## Huawei

### Huawei CH226 V3 (Intel Xeon E5-2618L v4)

**SPECfp®2006 = NC**  
**SPECfp_base2006 = NC**

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</tr>
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<td>481.lbm</td>
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### Hardware

| CPU Name: | Intel Xeon E5-2618L v4 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.20 GHz |
| CPU MHz: | 2200 |
| FPU: | Integrated |
| CPU(s) enabled: | 20 cores, 2 chips, 10 cores/chip |
| 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 1 TB SATA, 7200 RPM |
| Other Hardware: | None |

### Software

| Operating System: | Red Hat Enterprise Linux Server release 7.2 (Maipo) 3.10.0-327.el7.x86_64 |
| Compiler: | C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux; Fortran: Version 16.0.0.101 of Intel Fortran Studio XE for Linux |
| Auto Parallel: | Yes |
| File System: | ext4 |
| System State: | Run level 3 (multi-user) |
| Boot Pointers: | 64-bit |
| Ped Pointer: | 32/64-bit |
| Other Software: | None |
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**SPEC CFP2006 Result**

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### Results Table

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<td>NC</td>
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**Operating System Notes**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

**Platform Notes**

**BIOS configuration:**
- Set Power Efficiency Mode to Custom
- Set Snoop Mode to HS mode
- Set Patrol Scrub to Disable
- Set Hyper-Threading to Disable

Sysinfo program /speccpu/spec16/config/sysinfo.rev6914

$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1

running on localhost.localdomain Thu Jul  7 04:23:43 2016

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Non-Compliant
Huawei

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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 E5-2618L v4 @ 2.20GHz
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 caution.)
cpu cores : 10
siblings : 10
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: 263569484 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)
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 Jul 6 12:58
SPEC is set to: /speccpu/spec16

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info@spec.org
http://www.spec.org/
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Platform Notes (Continued)

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. There are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS Insyde Corp. 3.09 02/22/2016
Memory:
8x NO DIMM NO DIMM 3 rank
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:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/speccpu/spec16/libs/32:/speccpu/spec16/libs/64:/speccpu/spec16/sh"
OMP_NUM_THREADS = "20"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

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Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

```sh
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
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
465.tonto: -DSPEC_CPU_LP64
470.lbm: -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:

```sh
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias
```

C++ benchmarks:

```sh
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
```

Fortran benchmarks:

```sh
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
```

Benchmarks using both Fortran and C:

```sh
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias
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Peak Compiler Invocation

C benchmarks:
- icc -m64

C++ benchmarks:
- icpc -m64

Fortran benchmarks:
- ifort -m64

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

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
- 433.milc: basepeak = yes
- 470.lbm: basepeak = yes
- 482.sphinx3: basepeak = yes

C++ benchmarks:
- 444.namd: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
  -ipo(pass 2) -03(pass 2) -no-prec-div(pass 2)
  -par-num-threads=1(pass 1) -prof-use(pass 2) -fno-alias
  -auto-ilp32
- 447.dealII: basepeak = yes
- 450.soplex: basepeak = yes
- 453.povray: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
  -ipo(pass 2) -03(pass 2) -no-prec-div(pass 2)
  -par-num-threads=1(pass 1) -prof-use(pass 2) -unroll4

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SPEC CFP2006 Result

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### Peak Optimization Flags (Continued)

Fortran benchmarks:

453.povray (continued):
- `-ansi-alias`

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)`
- `-unroll2`
- `-inline-level=0`
- `-scalar-rep`

434.zeusmp: `basepeak = yes`

437.leslie3d: `basepeak = yes`

459.GemsFDTD:
- `-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)`
- `-unroll2`
- `-inline-level=0`
- `-opt-prefetch`
- `-parallel`

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)`
- `-inline-calloc`
- `-SPECIAL_OPTIONS=3`
- `-auto`
- `-unroll4`

Benchmarks using both Fortran and C:

435.gromacs: `basepeak = yes`

436.cactusADM: `basepeak = yes`

454.calculix:
- `-xCORE-AVX2`
- `-ipo`
- `-O3`
- `-no-prec-div`
- `-auto-ilp32`
- `-ansi-alias`

811.wrf: `basepeak = yes`

The flags files that were used to format this result can be browsed at:

- [http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-BDW-V1.0.html](http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-BDW-V1.0.html)
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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

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

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