



# SPEC<sup>®</sup> CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Huawei

### SPECint<sup>®</sup>\_rate2006 = 858

### Huawei RH2288 V2 (Intel Xeon E5-2680 V2)

### SPECint\_rate\_base2006 = 830

CPU2006 license: 13

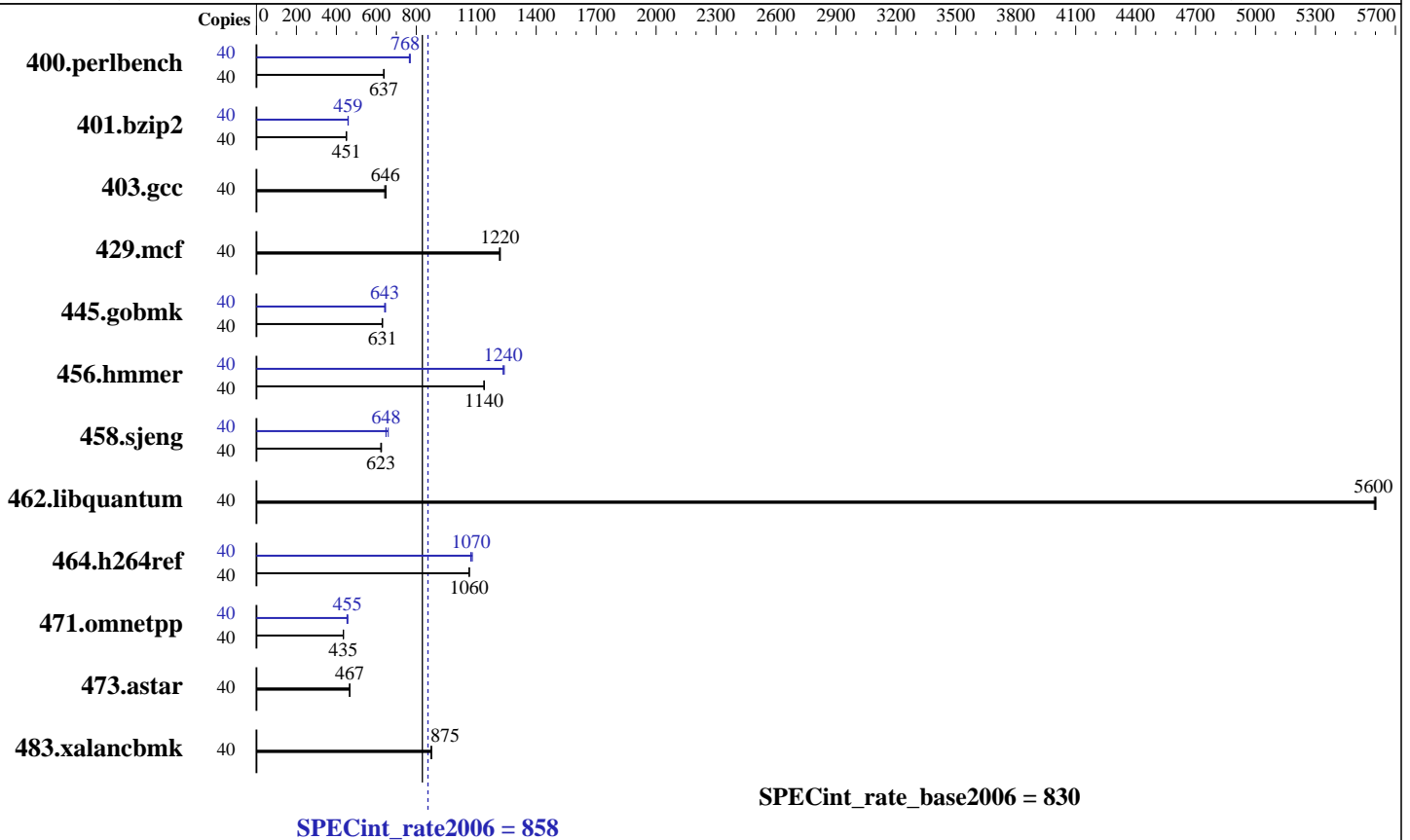
Test sponsor: Huawei

Tested by: Huawei

Test date: Apr-2014

Hardware Availability: Sep-2013

Software Availability: Nov-2013



#### Hardware

CPU Name: Intel Xeon E5-2680 v2  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 20 cores, 2 chips, 10 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 25 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,10K 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 14.0.0.080 of Intel C++ Studio XE for Linux  
 Auto Parallel: No  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.0



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Huawei

SPECint\_rate2006 = **858**

Huawei RH2288 V2 (Intel Xeon E5-2680 V2)

SPECint\_rate\_base2006 = **830**

CPU2006 license: 13  
Test sponsor: Huawei  
Tested by: Huawei

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

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	40	<b>613</b>	<b>637</b>	611	639	614	637	40	511	765	<b>509</b>	<b>768</b>	508	769
401.bzip2	40	<b>857</b>	<b>451</b>	860	449	857	451	40	<b>841</b>	<b>459</b>	840	459	843	458
403.gcc	40	<b>499</b>	<b>646</b>	502	642	497	648	40	<b>499</b>	<b>646</b>	502	642	497	648
429.mcf	40	299	1220	<b>299</b>	<b>1220</b>	300	1220	40	299	1220	<b>299</b>	<b>1220</b>	300	1220
445.gobmk	40	<b>665</b>	<b>631</b>	667	629	665	631	40	649	646	653	642	<b>653</b>	<b>643</b>
456.hammer	40	328	1140	<b>328</b>	<b>1140</b>	327	1140	40	302	1230	<b>302</b>	<b>1240</b>	301	1240
458.sjeng	40	773	626	<b>776</b>	<b>623</b>	777	623	40	734	660	<b>746</b>	<b>648</b>	746	648
462.libquantum	40	148	5590	<b>148</b>	<b>5600</b>	148	5600	40	148	5590	<b>148</b>	<b>5600</b>	148	5600
464.h264ref	40	<b>832</b>	<b>1060</b>	832	1060	831	1070	40	819	1080	<b>824</b>	<b>1070</b>	825	1070
471.omnetpp	40	<b>575</b>	<b>435</b>	575	435	575	435	40	547	457	552	453	<b>550</b>	<b>455</b>
473.astar	40	602	466	<b>602</b>	<b>467</b>	601	467	40	602	466	<b>602</b>	<b>467</b>	601	467
483.xalancbmk	40	315	876	316	874	<b>315</b>	<b>875</b>	40	315	876	316	874	<b>315</b>	<b>875</b>

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

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

## 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 localhost Tue Apr 15 11:29:28 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 E5-2680 v2 @ 2.80GHz  
2 "physical id"s (chips)  
40 "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 : 10  
siblings : 20

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint\_rate2006 = 858

Huawei RH2288 V2 (Intel Xeon E5-2680 V2)

SPECint\_rate\_base2006 = 830

CPU2006 license: 13  
Test sponsor: Huawei  
Tested by: Huawei

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

## Platform Notes (Continued)

```
physical 0: cores 0 1 2 3 4 8 9 10 11 12
physical 1: cores 0 1 2 3 4 8 9 10 11 12
cache size : 25600 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 Apr 14 17:11
```

```
SPEC is set to: /spec
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2       ext4  272G  9.8G  248G   4% /
```

```
Additional information from dmidecode:
BIOS Insyde Corp. RMIBV629 05/12/2014
Memory:
13x Hynix HMT42GR7AFR4C-RD 16 GB 1866 MHz 2 rank
8x NO DIMM NO DIMM
3x Samsung M393B2G70DB0-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"

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  
Filesystem page cache cleared with:  
echo 1> /proc/sys/vm/drop\_caches  
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.

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint\_rate2006 = 858

Huawei RH2288 V2 (Intel Xeon E5-2680 V2)

SPECint\_rate\_base2006 = 830

CPU2006 license: 13  
Test sponsor: Huawei  
Tested by: Huawei

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

## General Notes (Continued)

The results have been measured on a Huawei RH2288H v2 model

## Base Compiler Invocation

C benchmarks:  
icc -m32  
  
C++ benchmarks:  
icpc -m32

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
  
C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
-Wl,-z,muldefs -L/sh -lsmartheap

## Base Other Flags

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

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m32  
  
400.perlbench: icc -m64  
401.bzip2: icc -m64  
456.hmmer: icc -m64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint\_rate2006 = 858

Huawei RH2288 V2 (Intel Xeon E5-2680 V2)

SPECint\_rate\_base2006 = 830

CPU2006 license: 13  
Test sponsor: Huawei  
Tested by: Huawei

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

## Peak Compiler Invocation (Continued)

458.sjeng: icc -m64

C++ benchmarks:  
icpc -m32

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LINUX  
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)  
-auto-ilp32

401.bzip2: -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 -auto-ilp32 -ansi-alias

403.gcc: basepeak = yes

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -opt-mem-layout-trans=3

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

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 -auto-ilp32

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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint\_rate2006 = 858

Huawei RH2288 V2 (Intel Xeon E5-2680 V2)

SPECint\_rate\_base2006 = 830

CPU2006 license: 13  
Test sponsor: Huawei  
Tested by: Huawei

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

## Peak Optimization Flags (Continued)

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)  
-ansi-alias -opt-ra-region-strategy=block -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 22:52:39 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 25 June 2014.