**Supermicro**
SuperServer 7047R-TXRF (X9DRX+-F, Intel Xeon E5-2630L)

**SPECfp®2006 = 64.6**
**SPECfp_base2006 = 61.0**

**CPU2006 license:** 001176  
**Test date:** Apr-2012

**Test sponsor:** Supermicro  
**Hardware Availability:** Mar-2012

**Tested by:** Supermicro  
**Software Availability:** Dec-2011

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### Hardware

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon E5-2630L</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td>Intel Turbo Boost Technology up to 2.50 GHz</td>
</tr>
<tr>
<td>CPU MHz</td>
<td>2000</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled</td>
<td>12 cores, 2 chips, 6 cores/chip, 2 threads/core</td>
</tr>
<tr>
<td>CPU(s) orderable</td>
<td>1,2 chips</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>32 KB L + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>256 KB I+D on chip per core</td>
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</table>

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### Software

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
</table>
| Operating System  | Red Hat Enterprise Linux Server Release 6.2,  
 Kernel 2.6.32-220.el6.x86_64 |
| Compiler          | C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux;  
 Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux |
| Auto Parallel     | Yes                                |
| File System       | ext3                               |
| System State      | Run level 3 (multi-user)           |

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SPEC CFP2006 Result

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CPU2006 license: 001176
Test sponsor: Supermicro
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L3 Cache: 15 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 1Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x 2 TB SATA II, 7200 RPM
Other Hardware: None
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<td>363</td>
<td>53.7</td>
<td>365</td>
<td>53.4</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"

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"
OMP_NUM_THREADS = "12"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
SPEC CFP2006 Result

Supermicro
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CPU2006 license: 001176
Test sponsor: Supermicro
Test date: Apr-2012
Tested by: Supermicro
Hardware Availability: Mar-2012
Software Availability: Dec-2011

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:
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch -ansi-alias
C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias
Fortran benchmarks:
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
Benchmarks using both Fortran and C:
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch -ansi-alias
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)  -O3(pass 2)
             -no-prec-div(pass 2)  -prof-use(pass 2)  -static  -auto-ilp32
             -ansi-alias
  470.lbm:  basepeak = yes
  482.sphinx3:  -xAVX  -ipo  -O3  -no-prec-div  -unroll2  -ansi-alias
                -parallel

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:  -xAVX  -ipo  -O3  -no-prec-div  -opt-prefetch  -parallel
               -static

Continued on next page
Supermicro
SuperServer 7047R-TXRF (X9DRX+-F, Intel Xeon E5-2630L)

SPECfp2006 = 64.6
SPECfp_base2006 = 61.0

Peak Optimization Flags (Continued)

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- -static

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

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml

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For other inquiries, please contact webmaster@spec.org.

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