



SPEC[®] CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Quanta Computer Inc.

SPECint[®]2006 = 66.5

D51PS-1U (Intel Xeon E5-2698 v3)

SPECint_base2006 = 63.3

CPU2006 license: 9050

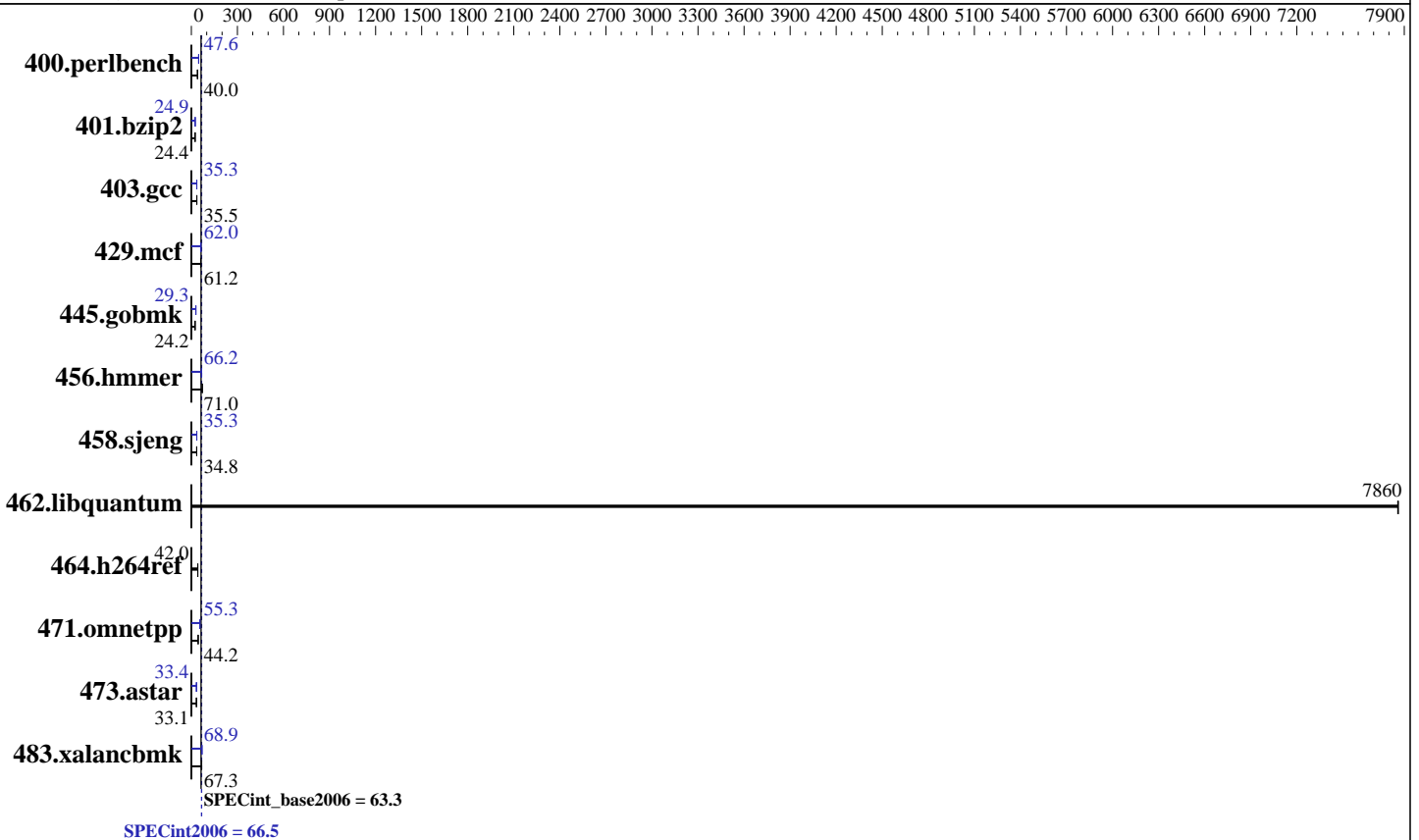
Test date: Nov-2014

Test sponsor: Quanta Computer Inc.

Hardware Availability: Oct-2014

Tested by: Quanta Computer Inc.

Software Availability: Oct-2014



Hardware

CPU Name: Intel Xeon E5-2698 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 32 cores, 2 chips, 16 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 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: 40 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (8 x 16 GB 2Rx4 PC4-2133P-R)
 Disk Subsystem: 197 GB 1 x 240 GB SATA, SSD
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)
 2.6.32-431.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4
 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 2006-2014 Standard Performance Evaluation Corporation

Quanta Computer Inc.

SPECint2006 = 66.5

D51PS-1U (Intel Xeon E5-2698 v3)

SPECint_base2006 = 63.3

CPU2006 license: 9050

Test date: Nov-2014

Test sponsor: Quanta Computer Inc.

Hardware Availability: Oct-2014

Tested by: Quanta Computer Inc.

Software Availability: Oct-2014

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<u>244</u>	<u>40.0</u>	245	39.9	244	40.1	206	47.5	<u>205</u>	<u>47.6</u>	205	47.6
401.bzip2	395	24.4	396	24.4	<u>396</u>	<u>24.4</u>	387	24.9	<u>387</u>	<u>24.9</u>	388	24.9
403.gcc	<u>227</u>	<u>35.5</u>	226	35.5	227	35.5	228	35.3	<u>228</u>	<u>35.3</u>	227	35.5
429.mcf	<u>149</u>	<u>61.2</u>	151	60.4	148	61.6	148	61.8	147	62.1	<u>147</u>	<u>62.0</u>
445.gobmk	434	24.2	<u>433</u>	<u>24.2</u>	433	24.2	<u>358</u>	<u>29.3</u>	357	29.3	358	29.3
456.hammer	131	71.2	133	70.1	<u>131</u>	<u>71.0</u>	140	66.4	<u>141</u>	<u>66.2</u>	141	66.1
458.sjeng	347	34.9	<u>347</u>	<u>34.8</u>	348	34.7	342	35.3	<u>342</u>	<u>35.3</u>	342	35.3
462.libquantum	<u>2.64</u>	<u>7860</u>	2.64	7860	2.64	7860	<u>2.64</u>	<u>7860</u>	2.64	7860	2.64	7860
464.h264ref	527	42.0	<u>527</u>	<u>42.0</u>	530	41.7	<u>527</u>	42.0	<u>527</u>	<u>42.0</u>	530	41.7
471.omnetpp	142	44.1	141	44.3	<u>142</u>	<u>44.2</u>	<u>113</u>	<u>55.3</u>	114	55.1	113	55.5
473.astar	212	33.0	211	33.3	<u>212</u>	<u>33.1</u>	210	33.4	<u>210</u>	<u>33.4</u>	211	33.3
483.xalancbmk	<u>103</u>	<u>67.3</u>	102	67.4	103	66.9	100	69.0	<u>100</u>	<u>68.9</u>	101	68.6

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

Sysinfo program /speccpu/speccpu_linux/config/sysinfo.rev6818
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Fri Nov 28 10:37:22 2014

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) Xeon(R) CPU E5-2698 v3 @ 2.30GHz
 2 "physical id"s (chips)
 64 "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 : 16
siblings : 32
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Quanta Computer Inc.

SPECint2006 = 66.5

D51PS-1U (Intel Xeon E5-2698 v3)

SPECint_base2006 = 63.3

CPU2006 license: 9050

Test date: Nov-2014

Test sponsor: Quanta Computer Inc.

Hardware Availability: Oct-2014

Tested by: Quanta Computer Inc.

Software Availability: Oct-2014

Platform Notes (Continued)

cache size : 40960 KB

From /proc/meminfo

MemTotal: 132046688 kB
HugePages_Total: 1
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d

Red Hat Enterprise Linux Server release 6.5 (Santiago)

From /etc/*release* /etc/*version*

redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:

Linux localhost.localdomain 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 28 10:30

SPEC is set to: /speccpu/speccpu_linux

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	ext4	197G	12G	176G	6%	/

Additional information from dmidecode:

BIOS American Megatrends Inc. S2P_2A07 11/14/2014

Memory:

8x NO DIMM NO DIMM

8x Samsung M393A2G40DB0-CPB 16 GB 2133 MHz 2 rank

(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 = "/speccpu/speccpu_linux/libs/32:/speccpu/speccpu_linux/libs/64:/speccpu/speccpu_linux/sh"

OMP_NUM_THREADS = "32"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB

memory using RedHat EL 6.4

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

runspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Quanta Computer Inc.

SPECint2006 = 66.5

D51PS-1U (Intel Xeon E5-2698 v3)

SPECint_base2006 = 63.3

CPU2006 license: 9050

Test date: Nov-2014

Test sponsor: Quanta Computer Inc.

Hardware Availability: Oct-2014

Tested by: Quanta Computer Inc.

Software Availability: Oct-2014

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 -lsmarthheap64

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Quanta Computer Inc.

SPECint2006 = 66.5

D51PS-1U (Intel Xeon E5-2698 v3)

SPECint_base2006 = 63.3

CPU2006 license: 9050

Test date: Nov-2014

Test sponsor: Quanta Computer Inc.

Hardware Availability: Oct-2014

Tested by: Quanta Computer Inc.

Software Availability: Oct-2014

Peak Compiler Invocation (Continued)

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

C++ benchmarks (except as noted below):

`icpc -m32`

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`

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

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Quanta Computer Inc.

SPECint2006 = 66.5

D51PS-1U (Intel Xeon E5-2698 v3)

SPECint_base2006 = 63.3

CPU2006 license: 9050

Test date: Nov-2014

Test sponsor: Quanta Computer Inc.

Hardware Availability: Oct-2014

Tested by: Quanta Computer Inc.

Software Availability: Oct-2014

Peak Optimization Flags (Continued)

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-ic14.0-official-linux64.20140128.html>

<http://www.spec.org/cpu2006/flags/Quanta-Cloud-Technology-Platform-Settings-V1.0.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/Quanta-Cloud-Technology-Platform-Settings-V1.0.xml>

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 Dec 30 16:10:46 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 30 December 2014.