# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Acer Incorporated

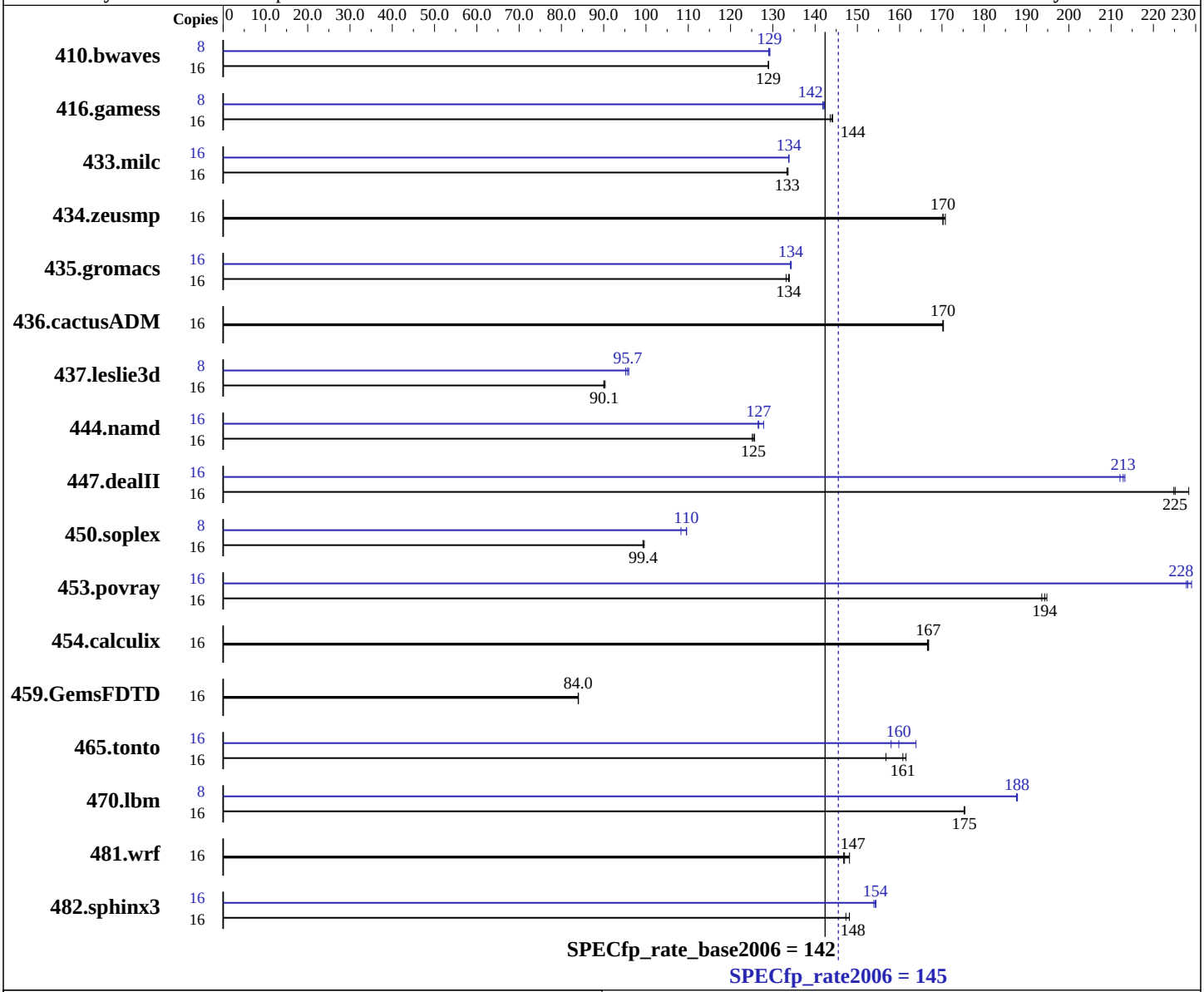
Gateway GW2000h-GW170h F1 (Intel Xeon L5630, 2.13GHz)

SPECfp®_rate2006 = 145

SPECfp_rate_base2006 = 142

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

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




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon L5630 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 2.40 GHz |
| CPU MHz: | 2133 |
| 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 |

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 |

Continued on next page

# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Acer Incorporated

Gateway GW2000h-GW170h F1 (Intel Xeon L5630, 2.13GHz)

SPECfp_rate2006 = 145

SPECfp_rate_base2006 = 142

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

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

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 | 1686 | 129 | **1686** | **129** | 1685 | 129 | 8 | 841 | 129 | 843 | 129 | **842** | **129** |
| 416.gamess | 16 | 2173 | 144 | 2182 | 144 | **2176** | **144** | 8 | 1104 | 142 | 1102 | 142 | **1104** | **142** |
| 433.milc | 16 | **1101** | **133** | 1102 | 133 | 1099 | 134 | 16 | 1098 | 134 | **1098** | **134** | 1098 | 134 |
| 434.zeusmp | 16 | **855** | **170** | 852 | 171 | 855 | 170 | 16 | **855** | **170** | 852 | 171 | 855 | 170 |
| 435.gromacs | 16 | 853 | 134 | 858 | 133 | **854** | **134** | 16 | 851 | 134 | 850 | 134 | **851** | **134** |
| 436.cactusADM | 16 | 1122 | 170 | **1123** | **170** | 1123 | 170 | 16 | 1122 | 170 | **1123** | **170** | 1123 | 170 |
| 437.leslie3d | 16 | 1671 | 90.0 | 1665 | 90.3 | **1669** | **90.1** | 8 | **786** | **95.7** | 790 | 95.2 | 784 | 95.9 |
| 444.namd | 16 | 1021 | 126 | 1025 | 125 | **1023** | **125** | 16 | 1014 | 127 | **1013** | **127** | 1004 | 128 |
| 447.dealII | 16 | **813** | **225** | 814 | 225 | 802 | 228 | 16 | 863 | 212 | 858 | 213 | **860** | **213** |
| 450.soplex | 16 | 1340 | 99.6 | 1344 | 99.3 | **1343** | **99.4** | 8 | 616 | 108 | **609** | **110** | 609 | 110 |
| 453.povray | 16 | **438** | **194** | 440 | 194 | 437 | 195 | 16 | 374 | 228 | 372 | 229 | **373** | **228** |
| 454.calculix | 16 | 792 | 167 | **792** | **167** | 791 | 167 | 16 | 792 | 167 | **792** | **167** | 791 | 167 |
| 459.GemsFDTD | 16 | 2020 | 84.0 | 2022 | 84.0 | **2021** | **84.0** | 16 | 2020 | 84.0 | 2022 | 84.0 | **2021** | **84.0** |
| 465.tonto | 16 | 1004 | 157 | 975 | 161 | **979** | **161** | 16 | 997 | 158 | **985** | **160** | 961 | 164 |
| 470.lbm | 16 | **1254** | **175** | 1255 | 175 | 1253 | 175 | 8 | **585** | **188** | 586 | 188 | 585 | 188 |
| 481.wrf | 16 | 1206 | 148 | **1216** | **147** | 1218 | 147 | 16 | 1206 | 148 | **1216** | **147** | 1218 | 147 |
| 482.sphinx3 | 16 | 2117 | 147 | 2105 | 148 | **2106** | **148** | 16 | 2026 | 154 | **2022** | **154** | 2020 | 154 |

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)
```

## 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
```

Continued on next page

## 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`

# 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

Continued on next page

# 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`


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 v1.1.
Report generated on Wed Jul 23 22:30:13 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 13 September 2011.