# SPEC® CINT2006 Result
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## Huawei

Huawei CH220 (Intel Xeon E5-2630L v2)

SPECint®_rate2006 =    455

SPECint_rate_base2006 =  437

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

**Copies**

```
400.perlbench   24   387
                24   321
401.bzip2       24   237
                24   232
403.gcc         24   350
429.mcf         24   674
445.gobmk       24   325
                24   317
456.hmmer       24   659
                24   592
458.sjeng       24   336
                24   315
462.libquantum  24   2890
464.h264ref     24   540
                24   534
471.omnetpp     24   255
                24   241
473.astar       24   257
483.xalancbmk   24   495
```

SPECint_rate_base2006 = 437

SPECint_rate2006 = 455
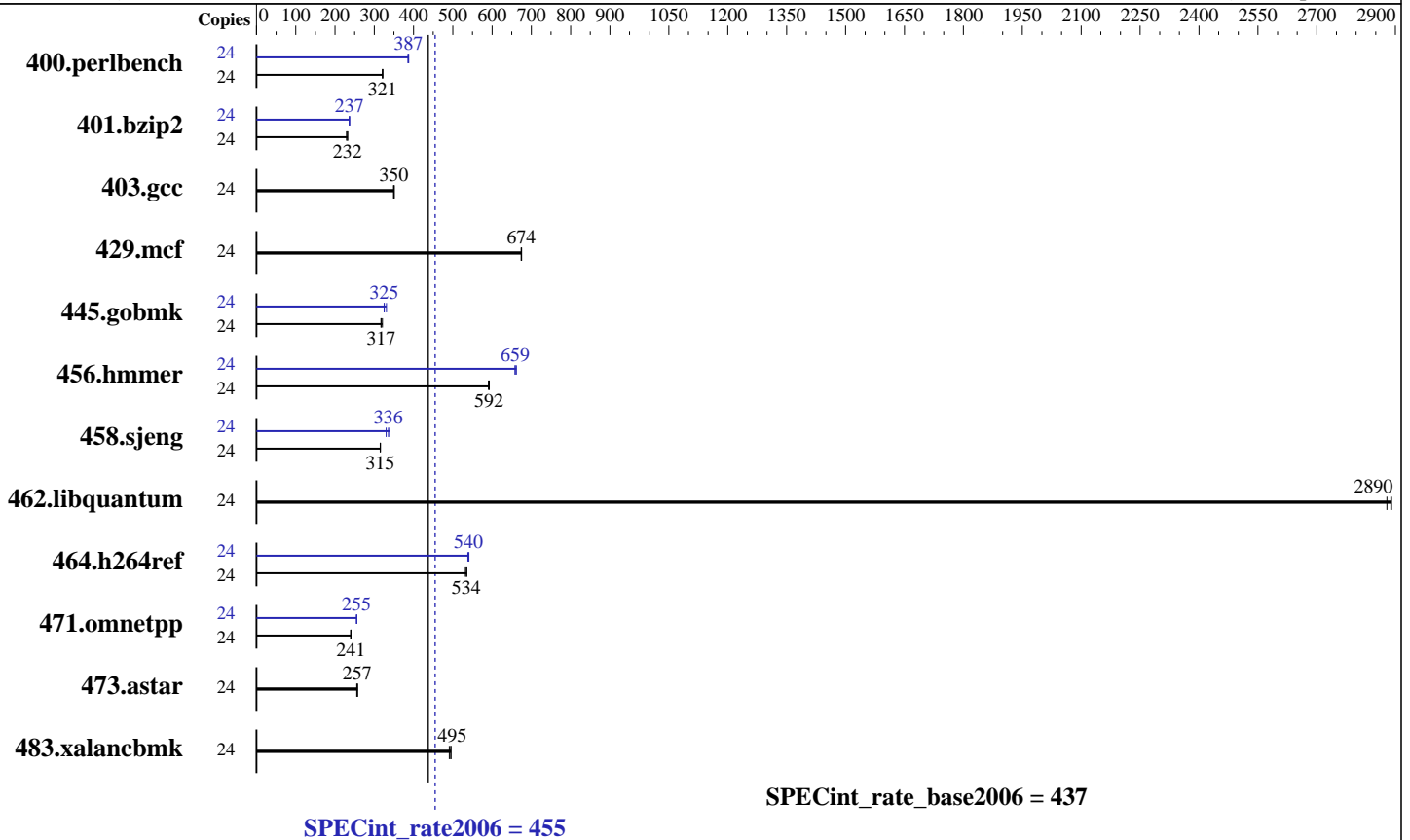
## Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5-2630L v2 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 2.80 GHz |
| CPU MHz: | 2400 |
| FPU: | Integrated |
| CPU(s) enabled: | 12 cores, 2 chips, 6 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: | 15 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 96 GB (12 x 8 GB 2Rx8 PC3-12800R-11, ECC) |
| Disk Subsystem: | 1 x 300 GB SAS, 10K RPM |
| Other Hardware: | None |

## Software

| | |
|---|---|
| Operating System: | Red Hat Enterprise Linux Server release 6.5 (Santiago) |
| | 2.6.32-431.el6.x86_64 |
| 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 |

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## Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 24 | 731 | 321 | 729 | 322 | **730** | **321** | 24 | **606** | **387** | 605 | 388 | 608 | 386 |
| 401.bzip2 | 24 | 1011 | 229 | **1000** | **232** | 998 | 232 | 24 | **978** | **237** | 980 | 236 | 977 | 237 |
| 403.gcc | 24 | **553** | **350** | 550 | 351 | 553 | 349 | 24 | **553** | **350** | 550 | 351 | 553 | 349 |
| 429.mcf | 24 | 325 | 674 | 324 | 675 | **325** | **674** | 24 | 325 | 674 | 324 | 675 | **325** | **674** |
| 445.gobmk | 24 | 785 | 321 | **793** | **317** | 794 | 317 | 24 | **774** | **325** | 775 | 325 | 761 | 331 |
| 456.hmmer | 24 | 379 | 591 | 378 | 593 | **378** | **592** | 24 | 340 | 658 | **340** | **659** | 338 | 662 |
| 458.sjeng | 24 | 920 | 316 | 922 | 315 | **921** | **315** | 24 | 857 | 339 | 879 | 330 | **864** | **336** |
| 462.libquantum | 24 | 173 | 2880 | **172** | **2890** | 172 | 2890 | 24 | 173 | 2880 | **172** | **2890** | 172 | 2890 |
| 464.h264ref | 24 | 998 | 532 | **994** | **534** | 992 | 536 | 24 | 982 | 541 | **983** | **540** | 987 | 538 |
| 471.omnetpp | 24 | 623 | 241 | **624** | **241** | 626 | 240 | 24 | 588 | 255 | 589 | 255 | **588** | **255** |
| 473.astar | 24 | **656** | **257** | 660 | 255 | 655 | 257 | 24 | **656** | **257** | 660 | 255 | 655 | 257 |
| 483.xalancbmk | 24 | 337 | 491 | 334 | 495 | **335** | **495** | 24 | 337 | 491 | 334 | 495 | **335** | **495** |

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
    Baseboard Management Controller used to adjust the fan speed to 100%
    Sysinfo program /spec/config/sysinfo.rev6818
    $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
    running on wbspeccpu Thu Nov  6 19:00:48 2014

    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 E5-2630L v2 @ 2.40GHz
         2 "physical id"s (chips)
         24 "processors"
      cores, siblings (Caution: counting these is hw and system dependent.  The
      following excerpts from /proc/cpuinfo might not be reliable.  Use with
```
Continued on next page

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## Platform Notes (Continued)

```
    caution.)
       cpu cores : 6
       siblings  : 12
       physical 0: cores 0 1 2 3 4 5
       physical 1: cores 0 1 2 3 4 5
    cache size : 15360 KB

  From /proc/meminfo
     MemTotal:        99010148 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)
     system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

  uname -a:
     Linux wbspeccpu 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 Oct 30 15:36

  SPEC is set to: /spec
     Filesystem      Type  Size  Used Avail Use% Mounted on
     /dev/sda1       ext4  270G   56G  200G  22% /

  Additional information from dmidecode:
    BIOS Insyde Corp. RMIBV629 05/12/2014
    Memory:
    4x Hynix HMT41GR7MFR8C-PB 8 GB 1600 MHz 2 rank
    8x Micron 18JSF1G72PDZ-1G6E 8 GB 1600 MHz 2 rank
    12x 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 = "/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:
 echo 1>       /proc/sys/vm/drop_caches
 runspec command invoked through numactl i.e.:
```

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## General Notes (Continued)

```
numactl --interleave=all runspec <etc>
```

## Base Compiler Invocation

C benchmarks:
```
icc  -m32
```

C++ benchmarks:
```
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:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,-z,muldefs -L/sh -lsmartheap
```

## Base Other Flags

C benchmarks:

```
   403.gcc: -Dalloca=_alloca
```

## Peak Compiler Invocation

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

```
   400.perlbench: icc -m64
```

```
   401.bzip2: icc -m64
```

```
   456.hmmer: icc -m64
```

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# Peak Compiler Invocation (Continued)

458.sjeng: `icc -m64`

C++ benchmarks:
`icpc -m32`

# Peak Portability Flags

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

C benchmarks:

400.perlbench: `-xSSE4.2(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: `-xSSE4.2(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: `-xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)`
`-ansi-alias -opt-mem-layout-trans=3`

456.hmmer: `-xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32`

458.sjeng: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
`-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)`
`-unroll4 -auto-ilp32`

462.libquantum: `basepeak = yes`

464.h264ref: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
`-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)`
`-unroll2 -ansi-alias`

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# Peak Optimization Flags (Continued)

C++ benchmarks:

471.omnetpp: `-xSSE4.2`(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-V1.0-IVB-RevG.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-V1.0-IVB-RevG.xml

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

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