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

Huawei

Huawei RH1288 V2 (Intel Xeon E5-2658 v2)

$SPECint®2006 =$ 52.3

$SPECint\_base2006 =$ 48.0

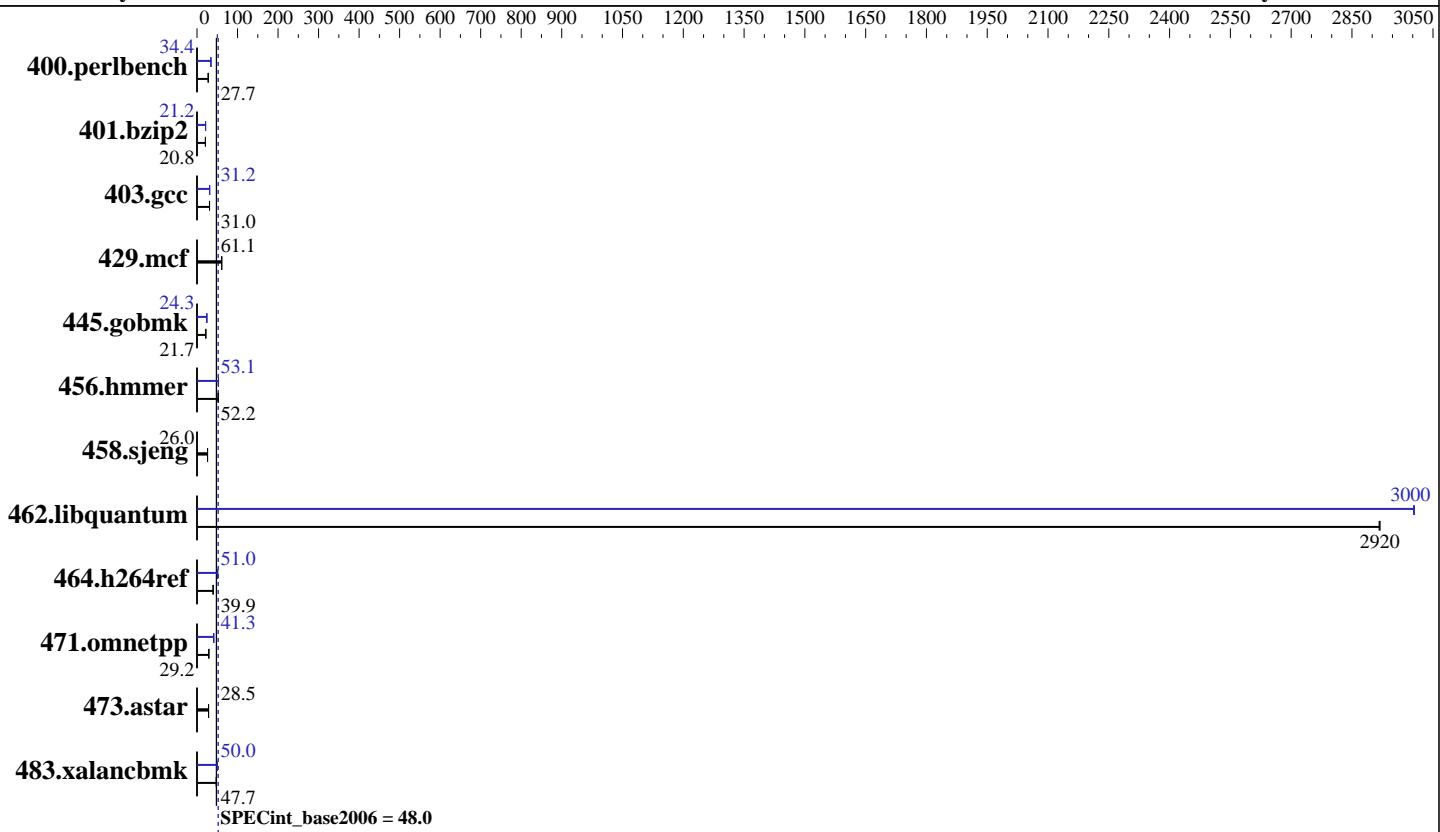|			
CPU2006 license:	3175	**Test date:**	Jul-2014
Test sponsor:	Huawei	**Hardware Availability:**	Sep-2013
Tested by:	Huawei	**Software Availability:**	Nov-2013

Graph results (peak / base):

- **400.perlbench** 34.4 / 27.7
- **401.bzip2** 21.2 / 20.8
- **403.gcc** 31.2 / 31.0
- **429.mcf** 61.1
- **445.gobmk** 24.3 / 21.7
- **456.hmmer** 53.1 / 52.2
- **458.sjeng** 26.0
- **462.libquantum** 3000 / 2920
- **464.h264ref** 51.0 / 39.9
- **471.omnetpp** 41.3 / 29.2
- **473.astar** 28.5
- **483.xalancbmk** 50.0 / 47.7

SPECint_base2006 = 48.0

SPECint2006 = 52.3

Hardware

CPU Name:	Intel Xeon E5-2658 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.00 GHz
CPU MHz:	2400
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 PC3-14900R-13, 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 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 RH1288 V2 (Intel Xeon E5-2658 v2)

SPECint2006 =   52.3

SPECint_base2006 =   48.0

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

Test date: Jul-2014
Hardware Availability: Sep-2013
Software Availability: Nov-2013

Results Table

Benchmark	Base						Peak					
	Seconds	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
400.perlbench	**352**	**27.7**	352	27.7	353	27.7	284	34.4	285	34.3	**284**	**34.4**
401.bzip2	**465**	**20.8**	464	20.8	465	20.7	456	21.2	**456**	**21.2**	455	21.2
403.gcc	**260**	**31.0**	260	30.9	260	31.0	258	31.2	**258**	**31.2**	258	31.2
429.mcf	151	60.5	**149**	**61.1**	149	61.1	151	60.5	**149**	**61.1**	149	61.1
445.gobmk	484	21.7	483	21.7	**483**	**21.7**	**432**	**24.3**	432	24.3	433	24.2
456.hmmer	179	52.2	179	52.1	**179**	**52.2**	176	53.1	177	52.8	**176**	**53.1**
458.sjeng	465	26.0	465	26.0	**465**	**26.0**	465	26.0	465	26.0	**465**	**26.0**
462.libquantum	**7.10**	**2920**	7.10	2920	7.10	2920	**6.90**	**3000**	6.90	3000	6.90	3000
464.h264ref	555	39.9	556	39.8	**555**	**39.9**	**434**	**51.0**	434	51.0	434	51.0
471.omnetpp	213	29.3	**214**	**29.2**	216	29.0	153	40.9	150	41.6	**151**	**41.3**
473.astar	246	28.6	247	28.5	**246**	**28.5**	246	28.6	247	28.5	**246**	**28.5**
483.xalancbmk	145	47.7	144	47.8	**145**	**47.7**	138	50.0	138	50.0	**138**	**50.0**

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 RHEL Mon Jul 14 21:04:57 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 E5-2658 v2 @ 2.40GHz
      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 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:       264478184 kB
```

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

Huawei RH1288 V2 (Intel Xeon E5-2658 v2)

SPECint2006 = 52.3

SPECint_base2006 = 48.0

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

Test date: Jul-2014
Hardware Availability: Sep-2013
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 RHEL 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 Jul 14 21:04

 SPEC is set to: /spec
    Filesystem      Type   Size  Used Avail Use% Mounted on
    /dev/sda2       ext4   265G  136G  116G  54% /

 Additional information from dmidecode:
   Memory:
    2x Hynix HMT42GR7AFR4C-RD 16 GB 1867 MHz 2 rank
    8x Samsung M393B2G70DB0-CMA 16 GB 1867 MHz 2 rank
    6x Samsung M393B2G70QH0-CMA 16 GB 1867 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 = "20"

 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 RH2288 v2 and Huawei RH1288 v2 models are electronically equivalent.
 The results have been measured on a Huawei RH2288 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 RH1288 V2 (Intel Xeon E5-2658 v2)

SPECint2006 = 52.3

SPECint_base2006 = 48.0

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

Test date: Jul-2014
Hardware Availability: Sep-2013
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 RH1288 V2 (Intel Xeon E5-2658 v2)

SPECint2006 = 52.3

SPECint_base2006 = 48.0

CPU2006 license: 3175		**Test date:**	Jul-2014
Test sponsor: Huawei		**Hardware Availability:**	Sep-2013
Tested by: Huawei		**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`

Continued on next page

Huawei

Huawei RH1288 V2 (Intel Xeon E5-2658 v2)

SPECint2006 = 52.3

SPECint_base2006 = 48.0

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

Test date: Jul-2014
Hardware Availability: Sep-2013
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 Tue Sep 2 13:38:40 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 September 2014.