**SPEC® CFP2006 Result**

**Supermicro**
Supermicro X11SAE-M motherboard (X11SAE-M, Intel Core i5-6600)  

| SPECfp®2006 | 95.1 |
| SPECfp_base2006 | 92.9 |

**CPU2006 license:** 001176  
**Test date:** Jan-2016  
**Test sponsor:** Supermicro  
**CPU(s) orderable:** 1 chip  
**Hardware Availability:** Sep-2015  
**Tested by:** Supermicro  
**Software Availability:** Sep-2015  

**CPU Name:** Intel Core i5-6600  
**CPU Characteristics:** Intel Turbo Boost Technology up to 3.90 GHz  
**CPU MHz:** 3300  
**FPU:** Integrated  
**CPU(s) enabled:** 4 cores, 1 chip, 4 cores/chip  
**CPU(s) orderable:** 1 chip  
**Primary Cache:** 32 KB I + 32 KB D on chip per core  
**Secondary Cache:** 256 KB I+D on chip per core  

**Operating System:** Red Hat Enterprise Linux Server release 7.1, Kernel 3.10.0-229.e17.x86_64  
**Compiler:** 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  
**Auto Parallel:** Yes  
**File System:** xfs  
**System State:** Run level 3 (multi-user)
**SPEC CFP2006 Result**

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**SPECfp2006 = 95.1**

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CPU2006 license: 001176

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Test date: Jan-2016

Hardware Availability: Sep-2015

Software Availability: Sep-2015

L3 Cache: 6 MB I+D on chip per chip

Other Cache: None

Memory: 16 GB (4 x 4 GB 1Rx8 PC4-2133P-U)

Disk Subsystem: 1 x 400 GB SATA III SSD

Other Hardware: None

Base Pointers: 64-bit

Peak Pointers: 32/64-bit

Other Software: None

### Results Table

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<th>Ratio</th>
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<td>209</td>
<td>93.5</td>
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</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-731i-300B chassis. The chassis is configured with 2 PW5-305-PQ redundant power supply, 1 SNK-P0046A4 heatsink, as well as 1 FAN-0108L4 rear cooling fan.

Sysinfo program /usr/cpu2006/config/sysinfo.rev6914

$Rev: 6914 $ $Date:: 2014-06-25 $$ e3fbb8667b5a285932ceab81e28219e1
runtime on localhost.localdomain Tue Jan 26 22:28:22 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 X11SAE-M motherboard
(X11SAE-M, Intel Core i5-6600)

SPECfp2006 = 95.1
SPECfp_base2006 = 92.9

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

Platform Notes (Continued)

From /proc/cpuinfo
   model name : Intel(R) Core(TM) i5-6600 CPU @ 3.30GHz
   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 : 6144 KB

From /proc/meminfo
MemTotal: 16039968 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 26 04:43

SPEC is set to: /usr/cpu2006
   Filesystem Type Size Used Avail Use% Mounted on
   /dev/sda2 xfs 369G 173G 197G 47% /

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 "DMTF SMBIOS" standard.

BIOS American Megatrends Inc. 1.0a 12/21/2015
Memory:
   4x Micron 8ATF51264AZ-2G1A2 4 GB 1 rank 2133 MHz

Continued on next page
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Test date: Jan-2016
Hardware Availability: Sep-2015
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:
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
Supermicro
Supermicro X11SAE-M motherboard (X11SAE-M, Intel Core i5-6600)

SPECfp2006 = 95.1
SPECfp_base2006 = 92.9

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

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 X11SAE-M motherboard
(X11SAE-M, Intel Core i5-6600)

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SPECfp_base2006 = 92.9

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Test sponsor: Supermicro
Tested by: Supermicro

Test date: Jan-2016
Hardware Availability: Sep-2015
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) -03(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -fnof-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) -03(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) -03(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) -03(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) -03(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 X11SAE-M motherboard (X11SAE-M, Intel Core i5-6600)

| SPECfp2006 = | 95.1 |
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| Hardware Availability: | Sep-2015 |
| Software Availability: | Sep-2015 |

### 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


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

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For questions about this result, please contact the tester.

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

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