**Supermicro**

Supermicro C7H170-M motherboard (C7H170-M, Intel Core i5-6400T)

**SPECFact®_rate2006 = 156**

**SPECFact_rate_base2006 = 151**

**CPU2006 license:** 001176  
**Test date:** Oct-2015  
**Test sponsor:** Supermicro  
**Hardware Availability:** Sep-2015

**Tested by:** Supermicro  
**Software Availability:** Sep-2014

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**Hardware**

- **CPU Name:** Intel Core i5-6400T  
- **CPU Characteristics:** Intel Turbo Boost Technology up to 2.80 GHz  
- **CPU MHz:** 2200  
- **FPU:** Integrated  
- **CPU(s) enabled:** 4 cores, 1 chip, 4 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:** 6 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

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**Software**

- **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
SPEC CINT2006 Result

Supermicro
Supermicro C7H170-M motherboard
(C7H170-M, Intel Core i5-6400T)

SPECint_rate2006 = 156
SPECint_rate_base2006 = 151

Results Table

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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 CSE-743TQ-865B-SQ chassis.

Sysinfo program /usr/cpu2006/config/sysinfo.rev6914

$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on C7H170-01 Wed Oct 21 23:09:08 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) i5-6400T CPU @ 2.20GHz
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.)
Supermicro C7H170-M motherboard
(C7H170-M, Intel Core i5-6400T)

SPECint_rate2006 = 156
SPECint_rate_base2006 = 151

Platform Notes (Continued)

cpu cores : 4
siblings : 4
physical 0: cores 0 1 2 3
cache size : 6144 KB

From /proc/meminfo
MemTotal: 16334556 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 C7H170-01 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 Oct 21 23:03

SPEC is set to: /usr/cpu2006
Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/sda2      xfs   183G  24G  159G  13% /

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. T20151015150001 10/15/2015
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:
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"

Continued on next page
**SPEC CINT2006 Result**

**Supermicro**
Supermicro C7H170-M motherboard (C7H170-M, Intel Core i5-6400T)

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**CPU2006 license:** 001176

**Test sponsor:** Supermicro

**Test date:** Oct-2015

**Hardware Availability:** Sep-2015

**Tested by:** Supermicro

**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`

- **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:**
  
  `icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32`

- **400.perlbench:**
  
  `icc -m64`

Continued on next page
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Supermicro C7H170-M motherboard
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Peak Compiler Invocation (Continued)

401.bzip2: icc -m64
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

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 -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

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Supermicro
Supermicro C7H170-M motherboard (C7H170-M, Intel Core i5-6400T)

SPECint_rate2006 = 156
SPECint_rate_base2006 = 151

Peak Optimization Flags (Continued)

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

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

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

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-revG.20141230.00.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-revG.20141230.00.xml

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

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