



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei  
Huawei RH1288 v2

SPECint®2006 = 54.6  
SPECint\_base2006 = 49.8

CPU2006 license: 3175

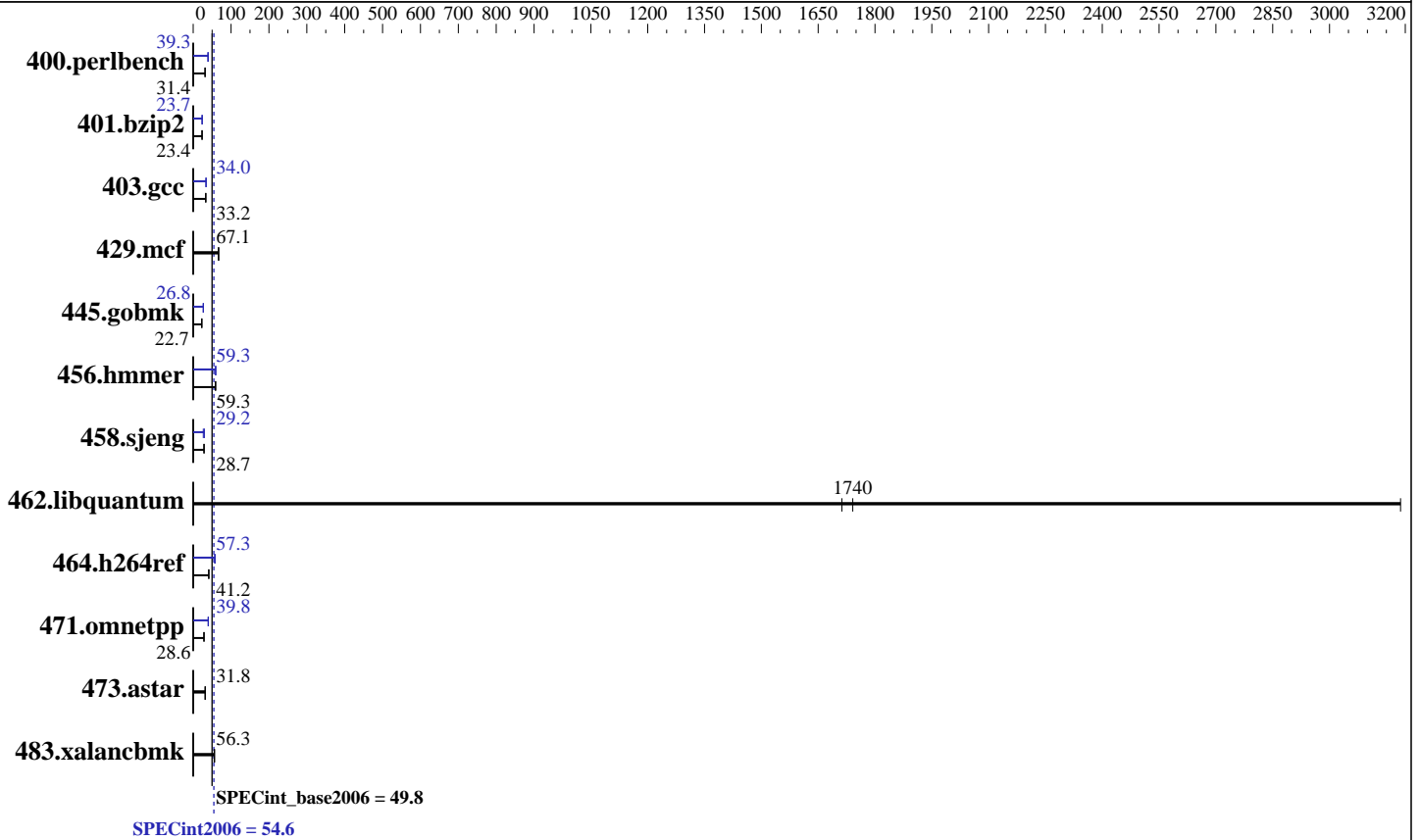
Test sponsor: Huawei

Tested by: Huawei

Test date: Apr-2014

Hardware Availability: Sep-2013

Software Availability: Nov-2013



## Hardware

CPU Name: Intel Xeon E5-2650 v2  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip  
 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: 20 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (8 x 16 GB 2Rx4 PC3-14900R-13, ECC)  
 Disk Subsystem: 1 x 500 GB SATA, 7200RPM  
 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

Huawei  
Huawei RH1288 v2

SPECint2006 = 54.6  
SPECint\_base2006 = 49.8

CPU2006 license: 3175  
Test sponsor: Huawei  
Tested by: Huawei

Test date: Apr-2014  
Hardware Availability: Sep-2013  
Software Availability: Nov-2013

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	311	31.4	310	31.5	<b>311</b>	<b>31.4</b>	<u>249</u>	<u>39.3</u>	248	39.3	249	39.2
401.bzip2	<b>412</b>	<b>23.4</b>	411	23.5	412	23.4	<u>407</u>	<u>23.7</u>	407	23.7	407	23.7
403.gcc	242	33.2	242	33.2	<b>242</b>	<b>33.2</b>	237	34.0	<u>237</u>	<b>34.0</b>	237	34.0
429.mcf	<b>136</b>	<b>67.1</b>	136	67.2	137	66.8	<u>136</u>	<u>67.1</u>	136	67.2	137	66.8
445.gobmk	460	22.8	<b>461</b>	<b>22.7</b>	463	22.7	<u>392</u>	<u>26.8</u>	392	26.7	392	26.8
456.hammer	157	59.3	159	58.5	<b>157</b>	<b>59.3</b>	157	59.4	157	59.3	<b>157</b>	<b>59.3</b>
458.sjeng	422	28.7	422	28.7	<b>422</b>	<b>28.7</b>	414	29.2	455	26.6	<b>414</b>	<b>29.2</b>
462.libquantum	12.1	1710	<b>11.9</b>	<b>1740</b>	6.50	3190	12.1	1710	<b>11.9</b>	<b>1740</b>	6.50	3190
464.h264ref	537	41.2	<b>537</b>	<b>41.2</b>	538	41.2	<u>386</u>	<u>57.3</u>	386	57.3	386	57.3
471.omnetpp	221	28.3	218	28.7	<b>219</b>	<b>28.6</b>	<u>157</u>	<u>39.8</u>	156	40.0	158	39.6
473.astar	<b>221</b>	<b>31.8</b>	222	31.6	221	31.8	<u>221</u>	<b>31.8</b>	222	31.6	221	31.8
483.xalancbmk	<b>123</b>	<b>56.3</b>	122	56.4	125	55.2	<u>123</u>	<u>56.3</u>	122	56.4	125	55.2

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

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Platform Notes

```
Sysinfo program /spec/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on huawei Fri Apr 4 08:48:53 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 E5-2650 v2 @ 2.60GHz
2 "physical id"s (chips)
16 "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 : 8
siblings : 8
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB
```

```
From /proc/meminfo
MemTotal: 132103760 kB
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

<b>Huawei</b>	<b>SPECint2006 =</b>	<b>54.6</b>
<b>Huawei RH1288 v2</b>	<b>SPECint_base2006 =</b>	<b>49.8</b>

<b>CPU2006 license:</b> 3175	<b>Test date:</b> Apr-2014
<b>Test sponsor:</b> Huawei	<b>Hardware Availability:</b> Sep-2013
<b>Tested by:</b> Huawei	<b>Software Availability:</b> Nov-2013

## Platform Notes (Continued)

```
HugePages_Total: 0
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 huawei 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 Apr 4 08:46
```

```
SPEC is set to: /spec
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdal        ext4  193G  112G   71G  62% /
```

```
Additional information from dmidecode:
BIOS Insyde Corp. RMIBV372 12/21/2013
Memory:
16x NO DIMM NO DIMM
2x Samsung M393B2G70DB0-CMA 16 GB 1866 MHz 2 rank
6x Samsung M393B2G70QH0-CMA 16 GB 1866 MHz 2 rank
```

(End of data from sysinfo program)

## General Notes

Environment variables set by runspec before the start of the run:

```
LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64:/spec/sh"
OMP_NUM_THREADS = "16"
```

```
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>
The Huawei RH2288H v2 and Huawei RH2288 v2 and
the Huawei RH1288 v2 models are electronically equivalent.
The results have been measured on a Huawei RH2288H v2 model
```



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

<b>Huawei</b>	<b>SPECint2006 =</b>	<b>54.6</b>
<b>Huawei RH1288 v2</b>	<b>SPECint_base2006 =</b>	<b>49.8</b>

<b>CPU2006 license:</b> 3175	<b>Test date:</b> Apr-2014
<b>Test sponsor:</b> Huawei	<b>Hardware Availability:</b> Sep-2013
<b>Tested by:</b> Huawei	<b>Software Availability:</b> Nov-2013

## 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:  
 -xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:  
 -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32  
 -Wl,-z,muldefs -L/sh -lsmartheap64

## 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

<b>Huawei</b>	<b>SPECint2006 =</b>	<b>54.6</b>
<b>Huawei RH1288 v2</b>	<b>SPECint_base2006 =</b>	<b>49.8</b>

<b>CPU2006 license:</b> 3175	<b>Test date:</b> Apr-2014
<b>Test sponsor:</b> Huawei	<b>Hardware Availability:</b> Sep-2013
<b>Tested by:</b> Huawei	<b>Software Availability:</b> Nov-2013

## Peak Compiler Invocation (Continued)

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

C++ benchmarks (except as noted below):

`icpc -m64`

471.omnetpp: `icpc -m32`

## 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`

473.astar: `-DSPEC_CPU_LP64`

483.xalancbmk: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`

## Peak Optimization Flags

C benchmarks:

400.perlbench: `-xSSE4.2(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: `-xSSE4.2(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: `-xSSE4.2 -ipo -O3 -no-prec-div -inline-calloc -opt-malloc-options=3 -auto-ilp32`

429.mcf: `basepeak = yes`

445.gobmk: `-xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias`

456.hmmer: `-xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32 -ansi-alias`

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 54.6

Huawei RH1288 v2

SPECint\_base2006 = 49.8

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Apr-2014

Hardware Availability: Sep-2013

Software Availability: Nov-2013

## Peak Optimization Flags (Continued)

458.sjeng: -xSSE4.2(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: -xSSE4.2(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: -xSSE4.2(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: basepeak = yes

483.xalancbmk: basepeak = yes

## 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/Huawei-Platform-Settings-V1.0-IVB-RevG.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/Huawei-Platform-Settings-V1.0-IVB-RevG.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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Thu Jul 24 22:50:16 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 25 June 2014.