Huawei
Huawei RH2288 v2

SPECint\_rate2006 = 251
SPECint\_rate\_base2006 = 243

CPU2006 license: 3175
Test sponsor: Huawei
Test date: Jun-2014
Tested by: Huawei
Hardware Availability: Sep-2013

SPECint\_rate2006 = 251
SPECint\_rate\_base2006 = 243

<table>
<thead>
<tr>
<th>Benchmark</th>
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<tr>
<td>400.perlbench</td>
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<td>445.gobmk</td>
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<td>471.omnetpp</td>
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<td>SPECint_rate_base2006 = 243</td>
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<table>
<thead>
<tr>
<th>Hardware</th>
<th>Software</th>
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<tbody>
<tr>
<td>CPU Name:</td>
<td>Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)</td>
</tr>
<tr>
<td>CPU Characteristics: Intel Xeon E5-2609 v2</td>
<td>Compiler: CIC++: Version 14.0.0.080 of Intel C++ Studio XE for Linux</td>
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<tr>
<td>CPU MHz:</td>
<td>Auto Parallel: No</td>
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<tr>
<td>FPU:</td>
<td>File System: ext4</td>
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<tr>
<td>CPU(s) enabled:</td>
<td>System State: Run level 3 (multi-user)</td>
</tr>
<tr>
<td>CPU(s) orderable: 1.2 chip</td>
<td>Base Pointers: 32-bit</td>
</tr>
<tr>
<td>Primary Cache:</td>
<td>Peak Pointers: 32/64-bit</td>
</tr>
<tr>
<td>Secondary Cache:</td>
<td>Other Software: Microquill SmartHeap V10.0</td>
</tr>
<tr>
<td>L3 Cache:</td>
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<tr>
<td>Other Cache:</td>
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<td>Disk Subsystem:</td>
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<td>Other Hardware:</td>
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## SPEC CINT2006 Result

**Huawei**  
**Huawei RH2288 v2**  

<table>
<thead>
<tr>
<th>Specint_rate2006</th>
<th>Specint_rate_base2006</th>
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<tr>
<td>251</td>
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**CPU2006 license:** 3175  
**CPU2006 license:** 3175  
**Test sponsor:** Huawei  
**Tested by:** Huawei  
**Test date:** Jun-2014  
**Hardware Availability:** Sep-2013  
**Software Availability:** Nov-2013

### Results Table

<table>
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<tr>
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</tbody>
</table>

### 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  
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 localhost Fri Jun 6 17:20:53 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 E5-2609 v2 @ 2.50GHz  
2 "physical id"s (chips)  
8 "processors"  
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with Continued on next page
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SPECint_rate2006 = 251
SPECint_rate_base2006 = 243

Platform Notes (Continued)

cautions.
    cpu cores : 4
    siblings : 4
    physical 0: cores 0 1 2 3
    physical 1: cores 0 1 2 3
    cache size : 10240 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)

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 Jun 6 16:39

SPEC is set to: /spec
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/sda2      ext4  272G  32G  226G  13% /

Additional information from dmidecode:
   BIOS Insyde Corp. RMIBV629 05/12/2014
   Memory:
      13x Hynix HMT42GR7AFR4C-RD 16 GB 1333 MHz 2 rank
      8x NO DIMM NO DIMM
      3x Samsung M393B2G70DB0-CMA 16 GB 1333 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.:

Continued on next page
SPEC CINT2006 Result

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General Notes (Continued)

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

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

Continued on next page
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Peak Compiler Invocation (Continued)

401.bzip2: icc -m64
456.hmmer: icc -m64
458.sjeng: icc -m64

C++ benchmarks:
icpc -m32

Peak Portability Flags

400.perlbmk: -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.perlbmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(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)
-03(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 -03 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4 -auto-ilp32

462.libquantum: basepeak = yes
Huawei
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Peak Optimization Flags (Continued)

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(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)
-03(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.xalanchbmk: 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

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

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For other inquiries, please contact webmaster@spec.org.

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