## SPEC® CFP2006 Result

Supermicro
SuperServer 6027AX-TRF
(X9DAX-iF, Intel Xeon E5-2697 v2, 2.70 GHz)

<table>
<thead>
<tr>
<th>SPECfp®2006 =</th>
<th>NC</th>
<th>SPECfp_base2006 =</th>
<th>NC</th>
</tr>
</thead>
</table>

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, SPEC was notified that an attempt to reproduce the published result did not come within SPEC's requirements for run-to-run variation. Upon re-review, it was determined that the system configuration does not meet SPEC's requirements for documented and supported systems, and does not meet SPEC's requirements for general availability.

### Hardware

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon E5-2697 v2</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td>Intel Turbo Boost Technology up to 3.50 GHz</td>
</tr>
<tr>
<td>CPU MHz</td>
<td>2700</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled</td>
<td>24 cores, 2 chips, 12 cores/chip</td>
</tr>
<tr>
<td>CPU(s) orderable</td>
<td>1, 2 chips</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>32 KB I + 32 KB D per core</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>256 KB I+D on chip per core</td>
</tr>
<tr>
<td>L3 Cache</td>
<td>30 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other Cache</td>
<td>None</td>
</tr>
<tr>
<td>Memory</td>
<td>128 GB (16 x 8 GB 2Rx4 PC3-14900R-13, ECC)</td>
</tr>
<tr>
<td>Disk Subsystem</td>
<td>1 x 300 GB 10K-SATA II, 10000 RPM</td>
</tr>
<tr>
<td>Other Hardware</td>
<td>None</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Red Hat Enterprise Linux Server release 6.4, Kernel 2.6.32-358.el6.x86_64</td>
</tr>
<tr>
<td>Compiler</td>
<td>C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux;</td>
</tr>
<tr>
<td></td>
<td>Fortran: Version 14.0.0.080 of Intel Fortran Studio XE for Linux</td>
</tr>
<tr>
<td>Auto Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>File System</td>
<td>ext4</td>
</tr>
<tr>
<td>System State</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers</td>
<td>64-bit</td>
</tr>
<tr>
<td>Peak Pointers</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Other Software</td>
<td>None</td>
</tr>
</tbody>
</table>
SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, SPEC was notified that an attempt to reproduce the published result did not come within SPEC's requirements for run-to-run variation. Upon re-review, it was determined that the system configuration does not meet SPEC's requirements for documented and supported systems, and does not meet SPEC's requirements for general availability.

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Peak Seconds</th>
<th>Peak Ratio</th>
<th>Peak Seconds</th>
<th>Peak Ratio</th>
<th>Peak Seconds</th>
<th>Peak Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>416.gamess</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>433.milc</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>434.zeusmp</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>435.gromacs</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>436.cactusADM</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>437.leslie3d</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>444.namd</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>447.dealII</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>450.soplex</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>453.povray</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>454.calculix</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>459.GemsFD1D</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>465.tonto</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>470.lbm</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>481.wrf</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>482.sphinx3</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
</tbody>
</table>

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
SPEC CFP2006 Result

Supermicro

SuperServer 6027AX-TRF
(X9DAX-iF, Intel Xeon E5-2697 v2, 2.70 GHz)

SPECfp2006 = NC
SPECfp_base2006 = NC

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Oct-2013
Hardware Availability: Sep-2013
Software Availability: Sep-2013

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, SPEC was notified that an attempt to reproduce the published result did not come within SPEC's requirements for run-to-run variation. Upon re-review, it was determined that the system configuration does not meet SPEC's requirements for documented and supported systems, and does not meet SPEC's requirements for general availability.

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"
OMP_NUM_THREADS = "23"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4.
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

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

Continued on next page
SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, SPEC was notified that an attempt to reproduce the published result did not come within SPEC's requirements for run-to-run variation. Upon re-review, it was determined that the system configuration does not meet SPEC's requirements for documented and supported systems, and does not meet SPEC's requirements for general availability.

Base Portability Flags (Continued)

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 -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias

C++ benchmarks:
-C -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

Fortran benchmarks:
-C -ipo -O3 -no-prec-div -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-C -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias
SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, SPEC was notified that an attempt to reproduce the published result did not come within SPEC’s requirements for run-to-run variation. Upon re-review, it was determined that the system configuration does not meet SPEC's requirements for documented and supported systems, and does not meet SPEC's requirements for general availability.

### Peak Compiler Invocation

**C benchmarks:**
- `icc -m64`

**C++ benchmarks:**
- `icpc -m64`

**Fortran benchmarks:**
- `ifort -m64`

**Benchmarks using both Fortran and C:**
- `icc -m64 ifort -m64`

### Peak Portability Flags

Same as Base Portability Flags

### Peak Optimization Flags

**C benchmarks:**
- `433.milc: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -auto-ilp32 -ansi-alias`
- `470.lbm: basepeak = yes`
- `482.sphinx3: -xAVX -ipo -03 -no-prec-div -unroll2 -ansi-alias -parallel`

Continued on next page
### SPEC CFP2006 Result

Supermicro  
SuperServer 6027AX-TRF  
(X9DAX-iF, Intel Xeon E5-2697 v2, 2.70 GHz)  

<table>
<thead>
<tr>
<th>CPU2006 license: 001176</th>
<th>Test date: Oct-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor: Supermicro</td>
<td>Hardware Availability: Sep-2013</td>
</tr>
<tr>
<td>Tested by: Supermicro</td>
<td>Software Availability: Sep-2013</td>
</tr>
</tbody>
</table>

**SPEC** has determined that this result is not in compliance with the *SPEC CPU2006* run and reporting rules. Specifically, **SPEC** was notified that an attempt to reproduce the published result did not come within **SPEC**'s requirements for run-to-run variation. Upon re-review, it was determined that the system configuration does not meet **SPEC**'s requirements for documented and supported systems, and does not meet **SPEC**'s requirements for general availability.

---

**Peak Optimization Flags (Continued)**

#### C++ benchmarks:

- 444.namd: `-xAVX(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: basepeak = yes
- 450.soplex: basepeak = yes
- 453.povray: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias`

#### Fortran benchmarks:

- 410.bwaves: basepeak = yes
- 416.gamess: `-xAVX(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-
- 434.zeusmp: basepeak = yes
- 437.leslie3d: basepeak = yes
- 459.GemsFDTD: `-xAVX(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 -opt-prefetch -parallel`
- 465.tonto: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc -opt-malloc-options=3 -auto -unroll4`

Continued on next page
SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, SPEC was notified that an attempt to reproduce the published result did not come within SPEC's requirements for run-to-run variation. Upon re-review, it was determined that the system configuration does not meet SPEC's requirements for documented and supported systems, and does not meet SPEC's requirements for general availability.

**Peak Optimization Flags (Continued)**

Benchmarks using both Fortran and C:

- 435.gromacs: basepeak = yes
- 436.cactusADM: basepeak = yes
- 454.calculix: -xAVX -ipo -03 -no-prec-div -auto-ilp32 -ansi-alias
- 481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at:


You can also download the XML flags sources by saving the following links:


**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 v1.2.
Originally published on 25 February 2014.