Supermicro
Supermicro X11SAE-M motherboard (X11SAE-M, Intel Core i3-6100TE)

SPECfp®2006 = 70.8
SPECfp_base2006 = 69.7

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

410.bwaves
416.gamess
433.milc
434.zeusmp
435.gromacs
436.cactusADM
437.leslie3d
444.namd
447.dealII
450.soplex
453.povray
454.calculix
459.GemsFDTD
465.tonto
470.lbm
481.wrf
482.sphinx3

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180

Hardware
CPU Name: Intel Core i3-6100TE
CPU Characteristics:
CPU MHz: 3200
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 2 threads/core
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

Software
Operating System: Red Hat Enterprise Linux Server release 7.1, Kernel 3.10.0-229.e17.x86_64
Compiler: C/C++: Version 160.0.101 of Intel C++ Studio XE for Linux;
Fortran: Version 160.0.101 of Intel Fortran Studio XE for Linux
Auto Parallel: Yes
File System: xfs
System State: Run level 3 (multi-user)

SPECfp_base2006 = 69.7
SPECfp2006 = 70.8
Continued on next page
Supermicro X11SAE-M motherboard (X11SAE-M, Intel Core i3-6100TE)

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

L3 Cache: 4 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

<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>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td>98.3</td>
<td>138</td>
<td>99.0</td>
<td>137</td>
<td>98.6</td>
<td>138</td>
<td>98.3</td>
<td>138</td>
<td>99.0</td>
<td>137</td>
</tr>
<tr>
<td>416.gamess</td>
<td>537</td>
<td>36.4</td>
<td>538</td>
<td>36.4</td>
<td>537</td>
<td>36.5</td>
<td>514</td>
<td>38.1</td>
<td>514</td>
<td>38.1</td>
</tr>
<tr>
<td>433.milc</td>
<td>104</td>
<td>88.5</td>
<td>104</td>
<td>88.5</td>
<td>104</td>
<td>88.5</td>
<td>104</td>
<td>88.5</td>
<td>104</td>
<td>88.5</td>
</tr>
<tr>
<td>434.zeusmp</td>
<td>69.5</td>
<td>131</td>
<td>69.5</td>
<td>131</td>
<td>69.5</td>
<td>131</td>
<td>69.5</td>
<td>131</td>
<td>69.5</td>
<td>131</td>
</tr>
<tr>
<td>435.gromacs</td>
<td>159</td>
<td>44.9</td>
<td>159</td>
<td>44.9</td>
<td>159</td>
<td>44.9</td>
<td>159</td>
<td>44.9</td>
<td>159</td>
<td>44.9</td>
</tr>
<tr>
<td>436.cactusADM</td>
<td>67.1</td>
<td>178</td>
<td>67.4</td>
<td>177</td>
<td>67.7</td>
<td>176</td>
<td>67.1</td>
<td>178</td>
<td>67.4</td>
<td>177</td>
</tr>
<tr>
<td>437.leslie3d</td>
<td>114</td>
<td>82.4</td>
<td>114</td>
<td>82.5</td>
<td>114</td>
<td>82.3</td>
<td>114</td>
<td>82.4</td>
<td>114</td>
<td>82.3</td>
</tr>
<tr>
<td>444.namd</td>
<td>314</td>
<td>25.6</td>
<td>314</td>
<td>25.6</td>
<td>315</td>
<td>25.5</td>
<td>309</td>
<td>26.0</td>
<td>308</td>
<td>26.0</td>
</tr>
<tr>
<td>447.dealII</td>
<td>202</td>
<td>56.7</td>
<td>202</td>
<td>56.7</td>
<td>201</td>
<td>56.8</td>
<td>202</td>
<td>56.7</td>
<td>202</td>
<td>56.7</td>
</tr>
<tr>
<td>450.soplex</td>
<td>214</td>
<td>39.0</td>
<td>211</td>
<td>39.5</td>
<td>213</td>
<td>39.1</td>
<td>214</td>
<td>39.0</td>
<td>211</td>
<td>39.5</td>
</tr>
<tr>
<td>453.povray</td>
<td>107</td>
<td>49.6</td>
<td>106</td>
<td>50.3</td>
<td>107</td>
<td>49.7</td>
<td>94.3</td>
<td>56.4</td>
<td>95.7</td>
<td>55.6</td>
</tr>
<tr>
<td>454.calculix</td>
<td>149</td>
<td>55.5</td>
<td>149</td>
<td>55.4</td>
<td>149</td>
<td>55.5</td>
<td>150</td>
<td>54.8</td>
<td>151</td>
<td>54.8</td>
</tr>
<tr>
<td>459.GemsFDTD</td>
<td>154</td>
<td>69.0</td>
<td>154</td>
<td>68.9</td>
<td>154</td>
<td>68.9</td>
<td>150</td>
<td>70.9</td>
<td>150</td>
<td>70.9</td>
</tr>
<tr>
<td>465.tonto</td>
<td>205</td>
<td>47.9</td>
<td>206</td>
<td>47.7</td>
<td>205</td>
<td>47.9</td>
<td>194</td>
<td>50.7</td>
<td>194</td>
<td>50.7</td>
</tr>
<tr>
<td>470.lbm</td>
<td>74.6</td>
<td>184</td>
<td>74.6</td>
<td>184</td>
<td>74.6</td>
<td>184</td>
<td>74.6</td>
<td>184</td>
<td>74.6</td>
<td>184</td>
</tr>
<tr>
<td>481.wrf</td>
<td>115</td>
<td>97.5</td>
<td>114</td>
<td>97.7</td>
<td>115</td>
<td>97.0</td>
<td>115</td>
<td>97.5</td>
<td>114</td>
<td>97.7</td>
</tr>
<tr>
<td>482.sphinx3</td>
<td>318</td>
<td>61.4</td>
<td>317</td>
<td>61.6</td>
<td>317</td>
<td>61.4</td>
<td>318</td>
<td>61.4</td>
<td>317</td>
<td>61.6</td>
</tr>
</tbody>
</table>

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 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 $ e3fbb8667b5a285932ceab81e28219e1 running on localhost.localdomain Sat Jan 23 09:55:24 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 i3-6100TE)

SPEC CFP2006 = 70.8
SPECfp_base2006 = 69.7

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) Core(TM) i3-6100TE CPU @ 2.70GHz
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 : 2
siblings : 4
physical 0: cores 0 1
cache size : 4096 KB

From /proc/meminfo
MemTotal: 16039968 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
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 22 12:10

SPEC is set to: /usr/cpu2006
Files system 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
Supermicro
Supermicro X11SAE-M motherboard
(X11SAE-M, Intel Core i3-6100TE)

SPECfp2006 = 70.8
SPECfp_base2006 = 69.7

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 = "2"

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.gamepp: -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 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX

Continued on next page
Supermicro
Supermicro X11SAE-M motherboard
(X11SAE-M, Intel Core i3-6100TE)

SPECfp2006 = 70.8
SPECfp_base2006 = 69.7

CPU2006 license: 001176
Test date: Jan-2016
Test sponsor: Supermicro
Hardware Availability: Oct-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
Peak Optimization Flags (Continued)

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

C++ benchmarks:

444.namd: -xCORE-AVX2(p...4... -unroll4
   -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes
416.gamess: -xCORE-AVX2(p...4... -unroll2
   -inline-level=0 -scalar-rep-

434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes

459.GemsFDTD: -xCORE-AVX2(p...4... -opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes
436.cactusADM: basepeak = yes

Continued on next page
Supermicro
Supermicro X11SAE-M motherboard
(X11SAE-M , Intel Core i3-6100TE)

SPECfp2006 = 70.8
SPECfp_base2006 = 69.7

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

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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 23 17:36:41 2016 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 23 February 2016.