



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Huawei

**SPECint®\_rate2006 = 620**

Huawei RH5885 V3 (Intel Xeon E7-4809 v2)

**SPECint\_rate\_base2006 = 599**

CPU2006 license: 3175

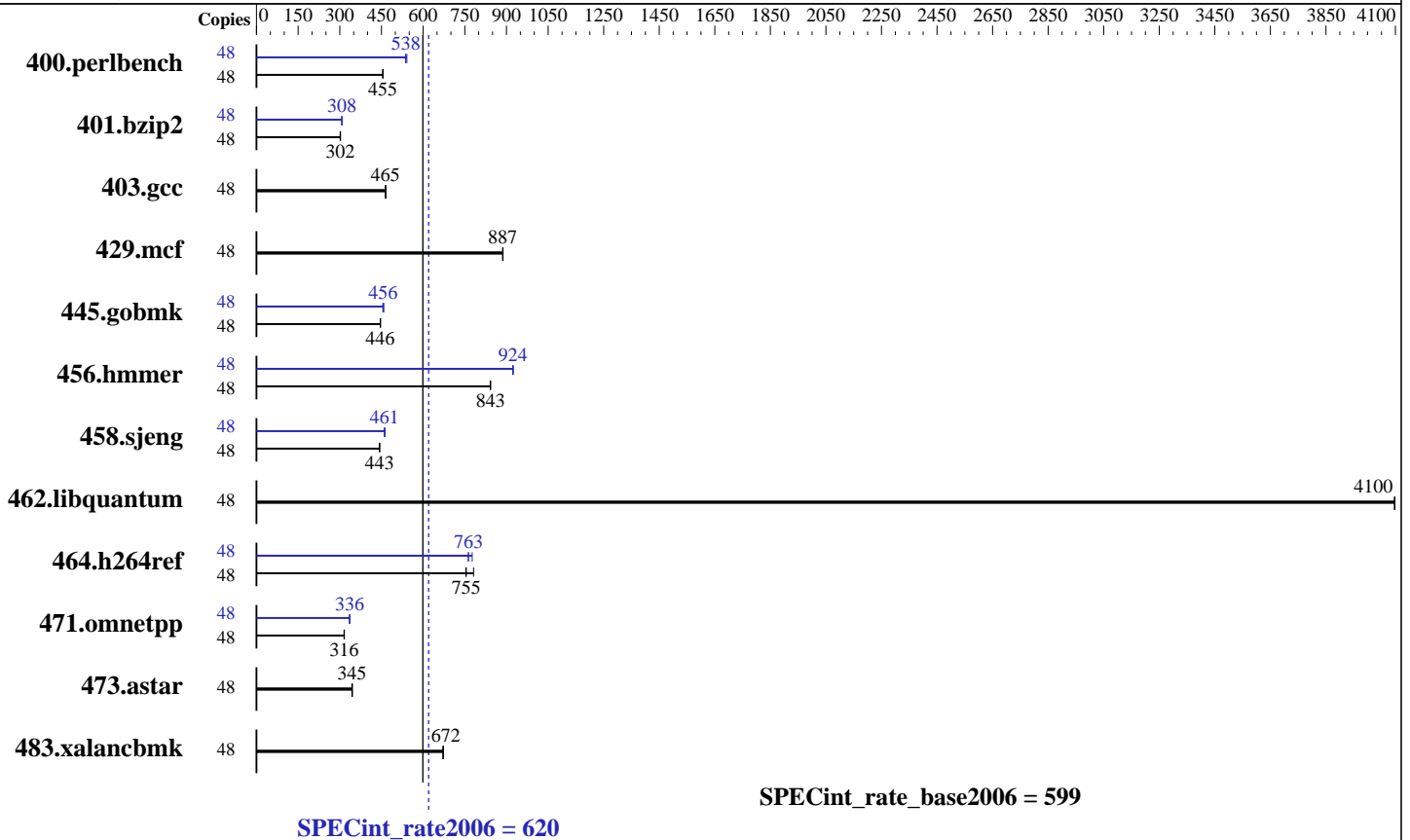
Test date: Oct-2014

Test sponsor: Huawei

Hardware Availability: Feb-2014

Tested by: Huawei

Software Availability: Nov-2013



### Hardware

CPU Name: Intel Xeon E7-4809 v2  
 CPU Characteristics:  
 CPU MHz: 1900  
 FPU: Integrated  
 CPU(s) enabled: 24 cores, 4 chips, 6 cores/chip, 2 threads/core  
 CPU(s) orderable: 2,4 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: 12 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 256 GB (16 x 16 GB 2Rx4 PC3-12800R-11, ECC, running at 1066 MHz and CL7)  
 Disk Subsystem: 1 x 600 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 = **620**

Huawei RH5885 V3 (Intel Xeon E7-4809 v2)

SPECint\_rate\_base2006 = 599

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

Test date: Oct-2014  
Hardware Availability: Feb-2014  
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	48	1030	455	<b><u>1031</u></b>	<b><u>455</u></b>	1031	455	48	874	536	866	542	<b><u>871</u></b>	<b><u>538</u></b>
401.bzip2	48	1537	301	1530	303	<b><u>1535</u></b>	<b><u>302</u></b>	48	<b><u>1506</u></b>	<b><u>308</u></b>	1504	308	1508	307
403.gcc	48	829	466	833	464	<b><u>831</u></b>	<b><u>465</u></b>	48	829	466	833	464	<b><u>831</u></b>	<b><u>465</u></b>
429.mcf	48	<b><u>494</u></b>	<b><u>887</u></b>	494	886	493	888	48	<b><u>494</u></b>	<b><u>887</u></b>	494	886	493	888
445.gobmk	48	1130	446	1127	447	<b><u>1129</u></b>	<b><u>446</u></b>	48	1106	455	<b><u>1105</u></b>	<b><u>456</u></b>	1098	459
456.hammer	48	<b><u>531</u></b>	<b><u>843</u></b>	532	842	531	843	48	<b><u>485</u></b>	<b><u>924</u></b>	484	924	485	923
458.sjeng	48	1310	443	<b><u>1311</u></b>	<b><u>443</u></b>	1311	443	48	<b><u>1259</u></b>	<b><u>461</u></b>	1255	463	1261	461
462.libquantum	48	243	4100	<b><u>243</u></b>	<b><u>4100</u></b>	243	4100	48	243	4100	<b><u>243</u></b>	<b><u>4100</u></b>	243	4100
464.h264ref	48	1359	781	1409	754	<b><u>1406</u></b>	<b><u>755</u></b>	48	<b><u>1392</u></b>	<b><u>763</u></b>	1368	777	1393	763
471.omnetpp	48	951	315	948	317	<b><u>950</u></b>	<b><u>316</u></b>	48	893	336	897	335	<b><u>894</u></b>	<b><u>336</u></b>
473.astar	48	<b><u>978</u></b>	<b><u>345</u></b>	981	344	976	345	48	<b><u>978</u></b>	<b><u>345</u></b>	981	344	976	345
483.xalancbmk	48	<b><u>493</u></b>	<b><u>672</u></b>	494	671	492	673	48	<b><u>493</u></b>	<b><u>672</u></b>	494	671	492	673

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

BIOS configuration:  
Set Power Efficiency Mode to Performance  
Set Lock\_step to disabled  
Baseboard Management Controller used to adjust the fan speed to 100%  
Sysinfo program /spec/config/sysinfo.rev6818  
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191  
running on RH5885V3 Thu Oct 23 16:59:41 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 E7-4809 v2 @ 1.90GHz  
4 "physical id"s (chips)  
48 "processors"  
cores, siblings (Caution: counting these is hw and system dependent. The  
Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint\_rate2006 = 620

Huawei RH5885 V3 (Intel Xeon E7-4809 v2)

SPECint\_rate\_base2006 = 599

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

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

## Platform Notes (Continued)

following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

```
cpu cores : 6
siblings  : 12
physical 0: cores 0 1 2 3 4 5
physical 1: cores 0 1 2 3 4 5
physical 2: cores 0 1 2 3 4 5
physical 3: cores 0 1 2 3 4 5
cache size : 12288 KB
```

```
From /proc/meminfo
MemTotal:      264357168 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 RH5885V3 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 22 20:30
```

```
SPEC is set to: /spec
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       ext4  531G   33G  472G   7% /
```

```
Additional information from dmidecode:
BIOS American Megatrends Inc. BLISV395 07/25/2014
Memory:
16x 16 GB
15x Hynix HMT42GR7AFR4C-PB 16 GB 1066 MHz 2 rank
1x Hynix HMT42GR7MFR4C-PB 16 GB 1066 MHz 2 rank
32x NO DIMM NO DIMM
```

(End of data from sysinfo program)

Regarding the sysinfo display about the memory installed, the correct amount of memory is 256 GB and the dmidecode description should have two lines reading as:

```
15x Hynix HMT42GR7AFR4C-PB 16 GB 1066 MHz 2 rank
1x Hynix HMT42GR7MFR4C-PB 16 GB 1066 MHz 2 rank
```



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint\_rate2006 = 620

Huawei RH5885 V3 (Intel Xeon E7-4809 v2)

SPECint\_rate\_base2006 = 599

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Oct-2014

Hardware Availability: Feb-2014

Software Availability: Nov-2013

## 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>

## 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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint\_rate2006 = 620

Huawei RH5885 V3 (Intel Xeon E7-4809 v2)

SPECint\_rate\_base2006 = 599

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

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

## Peak Compiler Invocation

C benchmarks (except as noted below):

```
icc -m32

400.perlbench: icc -m64
401.bzip2: icc -m64
456.hmmer: icc -m64
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
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint\_rate2006 = 620

Huawei RH5885 V3 (Intel Xeon E7-4809 v2)

SPECint\_rate\_base2006 = 599

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Oct-2014

Hardware Availability: Feb-2014

Software Availability: Nov-2013

## Peak Optimization Flags (Continued)

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)  
-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-revC.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-revC.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 Tue Nov 18 16:32:13 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 18 November 2014.