



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Huawei

**SPECint®2006 = 60.2**

Huawei RH2288E v2 (Intel Xeon E5-2697 v2)

**SPECint\_base2006 = 55.3**

CPU2006 license: 3175

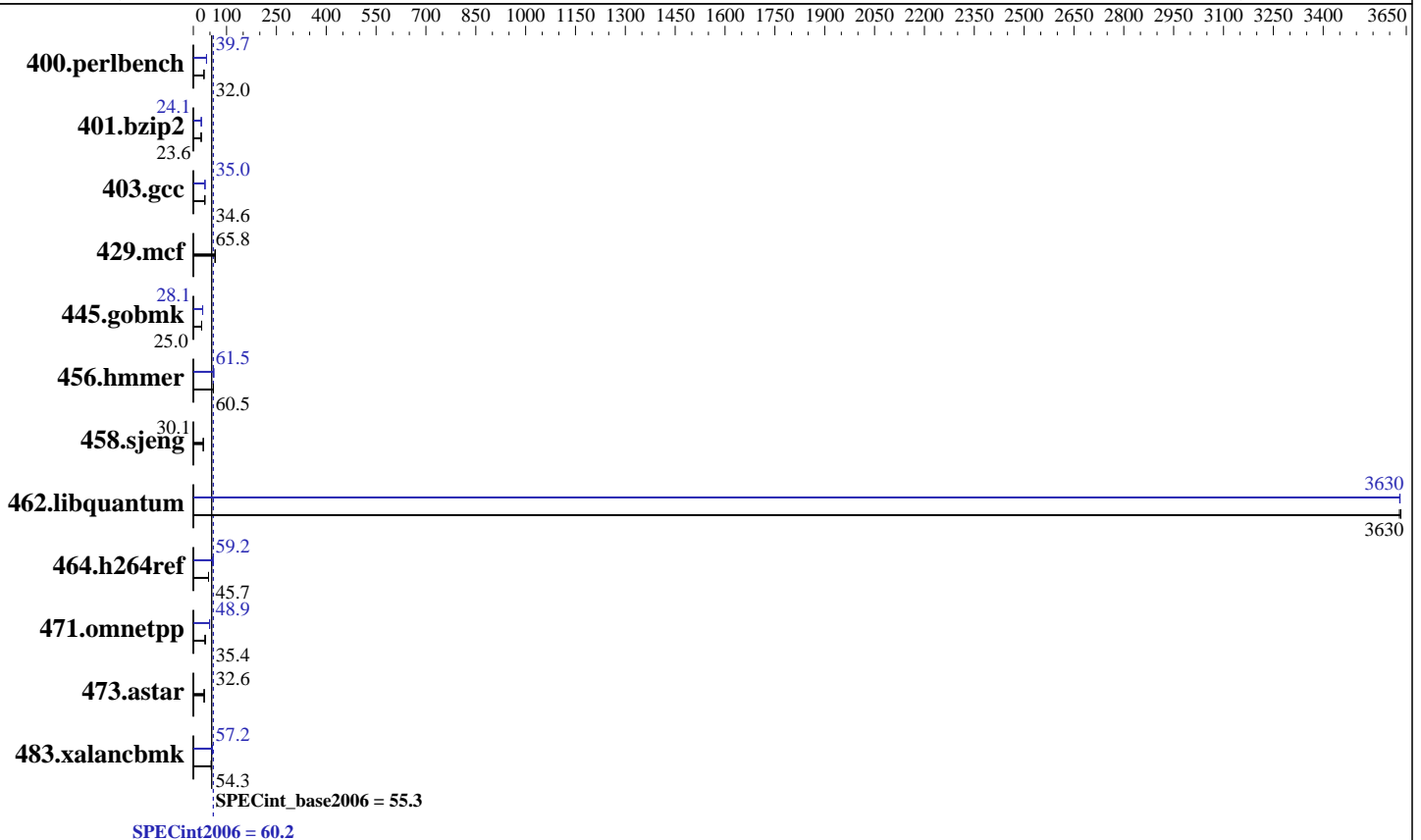
Test sponsor: Huawei

Tested by: Huawei

Test date: Oct-2014

Hardware Availability: Sep-2013

Software Availability: Nov-2013



### Hardware

CPU Name: Intel Xeon E5-2697 v2  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz  
 CPU MHz: 2700  
 FPU: Integrated  
 CPU(s) enabled: 24 cores, 2 chips, 12 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: 30 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC)  
 Disk Subsystem: 1 x 300 GB SAS, 10000 RPM  
 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 12.1.0.225 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 V9.01



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Huawei

SPECint2006 = **60.2**

Huawei RH2288E v2 (Intel Xeon E5-2697 v2)

SPECint\_base2006 = **55.3**

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

Test date: Oct-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	<b>305</b>	<b>32.0</b>	305	32.0	306	32.0	246	39.7	<b>246</b>	<b>39.7</b>	246	39.8
401.bzip2	<b>409</b>	<b>23.6</b>	409	23.6	409	23.6	401	24.1	<b>400</b>	<b>24.1</b>	400	24.1
403.gcc	233	34.5	232	34.7	<b>233</b>	<b>34.6</b>	230	35.0	<b>230</b>	<b>35.0</b>	230	35.1
429.mcf	<b>139</b>	<b>65.8</b>	138	65.9	139	65.4	<b>139</b>	<b>65.8</b>	138	65.9	139	65.4
445.gobmk	420	25.0	<b>420</b>	<b>25.0</b>	419	25.0	373	28.1	373	28.1	<b>373</b>	<b>28.1</b>
456.hammer	<b>154</b>	<b>60.5</b>	155	60.4	154	60.6	155	60.3	151	61.8	<b>152</b>	<b>61.5</b>
458.sjeng	403	30.1	402	30.1	<b>402</b>	<b>30.1</b>	403	30.1	402	30.1	<b>402</b>	<b>30.1</b>
462.libquantum	5.70	3630	5.71	3630	<b>5.70</b>	<b>3630</b>	5.71	3630	5.71	3630	<b>5.71</b>	<b>3630</b>
464.h264ref	483	45.8	<b>484</b>	<b>45.7</b>	484	45.7	374	59.2	374	59.1	<b>374</b>	<b>59.2</b>
471.omnetpp	<b>176</b>	<b>35.4</b>	170	36.7	179	34.9	127	49.1	<b>128</b>	<b>48.9</b>	128	48.8
473.astar	216	32.6	214	32.8	<b>215</b>	<b>32.6</b>	216	32.6	214	32.8	<b>215</b>	<b>32.6</b>
483.xalancbmk	128	53.9	<b>127</b>	<b>54.3</b>	127	54.3	121	57.2	121	57.2	<b>121</b>	<b>57.2</b>

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

```

BIOS configuration:
Set Power Efficiency Mode to Custom
Baseboard Management Controller used to adjust the fan speed to 100%
Set Hyper-Threading to Disabled
Sysinfo program /spec/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost Thu Oct 16 11:54:35 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 E5-2697 v2 @ 2.70GHz
 2 "physical id"s (chips)
 24 "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 : 12
siblings  : 12
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13

```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Huawei**

**SPECint2006 = 60.2**

**Huawei RH2288E v2 (Intel Xeon E5-2697 v2)**

**SPECint\_base2006 = 55.3**

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

**Test date:** Oct-2014  
**Hardware Availability:** Sep-2013  
**Software Availability:** Nov-2013

## Platform Notes (Continued)

cache size : 30720 KB

From /proc/meminfo

MemTotal: 264478184 kB  
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 localhost 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 Oct 13 09:28

SPEC is set to: /spec

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	ext4	272G	33G	226G	13%	/

Additional information from dmidecode:

Memory:

4x Hynix HMT42GR7AFR4C-RD 16 GB 1867 MHz 2 rank  
12x Samsung M393B2G70DB0-CMA 16 GB 1867 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,compact,0,1"  
LD\_LIBRARY\_PATH = "/spec/libs/32:/spec/libs/64"  
OMP\_NUM\_THREADS = "24"

Binaries compiled on a system with 2 x Xeon X5645 CPU + 16GB memory  
using RHEL 6.1

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled

## Base Compiler Invocation

C benchmarks:

icc -m64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 60.2

Huawei RH2288E v2 (Intel Xeon E5-2697 v2)

SPECint\_base2006 = 55.3

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

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

## Base Compiler Invocation (Continued)

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.hmmmer: -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/smartheap -lsmartheap64

## Base Other Flags

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

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m64  
400.perlbench: icc -m32  
445.gobmk: icc -m32

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 60.2

Huawei RH2288E v2 (Intel Xeon E5-2697 v2)

SPECint\_base2006 = 55.3

CPU2006 license: 3175

Test date: Oct-2014

Test sponsor: Huawei

Hardware Availability: Sep-2013

Tested by: Huawei

Software Availability: Nov-2013

## Peak Compiler Invocation (Continued)

464.h264ref: 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  
 473.astar: -DSPEC\_CPU\_LP64  
 483.xalancbmk: -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: -xAVX -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

458.sjeng: basepeak = yes

462.libquantum: -xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch  
 -auto-p32

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 60.2

Huawei RH2288E v2 (Intel Xeon E5-2697 v2)

SPECint\_base2006 = 55.3

CPU2006 license: 3175

Test date: Oct-2014

Test sponsor: Huawei

Hardware Availability: Sep-2013

Tested by: Huawei

Software Availability: Nov-2013

## Peak Optimization Flags (Continued)

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/smartheap -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias  
-Wl,-z,muldefs -L/smartheap -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-ic12.1-official-linux64.20120425.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-ic12.1-official-linux64.20120425.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 Nov 6 13:48:39 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 6 November 2014.