Huawei CH121 V3 (Intel Xeon E5-2630 v4)

<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
<th>= NC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_rate_base2006</td>
<td>= NC</td>
</tr>
</tbody>
</table>


**SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by [SPEC CPU rule 1.3.2](http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2) and the SPEC Open Systems Group policy on [general availability](https://www.spec.org/osg/policy.html#AppendixC).**

### Hardware
- **CPU Name:** Intel Xeon E5-2630 v4
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.10 GHz
- **CPU MHz:** 2200
- **FPU:** Integrated
- **CPU(s) enabled:** 20 cores, 2 chips, 10 cores/chip, 2 threads/core
- **CPU(s) orderable:** 1, 2 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:** 25 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R, running at 2133 MHz)
- **Disk Subsystem:** 1 x 2 T SATA, 7200 RPM

### Software
- **Operating System:** Red Hat Enterprise Linux Server release 7.0 (Maipo) 3.10.0-123.el7.x86_64
- **Compiler:** C/C++: Version 16.0.0.101 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 V10.2

Continued on next page
SPEC CINT2006 Result

Huawei

Huawei CH121 V3 (Intel Xeon E5-2630 v4)

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

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

Hardware Availability: Mar-2016
Software Availability: Mar-2016

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>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>403.gcc</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>429.mcf</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>445. gobmk</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>458. sjeng</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>473.astar</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>40</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
</tbody>
</table>

Other Hardware: None

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 Snoop Mode to ES mode
- Set Patrol Scrub to Disable

Sysinfo program /speccpu/spec16/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 $$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Fri Feb 26 02:47:04 2016

Non-Compliant

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by <a href="http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2">SPEC CPU rule 1.3.2</a> and the SPEC Open Systems Group policy on <a href="https://www.spec.org/osg/policy.html#AppendixC">general availability</a>. 
Huawei CH121 V3 (Intel Xeon E5-2630 v4)

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei
Test date: Feb-2016
Hardware Availability: Mar-2016
Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

Platform Notes (Continued)

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 E5-2630 v4 @ 2.20GHz
- 2 "physical id"s (chips) 40 "processors"
- 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 2 3 4 8 9 10 11 12
- physical 1: cores 0 1 3 4 8 9 10 11 12
- cache size: 25600 KB

From /proc/meminfo
- MemTotal: 263568392 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

From /etc/*release*/etc/*version*
- os-release:
  NAME="Red Hat Enterprise Linux Server"
  VERSION="7.0 (Maipo)"
  ID="rhel"
  ID_LIKE="fedora"
  VERSION_ID="7.0"
  PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
  CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
  Redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
  system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
  system-release-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server

uname -a:
- Linux localhost.localdomain 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57 EDT 2014 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Feb 25 14:49
SPEC is set to: /speccpu/spec16

Continued on next page
SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by the SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability. The results have been measured on a Huawei CH121 V3 model.

Base Compiler Invocation

C benchmarks:
```
icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin```

C++ benchmarks:
```
icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin```
SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by <a href="http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2">SPEC CPU rule 1.3.2</a> and the SPEC Open Systems Group policy on <a href="https://www.spec.org/osg/policy.html#AppendixC">general availability</a>.

**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
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 -m32 -mprec-div -opt-prefetch
-opt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -m32 -mprec-div -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmartheap

**Base Other Flags**

C benchmarks:
-Dlcgtc=alloca=alloca

**Peak Compiler Invocation**

C benchmarks (except as noted below):
`icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin`

400.perlbench: `icc -m64`
SPEC CINT2006 Result

Huawei

Huawei CH121 V3 (Intel Xeon E5-2630 v4)

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

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

CPU2006 license: 3175
Test date: Feb-2016
Hardware Availability: Mar-2016
Software Availability: Mar-2016

Peek Compiler Invocation (Continued)

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

C++ benchmarks:
icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

Peak Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64
403.gcc: -D_FILE_OFFSET_BITS=64
429.mcf: -D_FILE_OFFSET_BITS=64
445.gobmk: -D_FILE_OFFSET_BITS=64
456.hmmer: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64
458.sjeng: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU(LP64
462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64
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

Peak Optimization Flags

C benchmarks:

400.perlbench: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 1)
        -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
        -par-num-thread=1(pass 1) -prof-use(pass 2) -auto-ilp32

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 1)
        -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
        -par-num-thread=1(pass 1) -prof-use(pass 2) -opt-prefetch
        -auto-ilp32 -ansi-alias

403.gcc: basepeak = yes

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

Non-Compliant
Huawei

Huawei CH121 V3 (Intel Xeon E5-2630 v4)

<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>Feb-2016</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Mar-2016</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Mar-2016</td>
</tr>
</tbody>
</table>

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

Peak Optimization Flags (Continued)

- 429.mcf: basepeak = yes
- 445.gobmk: -xCORE-AVX2 -prof-use(pass 2) -par-num-threads=1(pass 1) -ansi-alias -opt-mem-layout-trans=3
- 456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll12 -auto-ilp32
- 458.sjeng: -xCORE-AVX2 -prof-gen:threadsafe(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -prof-use(pass 2) -unroll14 -auto-ilp32
- 462.libquantum: basepeak = yes
- 464.h264ref: -xCORE-AVX2 -prof-gen:threadsafe(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -prof-use(pass 2) -unroll12 -ansi-alias
- 471.omnetpp: -xCORE-AVX2 -prof-gen:threadsafe(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -prof-use(pass 2) -ansi-alias -opt-mem-region-strategy=block -Wl,-z,muldefs -L/sh -lsmarthep
- 473.astar: basepeak = yes
- 483.xalancbmk: basepeak = yes

C++ benchmarks:

- 403.gcc: -Dalloca=_alloca

Peak Other Flags

C benchmarks:
SPEC CINT2006 Result

Huawei

Huawei CH121 V3 (Intel Xeon E5-2630 v4)

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

CPU2006 license: 3175
Test date: Feb-2016
Test sponsor: Huawei
Hardware Availability: Mar-2016
Tested by: Huawei
Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by <a href="http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2">SPEC CPU rule 1.3.2</a> and the SPEC Open Systems Group policy on <a href="https://www.spec.org/osg/policy.html#AppendixC">general availability</a>.

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-BDW-V1.0.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-BDW-V1.0.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 7 April 2016.