## SPEC® CINT2006 Result

**Huawei**

**Kunlun 9016(Intel Xeon E7-8893 v4)**

### SPECint\_rate2006 = Not Run

<table>
<thead>
<tr>
<th>SPECint_rate_base2006 = 1500</th>
</tr>
</thead>
</table>

**CPU2006 license:** 3175  
**Test sponsor:** Huawei  
**Tested by:** Huawei  
**Test date:** May-2017  
**Hardware Availability:** Jan-2016  
**Software Availability:** Sep-2016

<table>
<thead>
<tr>
<th>SPECint_rate_base2006 = 1500</th>
</tr>
</thead>
</table>

| CPU Name: | Intel Xeon E7-8893 v4 |
|--------------------------------|
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.50 GHz |
| CPU MHz: | 3200 |
| FPU: | Integrated |
| CPU(s) enabled: | 64 cores, 16 chips, 4 cores/chip, 2 threads/core |
| CPU(s) orderable: | 4,8,16 chip |
| Primary Cache: | 32 KB I + 32 KB D on chip per core |
| Secondary Cache: | 256 KB I+D on chip per core |
| L3 Cache: | 60 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 2 TB (128 x 16 GB 2Rx4 PC4-2400T-R, running at 1600 MHz) |
| Disk Subsystem: | 2 x 600 GB SAS, 10K RPM |

### Hardware

<table>
<thead>
<tr>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System:</td>
</tr>
<tr>
<td>Compiler:</td>
</tr>
<tr>
<td>Auto Parallel:</td>
</tr>
<tr>
<td>File System:</td>
</tr>
<tr>
<td>System State:</td>
</tr>
<tr>
<td>Base Pointers:</td>
</tr>
<tr>
<td>Peak Pointers:</td>
</tr>
<tr>
<td>Other Software:</td>
</tr>
</tbody>
</table>

---

**Standard Performance Evaluation Corporation**  
info@spec.org  
http://www.spec.org/
SPEC CINT2006 Result

Huawei

Kunlun 9016(Intel Xeon E7-8893 v4)

SPECint_rate2006 = Not Run

SPECint_rate_base2006 = 1500

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

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</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>128</td>
<td>1342</td>
<td>932</td>
<td>1346</td>
<td>929</td>
<td>1345</td>
<td>930</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>128</td>
<td>1691</td>
<td>730</td>
<td><strong>1689</strong></td>
<td><strong>731</strong></td>
<td>1688</td>
<td>732</td>
</tr>
<tr>
<td>403.gcc</td>
<td>128</td>
<td><strong>711</strong></td>
<td><strong>1450</strong></td>
<td>679</td>
<td>1520</td>
<td>712</td>
<td>1450</td>
</tr>
<tr>
<td>429.mcf</td>
<td>128</td>
<td>516</td>
<td>2260</td>
<td>508</td>
<td>2300</td>
<td><strong>512</strong></td>
<td><strong>2280</strong></td>
</tr>
<tr>
<td>445.gobmk</td>
<td>128</td>
<td><strong>1475</strong></td>
<td><strong>910</strong></td>
<td>1473</td>
<td>912</td>
<td>1480</td>
<td>907</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>128</td>
<td>611</td>
<td>1950</td>
<td><strong>611</strong></td>
<td><strong>1960</strong></td>
<td>610</td>
<td>1960</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>128</td>
<td>1788</td>
<td>866</td>
<td>1788</td>
<td>866</td>
<td><strong>1788</strong></td>
<td><strong>866</strong></td>
</tr>
<tr>
<td>462.libquantum</td>
<td>128</td>
<td>204</td>
<td>13000</td>
<td>204</td>
<td>13000</td>
<td><strong>204</strong></td>
<td><strong>13000</strong></td>
</tr>
<tr>
<td>464.h264ref</td>
<td>128</td>
<td>1869</td>
<td>1520</td>
<td>1830</td>
<td>1550</td>
<td><strong>1846</strong></td>
<td><strong>1530</strong></td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>128</td>
<td><strong>825</strong></td>
<td><strong>969</strong></td>
<td>823</td>
<td>972</td>
<td>826</td>
<td>969</td>
</tr>
<tr>
<td>473.astar</td>
<td>128</td>
<td>961</td>
<td>935</td>
<td>964</td>
<td>932</td>
<td><strong>962</strong></td>
<td><strong>934</strong></td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>128</td>
<td><strong>420</strong></td>
<td><strong>2100</strong></td>
<td>417</td>
<td>2120</td>
<td>421</td>
<td>2100</td>
</tr>
</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"
 Turbo mode set with:
cpupower -c all frequency-set -g performance

Platform Notes

BIOS configuration:
Set Power Efficiency Mode to Performance
Sysinfo program /root/spec/cpu2006/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-ailn Wed May 10 18:40:59 2017

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 E7-8893 v4 @ 3.20GHz
  16 "physical id"s (chips)
  128 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
Continued on next page
## SPEC CINT2006 Result

### Huawei

**Kunlun 9016(Intel Xeon E7-8893 v4)**

<table>
<thead>
<tr>
<th>SPECint_rate2006 =</th>
<th>Not Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_rate_base2006 =</td>
<td>1500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CPU2006 license:</th>
<th>3175</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor:</td>
<td>Huawei</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Huawei</td>
</tr>
<tr>
<td>Test date:</td>
<td>May-2017</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Jan-2016</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Sep-2016</td>
</tr>
</tbody>
</table>

**Platform Notes (Continued)**

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

```plaintext
cpu cores : 4
siblings : 8
physical 0: cores 12 13 25 26
physical 1: cores 12 13 25 26
physical 2: cores 12 13 25 26
physical 3: cores 12 13 25 26
physical 4: cores 12 13 25 26
physical 5: cores 12 13 25 26
physical 6: cores 12 13 25 26
physical 7: cores 12 13 25 26
physical 8: cores 12 13 25 26
physical 9: cores 12 13 25 26
physical 10: cores 12 13 25 26
physical 11: cores 12 13 25 26
physical 12: cores 12 13 25 26
physical 13: cores 12 13 25 26
physical 14: cores 12 13 25 26
physical 15: cores 12 13 25 26
cache size : 61440 KB
```

From /proc/meminfo

```plaintext
MemTotal:  2112838264 kB
HugePages_Total:       0
Hugepagesize:  2048 kB
```

/usr/bin/lsb_release -d

SUSE Linux Enterprise Server 12 SP2

From /etc/*release* /etc/*version*
SuSE-release:

```
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 2
# This file is deprecated and will be removed in a future service pack or
# release.
# Please check /etc/os-release for details about this release.
```

os-release:

```
NAME="SLES"
VERSION="12-SP2"
VERSION_ID="12.2"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
ID=sles
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp2"
```

uname -a:

```
(9464f67) x86_64 x86_64 x86_64 GNU/Linux
```

run-level 5 May 10 18:18

Continued on next page
**Huawei**

**Kunlun 9016(Intel Xeon E7-8893 v4)**

**SPECint_rate2006 = Not Run**

**SPECint_rate_base2006 = 1500**

<table>
<thead>
<tr>
<th>CPU2006 license</th>
<th>Test date</th>
</tr>
</thead>
<tbody>
<tr>
<td>3175</td>
<td>May-2017</td>
</tr>
</tbody>
</table>

**Test sponsor:** Huawei

**Tested by:** Huawei

---

**Platform Notes (Continued)**

SPEC is set to: `/root/speccpu`

Filesystem | Type   | Size  | Used | Avail | Use% | Mounted on |
---|--------|-------|------|-------|------|------------|
/dev/sda3 | btrfs  | 1.1T  | 343G | 750G  | 32%  | /           |

Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

**BIOS American Megatrends Inc. BLXSV207 04/17/2017**

**Memory:**
- 128x Hynix HMA82GR7AFR8N-UH 16 GB 2 rank 2400 MHz, configured at 1600 MHz
- 256x NO DIMM NO DIMM

(End of data from sysinfo program)

---

**General Notes**

Environment variables set by runspec before the start of the run:

```
LD_LIBRARY_PATH = "/root/speccpu/libs/32:/root/speccpu/libs/64:/root/speccpu/sh10.2"
```

Binaries compiled on a system with 1x Intel Core i7-4790K CPU + 32GB RAM memory using Redhat Enterprise Linux 7.2

Transparent Huge Pages enabled by default

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 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32
```

C++ benchmarks:
```
icpc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32
```

---

**Base Portability Flags**

```
400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32
401.bzip2: -D_FILE_OFFSET_BITS=64
403.gcc: -D_FILE_OFFSET_BITS=64
429.mcf: -D_FILE_OFFSET_BITS=64
445.gobmk: -D_FILE_OFFSET_BITS=64
```

Continued on next page
Huawei
Kunlun 9016(Intel Xeon E7-8893 v4)

SPECint_rate2006 =  Not Run
SPECint_rate_base2006 = 1500

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

SPEC CINT2006 Result
Copyright 2006-2017 Standard Performance Evaluation Corporation

Base Portability Flags (Continued)

456.hmmer: -D_FILE_OFFSET_BITS=64
458.sjeng: -D_FILE_OFFSET_BITS=64
462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
464.h264ref: -D_FILE_OFFSET_BITS=64
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar: -D_FILE_OFFSET_BITS=64
483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh10.2 -lsmartheap

Base Other Flags

C benchmarks:
403.gcc: -Danomaly=_alloca

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.2-BDW-RevG.20170404.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.

Tested with SPEC CPU2006 v1.2.
Originally published on 9 October 2017.