



SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Supermicro

Supermicro C7Z170-M motherboard
(C7Z170-M, Intel Core i7-6700K)

SPECint®2006 = 74.3

SPECint_base2006 = 73.0

CPU2006 license: 001176

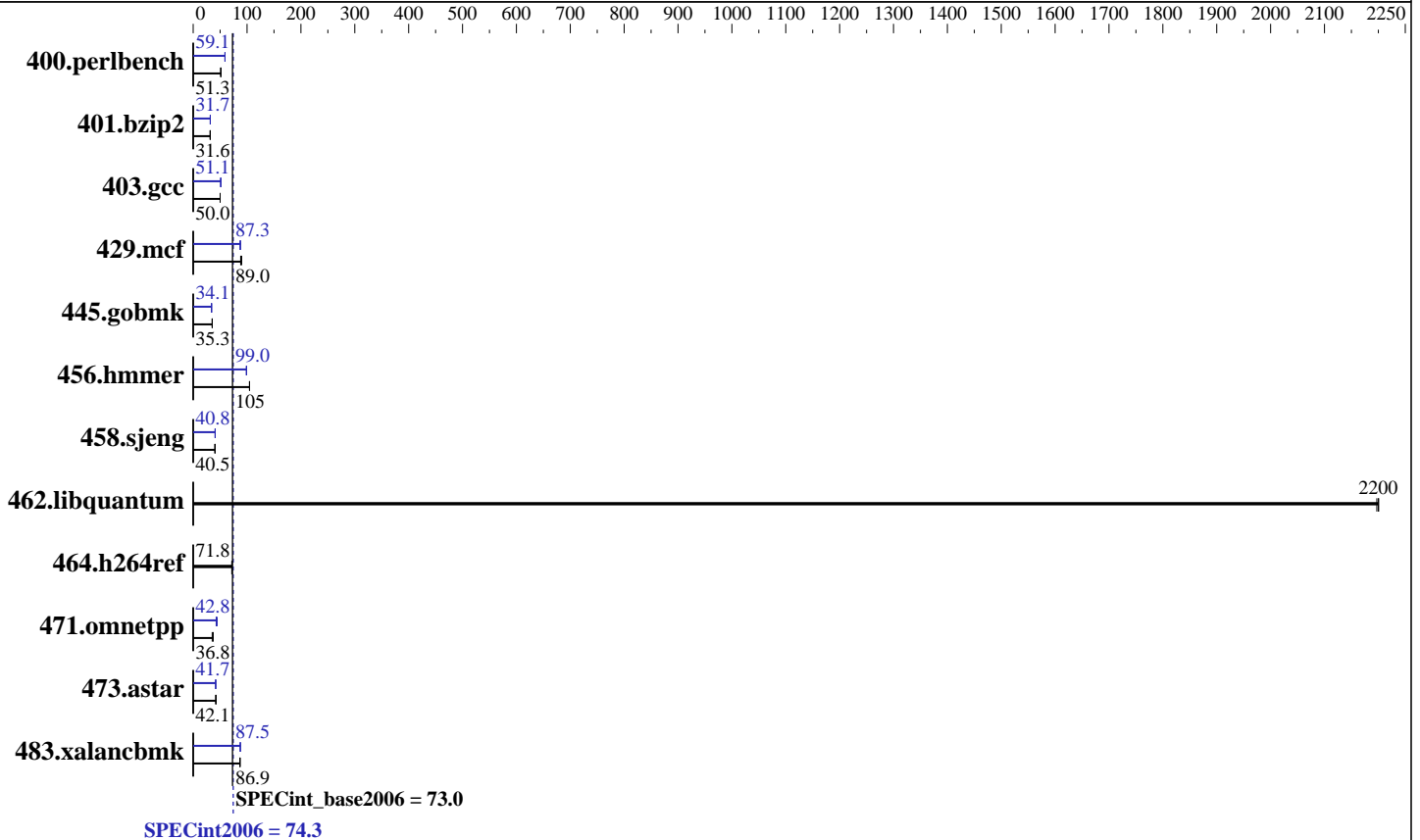
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Oct-2015

Hardware Availability: Aug-2015

Software Availability: Sep-2014



Hardware

CPU Name: Intel Core i7-6700K
 CPU Characteristics: Intel Turbo Boost Technology up to 4.20 GHz
 CPU MHz: 4000
 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: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 16 GB (4 x 4 GB 1Rx8 PC4-2666P-U, running at 2133 MHz)
 Disk Subsystem: 1 x 200 GB SATA III SSD
 Other Hardware: None

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: 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-M motherboard
(C7Z170-M, Intel Core i7-6700K)

SPECint2006 = 74.3

SPECint_base2006 = 73.0

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

Test date: Oct-2015
Hardware Availability: Aug-2015
Software Availability: Sep-2014

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	190	51.5	190	51.3	191	51.1	166	59.0	165	59.1	165	59.1
401.bzip2	306	31.5	305	31.7	305	31.6	304	31.7	304	31.8	304	31.7
403.gcc	161	50.1	161	50.0	161	50.0	157	51.1	157	51.2	158	51.1
429.mcf	101	90.0	103	89.0	103	88.1	104	87.9	105	87.2	104	87.3
445.gobmk	297	35.3	297	35.3	297	35.3	308	34.1	308	34.1	308	34.1
456.hmmer	89.1	105	89.3	105	89.2	105	94.3	99.0	94.3	99.0	94.4	98.8
458.sjeng	299	40.5	299	40.5	299	40.5	297	40.8	297	40.8	297	40.8
462.libquantum	9.42	2200	9.43	2200	9.42	2200	9.42	2200	9.43	2200	9.42	2200
464.h264ref	308	71.8	308	71.8	308	71.8	308	71.8	308	71.8	308	71.8
471.omnetpp	170	36.8	177	35.2	169	36.9	146	42.7	146	42.8	141	44.5
473.astar	165	42.5	168	41.9	167	42.1	168	41.7	168	41.8	168	41.7
483.xalancbmk	79.7	86.6	79.2	87.1	79.4	86.9	78.9	87.5	78.9	87.4	78.8	87.6

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-305-PQ power supply, 1 SNK-P0046A4 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 #\$ e3fbb8667b5a285932ceab81e28219e1

running on C7Z170-01 Tue Oct 27 17:11:48 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) i7-6700K CPU @ 4.00GHz

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

Copyright 2006-2015 Standard Performance Evaluation Corporation

Supermicro

Supermicro C7Z170-M motherboard
(C7Z170-M, Intel Core i7-6700K)

SPECint2006 = 74.3

SPECint_base2006 = 73.0

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

Test date: Oct-2015
Hardware Availability: Aug-2015
Software Availability: Sep-2014

Platform Notes (Continued)

```
cpu cores : 4
siblings  : 4
physical 0: cores 0 1 2 3
cache size : 8192 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)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.1:ga:server
```

```
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 Oct 27 17:09
```

```
SPEC is set to: /usr/cpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2       xfs   183G  36G  147G  20% /
```

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 F4-2666C15-4GRR 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



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Supermicro

Supermicro C7Z170-M motherboard
(C7Z170-M, Intel Core i7-6700K)

SPECint2006 = 74.3

SPECint_base2006 = 73.0

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

Test date: Oct-2015
Hardware Availability: Aug-2015
Software Availability: Sep-2014

General Notes (Continued)

OMP_NUM_THREADS = "4"

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:

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Supermicro

Supermicro C7Z170-M motherboard
(C7Z170-M, Intel Core i7-6700K)

SPECint2006 = 74.3

SPECint_base2006 = 73.0

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Oct-2015

Hardware Availability: Aug-2015

Software Availability: Sep-2014

Base Other Flags (Continued)

403.gcc: -Dalloca=_alloca

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

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Supermicro

Supermicro C7Z170-M motherboard
(C7Z170-M, Intel Core i7-6700K)

SPECint2006 = 74.3

SPECint_base2006 = 73.0

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Oct-2015

Hardware Availability: Aug-2015

Software Availability: Sep-2014

Peak Optimization Flags (Continued)

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

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 -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-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-M motherboard
(C7Z170-M, Intel Core i7-6700K)

SPECint2006 = 74.3

SPECint_base2006 = 73.0

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Oct-2015

Hardware Availability: Aug-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.

Tested with SPEC CPU2006 v1.2.
Report generated on Tue Nov 17 19:14:40 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 17 November 2015.