Supermicro
Supermicro X11SSL-nF motherboard
(X11SSL-nF, Intel Core i3-6100TE)

SPECint\textsubscript{rate}_2006 = 107
SPECint\textsubscript{rate}_base2006 = 103

<table>
<thead>
<tr>
<th>Software</th>
<th>Hardware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System: Red Hat Enterprise Linux Server release 7.1, Kernel 3.10.0-229.el7.x86_64</td>
<td>CPU Name: Intel Core i3-6100TE</td>
</tr>
<tr>
<td>Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux</td>
<td>CPU Characteristics:</td>
</tr>
<tr>
<td>Auto Parallel: No</td>
<td>CPU MHz: 2700</td>
</tr>
<tr>
<td>File System: xfs</td>
<td>FPU: Integrated</td>
</tr>
<tr>
<td>System State: Run level 3 (multi-user)</td>
<td>CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 2 threads/core</td>
</tr>
<tr>
<td>Base Pointers: 32-bit</td>
<td>CPU(s) orderable: 1 chip</td>
</tr>
<tr>
<td>Peak Pointers: 32/64-bit</td>
<td>Primary Cache: 32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Other Software: Microquill SmartHeap V10.0</td>
<td>Secondary Cache: 256 KB I+D on chip per core</td>
</tr>
<tr>
<td></td>
<td>L3 Cache: 4 MB I+D on chip per chip</td>
</tr>
<tr>
<td></td>
<td>Other Cache: None</td>
</tr>
<tr>
<td></td>
<td>Memory: 64 GB (4 x 16 GB 2Rx8 PC4-2133P-E)</td>
</tr>
<tr>
<td></td>
<td>Disk Subsystem: 1 x 1000 GB SATA III, 7200 RPM</td>
</tr>
<tr>
<td></td>
<td>Other Hardware: None</td>
</tr>
</tbody>
</table>
**Supermicro**

Supermicro X11SSL-nF motherboard (X11SSL-nF, Intel Core i3-6100TE)

**SPEC CINT2006 Result**

**SPECint_rate2006 = 107**

**SPECint_rate_base2006 = 103**

<table>
<thead>
<tr>
<th>CPU2006 license:</th>
<th>001176</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor:</td>
<td>Supermicro</td>
</tr>
<tr>
<td>Test date:</td>
<td>Mar-2016</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Oct-2015</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Mar-2015</td>
</tr>
</tbody>
</table>

---

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base</td>
<td>Peak</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Base</td>
<td>Peak</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400.perlbench</td>
<td>4</td>
<td>536</td>
<td>73.0</td>
<td>535</td>
<td>73.1</td>
<td>534</td>
<td>73.2</td>
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<tr>
<td>401.bzip2</td>
<td>4</td>
<td>828</td>
<td>46.6</td>
<td>826</td>
<td>46.7</td>
<td>826</td>
<td>46.7</td>
</tr>
<tr>
<td>403.gcc</td>
<td>4</td>
<td>368</td>
<td>87.5</td>
<td>367</td>
<td>87.8</td>
<td>367</td>
<td>87.8</td>
</tr>
<tr>
<td>429.mcf</td>
<td>4</td>
<td>258</td>
<td>141</td>
<td>258</td>
<td>141</td>
<td>258</td>
<td>141</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>4</td>
<td>694</td>
<td>60.5</td>
<td>694</td>
<td>60.5</td>
<td>694</td>
<td>60.5</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>4</td>
<td>241</td>
<td>155</td>
<td>240</td>
<td>155</td>
<td>240</td>
<td>155</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>4</td>
<td>732</td>
<td>66.1</td>
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<td>66.2</td>
<td>731</td>
<td>66.2</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>4</td>
<td>82.2</td>
<td>1010</td>
<td>82.2</td>
<td>1010</td>
<td>82.2</td>
<td>1010</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>4</td>
<td>764</td>
<td>116</td>
<td>761</td>
<td>116</td>
<td>761</td>
<td>116</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>4</td>
<td>396</td>
<td>63.1</td>
<td>395</td>
<td>63.2</td>
<td>397</td>
<td>63.0</td>
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<tr>
<td>473.astar</td>
<td>4</td>
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<td>57.6</td>
<td>490</td>
<td>57.4</td>
<td>485</td>
<td>57.9</td>
</tr>
<tr>
<td>483.xalancbmk</td>
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<td>217</td>
<td>127</td>
<td>217</td>
<td>127</td>
<td>216</td>
<td>128</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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### 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-731i-300B chassis. The chassis is configured with 2 FWS-305-PQ redundant power supply, 1 SNK-P0046A4 heatsink, as well as 1 FAN-0108L4 rear cooling fan.

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

$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Thu Mar 24 08:40:50 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) 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
Continued on next page
Supermicro
Supermicro X11SSL-nF motherboard
(X11SSL-nF, Intel Core i3-6100TE)

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SPECint_rate_base2006 = 103

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

Platform Notes (Continued)

caution.)
cpu cores : 2
siblings : 4
physical 0: cores 0 1
cache size : 4096 KB

From /proc/meminfo
MemTotal: 65631132 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 Mar 24 02:42

SPEC is set to: /home/cpu2006
  Filesystem Type Size Used Avail Use% Mounted on
  /dev/mapper/rhel-home xfs 865G 170G 696G 20% /home

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 12/25/2015
  Memory:
    4x Samsung M391A2K43BB1-CPB 16 GB 2 rank 2133 MHz

(End of data from sysinfo program)
Supermicro
Supermicro X11SSL-nF motherboard
(X11SSL-nF, Intel Core i3-6100TE)

SPECint_rate2006 = 107
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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 -m32 -L/opt/intel/composer_xe_2015/lib/ia32

C++ benchmarks:
  icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
  -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
  -opt-mem-layout-trans=3

C++ benchmarks:
  -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
  -opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmartheap

Base Other Flags

C benchmarks:
  403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
  icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

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SPEC CINT2006 Result

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CPU2006 license: 001176
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Test date: Mar-2016
Hardware Availability: Oct-2015
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Peak Compiler Invocation (Continued)

400.perlbench: icc -m64
401.bzip2: icc -m64
456.hmmer: icc -m64
458.sjeng: icc -m64

C++ benchmarks:
   icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
   -auto-ilp32

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
   -opt-prefetch -auto-ilp32 -ansi-alias

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
   -ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -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-ilp32

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SPECint\textsubscript{rate}2006 = 107
SPECint\textsubscript{rate\_base}2006 = 103

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</tr>
<tr>
<td>Tested by: Supermicro</td>
<td>Software Availability: Mar-2015</td>
</tr>
</tbody>
</table>

**Peak Optimization Flags (Continued)**

462.libquantum: basepeak = yes

464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -ansi-alias -opt-ra-region-strategy=block -L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

**Peak Other Flags**

C benchmarks:

403.gcc: -Dalloca=_alloca

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-revH.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-revH.xml

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

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