Supermicro
Supermicro X11SAE-M motherboard (X11SAE-M, Intel Xeon E3-1225 v5)

SPECfp®2006 = 94.4
SPECfp_base2006 = 92.2

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

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

SPECfp®2006 = 94.4
SPECfp_base2006 = 92.2

Hardware
CPU Name: Intel Xeon E3-1225 v5
CPU Characteristics: Intel Turbo Boost Technology up to 3.70 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.el7.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)
**Supermicro**

Supermicro X11SAE-M motherboards
(X11SAE-M, Intel Xeon E3-1225 v5)

SPECfp2006 = 94.4
SPECfp_base2006 = 92.2

**CPU2006 license:** 001176  
**Test sponsor:** Supermicro  
**Tested by:** Supermicro  
**L3 Cache:** 8 MB I+D on chip per chip  
**Base Pointers:** 64-bit  
**Peak Pointers:** 32/64-bit  
**Other Cache:** None  
**Other Software:** None  
**Memory:** 32 GB (2 x 16 GB 2Rx8 PC4-2133P-E)  
**Other Hardware:** None  
**Operating System Notes**  
Stack size set to unlimited using "ulimit -s unlimited"

**Operating System Notes**

As tested, the system used a Supermicro CSE-731i-300B chassis.  
The chassis is configured with 2 PWS-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 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceb81e28219e1  
running on X10SRA-01 Thu Feb 4 02:17:00 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

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### Results Table

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<td>436.cactusADM</td>
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<td>88.8</td>
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<tr>
<td>470.lbm</td>
<td>76.3</td>
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<td><strong>76.3</strong></td>
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<td><strong>89.5</strong></td>
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<td>482.sphinx3</td>
<td>205</td>
<td>95.0</td>
<td><strong>207</strong></td>
<td><strong>94.1</strong></td>
</tr>
</tbody>
</table>

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

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### Platform Notes

As tested, the system used a Supermicro CSE-731i-300B chassis.  
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Supermicro
Supermicro X11SAE-M motherboard
(X11SAE-M, Intel Xeon E3-1225 v5)

SPECfp2006 = 94.4
SPECfp_base2006 = 92.2

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

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

Platform Notes (Continued)

From /proc/cpuinfo
    model name : Intel(R) Xeon(R) CPU E3-1225 v5 @ 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
    caution.)
    cpu cores : 4
    siblings : 4
    physical 0: cores 0 1 2 3
    cache size : 8192 KB

From /proc/meminfo
    MemTotal: 32719784 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 X10SRA-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 Feb 3 21:54

    SPEC is set to: /usr/cpu2006
    Filesystem       Type Size Used Avail Use% Mounted on
    /dev/sda2        xfs  183G  7.0G  176G   4% /

    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:
        2x Not Specified Not Specified
        2x Samsung M391A2K43BB1-CPB 16 GB 2 rank 2133 MHz

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SPEC CFP2006 Result

Supermicro
Supermicro X11SAE-M motherboard
(X11SAE-M, Intel Xeon E3-1225 v5)

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Tested by: Supermicro

Test date: Feb-2016
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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.zesmp: -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 -nofor_main
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64 -nofor_main
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64

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Software Availability: Sep-2015

Base Portability Flags (Continued)
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 -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:

Continued on next page
Peak Optimization Flags (Continued)

433.milc: basepeak = yes
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
Supermicro
Supermicro X11SAE-M motherboard (X11SAE-M, Intel Xeon E3-1225 v5)

SPECfp2006 = 94.4
SPECfp_base2006 = 92.2

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

Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes
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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