SPEC® CFP2006 Result

Supermicro
Motherboard H8DMR-82

SPECfp®_rate2006 = NA
SPECfp_rate_base2006 = NA

CPU2006 license: 001176  Test date: Sep-2007
Test sponsor: Supermicro  Hardware Availability: Oct-2007
Tested by: Supermicro  Software Availability: Oct-2007

SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the processor vendor reported that the processor would not meet the SPEC OSG requirements for continued availability.

<table>
<thead>
<tr>
<th>Copies</th>
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<tbody>
<tr>
<td>410.bwaves</td>
</tr>
<tr>
<td>416.gamess</td>
</tr>
<tr>
<td>433.milc</td>
</tr>
<tr>
<td>434.zeusmp</td>
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<tr>
<td>435.gromacs</td>
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<tr>
<td>436.cactusADM</td>
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<tr>
<td>437.leslie3d</td>
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<tr>
<td>444.namd</td>
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<tr>
<td>447.dealII</td>
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<td>450.soplex</td>
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<td>453.povray</td>
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<td>454.calculix</td>
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<td>459.chem3d</td>
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<td>465.tonto</td>
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<td>470.lbm</td>
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<tr>
<td>481.wrf</td>
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<td>482.sphinx3</td>
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</table>
SPEC CFP2006 Result

Supermicro
Motherboard H8DMR-82

<table>
<thead>
<tr>
<th>SPECfp_rate2006</th>
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<tr>
<td>SPECfp_rate_base2006</td>
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CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

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<table>
<thead>
<tr>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name: AMD Opteron 2350</td>
<td>Operating System: SuSE Linux Enterprise Server 10 SP1 64-bit kernel</td>
</tr>
<tr>
<td>CPU Characteristics:</td>
<td>Compiler: The Portland Group (PGI)</td>
</tr>
<tr>
<td>CPU MHz: 2000</td>
<td>PGI pgcc 7.1-0 C Compiler</td>
</tr>
<tr>
<td>FPU: Integrated</td>
<td>PGI pgCC 7.1-0 C++ Compiler</td>
</tr>
<tr>
<td>CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip</td>
<td>PathScale Compiler Suite, Release 3.0</td>
</tr>
<tr>
<td>CPU(s) orderable: 1.2 chips</td>
<td>Auto Parallel: No</td>
</tr>
<tr>
<td>Primary Cache: 64 KB I + 64 KB D on chip per core</td>
<td>File Systems: ReiserFS</td>
</tr>
<tr>
<td>Secondary Cache: 512 KB I+D on chip per core</td>
<td>System State: Multi-user, run level 2</td>
</tr>
<tr>
<td>L3 Cache: 2 MB I+D on chip per chip</td>
<td>Base Pointers: 64-bit</td>
</tr>
<tr>
<td>Other Cache: None</td>
<td>Peak Pointers: 32/64-bit</td>
</tr>
<tr>
<td>Memory: 32 GB (8x 4GB, PC5300 CL2.5)</td>
<td>Other Software: --</td>
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<tr>
<td>Disk Subsystem: 1x SATA, 500 GB, 7200 RPM</td>
<td></td>
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<tr>
<td>Other Hardware: None</td>
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</table>

Errors
Run of 450.soplex (peak) was not valid; status is RE

Not Available
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Results Table

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</table>

The order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

Environment stack size set to 'unlimited'
PGI_HUGE_PAGES set to 896.
Total number of huge pages available is 7168.

Base Compiler Invocation

C benchmarks: pgcc
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Base Compiler Invocation (Continued)

C++ benchmarks:
pgcpp

Fortran benchmarks:
pgf95

Benchmarks using both Fortran and C:
pgcc pgf95

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 -Mnomain
436.cactusADM: -DSPEC_CPU_LP64 -Mnomain
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 -Mnomain
459.GemsFDTD: -DSPEC_CPU_LP64 -Mnomain
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-fast -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=448
-tp barcelona-64 -Bstatic_pgi

Continued on next page
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### Base Optimization Flags (Continued)

**C++ benchmarks:**
- `--fast`
- `--Mipa=fast`
- `--Mipa=inline`
- `--Mfprelaxed`
- `--Msmartalloc=hiuge:448`
- `--zc_eh`
- `--tp barcelona-64`
- `--Bstatic_pgi`

**Fortran benchmarks:**
- `--fast`
- `--Mipa=fast`
- `--Mipa=inline`
- `--Mfprelaxed`
- `--Msmartalloc=hiuge:448`
- `--tp barcelona-64`
- `--Bstatic_pgi`

**Benchmarks using both Fortran and C:**
- `--fast`
- `--Mipa=fast`
- `--Mipa=inline`
- `--Mfprelaxed`
- `--Msmartalloc=hiuge:448`
- `--tp barcelona-64`
- `--Bstatic_pgi`

### Base Other Flags

**C benchmarks:**
- `--w`

**C++ benchmarks:**
- `--w`

**Fortran benchmarks:**
- `--w`

**Benchmarks using both Fortran and C:**
- `--w`

### Peak Compiler Invocation

**C benchmarks (except as noted below):**
- `pathcc`
- `433.milc: pgcc`

**C++ benchmarks (except as noted below):**
- `pathCC`
SPEC CFP2006 Result

Supermicro
Motherboard H8DMR-82

SPECfp_rate2006 = NA
SPECfp_rate_base2006 = NA

CPU2006 license: 001176
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Peak Compiler Invocation (Continued)

444.namd: pgcpc
453.povray: pgcpc
Fortran benchmarks (except as noted below):
pathf95
434.zeusmp: pgf95
465.tonto: pgf95

Benchmarks using both Fortran and C (except as noted below):
pgcc pgf95
436.cactusADM: pathcc pathf95

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 -Mnomain
436.cactusADM: -DSPEC_CPU_LP64 -fno-second-underscore
437.lbm: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -Mnomain
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.m: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64
Supermicro
Motherboard H8DMR-82

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Peak Optimization Flags

C benchmarks:

433.milc:
- Mpfi(pass 1) -Mipa=fast(pass 2) -Mipa=inline(pass 2)
- Mipa=noarg(pass 2) -Mpfo(pass 4) -O4 -Mdse
- Mpfo=relaxed -Msmrtalloc=huge:448 -tp barcelona-64
- Bstatic_pgi

470.lbm: -Ofast

482.sphinx3:
- fb_create fbdata(pass 1) -fb_options fbdata(pass 2) -O3
- OPT:Ofast -WOPT:aggr=0 -mpicc

C++ benchmarks:

444.namd:
- fast -O4 -Mfprelaxed -Msmrtalloc=huge:448 --zc_eh
- tp barcelona-64 -Mprefetch -Msafe_lastval
- Msafe=static -Mptride0 -Munroll=n:4 -Mvect=noidiom
- Mvect=static -Mprefetch -Bstatic_pgi

447.dealII:
- OPT:INL:aggressive=on -OPT:malloc_alg=1 -m32
- fno-excptions

450.soplex:
- fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -m32 -O3
- OPT:IEEE_arith=3 -CG:load_exe=0 -CG:movnti=1
- LNO:compress=on -LNO:prefetch=1 -fno-excptions

Fortran benchmarks:

434.zeusmp: basepeak = yes
### SPEC CFP2006 Result

**Supermicro Motherboard H8DMR-82**

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<tr>
<th>CPU2006 license:</th>
<th>001176</th>
</tr>
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<tbody>
<tr>
<td>Test sponsor:</td>
<td>Supermicro</td>
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<td>Tested by:</td>
<td>Supermicro</td>
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**SPECfp_rate2006 = NA**

**SPECfp_rate_base2006 = NA**

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**Peak Optimization Flags (Continued)**

- **437.leslie3d**: `-Ofast -OPT:malloc_alg=1`
- **459.GemsFDTD**: `-Ofast -LNO:fission=2 -LNO:prefetch=0`
- **465.tonto**: `-fast -O4 -Mfprelaxed -Msmartalloc=huge:448 -Mipa=fast -Mipa=inline -Mvect=noaltcode -tp barcelona-64 -Bstatic_pgi`

**Benchmarks using both Fortran and C:**

- **435.gromacs**: `-fast -Mfpapprox=rsqrt -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=huge:448 -tp barcelona-64 -Bstatic_pgi`
- **436.cactusADM**: `-fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O3 -LNO:prefetch=3 -LNO:prefetch_ahead=5 -LNO:ou_prod_max=10 -LNO:full_unroll=5 -ipa`
- **454.calculix**: `basepeak = yes`
- **481.wrf**: `-fast -Mfprelaxed -Msmartalloc=huge:448 -Mvect=noaltcode -tp barcelona-64 -Bstatic_pgi`

---

**Peak Other Flags**

**C benchmarks:**

**C++ benchmarks (except as noted below):**

- **447.dealII**: `-static`
- **450.soplex**: No flags used

**Fortran benchmarks:**

- **434.zeusmp**: `-w`

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*Continued on next page*
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Peak Other Flags (Continued)

465.tonto: -w

Benchmarks using both Fortran and C (except as noted below):

- w

436.cactusADM: No flags used

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/amd814GH-flags.20090714.01.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/amd814GH-flags.20090714.01.xml

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

Tested with SPEC CPU2006 v1.0.1.
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