



# SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Supermicro

Supermicro C7Z170-SQ motherboard  
(C7Z170-SQ , Intel Core i5-6600K)

SPECint®2006 = 71.1

SPECint\_base2006 = 69.1

CPU2006 license: 001176

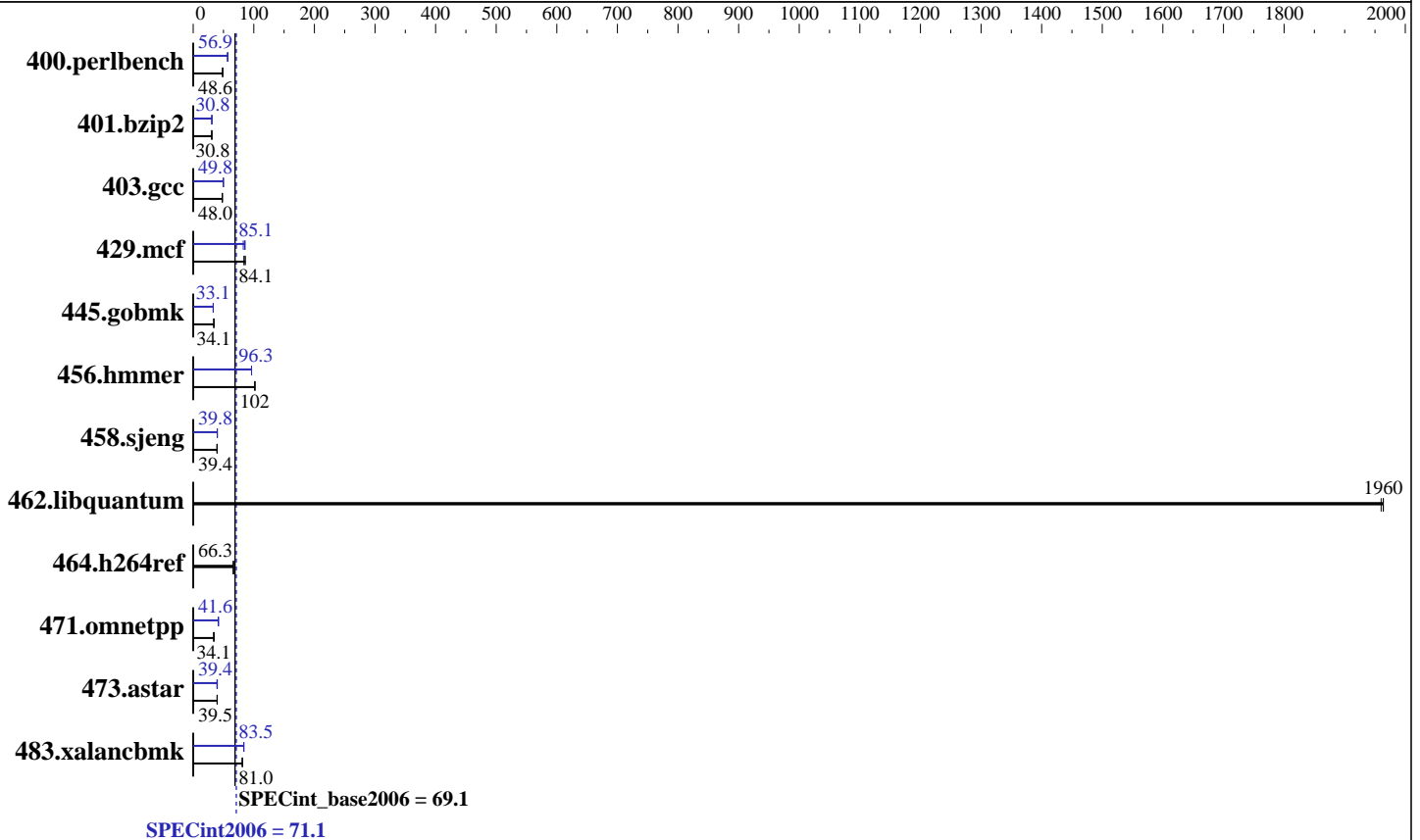
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2015

Hardware Availability: Sep-2015

Software Availability: Sep-2014



### Hardware

CPU Name: Intel Core i5-6600K  
 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  
 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 PC4-2133P-U)  
 Disk Subsystem: 1 x 400 GB SATA III SSD  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 7.0, Kernel 3.10.0-123.el7.x86\_64  
 Compiler: C/C++; Version 15.0.0.090 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 V10.0



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Supermicro

Supermicro C7Z170-SQ motherboard  
(C7Z170-SQ, Intel Core i5-6600K)

SPECint2006 = 71.1

SPECint\_base2006 = 69.1

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2015

Hardware Availability: Sep-2015

Software Availability: Sep-2014

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	201	48.7	<u>201</u>	<u>48.6</u>	201	48.6	<u>172</u>	<u>56.9</u>	172	56.9	172	56.8
401.bzip2	315	30.6	314	30.8	<u>314</u>	<u>30.8</u>	<u>313</u>	<u>30.8</u>	313	30.8	313	30.8
403.gcc	167	48.1	<u>168</u>	<u>48.0</u>	168	48.0	162	49.8	162	49.7	<u>162</u>	<u>49.8</u>
429.mcf	<u>108</u>	<u>84.1</u>	109	84.0	106	86.1	110	82.7	107	85.6	<u>107</u>	<u>85.1</u>
445.gobmk	<u>307</u>	<u>34.1</u>	308	34.1	307	34.1	317	33.1	317	33.0	<u>317</u>	<u>33.1</u>
456.hammer	91.6	102	<u>91.6</u>	<u>102</u>	91.7	102	97.0	96.2	<u>96.9</u>	<u>96.3</u>	96.8	96.4
458.sjeng	<u>307</u>	<u>39.4</u>	308	39.3	307	39.4	304	39.8	304	39.8	<u>304</u>	<u>39.8</u>
462.libquantum	10.6	1960	10.6	1960	<u>10.6</u>	<u>1960</u>	10.6	1960	10.6	1960	<u>10.6</u>	<u>1960</u>
464.h264ref	334	66.3	<u>334</u>	<u>66.3</u>	333	66.4	334	66.3	<u>334</u>	<u>66.3</u>	333	66.4
471.omnetpp	<u>183</u>	<u>34.1</u>	182	34.4	185	33.7	150	41.7	<u>150</u>	<u>41.6</u>	151	41.5
473.astar	177	39.7	<u>178</u>	<u>39.5</u>	178	39.4	<u>178</u>	<u>39.4</u>	176	39.9	178	39.4
483.xalancbmk	84.8	81.3	85.2	81.0	<u>85.1</u>	<u>81.0</u>	82.5	83.6	<u>82.6</u>	<u>83.5</u>	82.7	83.5

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-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 Tue Nov 3 22:20:28 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) i5-6600K CPU @ 3.50GHz
 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.)
cpu cores : 4
siblings : 4
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Supermicro

Supermicro C7Z170-SQ motherboard  
(C7Z170-SQ , Intel Core i5-6600K)

SPECint2006 = 71.1

SPECint\_base2006 = 69.1

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2015

Hardware Availability: Sep-2015

Software Availability: Sep-2014

### Platform Notes (Continued)

physical 0: cores 0 1 2 3  
cache size : 6144 KB

From /proc/meminfo  
MemTotal: 16170460 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 3 09:32

SPEC is set to: /home/cpu2006  
Filesystem Type Size Used Avail Use% Mounted on  
/dev/mapper/rhel-home xfs 318G 317G 1.2G 100% /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. 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:  
KMP\_AFFINITY = "granularity=fine,scatter"  
LD\_LIBRARY\_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"  
OMP\_NUM\_THREADS = "4"

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Supermicro

Supermicro C7Z170-SQ motherboard  
(C7Z170-SQ , Intel Core i5-6600K)

SPECint2006 = 71.1

SPECint\_base2006 = 69.1

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2015

Hardware Availability: Sep-2015

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 -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 -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:  
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32  
-Wl,-z,muldefs -L/sh -lsmartheap64

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Supermicro

Supermicro C7Z170-SQ motherboard  
(C7Z170-SQ , Intel Core i5-6600K)

**SPECint2006 = 71.1**

**SPECint\_base2006 = 69.1**

**CPU2006 license:** 001176

**Test sponsor:** Supermicro

**Tested by:** Supermicro

**Test date:** Nov-2015

**Hardware Availability:** Sep-2015

**Software Availability:** Sep-2014

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

400.perlbench: icc -m32 -L/opt/intel/composer\_xe\_2015/lib/ia32

445.gobmk: icc -m32 -L/opt/intel/composer\_xe\_2015/lib/ia32

C++ benchmarks (except as noted below):

icpc -m32 -L/opt/intel/composer\_xe\_2015/lib/ia32

473.astar: icpc -m64

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

401.bzip2: -DSPEC\_CPU\_LP64

403.gcc: -DSPEC\_CPU\_LP64

429.mcf: -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

473.astar: -DSPEC\_CPU\_LP64

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)

-opt-prefetch -ansi-alias

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)

-O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32

-opt-prefetch -ansi-alias

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

-opt-prefetch -auto-p32

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)

-ansi-alias

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Supermicro

Supermicro C7Z170-SQ motherboard  
(C7Z170-SQ , Intel Core i5-6600K)

**SPECint2006 = 71.1**

**SPECint\_base2006 = 69.1**

**CPU2006 license:** 001176

**Test sponsor:** Supermicro

**Tested by:** Supermicro

**Test date:** Nov-2015

**Hardware Availability:** Sep-2015

**Software Availability:** Sep-2014

## Peak Optimization Flags (Continued)

456.hmmr: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-ansi-alias

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

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

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)  
-opt-ra-region-strategy=block -ansi-alias  
-Wl,-z,muldefs -L/sh -lsmarheap

473.astar: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
-auto-p32 -Wl,-z,muldefs -L/sh -lsmarheap64

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

## 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-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>



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Supermicro

Supermicro C7Z170-SQ motherboard  
(C7Z170-SQ , Intel Core i5-6600K)

SPECint2006 = 71.1

SPECint\_base2006 = 69.1

**CPU2006 license:** 001176

**Test sponsor:** Supermicro

**Tested by:** Supermicro

**Test date:** Nov-2015

**Hardware Availability:** Sep-2015

**Software Availability:** Sep-2014

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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Tue Dec 1 17:41:22 2015 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 1 December 2015.