Huawei CH220 V3 (Intel Xeon E5-2630 v4)

**SPECfp®_rate2006 = NC**

**SPECfp_rate_base2006 = NC**

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<th>CPU2006 license: 3175</th>
<th>Test date: May-2016</th>
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<tr>
<td>Test sponsor: Huawei</td>
<td>Hardware Availability: Mar-2016</td>
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<tr>
<td>Tested by: Huawei</td>
<td>Software Availability: Mar-2016</td>
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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>.

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<td>410.bwaves</td>
</tr>
<tr>
<td>416.gamess</td>
</tr>
<tr>
<td>433.milc</td>
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<td>434.zeusmp</td>
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<td>435.gromacs</td>
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<td>436.cactusADM</td>
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<td>437.leslie3d</td>
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<td>444.namd</td>
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<td>447.dealII</td>
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<tr>
<td>450.soplex</td>
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<td>453.povray</td>
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<td>454.calculix</td>
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<tr>
<td>459.GemsFDTD</td>
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<td>465.tonto</td>
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<tr>
<td>4.9.lbm</td>
</tr>
<tr>
<td>481.wrf</td>
</tr>
<tr>
<td>482.sphinx3</td>
</tr>
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Huawei CH220 V3 (Intel Xeon E5-2630 v4)

SPEC fp_rate2006 = NC
SPEC fp_rate_base2006 = NC

CPU2006 license: 3175
Test sponsor: Huawei
Test date: May-2016
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 SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

Hardware

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<th>Feature</th>
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<tr>
<td>CPU Name</td>
<td>Intel Xeon E5-2630 v4</td>
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<td>CPU Characteristics</td>
<td>Intel Turbo Boost Technology up to 3.10 GHz</td>
</tr>
<tr>
<td>CPU MHZ</td>
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<tr>
<td>FPU</td>
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<td>Disk Subsystem</td>
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<td>Other Hardware</td>
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Software

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<td>Auto Parallel</td>
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Non-Compliant
Huawei

Huawei CH220 V3 (Intel Xeon E5-2630 v4)

SPEC CFP2006 Result

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Huawei

Huawei CH220 V3 (Intel Xeon E5-2630 v4)

SPECfp_rate2006 = NC
SPECfp_rate_base2006 = NC

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

Results Table

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</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"

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 CH220 V3 (Intel Xeon E5-2630 v4)

SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei
Test date: May-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

BIOS configuration:
Set Power Efficiency Mode to Peformance
Set Snoop Mode to ES mode
Set Patrol Scrub to Disable
Set Hyper-Threading to enabled
Sysinfo program /spec16/config/sysinfo.rev6914
Running on localhost.localdomain Thu May 12 19:44:59 2016

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 1 2 3 4 8 9 10 11 12
physical 1: cores 0 1 2 3 4 8 9 10 11 12
cache size : 25600 KB

From /proc/meminfo
MemTotal:       263567008 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

From /etc/*release*/etc/*version*

os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.2 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.2"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.2 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.2:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)

Continued on next page
Huawei CH220 V3 (Intel Xeon E5-2630 v4)  

SPEC CFP2006 Result  

Huawei

SPECfp_rate2006 = NC  
SPECfp_rate_base2006 = NC

CPU2006 license: 3175  
Test date: May-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 SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

Platform Notes (Continued)

uname -a:  
Linux localhost.localdomain 3.10.0-327.el7.x86_64 #1 SMP Thu Oct 29 17:29:29 EDT 2015 x86_64 x86_64 x86_64 GNU/Linux  
run-level 3 May 12 06:45

SPEC is set to: /spec16  
  Filesystem Type Size Used Avail Use% Mounted on  
  /dev/sda2 ext4 850G 48G 760G 6% /

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 input may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS Insyde Corp. 3.09 02/22/2016  
Memory:  
8x Samsung M393A2G40EB1-CRC 16 GB 1 rank 2400 MHz, configured at 2133 MHz  
8x Samsung M393A2G40EB1-CRC 16 GB 2 rank 2400 MHz, configured at 2133 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:  
LD_LIBRARY_PATH = "/spec16/libs/32:/spec16/libs/64:/spec16/sh"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB  
RedHat EL 7.1  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/transparent_hugepage/enabled  
Filesystem page cache cleared with:  
echo 1> /proc/sys/vm/drop_caches  
runcmd command invoked through numactl i.e.:  
numactl --interleave=all runspec <etc>
Huawei CH220 V3 (Intel Xeon E5-2630 v4) SPECfp_rate2006 = NC
SPECfp_rate_base2006 = NC

CPU2006 license: 3175
Test sponsor: Huawei
Test date: May-2016
Tested by: Huawei
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. 

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64 -nofor_main
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64 -nofor_main
465.tonto: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3
Huawei

Huawei CH220 V3 (Intel Xeon E5-2630 v4)

**SPECfp_rate2006 = NC**

**SPECfp_rate_base2006 = NC**

**CPU2006 license:** 3175

**Test date:** May-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 [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).

### Base Optimization Flags (Continued)

- **C++ benchmarks:**
  - `-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -cco-p32 -ansi-alias -opt-mem-layout-trans=3`

- **Fortran benchmarks:**
  - `-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch`

- **Benchmarks using both Fortran and C:**
  - `-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias -opt-mem-layout-trans=3`

### Peak Compiler Invocation

- **C benchmarks:**
  - `icc -m64`

- **C++ benchmarks (except as noted below):**
  - `icpc -m64`

  - `450.soplex: icpc -m64 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin`

- **Fortran benchmarks:**
  - `ifort -m64`

- **Benchmarks using both Fortran and C:**
  - `icce -m64 icfort -m64`

### Peak Portability Flags

- `410.bwaves: -DSPEC_CPU_LP64`
- `416.gamess: -DSPEC_CPU_LP64`
- `433.milc: -DSPEC_CPU_LP64`
- `434.zeusmp: -DSPEC_CPU_LP64`
- `435.gromacs: -DSPEC_CPU_LP64 -nofor_main`
- `436.cactusADM: -DSPEC_CPU_LP64 -nofor_main`
- `437.leslie3d: -DSPEC_CPU_LP64`
- `444.namd: -DSPEC_CPU_LP64 -nofor_main`
- `447.dealII: -DSPEC_CPU_LP64`
Huawei

Huawei CH220 V3 (Intel Xeon E5-2630 v4)

<table>
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CPU2006 license: 3175
Test sponsor: Huawei
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CPU2006 license: 3175
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Peak Portability Flags (Continued)

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<td>454.calculix</td>
<td>-DSPEC_CPU_LP64 -nofor_main</td>
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<td>459.GemsFDTD</td>
<td>-DSPEC_CPU_LP64</td>
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<td>465.tonto</td>
<td>-DSPEC_CPU_LP64</td>
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<td>470.lbm</td>
<td>-DSPEC_CPU_LP64</td>
</tr>
<tr>
<td>481.wrf</td>
<td>-DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX</td>
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Peak Optimization Flags

C benchmarks:

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<td>basepeak = yes</td>
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C++ benchmarks:

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<td>-xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -fno-alias -auto-ilp32</td>
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<td>447.dealII</td>
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<td>-xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -opt-malloc-options=3</td>
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<td>-xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias</td>
</tr>
</tbody>
</table>

Fortran benchmarks:

Continued on next page
SPEC CFP2006 Result

Huawei
Huawei CH220 V3 (Intel Xeon E5-2630 v4)

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

SPECfp_rate2006 = NC
SPECfp_rate_base2006 = NC

Test date: May-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.

Peak Optimization Flags (Continued)

410.bwaves: basepeak = yes
416.gamess: -xCORE-AVX2(pass 2) -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
           -inline-level=0 -scalar-rep-
434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: basepeak = yes
465.tonto: -xCORE-AVX2(pass 2) -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
           -inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
           -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
           -par-num-threads=1(pass 1) -opt-mem-layout-trans=3(pass 2)
           -prof-use(pass 2) -opt-prefetch -auto-ilp32
436.cactusADM: basepeak = yes
454.calculix: basepeak = yes
481.wrf: basepeak = yes

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 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>.

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

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