## SPECint® CINT2006 Result

**Supermicro**

Supermicro C7Z170-SQ motherboard (C7Z170-SQ, Intel Core i3-6100TE)

- **SPEClnt_rate2006 = 107**
- **SPEClnt_rate_base2006 = 103**

### Hardware

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name:</td>
<td>Intel Core i3-6100TE</td>
</tr>
<tr>
<td>CPU Characteristics:</td>
<td></td>
</tr>
<tr>
<td>CPU MHz:</td>
<td>2700</td>
</tr>
<tr>
<td>FPU:</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled:</td>
<td>2 cores, 1 chip, 2 cores/chip, 2 threads/core</td>
</tr>
<tr>
<td>CPU(s) orderable:</td>
<td>1 chip</td>
</tr>
<tr>
<td>Primary Cache:</td>
<td>32 KB I + 32 KB D on chip per core</td>
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<tr>
<td>Secondary Cache:</td>
<td>256 KB I+D on chip per core</td>
</tr>
<tr>
<td>L3 Cache:</td>
<td>4 MB I+D on chip per chip</td>
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<tr>
<td>Other Cache:</td>
<td>None</td>
</tr>
<tr>
<td>Memory:</td>
<td>16 GB (4 x 4 GB 1Rx8 PC4-2133P-U)</td>
</tr>
<tr>
<td>Disk Subsystem:</td>
<td>1 x 400 GB SATA III SSD</td>
</tr>
<tr>
<td>Other Hardware:</td>
<td>None</td>
</tr>
</tbody>
</table>

### Software

- **Operating System:** Red Hat Enterprise Linux Server release 7.0, Kernel 3.10.0-123.el7.x86_64
- **Compiler:** C/C++: Version 15.0.0.0.90 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

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CPU2006 license: 001176  | CPU2006 license: 001176
Test sponsor: Supermicro  | Test sponsor: Supermicro
-tested by: Supermicro    | __Test date: Nov-2015__
Hardware Availability: Sep-2015 | Hardware Availability: Sep-2015
Software Availability: Sep-2014 | Software Availability: Sep-2014

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>CINT2006 Result</th>
<th>CINT2006 Base Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td></td>
<td></td>
</tr>
<tr>
<td>401.bzip2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>403.gcc</td>
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<tr>
<td>429.mcf</td>
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<tr>
<td>445.gobmk</td>
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</tr>
<tr>
<td>456.hmmer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>458.sjeng</td>
<td></td>
<td></td>
</tr>
<tr>
<td>462.libquantum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>464.h264ref</td>
<td></td>
<td></td>
</tr>
<tr>
<td>471.omnetpp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>473.astar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>483.xalancbmk</td>
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Copy a SPECint_rate2006 = 107

Copy a SPECint_rate_base2006 = 103
Supermicro
Supermicro C7Z170-SQ motherboard
(C7Z170-SQ, Intel Core i3-6100TE)

SPECint_rate2006 = 107
SPECint_rate_base2006 = 103

Results Table

<table>
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<tr>
<th>Benchmark</th>
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<th>Ratio</th>
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<th>Seconds</th>
<th>Ratio</th>
<th>Peak</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Peak</th>
<th>Seconds</th>
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<tr>
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<td>483.xalancbmk</td>
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<td>4</td>
<td>207</td>
<td>133</td>
<td>209</td>
<td>132</td>
</tr>
</tbody>
</table>

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-732G-903B chassis.
The chassis is configured with a PWS-903-PQ power supply, 1 SNK-P0051AP4 heatsink, as well as 1 FAN-0124L4 rear cooling fan.
Sysinfo program /home/cpu2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Thu Nov 12 09:53:54 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) 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 caution.)

Continued on next page
SPEC CINT2006 Result

Supermicro
Supermicro C7Z170-SQ motherboard
(C7Z170-SQ, Intel Core i3-6100TE)

SPECint_rate2006 = 107
SPECint_rate_base2006 = 103

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

Platform Notes (Continued)

- cpu cores : 2
- siblings : 4
- physical 0: cores 0 1
- cache size : 4096 KB

From /proc/meminfo
- MemTotal: 16174556 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 localhost.localdomain 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 Nov 10 10:43

SPEC is set to: /home/cpu2006

Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 318G 19G 300G 6% /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 SMI BIOS" standard.

BIOS American Megatrends Inc. T20151015150001 10/15/2015
Memory:
- 4x Micron 8ATF51264AZ-2G1A2 4 GB 1 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"

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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

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -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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<thead>
<tr>
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#### Peak Compiler Invocation (Continued)

```plaintext
401.bzip2: icc -m64
456.hmmer: icc -m64
458.sjeng: icc -m64
```

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

#### Peak Portability Flags

```plaintext
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:
```plaintext
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
456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll12 -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) -unroll14 -auto-ilp32
462.libquantum: basepeak = yes
```

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Peak Optimization Flags (Continued)

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

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