## Supermicro

SuperServer 5019S-L
(X11SSL-F, Intel Xeon E3-1240 v6)

### SPECint®_rate2006 = 274
SPECint_rate_base2006 = 263

<table>
<thead>
<tr>
<th>Test date:</th>
<th>May-2017</th>
</tr>
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<tbody>
<tr>
<td>Hardware Availability:</td>
<td>Mar-2017</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Sep-2015</td>
</tr>
</tbody>
</table>

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

### CPU Name:
Intel Xeon E3-1240 v6

### CPU Characteristics:
Intel Turbo Boost Technology up to 4.10 GHz

### CPU MHz:
3700

### 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 1Rx8 PC4-2400T-E)

### Disk Subsystem:
1 x 400 GB SATA III SSD

### Other Hardware:
None

### Operating System:
Red Hat Enterprise Linux Server release 7.3, Kernel 3.10.0-514.el7.x86_64

### Compiler:
C/C++: Version 16.0.0.101 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 V10.2

---

### Software

<table>
<thead>
<tr>
<th>Software</th>
<th>Operating System</th>
</tr>
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![SPECint Rate2006 Chart]

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<tr>
<th>Benchmark</th>
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<td>400.perlbench</td>
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<td>429.mcf</td>
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<tr>
<td>471.omnetpp</td>
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<td>473.astar</td>
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**SPECint Rate2006**

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</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 /usr/cpu2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 $ e3fbb8667b5a285932ceab81e28219e1 running on localhost.localdomain Wed May 17 19:34:45 2017

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 E3-1240 v6 @ 3.70GHz
- 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

Continued on next page
Supermicro
SuperServer 5019S-L
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SPEC CINT2006 Result

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CPU2006 license: 001176
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Platform Notes (Continued)

physical 0: cores 0 1 2 3
(cache size : 8192 KB)

From /proc/meminfo
MemTotal: 32795828 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.3 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.3"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.3 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.3:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)

uname -a:
Linux localhost.localdomain 3.10.0-514.el7.x86_64 #1 SMP Wed Oct 19 11:24:13 EDT 2016 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 May 17 19:27
SPEC is set to: /usr/cpu2006

Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-root xfs    50G   11G   40G  21% /

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. 2.0a 05/15/2017
Memory:
4x Micron 9ASF1G72AZ-2G3A1 8 GB 1 rank 2400 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"
Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1

Continued on next page
SPEC CINT2006 Result

Supermicro
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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/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin
C++ benchmarks:
  icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

Base Portability Flags
400.perlbanch: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32
401.bzip2: -D_FILE_OFFSET_BITS=64
403.gcc: -D_FILE_OFFSET_BITS=64
429.mcf: -D_FILE_OFFSET_BITS=64
445.gobmk: -D_FILE_OFFSET_BITS=64
456.hmmer: -D_FILE_OFFSET_BITS=64
458.sjeng: -D_FILE_OFFSET_BITS=64
462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
464.h264ref: -D_FILE_OFFSET_BITS=64
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar: -D_FILE_OFFSET_BITS=64
483.xalancbmk: -D_FILE_OFFSET_BITS=64 -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
Supermicro
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Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin
```
400.perlbench: icc -m64
401.bzip2: icc -m64
456.hmmer: icc -m64
458.sjeng: icc -m64

C++ benchmarks:
```
icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin
```

Peak Portability Flags

```
400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64
403.gcc: -D_FILE_OFFSET_BITS=64
429.mcf: -D_FILE_OFFSET_BITS=64
445.gobmk: -D_FILE_OFFSET_BITS=64
456.hmmer: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64
458.sjeng: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64
462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
464.h264ref: -D_FILE_OFFSET_BITS=64
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar: -D_FILE_OFFSET_BITS=64
483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:
```
400.perlbench: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -auto-ilp32
```
```
401.bzip2: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -opt-prefetch
-auto-ilp32 -ansi-alias
```
```
403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div
```
```
429.mcf: basepeak = yes
```

Continued on next page
SPEC CINT2006 Result

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Peak Optimization Flags (Continued)

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-prof-use(pass 2) -par-num-threads=1(pass 1) -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: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
-auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: -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
-ansi-alias

C++ benchmarks:

471.omnetpp: -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) -ansi-alias
-opt-ra-region-strategy=block -Wl,-z,muldefs
-L/sh -lsmartheap

473.astar: basepeak = yes

483.xalanchbmk: 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-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 questions about this result, please contact the tester.  
For other inquiries, please contact webmaster@spec.org.

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