Huawei RH1288 v2 (Intel Xeon E5-2690 v2)

**SPECint®2006 =** 57.3  
**SPECint_base2006 =** 57.3

<table>
<thead>
<tr>
<th>SPECint2006</th>
<th>57.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_base2006</td>
<td>57.3</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 3175  
**Test sponsor:** Huawei  
**Tested by:** Huawei  
**Test date:** Aug-2014  
**Hardware Availability:** Sep-2013  
**Software Availability:** Nov-2013

### Hardware

<table>
<thead>
<tr>
<th>CPU Name:</th>
<th>Intel Xeon E5-2690 v2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Characteristics:</td>
<td>Intel Turbo Boost Technology up to 3.60 GHz</td>
</tr>
<tr>
<td>CPU MHz:</td>
<td>3000</td>
</tr>
<tr>
<td>FPU:</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled:</td>
<td>20 cores, 2 chips, 10 cores/chip</td>
</tr>
<tr>
<td>CPU(s) orderable:</td>
<td>1.2 chip</td>
</tr>
<tr>
<td>Primary Cache:</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache:</td>
<td>256 KB I+D on chip per core</td>
</tr>
<tr>
<td>L3 Cache:</td>
<td>25 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other Cache:</td>
<td>None</td>
</tr>
<tr>
<td>Memory:</td>
<td>256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC)</td>
</tr>
<tr>
<td>Disk Subsystem:</td>
<td>1 x 300 GB SAS, 10000 RPM</td>
</tr>
<tr>
<td>Other Hardware:</td>
<td>None</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Operating System:</th>
<th>Red Hat Enterprise Linux Server release 6.5 (Santiago)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compiler:</td>
<td>C/C++, Version 12.1.0.225 of Intel C++ Studio XE for Linux</td>
</tr>
<tr>
<td>Auto Parallel:</td>
<td>Yes</td>
</tr>
<tr>
<td>File System:</td>
<td>ext4</td>
</tr>
<tr>
<td>System State:</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers:</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Peak Pointers:</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Other Software:</td>
<td>Microquill SmartHeap V9.01</td>
</tr>
</tbody>
</table>
Huawei RH1288 v2 (Intel Xeon E5-2690 v2)

SPECint2006 = 57.3
SPECint_base2006 = 57.3

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>294</td>
<td>33.2</td>
<td>295</td>
<td>33.2</td>
<td>294</td>
<td>33.2</td>
<td>294</td>
<td>33.2</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>388</td>
<td>24.9</td>
<td>388</td>
<td>24.9</td>
<td>388</td>
<td>24.9</td>
<td>388</td>
<td>24.9</td>
</tr>
<tr>
<td>403.mcf</td>
<td>221</td>
<td>36.4</td>
<td>221</td>
<td>36.4</td>
<td>221</td>
<td>36.4</td>
<td>221</td>
<td>36.4</td>
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<tr>
<td>429.gcc</td>
<td>128</td>
<td>71.5</td>
<td>128</td>
<td>71.1</td>
<td>129</td>
<td>70.9</td>
<td>128</td>
<td>71.5</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>392</td>
<td>26.8</td>
<td>392</td>
<td>26.8</td>
<td>391</td>
<td>26.8</td>
<td>392</td>
<td>26.8</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>149</td>
<td>62.8</td>
<td>149</td>
<td>62.5</td>
<td>149</td>
<td>62.7</td>
<td>149</td>
<td>62.7</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>391</td>
<td>30.9</td>
<td>391</td>
<td>30.9</td>
<td>391</td>
<td>31.0</td>
<td>391</td>
<td>30.9</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>5.89</td>
<td>3520</td>
<td>5.89</td>
<td>3520</td>
<td>5.89</td>
<td>3520</td>
<td>5.89</td>
<td>3520</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>437</td>
<td>50.6</td>
<td>437</td>
<td>50.6</td>
<td>437</td>
<td>50.6</td>
<td>437</td>
<td>50.6</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>190</td>
<td>33.0</td>
<td>190</td>
<td>33.0</td>
<td>190</td>
<td>32.8</td>
<td>190</td>
<td>33.0</td>
</tr>
<tr>
<td>473.astar</td>
<td>206</td>
<td>34.0</td>
<td>205</td>
<td>34.2</td>
<td>206</td>
<td>34.1</td>
<td>206</td>
<td>34.2</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>122</td>
<td>56.7</td>
<td>122</td>
<td>56.7</td>
<td>122</td>
<td>56.7</td>
<td>122</td>
<td>56.7</td>
</tr>
</tbody>
</table>

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
Set Hyper-Threading to Disabled
Baseboard Management Controller used to adjust the fan speed to 100%
Sysinfo program /spec/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdfff5032aaa42e583f96b07f99d3

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 E5-2690 v2 @ 3.00GHz
  2 "physical id"s (chips)
  20 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
cautions.)
cpu cores : 10
siblings : 10
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

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Huawei RH1288 v2 (Intel Xeon E5-2690 v2)

SPECint2006 = 57.3
SPECint_base2006 = 57.3

CPU2006 license: 3175
Test sponsor: Huawei
Test date: Aug-2014
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Platform Notes (Continued)

    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)

    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 Aug 20 19:37

        SPEC is set to: /spec
            Filesystem  Type   Size  Used  Avail  Use% Mounted on
            /dev/sda2   ext4    272G  102G  157G   40%  /

        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 = "20"

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/enable

Base Compiler Invocation

C benchmarks:
    icc  -m64
**SPEC CINT2006 Result**

**Huawei**

Huawei RH1288 v2 (Intel Xeon E5-2690 v2)

| SPECint2006 | 57.3 |
| SPECint_base2006 | 57.3 |

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---

**Base Compiler Invocation (Continued)**

```plaintext
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/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
Huawei

Huawei RH1288 v2 (Intel Xeon E5-2690 v2)

SPEClnt2006 = 57.3
SPEClnt_base2006 = 57.3

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

Test date: Aug-2014
Hardware Availability: Sep-2013
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: basepeak = yes
401.bzip2: basepeak = yes
403.gcc: basepeak = yes
429.mcf: basepeak = yes
445.gobmk: basepeak = yes
456.hmmer: basepeak = yes
458.sjeng: basepeak = yes
462.libquantum: basepeak = yes
464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: basepeak = yes

Continued on next page
SPEC CINT2006 Result

Huawei

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Peak Optimization Flags (Continued)

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-ic12.1-official-linux64.20120425.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

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
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