SPEC® CFP2006 Result
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Acer Incorporated
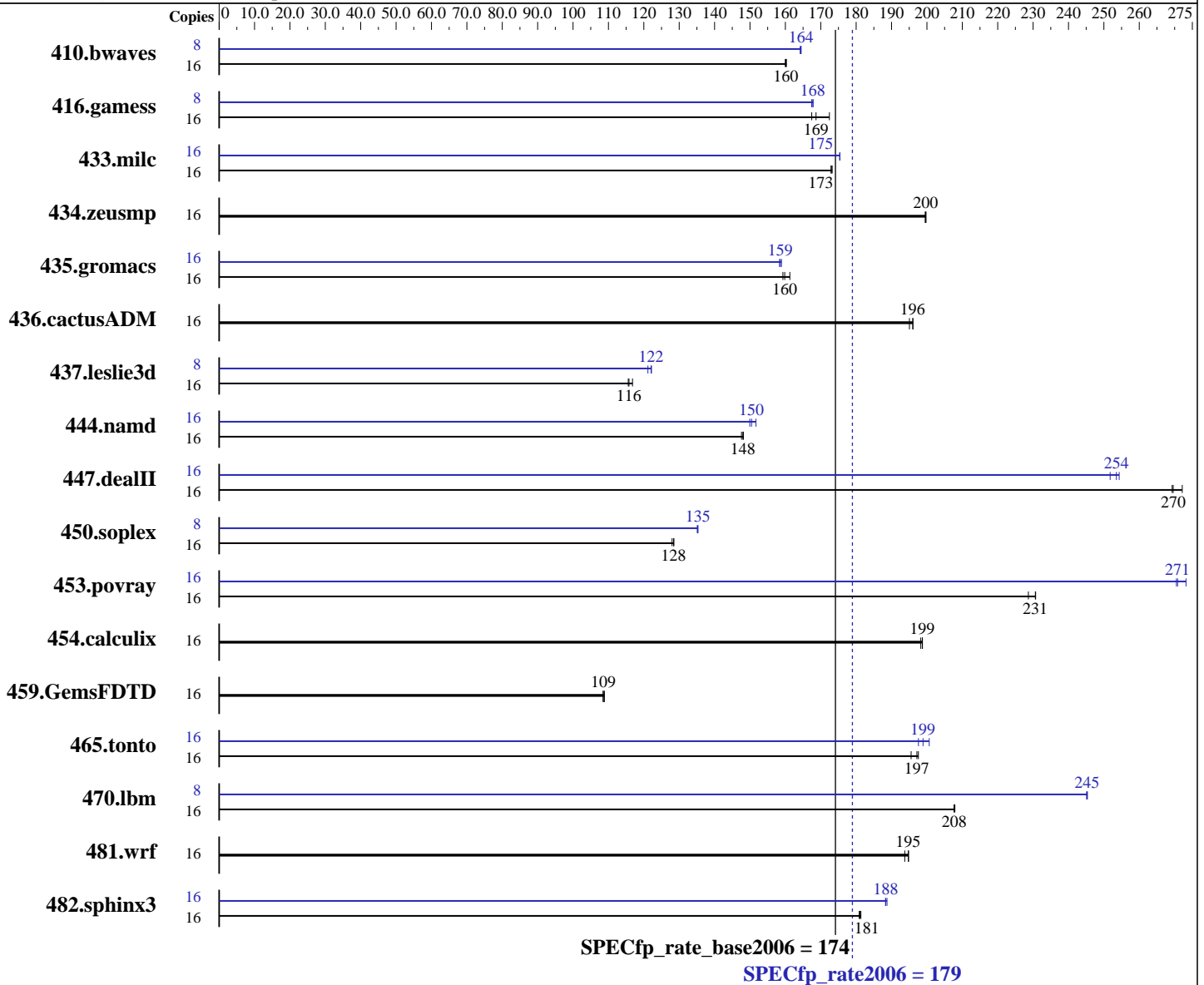
Gateway GW2000h-GW170h F1 (Intel Xeon E5620, 2.40GHz)

$SPECfp®\_rate2006 =$ 179

$SPECfp\_rate\_base2006 =$ 174

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

Test date: Jun-2011
Hardware Availability: Aug-2010
Software Availability: Jan-2011

SPECfp_rate_base2006 = 174

SPECfp_rate2006 = 179

Hardware

CPU Name: Intel Xeon E5620
CPU Characteristics: Intel Turbo Boost Technology up to 2.67 GHz
CPU MHz: 2400
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 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

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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
Other Cache:	None
Memory:	48 GB (12 x 4 GB 2Rx8 PC3-10600R-9, ECC)
Disk Subsystem:	1 x 1000 GB SATA 7200RPM
Other Hardware:	None

| 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	16	1357	160	**1358**	**160**	1359	160	8	661	164	**661**	**164**	662	164
416.gamess	16	1817	172	1871	167	**1857**	**169**	8	936	167	**934**	**168**	933	168
433.milc	16	848	173	**849**	**173**	849	173	16	837	175	**838**	**175**	838	175
434.zeusmp	16	729	200	730	199	**729**	**200**	16	729	200	730	199	**729**	**200**
435.gromacs	16	708	161	**715**	**160**	717	159	16	719	159	721	158	**720**	**159**
436.cactusADM	16	**976**	**196**	975	196	980	195	16	**976**	**196**	975	196	980	195
437.leslie3d	16	**1299**	**116**	1288	117	1301	116	8	621	121	**616**	**122**	616	122
444.namd	16	866	148	869	148	**867**	**148**	16	846	152	**853**	**150**	856	150
447.dealII	16	**679**	**270**	673	272	680	269	16	720	254	727	252	**722**	**254**
450.soplex	16	1038	128	1043	128	**1039**	**128**	8	**493**	**135**	493	135	494	135
453.povray	16	**369**	**231**	369	231	372	229	16	**314**	**271**	312	273	315	270
454.calculix	16	666	198	**664**	**199**	664	199	16	666	198	**664**	**199**	664	199
459.GemsFDTD	16	1565	108	1559	109	**1564**	**109**	16	1565	108	1559	109	**1564**	**109**
465.tonto	16	797	198	805	196	**799**	**197**	16	797	198	**792**	**199**	785	201
470.lbm	16	1057	208	1059	208	**1058**	**208**	8	448	245	448	245	**448**	**245**
481.wrf	16	917	195	**918**	**195**	923	194	16	917	195	**918**	**195**	923	194
482.sphinx3	16	1720	181	1724	181	**1722**	**181**	16	1652	189	1656	188	**1656**	**188**

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 = Energy Saving)
    Data Reuse = Disabled (Default = Enabled)

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General Notes

```
Binaries compiled on RHEL5.5
 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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