### SPEC® CINT2006 Result

**Huawei CH222 V3 (Intel Xeon E5-2660 v3)**

<table>
<thead>
<tr>
<th>SPECint®_rate2006</th>
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<tbody>
<tr>
<td>SPECint_rate_base2006</td>
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</tbody>
</table>

**CPU2006 license:** 3175

**Test sponsor:** Huawei

**Tested by:** Huawei

**Hardware**

<table>
<thead>
<tr>
<th>CPU Name:</th>
<th>Intel Xeon E5-2660 v3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU MHZ:</td>
<td>2600</td>
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<tr>
<td>FPU:</td>
<td>Integrated</td>
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**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 14.0.0.080 of Intel C++ Studio XE for Linux</td>
</tr>
<tr>
<td>Auto Parallel:</td>
<td>No</td>
</tr>
<tr>
<td>File System:</td>
<td>ext4</td>
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<tr>
<td>System State:</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers:</td>
<td>32-bit</td>
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<tr>
<td>Peak Pointers:</td>
<td>32/64-bit</td>
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<tr>
<td>Other Software:</td>
<td>Microquill SmartHeap V10.0</td>
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**Copies | SPECint_rate_base2006 = 898**

<table>
<thead>
<tr>
<th>400.perlbench</th>
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<tbody>
<tr>
<td>401.bzip2</td>
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<td>458</td>
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<tr>
<td>403.gcc</td>
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<td>439</td>
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<tr>
<td>429.mcf</td>
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<td>662</td>
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<tr>
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<td>471.omnetpp</td>
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<td>473.astar</td>
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<tr>
<td>483.xalancbmk</td>
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**Operating System:** Red Hat Enterprise Linux Server release 6.5 (Santiago)

**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
Huawei CH222 V3 (Intel Xeon E5-2660 v3)

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

Results Table

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</tbody>
</table>

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 Custom
Set Snoop Mode to COD
Set Patrol Scrub to Disable
Baseboard Management Controller used to adjust the fan speed to 100%
Sysinfo program /spec/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191

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 E5-2660 v3 @ 2.60GHz
2 "physical id"s (chips)
40 "processors"

Continued on next page
**Huawei**

**Huawei CH222 V3 (Intel Xeon E5-2660 v3)**

**SPECint_rate2006 = 927**

**SPECint_rate_base2006 = 898**

**CPU2006 license:** 3175  
**Test date:** Jan-2015  
**Test sponsor:** Huawei  
**Hardware Availability:** Sep-2014  
**Tested by:** Huawei  
**Software Availability:** Nov-2013

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### Platform Notes (Continued)

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  
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 : 12800 KB

From /proc/meminfo

```
MemTotal:       264273708 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.localdomain 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 Jan 7 21:23  
```

**SPEC is set to:** /spec

```
Filesystem     Type  Size  Used Avail Use% Mounted on  
/dev/sda1      ext4  268G   88G  167G  35% /  
```

Additional information from dmidecode:

```
BIOS Insyde Corp. 1.13 08/12/2014  
Memory:  
 8x NO DIMM NO DIMM    3 rank  
 8x Samsung M393A2G40DB0-CPB 16 GB 2133 MHz 1 rank  
 8x Samsung M393A2G40DB0-CPB 16 GB 2133 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:

```
Continued on next page  
```
Huawei CH222 V3 (Intel Xeon E5-2660 v3)

SPECnt_rate2006 = 927
SPECnt_rate_base2006 = 898

CPU2006 license: 3175
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General Notes (Continued)

```
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
The Huawei CH121 V3 and Huawei CH222 V3
are electronically equivalent.
The results have been measured on a Huawei CH121 V3 model
```

Base Compiler Invocation

C benchmarks:
```bash
icc  -m32
```
C++ benchmarks:
```bash
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:
```bash
-xCORE-AVX2  -ipo  -O3  -no-prec-div  -opt-prefetch
-opt-mem-layout-trans=3
```
C++ benchmarks:
```bash
-xCORE-AVX2  -ipo  -O3  -no-prec-div  -opt-prefetch
-opt-mem-layout-trans=3  -Wl,-z,muldefs  -L/sh  -lsmartheap
```

Base Other Flags

C benchmarks:
```bash
403.gcc: -Dalloca=_alloca
```

Base Other Flags

C benchmarks (except as noted below):
```bash
icc  -m32
```

Peak Compiler Invocation

Continued on next page
Huawei
Huawei CH222 V3 (Intel Xeon E5-2660 v3)

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

Test date: Jan-2015
Hardware Availability: Sep-2014
Software Availability: Nov-2013

Peak Compiler Invocation (Continued)

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

C++ benchmarks:
icpc -m32
```

Peak Portability Flags

```plaintext
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

```plaintext
C benchmarks:
400.perlbench: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -opt-mem-layout-trans=3
456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto-ilp32
```

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Huawei CH222 V3 (Intel Xeon E5-2660 v3)

Huawei

SPECint_rate2006 = 927
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CPU2006 license: 3175
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Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: -xCORE-AVX2(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: -xCORE-AVX2(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-HASWELL-V1.2.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-HASWELL-V1.2.xml

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

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