**Supermicro**  
Supermicro X11SSL-nF motherboard  
(X11SSL-nF, Intel Xeon E3-1270 v5)

**SPECfp**\textsuperscript{\textregistered} _rate2006 = 195  
**SPECfp_rate_base2006 = 190

**Hardware**

<table>
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<tr>
<th>Copy</th>
<th>CPU Name</th>
<th>CPU Characteristics</th>
<th>CPU MHz</th>
<th>FPU</th>
<th>CPU(s) enabled</th>
<th>CPU(s) orderable</th>
<th>Primary Cache</th>
<th>Secondary Cache</th>
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<tr>
<td>8</td>
<td>Intel Xeon E3-1270 v5</td>
<td>Intel Turbo Boost Technology up to 4.00 GHz</td>
<td>3600</td>
<td>Integrated</td>
<td>4 cores, 1 chip, 4 cores/chip, 2 threads/core</td>
<td>1 chip</td>
<td>32 KB I + 32 KB D on chip per core</td>
<td>256 KB I+D on chip per core</td>
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**Software**

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Compiler</th>
<th>Auto Parallel</th>
<th>File System</th>
<th>System State</th>
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</thead>
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<tr>
<td>Red Hat Enterprise Linux Server release 7.1, Kernel 3.10.0-229.el7.x86_64</td>
<td>C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux; Fortran: Version 15.0.0.090 of Intel Fortran Studio XE for Linux</td>
<td>No</td>
<td>xfs</td>
<td>Run level 3 (multi-user)</td>
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**Test date:** Jan-2016  
**Test sponsor:** Supermicro  
**Hardware Availability:** Oct-2015  
**Software Availability:** Mar-2015  

### SPECfp\textsuperscript{\textregistered} Rate

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Supermicro
Supermicro X11SSL-nF motherboard
(X11SSL-nF, Intel Xeon E3-1270 v5)

SPEC CFP2006 Result

SPECfp_rate2006 = 195
SPECfp_rate_base2006 = 190

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

Test date: Jan-2016
Hardware Availability: Oct-2015
Software Availability: Mar-2015

L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 64 GB (4 x 16 GB 2Rx8 PC4-2133P-E)
Disk Subsystem: 1 x 1000 GB SATA III, 7200 RPM
Other Hardware: None

Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

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<th>Seconds</th>
<th>Ratio</th>
<th>Copies</th>
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</tr>
</tbody>
</table>

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

Submit Notes
The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes
Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes
As tested, the system used a Supermicro CSE-113MFAC2-R606CB chassis. The chassis is configured with 2 PWS-606P-1R redundant power supply, 1 SNK-P0046P heatsink, as well as 4 FAN-0154L4 middle cooling fan.
Supermicro
Supermicro X11SSL-nF motherboard
(X11SSL-nF, Intel Xeon E3-1270 v5)

SPECfp_rate2006 = 195
SPECfp_rate_base2006 = 190

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

Test date: Jan-2016
Hardware Availability: Oct-2015
Software Availability: Mar-2015

Platform Notes (Continued)

Sysinfo program /home/cpu2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Tue Jan 19 06:45:48 2016

This section contains SUT (System Under Test) info as seen by
some common utilities. To remove or add to this section, see:
http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E3-1270 v5 @ 3.60GHz
 1 "physical id"s (chips)
 8 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
cautions.)
cpu cores : 4
siblings : 8
physical 0: cores 0 1 2 3
cache size : 8192 KB

From /proc/meminfo
MemTotal:       65630744 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

From /etc/*release* /etc/*version*

os-release:
  NAME="Red Hat Enterprise Linux Server"
  VERSION="7.1 (Maipo)"
  ID="rhel"
  ID_LIKE="fedora"
  VERSION_ID="7.1"
  PRETTY_NAME="Red Hat Enterprise Linux Server 7.1 (Maipo)"
  ANSI_COLOR="0;31"
  CPE_NAME=cpe:/o:redhat:enterprise_linux:7.1:GA:server
redhat-release: Red Hat Enterprise Linux Server release 7.1 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.1 (Maipo)

uname -a:
Linux localhost.localdomain 3.10.0-229.el7.x86_64 #1 SMP Thu Jan 29 18:37:38
EST 2015 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 18 18:48

SPEC is set to: /home/cpu2006

Filesystem       Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 865G 170G 696G  20% /home

Warning: Use caution when you interpret this section. The 'dmidecode' program
reads system data which is intended to allow hardware to be accurately
Continued on next page
Supermicro
Supermicro X11SSL-nF motherboard
(X11SSL-nF, Intel Xeon E3-1270 v5)

SPECfp_rate2006 = 195
SPECfp_rate_base2006 = 190

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

Test date: Jan-2016
Hardware Availability: Oct-2015
Software Availability: Mar-2015

Platform Notes (Continued)

determined", but the intent may not be met, as there are frequent changes to
hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS American Megatrends Inc. 1.0a 12/25/2015
Memory:
4x Samsung M391A2K43BB1-CPB 16 GB 2 rank 2133 MHz

(End of data from sysinfo program)

General Notes

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

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled

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 -nofor_main
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64 -nofor_main
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64

Continued on next page
Supermicro
Supermicro X11SSL-nF motherboard
(X11SSL-nF, Intel Xeon E3-1270 v5)

SPEC CFP2006 Result

SPECfp_rate2006 = 195
SPECfp_rate_base2006 = 190

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

Test date: Jan-2016
Hardware Availability: Oct-2015
Software Availability: Mar-2015

Base Portability Flags (Continued)

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:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

Fortran benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

Peak Compiler Invocation

C benchmarks:
icc  -m64

C++ benchmarks (except as noted below):
icpc  -m64

450.soplex: icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

Fortran benchmarks:
ifort  -m64

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

Peak Portability Flags

410.bwaves: -DSPEC_CPU_LP64

Continued on next page
Supermicro
Supermicro X11SSL-nF motherboard
(X11SSL-nF, Intel Xeon E3-1270 v5)

SPECfp_rate2006 = 195
SPECfp_rate_base2006 = 190

Peak Portability Flags (Continued)

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
482.sphinx3:  -DSPEC_CPU_LP64

Peak Optimization Flags

C benchmarks:

433.milc:  -xCORE-AVX2(pass 2)  -prof-gen(pass 1)  -ipo(pass 2)
  -O3(pass 2)  -no-prec-div(pass 2)
  -opt-mem-layout-trans=3(pass 2)  -prof-use(pass 2)
  -auto-ilp32

470.lbm: basepeak = yes

482.sphinx3:  -xCORE-AVX2  -ipo  -O3  -no-prec-div  -opt-mem-layout-trans=3
  -unroll2

C++ benchmarks:

444.namd:  -xCORE-AVX2(pass 2)  -prof-gen(pass 1)  -ipo(pass 2)
  -O3(pass 2)  -no-prec-div(pass 2)
  -opt-mem-layout-trans=3(pass 2)  -prof-use(pass 2)  -fno-alias
  -auto-ilp32

447.dealII: basepeak = yes

450.soplex:  -xCORE-AVX2(pass 2)  -prof-gen(pass 1)  -ipo(pass 2)
  -O3(pass 2)  -no-prec-div(pass 2)
  -opt-mem-layout-trans=3(pass 2)  -prof-use(pass 2)
  -opt-malloc-options=3

453.povray:  -xCORE-AVX2(pass 2)  -prof-gen(pass 1)  -ipo(pass 2)
  -O3(pass 2)  -no-prec-div(pass 2)
  -opt-mem-layout-trans=3(pass 2)  -prof-use(pass 2)  -unroll4
  -ansi-alias

Continued on next page
Supermicro
Supermicro X11SSL-nF motherboard
(X11SSL-nF, Intel Xeon E3-1270 v5)

SPECfp_rate2006 = 195
SPECfp_rate_base2006 = 190

CPU2006 license: 001176
Test date: Jan-2016
Test sponsor: Supermicro
Hardware Availability: Oct-2015
Tested by: Supermicro
Software Availability: Mar-2015

Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: basepeak = yes

416.games: -xCORE-AVX2(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: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

459.GemsFDTD: basepeak = yes

465.tonto: -xCORE-AVX2(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

Benchmarks using both Fortran and C:

435.gromacs: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
            -O3(pass 2) -no-prec-div(pass 2)
            -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2)
            -opt-prefetch -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revG.20141230.00.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revG.20141230.00.xml
### Supermicro

Supermicro X11SSL-nF motherboard  
(X11SSL-nF, Intel Xeon E3-1270 v5)

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<th>SPECfp_rate_base2006</th>
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<td>Software Availability:</td>
<td>Mar-2015</td>
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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 v1.2.  
Report generated on Tue Feb 9 17:20:30 2016 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 9 February 2016.