# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Huawei

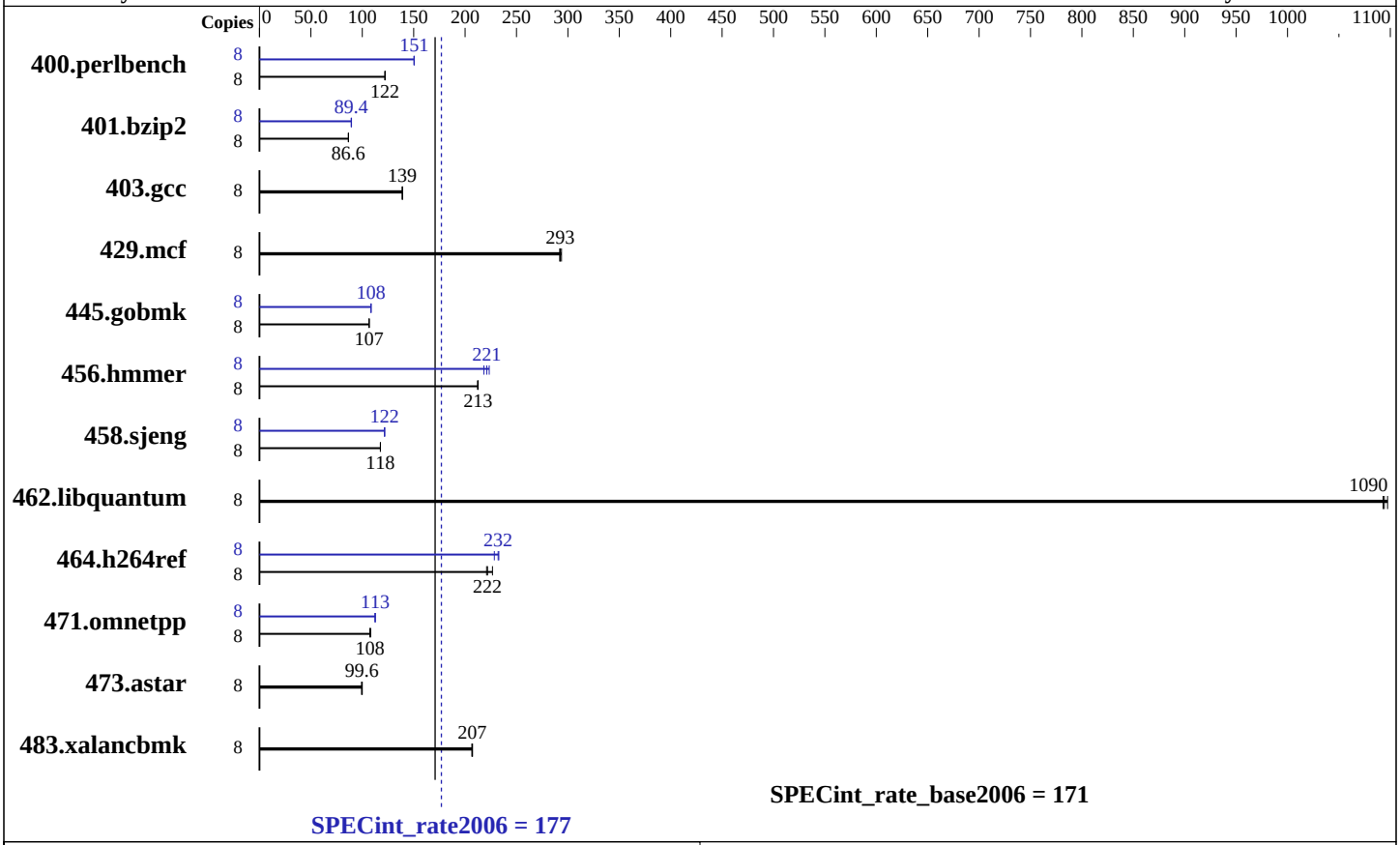
## Huawei BH622 V2 (Intel Xeon E5-2603)

SPECint®_rate2006 = 177

SPECint_rate_base2006 = 171

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

**Test date:** Apr-2014
**Hardware Availability:** Jan-2012
**Software Availability:** Nov-2013




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5-2603 |
| CPU Characteristics: | |
| CPU MHz: | 1800 |
| FPU: | Integrated |
| CPU(s) enabled: | 8 cores, 2 chips, 4 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: | 10 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 128 GB (16 x 8 GB 2Rx4 PC3-10600R-09, ECC) |
| Disk Subsystem: | 1 X 300 GB SAS 7200RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Red Hat Enterprise Linux Server release 6.5 (Santiago)<br>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 |

# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Huawei

## Huawei BH622 V2 (Intel Xeon E5-2603)

SPECint_rate2006 = 177

SPECint_rate_base2006 = 171

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

**Test date:** Apr-2014
**Hardware Availability:** Jan-2012
**Software Availability:** Nov-2013

## Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 8 | 639 | 122 | **640** | **122** | 641 | 122 | 8 | 519 | 151 | 520 | 150 | **519** | **151** |
| 401.bzip2 | 8 | 892 | 86.6 | **892** | **86.6** | 893 | 86.5 | 8 | 865 | 89.2 | 862 | 89.5 | **864** | **89.4** |
| 403.gcc | 8 | 463 | 139 | 464 | 139 | **463** | **139** | 8 | 463 | 139 | 464 | 139 | **463** | **139** |
| 429.mcf | 8 | 250 | 292 | **249** | **293** | 248 | 294 | 8 | 250 | 292 | **249** | **293** | 248 | 294 |
| 445.gobmk | 8 | 787 | 107 | 787 | 107 | **787** | **107** | 8 | 773 | 109 | 774 | 108 | **774** | **108** |
| 456.hmmer | 8 | **351** | **213** | 351 | 213 | 352 | 212 | 8 | 342 | 218 | 334 | 223 | **338** | **221** |
| 458.sjeng | 8 | **823** | **118** | 822 | 118 | 824 | 118 | 8 | 795 | 122 | 796 | 122 | **795** | **122** |
| 462.libquantum | 8 | 151 | 1100 | **151** | **1090** | 152 | 1090 | 8 | 151 | 1100 | **151** | **1090** | 152 | 1090 |
| 464.h264ref | 8 | **798** | **222** | 801 | 221 | 781 | 227 | 8 | 775 | 228 | 760 | 233 | **763** | **232** |
| 471.omnetpp | 8 | **464** | **108** | 462 | 108 | 466 | 107 | 8 | 445 | 112 | **444** | **113** | 444 | 113 |
| 473.astar | 8 | 565 | 99.4 | **564** | **99.6** | 562 | 100 | 8 | 565 | 99.4 | **564** | **99.6** | 562 | 100 |
| 483.xalancbmk | 8 | 267 | 207 | **266** | **207** | 266 | 207 | 8 | 267 | 207 | **266** | **207** | 266 | 207 |

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
Sysinfo program /spec/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on huawei Tue Apr 15 14:14:29 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 E5-2603 0 @ 1.80GHz
      2 "physical id"s (chips)
      8 "processors"
   cores, siblings (Caution: counting these is hw and system dependent.  The
   following excerpts from /proc/cpuinfo might not be reliable.  Use with
   caution.)
```

Continued on next page

## Platform Notes (Continued)

```
        cpu cores : 4
        siblings  : 4
        physical 0: cores 0 1 2 3
        physical 1: cores 0 1 2 3
     cache size : 10240 KB

  From /proc/meminfo
     MemTotal:       132103760 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 huawei 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 Apr 11 08:44

  SPEC is set to: /spec
     Filesystem     Type  Size  Used Avail Use% Mounted on
     /dev/sda1      ext4  193G   75G  109G  41% /

  Additional information from dmidecode:
    BIOS Insyde Corp. RMIBV372 12/21/2013
    Memory:
     8x NO DIMM NO DIMM
     11x Samsung M393B1K70CH0-CH9 8 GB 1066 MHz 2 rank
     5x Samsung M393B1K70DH0-CH9 8 GB 1066 MHz 2 rank

  (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.:
  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`

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

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

Continued on next page

## Peak Optimization Flags (Continued)

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`


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.
Report generated on Wed Sep 3 18:03:38 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 6 May 2014.