**Supermicro**

Motherboard X10SLM+-F  
(Intel Xeon E3-1231 v3)

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<table>
<thead>
<tr>
<th>SPECint_rate2006 = 218</th>
</tr>
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<tbody>
<tr>
<td>SPECint_rate_base2006 = 209</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 001176  
**Test date:** Jan-2015  
**Test sponsor:** Supermicro  
**Hardware Availability:** May-2014  
**Tested by:** Supermicro  
**Software Availability:** Sep-2014

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### Software

**Operating System:** Red Hat Enterprise Linux Server release 7.0, Kernel 3.10.0-123.el7.x86_64  
**Compiler:** C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux  
**Auto Parallel:** No  
**File System:** xfs  
**System State:** Run level 3 (multi-user)  
**Base Pointers:** 32-bit  
**Peak Pointers:** 32/64-bit  
**Other Software:** Microquill SmartHeap V10.0

---

### Hardware

**CPU Name:** Intel Xeon E3-1231 v3  
**CPU Characteristics:** Intel Turbo Boost Technology up to 3.80 GHz  
**CPU MHz:** 3400  
**FPU:** Integrated  
**CPU(s) enabled:** 4 cores, 1 chip, 4 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  
**L3 Cache:** 8 MB I+D on chip per chip  
**Other Cache:** None  
**Memory:** 32 GB (4 x 8 GB 2Rx8 PC3-14900E-13, ECC, running at 1600 MHz)  
**Disk Subsystem:** 1 x 512 GB SATA III, SSD  
**Other Hardware:** None

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**400.perlbench:**  
8 copies  
8 copies  
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**401.bzip2:**  
8 copies  
8 copies  
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**403.gcc:**  
8 copies  
8 copies  
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**429.mcf:**  
8 copies  
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**445.gobmk:**  
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**456.hmmer:**  
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**458.sjeng:**  
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**462.libquantum:**  
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**464.h264ref:**  
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**473.astar:**  
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**483.xalancbmk:**  
8 copies  
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**Copy**  
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**SPECint_rate2006 = 218**  
**SPECint_rate_base2006 = 209**

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Test date: Jan-2015
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Results Table

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<td>222</td>
<td>249</td>
<td>222</td>
<td>242</td>
<td>228</td>
</tr>
</tbody>
</table>

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

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
SuperChassis 113MTO-330CB and SNK-P0046P heatsink.
Sysinfo program /home/cpu2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 $ e3fbb8667b5a285932ceab81e28219e1
running on 21-45.hnet Fri Jan 23 21:00:04 2015

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) Xeon(R) CPU E3-1231 v3 @ 3.40GHz
1 "physical id"s (chips)
8 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

Continued on next page
**Supermicro**

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

### Platform Notes  (Continued)

- **cpu cores:** 4  
- **siblings:** 8  
- **physical 0:** cores 0 1 2 3  
- **cache size:** 8192 KB

From `/proc/meminfo`

- **MemTotal:** 32742812 kB  
- **HugePages_Total:** 0  
- **Hugepagesize:** 2048 kB

From `/etc/*release* /etc/*version*`

- **os-release:**
  - **NAME:** "Red Hat Enterprise Linux Server"  
  - **VERSION:** "7.0 (Maipo)"  
  - **ID:** "rhel"  
  - **ID_LIKE:** "fedora"  
  - **VERSION_ID:** "7.0"  
  - **PRETTY_NAME:** "Red Hat Enterprise Linux Server 7.0 (Maipo)"  
  - **ANSI_COLOR:** "0;31"  
  - **CPE_NAME:** "cpe:/o:redhat:enterprise_linux:7.0:GA:server"  
  - **redhat-release:** Red Hat Enterprise Linux Server release 7.0 (Maipo)  
  - **system-release:** Red Hat Enterprise Linux Server release 7.0 (Maipo)  
  - **system-release-cpe:** cpe:/o:redhat:enterprise_linux:7.0:ga:server

- **uname -a:**
  - Linux 21-45.hnet 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57 EDT 2014  
  - x86_64 x86_64 x86_64 GNU/Linux

- **run-level:** 3 Jan 23 20:43

**SPEC is set to:** /home/cpu2006

**Filesystem** | **Type** | **Size** | **Used** | **Avail** | **Use%** | **Mounted on**
--- | --- | --- | --- | --- | --- | ---
/dev/mapper/rhel_21--45-home | xfs | 423G | 78G | 345G | 19% | /home

- **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. 2.00 04/24/2014**
- **Memory:**
  - 4x Samsung M391B1G73QH0-CMA 8 GB 2 rank 1333 MHz, configured at 1600 MHz

(End of data from sysinfo program)

### 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"

Continued on next page
SPEC CINT2006 Result

Supermicro
Motherboard X10SLM+-F
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CPU2006 license: 001176
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Tested by: Supermicro

Test date: Jan-2015
Hardware Availability: May-2014
Software Availability: Sep-2014

General Notes (Continued)
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
400.perlbench: icc -m64

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SPEC CINT2006 Result

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Motherboard X10SLM+-F
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Peak Compiler Invocation (Continued)

401.bzip2: icc -m64
456.hmmer: 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
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)
-03(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)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32 -ansi-alias
403.gcc: -xCORE-AVX2 -ipo -03 -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 -03 -no-prec-div -unroll2 -auto-ilp32
462.libquantum: basepeak = yes
464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(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)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs

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SPEC CINT2006 Result

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Peak Optimization Flags (Continued)

471.omnetpp (continued):
   -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.

Tested with SPEC CPU2006 v1.2.
Report generated on Tue Feb 10 18:35:13 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 10 February 2015.