**Supermicro**

SuperServer 5019S-WR (X11SSW-F, Intel Xeon E3-1245 v5)

<table>
<thead>
<tr>
<th>SPECint_rate2006 = 249</th>
<th>SPECint_rate_base2006 = 241</th>
</tr>
</thead>
</table>

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

| CPU Name: | Intel Xeon E3-1245 v5 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.90 GHz |
| CPU MHz: | 3500 |
| 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 core |
| Other Cache: | None |
| Memory: | 64 GB (4 x 16 GB 2Rx8 PC4-2133P-E) |
| Disk Subsystem: | 1 x 1000 GB SATA III, 7200 RPM |
| Other Hardware: | None |

Operating System: Red Hat Enterprise Linux Server release 7.1, Kernel 3.10.0-229.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
Supermicro
SuperServer 5019S-WR
(X11SSW-F, Intel Xeon E3-1245 v5)

SPECint_rate2006 = 249
SPECint_rate_base2006 = 241

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<th>Ratio</th>
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<tr>
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<td>194</td>
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<td>401.bzip2</td>
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<td>669</td>
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<td>670</td>
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<td>672</td>
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<td>403.gcc</td>
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<td>429.mcf</td>
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<td>445.gobmk</td>
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<td>456.hmmer</td>
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<td>458.sjeng</td>
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<td>462.libquantum</td>
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<td>71.4</td>
<td>2320</td>
<td>71.6</td>
<td>2320</td>
<td>71.5</td>
<td>2320</td>
<td>8</td>
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<td>464.h264ref</td>
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<tr>
<td>471.omnetpp</td>
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<td>473.astar</td>
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<tr>
<td>483.xalancbmk</td>
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<td>268</td>
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<td>207</td>
<td>267</td>
<td>8</td>
<td>206</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

Sysinfo program /home/cpu2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 $s e3fbb8667b5a285932ceab8e28219e1
running on localhost.localdomain Wed Dec 23 00:00:53 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 E3-1245 v5 @ 3.50GHz
 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.)
cpu cores : 4
siblings : 8

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Platform Notes (Continued)

- physical 0: cores 0 1 2 3
- cache size: 8192 KB

From /proc/meminfo
- MemTotal: 65755200 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 Dec 22 19:46

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. 1.0 11/03/2015
Memory:
- 4x Samsung M391A2K43BB1-CPB 16 GB 2 rank 2133 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"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB
memory using RedHat EL 7.0

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**SPEC CINT2006 Result**

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<td>Supermicro</td>
<td>Software Availability</td>
<td>Mar-2015</td>
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**General Notes (Continued)**
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 -W1,-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

401.bzip2: icc -m64

Continued on next page
Peak Compiler Invocation (Continued)

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
455.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
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

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

Test date: Dec-2015
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Tested with SPEC CPU2006 v1.2.

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-revG.20141230.00.xml

Peak Optimization Flags (Continued)

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 -Wl,-z,muldefs
   -L/sh -lsmartheap

473.astar: basepeak = yes
483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

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

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