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

SPECint®2006 = 50.4
SPECint_base2006 = 49.2

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

Test date: Nov-2015
Hardware Availability: Oct-2015
Software Availability: Sep-2015

CPU Name: Intel Core i3-6100TE
CPU Characteristics:
CPU MHZ: 2700
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
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: 4 MB I+D on chip per chip
Other Cache: None
Memory: 16 GB (4 x 4 GB 1Rx8 PC4-2800R-U, running at 2133 MHz)
Disk Subsystem: 1 x 200 GB SATA III SSD
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 16.0.0.101 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.2
Supermicro
Supermicro C7Z170-M motherboard
(C7Z170-M, Intel Core i3-6100TE)

SPECint2006 = 50.4
SPECint_base2006 = 49.2

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>287</td>
<td>34.1</td>
<td>287</td>
<td>34.1</td>
<td>287</td>
<td>34.0</td>
<td>258</td>
<td>37.9</td>
<td>258</td>
<td>37.8</td>
</tr>
<tr>
<td>403.gcc</td>
<td>222</td>
<td>36.2</td>
<td>222</td>
<td>36.2</td>
<td>222</td>
<td>36.2</td>
<td>222</td>
<td>36.3</td>
<td>222</td>
<td>36.2</td>
</tr>
<tr>
<td>429.mcf</td>
<td>149</td>
<td>61.3</td>
<td>152</td>
<td>59.9</td>
<td>151</td>
<td>60.4</td>
<td>150</td>
<td>60.7</td>
<td>151</td>
<td>60.2</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>433</td>
<td>24.2</td>
<td>434</td>
<td>24.2</td>
<td>434</td>
<td>24.2</td>
<td>452</td>
<td>23.2</td>
<td>452</td>
<td>23.2</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>132</td>
<td>70.8</td>
<td>132</td>
<td>70.8</td>
<td>132</td>
<td>70.5</td>
<td>132</td>
<td>70.8</td>
<td>132</td>
<td>70.5</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>432</td>
<td>28.0</td>
<td>432</td>
<td>28.0</td>
<td>432</td>
<td>28.0</td>
<td>427</td>
<td>28.4</td>
<td>427</td>
<td>28.4</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>20.4</td>
<td>1010</td>
<td>20.4</td>
<td>1010</td>
<td>20.4</td>
<td>1010</td>
<td>20.4</td>
<td>1010</td>
<td>20.4</td>
<td>1010</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>425</td>
<td>52.1</td>
<td>425</td>
<td>52.1</td>
<td>425</td>
<td>52.1</td>
<td>425</td>
<td>52.1</td>
<td>425</td>
<td>52.1</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>224</td>
<td>27.9</td>
<td>224</td>
<td>27.9</td>
<td>224</td>
<td>27.9</td>
<td>192</td>
<td>32.6</td>
<td>192</td>
<td>32.6</td>
</tr>
<tr>
<td>473.astar</td>
<td>252</td>
<td>27.9</td>
<td>252</td>
<td>27.8</td>
<td>251</td>
<td>27.9</td>
<td>251</td>
<td>28.0</td>
<td>252</td>
<td>27.9</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>107</td>
<td>64.5</td>
<td>107</td>
<td>64.4</td>
<td>107</td>
<td>64.5</td>
<td>101</td>
<td>68.0</td>
<td>102</td>
<td>67.9</td>
</tr>
</tbody>
</table>

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

Submit Notes
The config file option 'submit' was used.

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 a PWS-105-P2 power supply, 1 SNK-P006A4 heatsink, as well as 1 FAN-0108L4 rear cooling fan.
BIOS Settings:
Hyper-threading = Disabled
Sysinfo program /usr/cpu2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a28593ceab81e28219e1
running on C7Z170-01 Fri Nov 27 01:58:28 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)
    2 "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
Supermicro C7Z170-M motherboard
(C7Z170-M, Intel Core i3-6100TE)

SPECint2006 = 50.4
SPECint_base2006 = 49.2

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

Test date: Nov-2015
Hardware Availability: Oct-2015
Software Availability: Sep-2015

---

Platform Notes (Continued)

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

From /proc/meminfo:
- MemTotal: 16210128 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 C7Z170-01 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 Nov 27 01:57
SPEC is set to: /usr/cpu2006

Filesystem  Type  Size  Used Avail Use% Mounted on
/dev/sda2    xfs  183G  26G  158G  14% /

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. 1.0c 11/11/2015
Memory:
- 4x 0420 F4-2800C16-4GRK 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:
- KMP_AFFINITY = "granularity=fine,scatter"
- LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"

Continued on next page
Supermicro
Supermicro C7Z170-M motherboard
(C7Z170-M, Intel Core i3-6100TE)

SPECint2006 = 50.4
SPECint_base2006 = 49.2

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

General Notes (Continued)

OMP_NUM_THREADS = "2"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled

Base Compiler Invocation

C benchmarks:
  icc -m64

C++ benchmarks:
  icpc -m64

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
  -xCORE-AVX2 -ipo -03 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
  -xCORE-AVX2 -ipo -03 -no-prec-div -opt-prefetch -auto-p32
  -Wl,-z,muldefs -L/sh/-lsmartheap64

Base Other Flags

C benchmarks:

Continued on next page
Supermicro
Supermicro C7Z170-M motherboard (C7Z170-M, Intel Core i3-6100TE)

SPECint2006 = 50.4
SPECint_base2006 = 49.2

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

Test date: Nov-2015
Hardware Availability: Oct-2015
Software Availability: Sep-2015

Base Other Flags (Continued)
403.gcc: -Dalocca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
   icc -m64

   400.perlbench: icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin
   445.gobmk: icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

C++ benchmarks (except as noted below):
   icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin
   473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -D_FILE_OFFSET_BITS=64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

   400.perlbench: -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) -opt-prefetch
   -ansi-alias

   401.bzip2: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
   -ipo(pass 2) -O3(pass 2) -no-prec-div
   -par-num-threads=1(pass 1) -prof-use(pass 2) -auto-ilp32
   -opt-prefetch -ansi-alias
Supermicro
Supermicro C7Z170-M motherboard
(C7Z170-M, Intel Core i3-6100TE)

SPECint2006 = 50.4
SPECint_base2006 = 49.2

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

Peak Optimization Flags (Continued)

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32

429.mcf: -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel
-optimization -auto-p32

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 1
-prof-use(pass 2) -par-num-threads=1(pass 1) -ansi-alias

456.hmmer: basepeak = yes

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 1
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

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

473.astar: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-auto-p32 -Wl,-z,muldefs -L/sh -lsmartheap64

483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

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
## SPEC CINT2006 Result

**Supermicro**

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

| SPECint2006 | 50.4 |
| SPECint_base2006 | 49.2 |

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

| Test date | Nov-2015 |
| Hardware Availability | Oct-2015 |
| Software Availability | Sep-2015 |

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.2.
Originally published on 15 December 2015.