SPEC® CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

Huawei RH2285H v2 (Intel Xeon E5-2407 v2)

$SPECint®2006 = $ 37.8
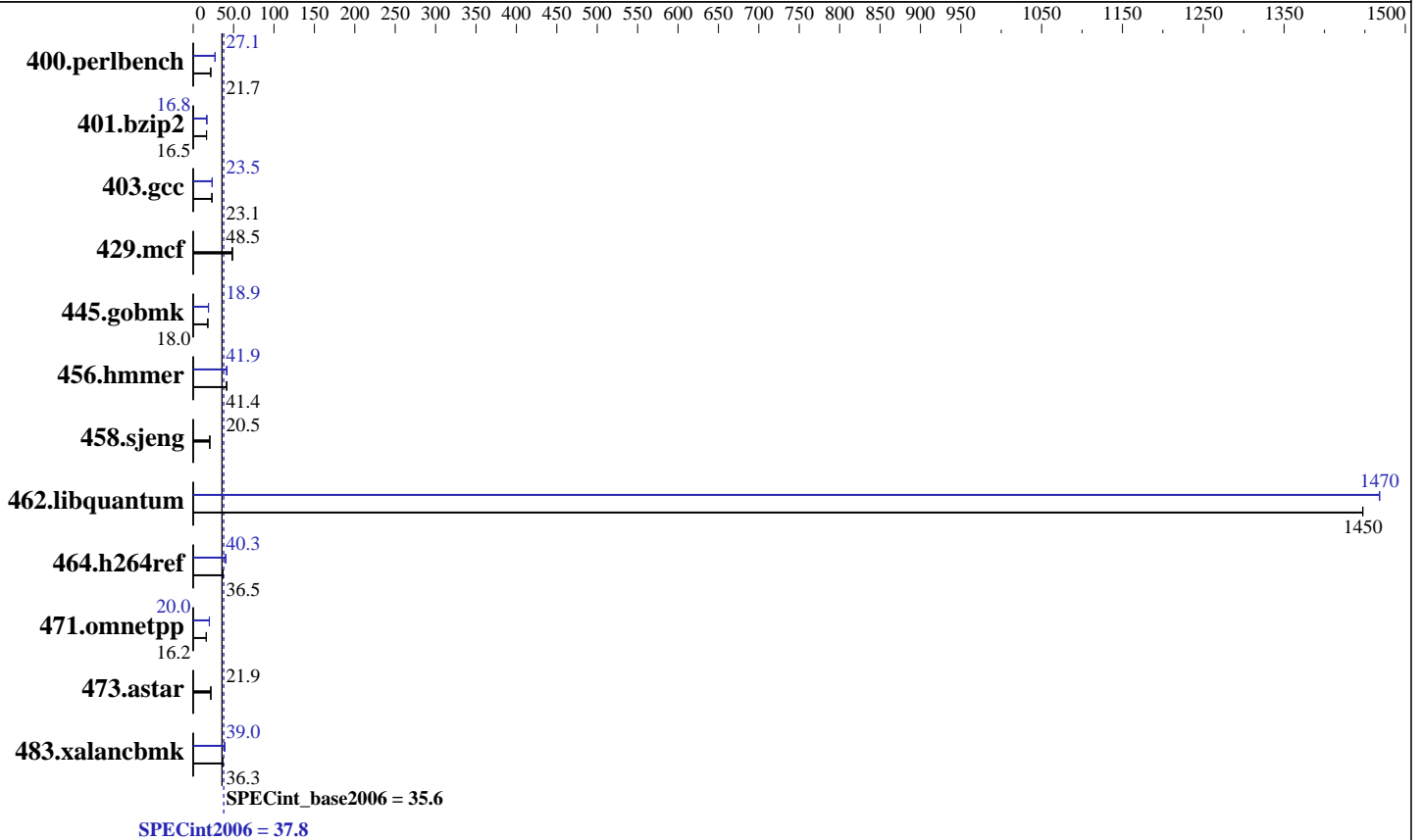
$SPECint_base2006 = $ 35.6

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

Test date: May-2014
Hardware Availability: Mar-2014
Software Availability: Nov-2013

Benchmark	Result
400.perlbench	27.1 / 21.7
401.bzip2	16.8 / 16.5
403.gcc	23.5 / 23.1
429.mcf	48.5
445.gobmk	18.9 / 18.0
456.hmmer	41.9 / 41.4
458.sjeng	20.5
462.libquantum	1470 / 1450
464.h264ref	40.3 / 36.5
471.omnetpp	20.0 / 16.2
473.astar	21.9
483.xalancbmk	39.0 / 36.3

SPECint_base2006 = 35.6

SPECint2006 = 37.8

Hardware

CPU Name: Intel Xeon E5-2407 v2
CPU Characteristics:
CPU MHz: 2400
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: 96 GB (12 x 8 GB 2Rx4 PC3-12800R-11,ECC)
Disk Subsystem: 1 x 300 GB SAS, 7200RPM
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 12.1.0.225 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: ext4
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V9.01

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

Huawei RH2285H v2 (Intel Xeon E5-2407 v2)

$SPECint2006 = $ 37.8

$SPECint_base2006 = $ 35.6

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

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	449	21.7	**450**	**21.7**	450	21.7	361	27.1	360	27.1	**361**	**27.1**
401.bzip2	585	16.5	**586**	**16.5**	586	16.5	575	16.8	574	16.8	**574**	**16.8**
403.gcc	345	23.3	348	23.1	**348**	**23.1**	**343**	**23.5**	343	23.5	343	23.5
429.mcf	187	48.7	190	48.0	**188**	**48.5**	187	48.7	190	48.0	**188**	**48.5**
445.gobmk	582	18.0	581	18.0	**581**	**18.0**	555	18.9	**555**	**18.9**	555	18.9
456.hmmer	225	41.5	226	41.3	**225**	**41.4**	223	41.9	227	41.0	**223**	**41.9**
458.sjeng	589	20.5	**589**	**20.5**	589	20.5	589	20.5	**589**	**20.5**	589	20.5
462.libquantum	14.3	1450	**14.3**	**1450**	14.3	1450	14.1	1470	14.1	1470	**14.1**	**1470**
464.h264ref	**606**	**36.5**	605	36.6	606	36.5	551	40.2	**550**	**40.3**	550	40.3
471.omnetpp	**386**	**16.2**	385	16.2	386	16.2	312	20.0	314	19.9	**313**	**20.0**
473.astar	**321**	**21.9**	323	21.7	321	21.9	**321**	**21.9**	323	21.7	321	21.9
483.xalancbmk	190	36.3	189	36.5	**190**	**36.3**	176	39.1	**177**	**39.0**	177	38.9

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

```
Sysinfo program /spec/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost.localdomain Sat May 31 15:48:54 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 E5-2407 v2 @ 2.40GHz
      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.)
      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:       99010156 kB
```

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

Huawei RH2285H v2 (Intel Xeon E5-2407 v2)

SPECint2006 = 37.8

SPECint_base2006 = 35.6

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

Test date: May-2014
Hardware Availability: Mar-2014
Software Availability: Nov-2013

Platform Notes (Continued)

```
    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 localhost.localdomain 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 May 30 11:40

 SPEC is set to: /spec
    Filesystem      Type  Size  Used Avail Use% Mounted on
    /dev/sda2       ext4  540G  113G  400G  23% /

 Additional information from dmidecode:
   Memory:
    8x Samsung M393B1K70CH0-CH9 8 GB 1333 MHz 2 rank
    3x Samsung M393B1K70DH0-CH9 8 GB 1333 MHz 2 rank
    1x Samsung M393B1K70DH0-YH9 8 GB 1333 MHz 2 rank

 (End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,0,1"
LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64"
OMP_NUM_THREADS = "8"

 Binaries compiled on a system with 2 x Xeon X5645 CPU + 16GB memory
 using RHEL 6.1
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

The Huawei RH2285H v2 and Huawei RH2285 v2 models are electronically equivalent.
The results have been measured on a Huawei RH2285H v2 model.
```

Base Compiler Invocation

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

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

Huawei RH2285H v2 (Intel Xeon E5-2407 v2)

SPECint2006 = 37.8

SPECint_base2006 = 35.6

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

Test date: May-2014
Hardware Availability: Mar-2014
Software Availability: Nov-2013

Base Compiler Invocation (Continued)

C++ benchmarks:
```
icpc -m64
```

Base Portability Flags

```
      400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
         401.bzip2: -DSPEC_CPU_LP64
           403.gcc: -DSPEC_CPU_LP64
           429.mcf: -DSPEC_CPU_LP64
        445.gobmk: -DSPEC_CPU_LP64
        456.hmmer: -DSPEC_CPU_LP64
         458.sjeng: -DSPEC_CPU_LP64
     462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
       464.h264ref: -DSPEC_CPU_LP64
       471.omnetpp: -DSPEC_CPU_LP64
         473.astar: -DSPEC_CPU_LP64
      483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
```

Base Optimization Flags

C benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/smartheap -lsmartheap64
```

Base Other Flags

C benchmarks:

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

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc  -m64
```

```
400.perlbench: icc -m32
```

```
445.gobmk: icc -m32
```

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

Huawei RH2285H v2 (Intel Xeon E5-2407 v2)

$SPECint2006 =$ 37.8

$SPECint\_base2006 =$ 35.6

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

Test date: May-2014
Hardware Availability: Mar-2014
Software Availability: Nov-2013

Peak Compiler Invocation (Continued)

464.h264ref: `icc -m32`

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

473.astar: `icpc -m64`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`
403.gcc: `-DSPEC_CPU_LP64`
429.mcf: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`
473.astar: `-DSPEC_CPU_LP64`
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)`
`-opt-prefetch -ansi-alias`

401.bzip2: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
`-O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32`
`-opt-prefetch -ansi-alias`

403.gcc: `-xAVX -ipo -O3 -no-prec-div -inline-calloc`
`-opt-malloc-options=3 -auto-ilp32`

429.mcf: `basepeak = yes`

445.gobmk: `-xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)`
`-ansi-alias`

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

458.sjeng: `basepeak = yes`

462.libquantum: `-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch`
`-auto-p32`

Huawei

Huawei RH2285H v2 (Intel Xeon E5-2407 v2)

SPECint2006 = 37.8

SPECint_base2006 = 35.6

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

Test date: May-2014
Hardware Availability: Mar-2014
Software Availability: Nov-2013

Peak Optimization Flags (Continued)

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)
-opt-ra-region-strategy=block   -ansi-alias
-Wl,-z,muldefs -L/smartheap -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
-Wl,-z,muldefs -L/smartheap -lsmartheap

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-ic12.1-official-linux64.20120425.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-ic12.1-official-linux64.20120425.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.

Tested with SPEC CPU2006 v1.2.
Report generated on Fri Jul 25 00:04:26 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 July 2014.