



SPEC[®] CFP2006 Result

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Supermicro Motherboard X7DWT-INF

SPECfp[®]_rate2006 = 85.2

SPECfp_rate_base2006 = 80.4

CPU2006 license: 001176

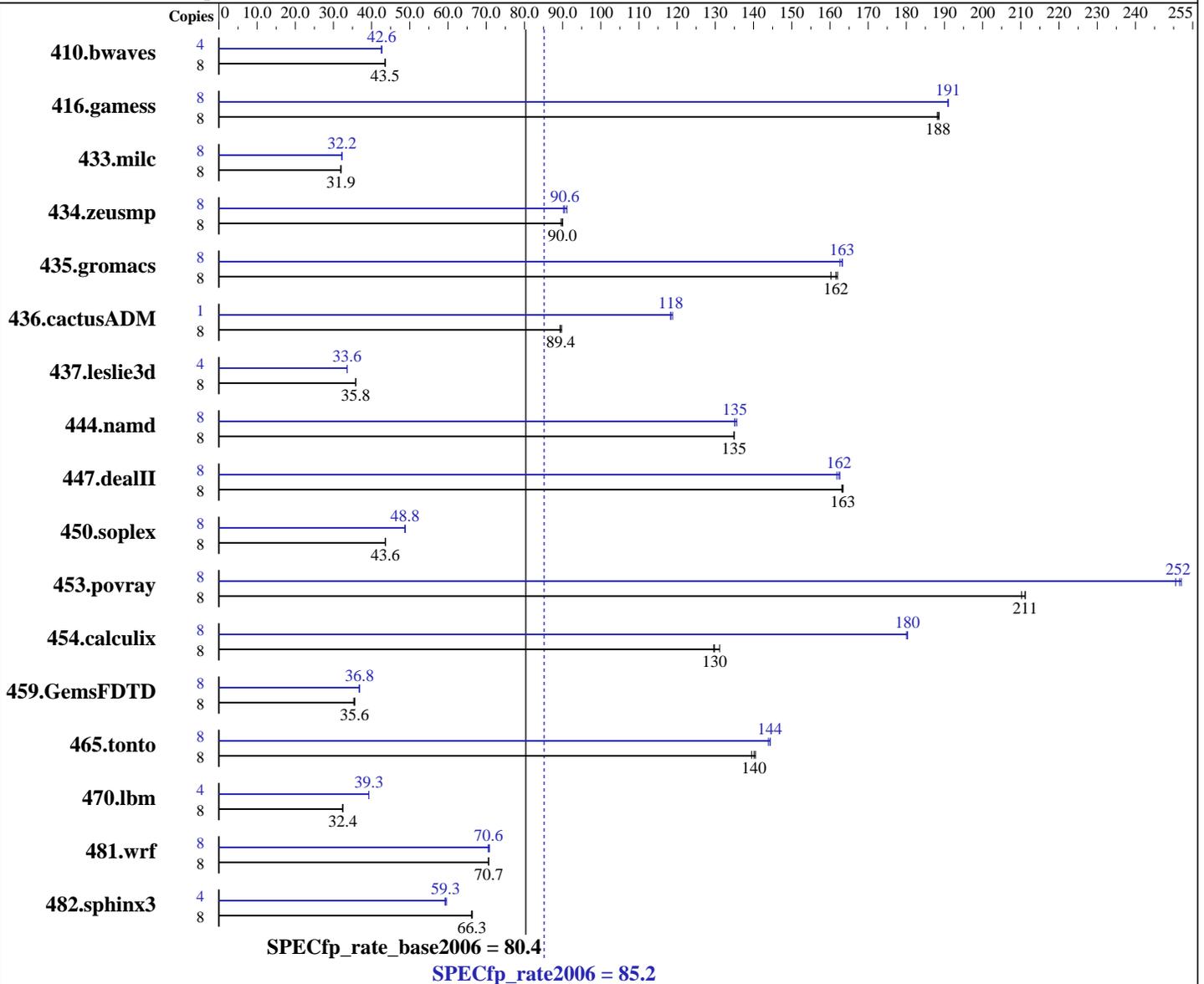
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X5482
 CPU Characteristics: Quad Core, 3.20GHz
 CPU MHz: 3200
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

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Software

Operating System: 64-Bit Suse Linux Enterprise Server 10 w/ SP1
 Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070725
 Auto Parallel: Yes
 File System: ReiserFS
 System State: Multi-user, run level 3
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit

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L3 Cache: None
Other Cache: None
Memory: 32 GB (8 X 4GB ECC PC2-6400, CL5, FBDIMM)
Disk Subsystem: Western Digital WD1600YS-01SHB1 160GB SATA II, 7200RPM
Other Hardware: None

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 | 2496 | 43.6 | 2497 | 43.5 | 2496 | 43.5 | 4 | 1279 | 42.5 | 1274 | 42.7 | 1275 | 42.6 | | |
| 416.gamess | 8 | 831 | 189 | 832 | 188 | 833 | 188 | 8 | 821 | 191 | 820 | 191 | 820 | 191 | | |
| 433.milc | 8 | 2299 | 31.9 | 2300 | 31.9 | 2299 | 31.9 | 8 | 2279 | 32.2 | 2278 | 32.2 | 2279 | 32.2 | | |
| 434.zeusmp | 8 | 809 | 90.0 | 813 | 89.6 | 809 | 90.0 | 8 | 807 | 90.2 | 799 | 91.2 | 804 | 90.6 | | |
| 435.gromacs | 8 | 356 | 160 | 353 | 162 | 353 | 162 | 8 | 350 | 163 | 351 | 163 | 350 | 163 | | |
| 436.cactusADM | 8 | 1070 | 89.3 | 1069 | 89.4 | 1065 | 89.8 | 1 | 101 | 118 | 101 | 118 | 101 | 119 | | |
| 437.leslie3d | 8 | 2100 | 35.8 | 2100 | 35.8 | 2098 | 35.8 | 4 | 1119 | 33.6 | 1120 | 33.6 | 1119 | 33.6 | | |
| 444.namd | 8 | 475 | 135 | 476 | 135 | 476 | 135 | 8 | 475 | 135 | 473 | 136 | 475 | 135 | | |
| 447.dealII | 8 | 560 | 163 | 560 | 163 | 561 | 163 | 8 | 563 | 163 | 565 | 162 | 564 | 162 | | |
| 450.soplex | 8 | 1528 | 43.7 | 1530 | 43.6 | 1531 | 43.6 | 8 | 1368 | 48.8 | 1369 | 48.7 | 1369 | 48.8 | | |
| 453.povray | 8 | 202 | 210 | 202 | 211 | 202 | 211 | 8 | 169 | 252 | 170 | 251 | 169 | 252 | | |
| 454.calculix | 8 | 503 | 131 | 508 | 130 | 509 | 130 | 8 | 366 | 180 | 366 | 180 | 367 | 180 | | |
| 459.GemsFDTD | 8 | 2387 | 35.6 | 2406 | 35.3 | 2383 | 35.6 | 8 | 2305 | 36.8 | 2306 | 36.8 | 2308 | 36.8 | | |
| 465.tonto | 8 | 562 | 140 | 560 | 141 | 564 | 139 | 8 | 545 | 144 | 547 | 144 | 546 | 144 | | |
| 470.lbm | 8 | 3389 | 32.4 | 3387 | 32.4 | 3385 | 32.5 | 4 | 1399 | 39.3 | 1399 | 39.3 | 1399 | 39.3 | | |
| 481.wrf | 8 | 1264 | 70.7 | 1267 | 70.5 | 1264 | 70.7 | 8 | 1267 | 70.6 | 1265 | 70.6 | 1261 | 70.8 | | |
| 482.sphinx3 | 8 | 2357 | 66.2 | 2352 | 66.3 | 2349 | 66.4 | 4 | 1317 | 59.2 | 1314 | 59.3 | 1308 | 59.6 | | |

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

General Notes

Tested systems can be used with SC-808T-980 case,
To ensure system stability, a 550W (minimum) ATX power supply
[4-pin (+12V), 8-pin (+12V) and 24-pin are required]
Product description located as of
<http://www.supermicro.com/products/motherboard/Xeon1333/5400/X7DWT-INF.cfm>
The system bus runs at 1600 MHz
BIOS Setting: Default
The taskset command was used with submit to bind benchmark copies to processors.
Except for 436.cactusADM peak runs which did not use submit.



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Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

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:
-fast

C++ benchmarks:
-fast

Fortran benchmarks:
-fast

Benchmarks using both Fortran and C:
-fast



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Peak Compiler Invocation

C benchmarks (except as noted below):

```
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

433.milc: icc

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icpc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

Fortran benchmarks (except as noted below):

ifort

```
437.leslie3d: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/ifort
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

Benchmarks using both Fortran and C:

icc ifort

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
444.namd: -DSPEC_CPU_LP64
447.deallI: -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
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

```
433.milc: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32
```

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Peak Optimization Flags (Continued)

470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-scalar-rep- -prefetch -opt-malloc-options=3

482.sphinx3: -fast -unroll2

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast
-opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4
-ansi-alias

Fortran benchmarks:

410.bwaves: -fast -prefetch

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-opt-malloc-options=3

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-prefetch -parallel -auto-ilp32

454.calculix: -fast -unroll-aggressive -auto-ilp32

481.wrf: -fast -auto-ilp32



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The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.22.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.22.xml>

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