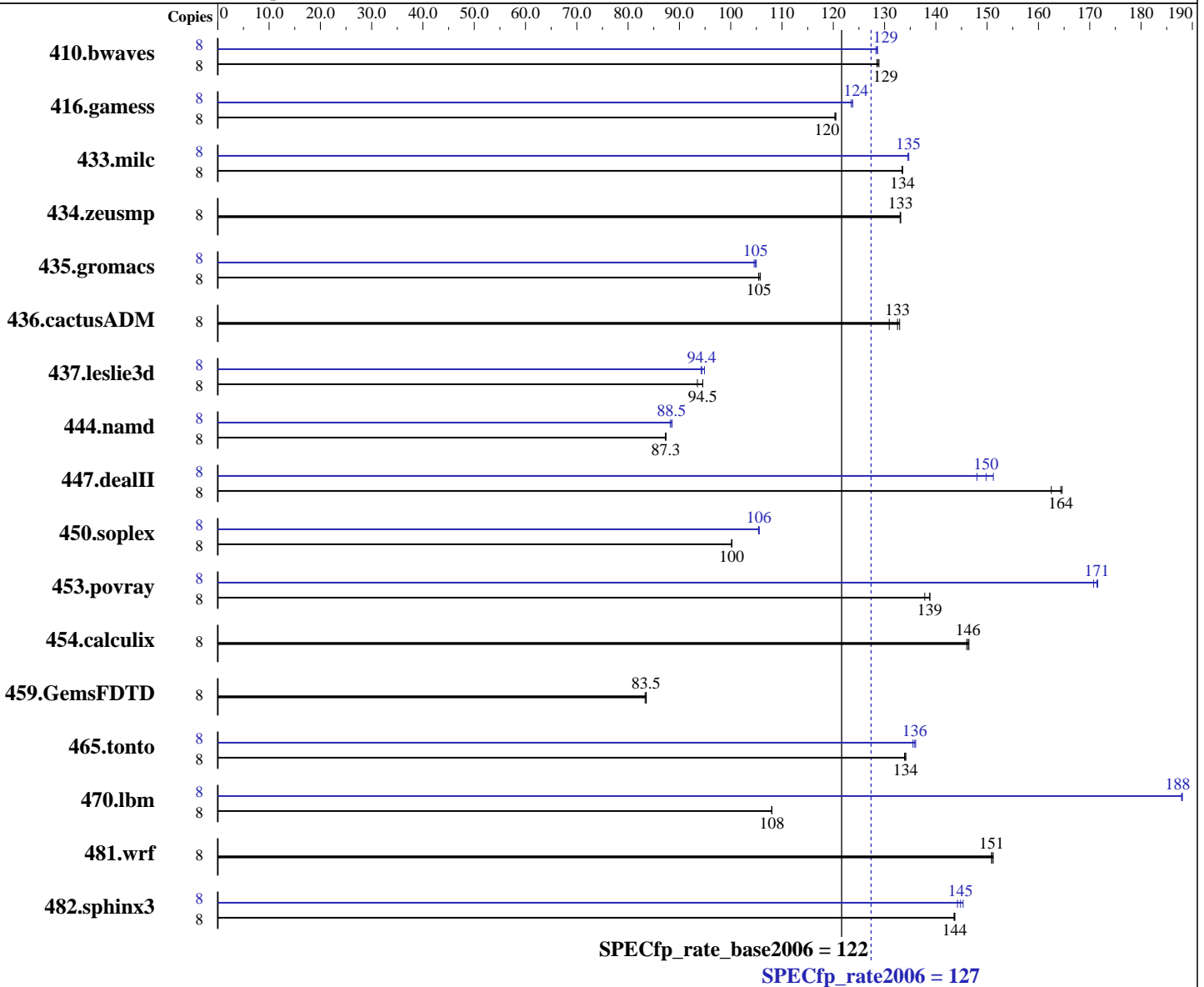
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Aug-2011

Hardware Availability: Aug-2010

Software Availability: Jan-2011

Benchmark	Copies	Result
410.bwaves	8 / 8	129 / 129
416.gamess	8 / 8	124 / 120
433.milc	8 / 8	135 / 134
434.zeusmp	8	133
435.gromacs	8 / 8	105 / 105
436.cactusADM	8	133
437.leslie3d	8 / 8	94.4 / 94.5
444.namd	8 / 8	88.5 / 87.3
447.dealII	8 / 8	150 / 164
450.soplex	8 / 8	106 / 100
453.povray	8 / 8	171 / 139
454.calculix	8	146
459.GemsFDTD	8	83.5
465.tonto	8 / 8	136 / 134
470.lbm	8 / 8	188 / 108
481.wrf	8	151
482.sphinx3	8 / 8	145 / 144

SPECfp_rate_base2006 = 122

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Hardware

CPU Name: Intel Xeon L5609

CPU Characteristics:

CPU MHz: 1866

FPU: Integrated

CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip

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: SUSE Linux Enterprise Server 11 (x86_64) SP1, Kernel 2.6.32.12-0.7-default

Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64
Version 12.0.1.116 Build 20101116

Auto Parallel: No

File System: ReiserFS

System State: Run level 3 (multi-user)

Base Pointers: 64-bit

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L3 Cache:	12 MB I+D on chip per chip	Peak Pointers:	32/64-bit
Other Cache:	None	Other Software:	None
Memory:	48 GB (12 x 4 GB 2Rx8 PC3-10600R-9, ECC)		
Disk Subsystem:	1 x 1000 GB SATA 7200 RPM		
Other Hardware:	None		

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	846	129	**844**	**129**	843	129	8	847	128	**846**	**129**	845	129
416.gamess	8	1300	120	1302	120	**1300**	**120**	8	1269	123	1265	124	**1266**	**124**
433.milc	8	**550**	**134**	550	134	551	133	8	545	135	546	135	**545**	**135**
434.zeusmp	8	**547**	**133**	547	133	547	133	8	**547**	**133**	547	133	547	133
435.gromacs	8	540	106	542	105	**541**	**105**	8	546	105	**545**	**105**	544	105
436.cactusADM	8	719	133	730	131	**721**	**133**	8	719	133	730	131	**721**	**133**
437.leslie3d	8	795	94.6	804	93.5	**795**	**94.5**	8	798	94.3	**797**	**94.4**	793	94.9
444.namd	8	735	87.3	**735**	**87.3**	734	87.4	8	**725**	**88.5**	724	88.6	727	88.2
447.dealII	8	556	165	563	163	**557**	**164**	8	**611**	**150**	618	148	605	151
450.soplex	8	666	100	**666**	**100**	666	100	8	632	106	633	105	**632**	**106**
453.povray	8	307	139	**307**	**139**	309	138	8	249	171	**248**	**171**	248	172
454.calculix	8	451	146	**451**	**146**	452	146	8	451	146	**451**	**146**	452	146
459.GemsFDTD	8	**1016**	**83.5**	1016	83.6	1019	83.3	8	**1016**	**83.5**	1016	83.6	1019	83.3
465.tonto	8	587	134	**587**	**134**	588	134	8	**579**	**136**	581	136	579	136
470.lbm	8	**1018**	**108**	1018	108	1018	108	8	585	188	584	188	**585**	**188**
481.wrf	8	**592**	**151**	591	151	592	151	8	**592**	**151**	591	151	592	151
482.sphinx3	8	1085	144	1086	144	**1085**	**144**	8	1081	144	1073	145	**1077**	**145**

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

Submit Notes

    The config file option 'submit' was used.
     numactl was used to bind copies to the cores

Operating System Notes

     'ulimit -s unlimited' was used to set environment stack size
     Large pages were disabled for this run

Platform Notes

     BIOS Settings:
     Fan speed = full speed (Default = Balanced)
     Data Reuse = Disabled (Default = Enabled)

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General Notes

```
  Binaries compiled on RHEL5.5
  None
  The Acer AW2000h-AW170h F1, Gateway GW2000h-GW170h F1, Acer AW2000ht-AW170ht F1  and Gateway GW2000ht-GW170ht F1
  are electronically equivalent.  This result was measured on Gateway GW2000ht-GW170ht F1.
```

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:
```
    -xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias
```

C++ benchmarks:
```
    -xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias
```

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Base Optimization Flags (Continued)

Fortran benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static
```

Benchmarks using both Fortran and C:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias
```

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`
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`

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Peak Optimization Flags

C benchmarks:

> 433.milc: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
> `-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32`

> 470.lbm: `-xSSE4.2(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`
> `-ansi-alias -opt-prefetch -static -auto-ilp32`

> 482.sphinx3: `-xSSE4.2 -ipo -O3 -no-prec-div -unroll2`

C++ benchmarks:

> 444.namd: `-xSSE4.2(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: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
> `-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32`

> 450.soplex: `-xSSE4.2(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`
> `-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT`

> 453.povray: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
> `-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias`
> `-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

Fortran benchmarks:

> 410.bwaves: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
> `-no-prec-div(pass 2) -prof-use(pass 2) -static`

> 416.gamess: `-xSSE4.2(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: `-xSSE4.2 -ipo -O3 -no-prec-div`
> `-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

> 459.GemsFDTD: `basepeak = yes`

> 465.tonto: `-xSSE4.2(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`
> `-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

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Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

```
435.gromacs: -xSSE4.2(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
```

```
436.cactusADM: basepeak = yes
```

```
454.calculix: basepeak = yes
```

```
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-ic12.0-linux64-revB.html
http://www.spec.org/cpu2006/flags/Acer-Intel-Linux-Settings-flags.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml
http://www.spec.org/cpu2006/flags/Acer-Intel-Linux-Settings-flags.xml

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

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