## SPEC® CFP2006 Result

Supermicro X11SSM-F motherboard (X11SSM-F, Intel Xeon E3-1235L v5)

<table>
<thead>
<tr>
<th></th>
<th>SPECfp®2006 = 83.8</th>
<th>SPECfp_base2006 = 81.6</th>
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<tr>
<td>CPU2006 license:</td>
<td>001176</td>
<td></td>
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<tr>
<td>Test sponsor:</td>
<td>Supermicro</td>
<td></td>
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<tr>
<td>Tested by:</td>
<td>Supermicro</td>
<td></td>
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<tr>
<td>Test date:</td>
<td>Jan-2016</td>
<td></td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Oct-2015</td>
<td></td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Sep-2015</td>
<td></td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Operating System:</th>
<th>Red Hat Enterprise Linux Server release 7.1, Kernel 3.10.0-229.el7.x86_64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compiler:</td>
<td>C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux; Fortran: Version 16.0.0.101 of Intel Fortran Studio XE for Linux</td>
</tr>
<tr>
<td>Auto Parallel:</td>
<td>Yes</td>
</tr>
<tr>
<td>File System:</td>
<td>xfs</td>
</tr>
<tr>
<td>System State:</td>
<td>Run level 3 (multi-user)</td>
</tr>
</tbody>
</table>

### Hardware

<table>
<thead>
<tr>
<th>CPU Name:</th>
<th>Intel Xeon E3-1235L v5</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Characteristics:</td>
<td>Intel Turbo Boost Technology up to 3.00 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>4 cores, 1 chip, 4 cores/chip</td>
</tr>
<tr>
<td>CPU(s) orderable:</td>
<td>1 chip</td>
</tr>
<tr>
<td>Primary Cache:</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache:</td>
<td>256 KB I+D on chip per core</td>
</tr>
</tbody>
</table>

### Benchmark Results

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td>42.8</td>
</tr>
<tr>
<td>416.gamess</td>
<td>37.5</td>
</tr>
<tr>
<td>433.milc</td>
<td>97.8</td>
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<tr>
<td>434.zeusmp</td>
<td>196</td>
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<tr>
<td>435.gromacs</td>
<td>49.9</td>
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<tr>
<td>436.cactusADM</td>
<td>42.8</td>
</tr>
<tr>
<td>437.leslie3d</td>
<td>29.4</td>
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<tr>
<td>444.namd</td>
<td>28.9</td>
</tr>
<tr>
<td>447.dealII</td>
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<td>450.soplex</td>
<td>46.6</td>
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<td>453.povray</td>
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<td>454.calculix</td>
<td>55.8</td>
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<tr>
<td>459.GemsFDTD</td>
<td>61.5</td>
</tr>
<tr>
<td>465.tonto</td>
<td>60.3</td>
</tr>
<tr>
<td>470.lbm</td>
<td>61.5</td>
</tr>
<tr>
<td>481.wrf</td>
<td>81.9</td>
</tr>
<tr>
<td>482.sphinx3</td>
<td>77.2</td>
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**SPECfp_base2006 = 81.6:**

**SPECfp2006 = 83.8**

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**Continued on next page**
Supermicro

Supermicro X11SSM-F motherboard (X11SSM-F, Intel Xeon E3-1235L v5)

SPEC CFP2006 Result

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

L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 32 GB (4 x 8 GB 2Rx8 PC4-2133P-E)
Disk Subsystem: 1 x 200 GB SATA III SSD
Other Hardware: 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>
<th>Seconds</th>
<th>Ratio</th>
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<td>77.3</td>
<td>253</td>
<td>77.2</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"

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.
Sysinfo program /usr/cpu2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 $$ e3fbb8667b5a285932ceab81e28219e1
running on X11SSM-01 Fri Jan 1 06:20:58 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
Continued on next page
Supermicro
Supermicro X11SSM-F motherboard
(X11SSM-F, Intel Xeon E3-1235L v5)

SPECfp2006 = 83.8
SPECfp_base2006 = 81.6

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

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

Platform Notes (Continued)

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E3-1235L v5 @ 2.00GHz
  1 "physical id"s (chips)
  4 "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 : 4
physical 0: cores 0 1 2 3
cache size : 8192 KB

From /proc/meminfo
MemTotal: 32769044 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 X11SSM-01 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 1 00:06

SPEC is set to: /usr/cpu2006

Additional information from dmidecode:
Warning: Use caution when you interpret this section. The 'dmidecode' program
reads system data which is "intended to allow hardware to be accurately
determined", but the intent may not be met, as there are frequent changes to
hardware, firmware, and the "DMPF SMBIOS" standard.

BIOS American Megatrends Inc. 1.0b 12/29/2015
Memory:
4x Micron 18ASF1G72AZ-2G1A1 8 GB 2 rank 2133 MHz

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SPEC CFP2006 Result

Supermicro
Supermicro X11SSM-F motherboard
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CPU2006 license: 001176
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Tested by: Supermicro
Software Availability: Sep-2015

Platform Notes (Continued)

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"
OMP_NUM_THREADS = "4"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB
memory using RedHat EL 7.1
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:
ilfort -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

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Supermicro X11SSM-F motherboard
(X11SSM-F, Intel Xeon E3-1235L v5)

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CPU2006 license: 001176
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Base Portability Flags (Continued)

482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-ansi-alias

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

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

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -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: basepeak = yes

Continued on next page
Supermicro
Supermicro X11SSM-F motherboard
(X11SSM-F, Intel Xeon E3-1235L v5)

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CPU2006 license: 001176
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Software Availability: Sep-2015

Peak Optimization Flags (Continued)

470.lbm: basepeak = yes
482.sphinx3: basepeak = yes

C++ benchmarks:
444.namd: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -fno-alias
-auto-ilp32
447.dealII: basepeak = yes
450.soplex: basepeak = yes
453.povray: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll4
-ansi-alias

Fortran benchmarks:
410.bwaves: basepeak = yes
416.gamess: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll2
-inline-level=0 -scalar-rep-
434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel
465.tonto: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -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

Continued on next page
# SPEC CFP2006 Result

**Supermicro**
Supermicro X11SSM-F motherboard (X11SSM-F, Intel Xeon E3-1235L v5)

| SPECfp2006 = | 83.8 |
| SPECfp_base2006 = | 81.6 |

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

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<tr>
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<td>Sep-2015</td>
</tr>
</tbody>
</table>

**Peak Optimization Flags (Continued)**

454.calculix: -xCORE-AVX2 -ipo -O3 -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

http://www.spec.org/cpu2006/flags/Intel-Ic16.0-official-linux64.html  
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revH.html

You can also download the XML flags sources by saving the following links:  
http://www.spec.org/cpu2006/flags/Intel-Ic16.0-official-linux64.xml  
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revH.xml

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

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