



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## HITACHI

**SPECint®2006 = 46.5**

Compute Blade 520H (Intel Xeon E5-2637)

**SPECint\_base2006 = 44.1**

CPU2006 license: 35

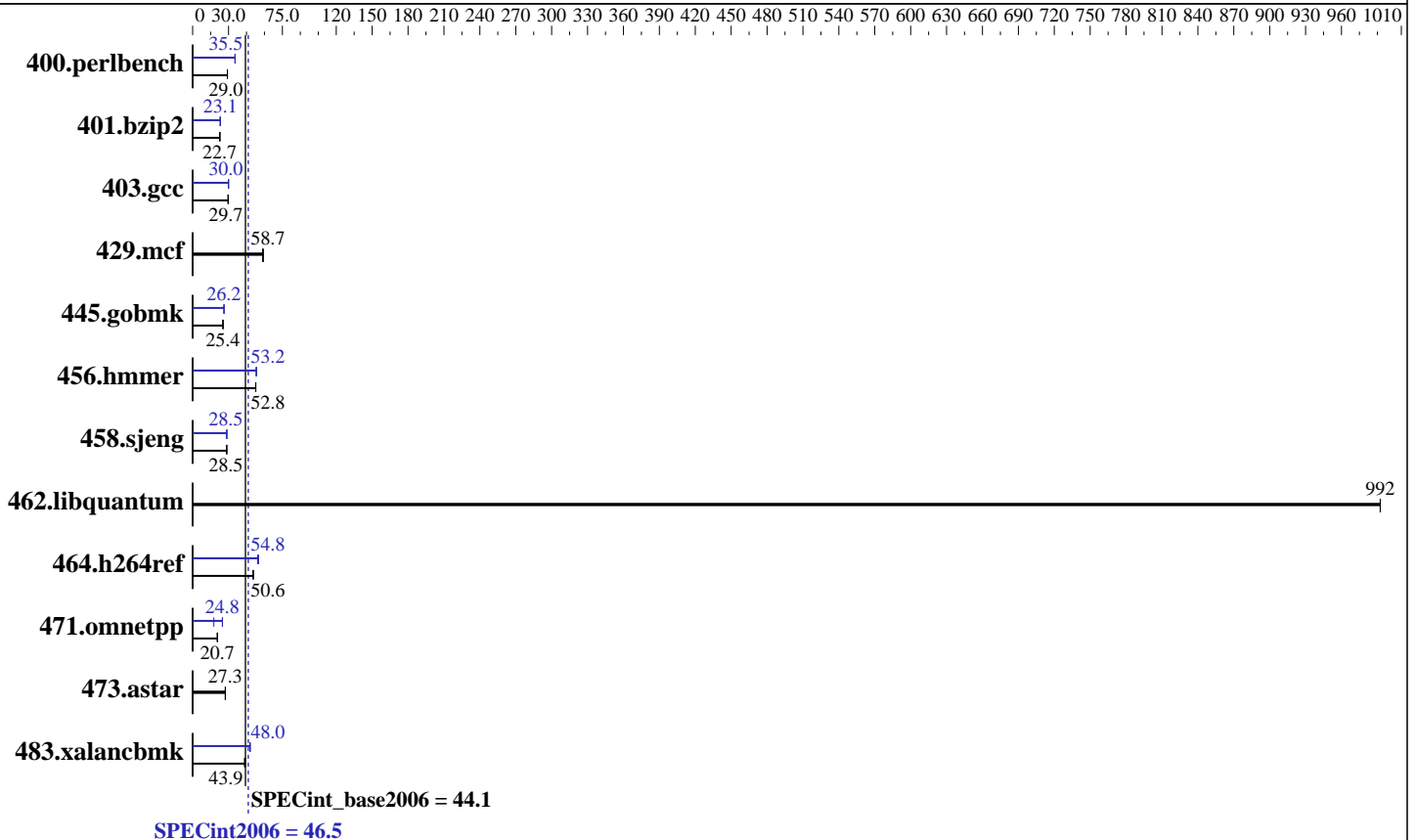
Test sponsor: HITACHI

Tested by: HITACHI

Test date: Oct-2012

Hardware Availability: Nov-2012

Software Availability: Feb-2012



### Hardware

CPU Name: Intel Xeon E5-2637  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip, 2 threads/core  
 CPU(s) orderable: 1, 2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 5 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3L-12800R-11, ECC)  
 Disk Subsystem: 1 x 146 GB SAS, 15000 RPM  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.2, Kernel 2.6.32-220.4.2.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

## HITACHI

SPECint2006 = **46.5**

Compute Blade 520H (Intel Xeon E5-2637)

SPECint\_base2006 = **44.1**

CPU2006 license: 35  
Test sponsor: HITACHI  
Tested by: HITACHI

Test date: Oct-2012  
Hardware Availability: Nov-2012  
Software Availability: Feb-2012

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b>336</b>	<b>29.0</b>	336	29.1	337	29.0	<b>275</b>	<b>35.5</b>	275	35.5	276	35.4
401.bzip2	425	22.7	<b>424</b>	<b>22.7</b>	424	22.7	<b>418</b>	<b>23.1</b>	418	23.1	417	23.1
403.gcc	271	29.7	<b>271</b>	<b>29.7</b>	271	29.7	269	29.9	<b>268</b>	<b>30.0</b>	268	30.0
429.mcf	154	59.1	156	58.6	<b>155</b>	<b>58.7</b>	154	59.1	156	58.6	<b>155</b>	<b>58.7</b>
445.gobmk	412	25.4	<b>414</b>	<b>25.4</b>	414	25.3	<b>400</b>	<b>26.2</b>	400	26.2	400	26.2
456.hammer	177	52.7	177	52.8	<b>177</b>	<b>52.8</b>	175	53.2	<b>175</b>	<b>53.2</b>	175	53.2
458.sjeng	425	28.5	<b>424</b>	<b>28.5</b>	424	28.5	<b>424</b>	<b>28.5</b>	424	28.6	424	28.5
462.libquantum	20.9	992	20.9	992	<b>20.9</b>	<b>992</b>	20.9	992	20.9	992	<b>20.9</b>	<b>992</b>
464.h264ref	<b>438</b>	<b>50.6</b>	437	50.7	438	50.6	402	55.0	<b>403</b>	<b>54.8</b>	407	54.3
471.omnetpp	304	20.6	302	20.7	<b>302</b>	<b>20.7</b>	251	24.9	<b>252</b>	<b>24.8</b>	353	17.7
473.astar	257	27.3	257	27.3	<b>257</b>	<b>27.3</b>	257	27.3	257	27.3	<b>257</b>	<b>27.3</b>
483.xalancbmk	<b>157</b>	<b>43.9</b>	157	43.9	159	43.3	<b>144</b>	<b>48.0</b>	144	48.1	144	48.0

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 /home/cpu2006/config/sysinfo.rev6800  
\$Rev: 6800 \$ \$Date:: 2011-10-11 #\$ 6f2ebdff5032aaa42e583f96b07f99d3  
running on localhost.localdomain Fri Oct 26 17:50:30 2012

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 E5-2637 0 @ 3.00GHz
 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 : 2
siblings : 4
physical 0: cores 0 1
physical 1: cores 0 1
cache size : 5120 KB
```

```
From /proc/meminfo
MemTotal: 132136072 kB
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## HITACHI

**SPECint2006 = 46.5**

### Compute Blade 520H (Intel Xeon E5-2637)

**SPECint\_base2006 = 44.1**

**CPU2006 license:** 35

**Test sponsor:** HITACHI

**Tested by:** HITACHI

**Test date:** Oct-2012

**Hardware Availability:** Nov-2012

**Software Availability:** Feb-2012

## Platform Notes (Continued)

HugePages\_Total: 0  
Hugepagesize: 2048 kB

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.2 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux localhost.localdomain 2.6.32-220.4.2.el6.x86_64 #1 SMP Mon Feb 6
16:39:28 EST 2012 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Oct 26 17:48
```

(End of data from sysinfo program)

## General Notes

Environment variables set by runspec before the start of the run:  
KMP\_AFFINITY = "granularity=fine,scatter"  
LD\_LIBRARY\_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64"  
OMP\_NUM\_THREADS = "4"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB  
memory using RHEL5.5  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled

HITACHI BladeSymphony BS520H and HITACHI Compute Blade 520H are electronically equivalent.  
The results have been measured on a HITACHI BladeSymphony BS520H.

## Base Compiler Invocation

C benchmarks:  
icc -m64

C++ benchmarks:  
icpc -m64

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**HITACHI**

**SPECint2006 = 46.5**

**Compute Blade 520H (Intel Xeon E5-2637)**

**SPECint\_base2006 = 44.1**

**CPU2006 license:** 35

**Test sponsor:** HITACHI

**Tested by:** HITACHI

**Test date:** Oct-2012

**Hardware Availability:** Nov-2012

**Software Availability:** Feb-2012

## Base Portability Flags (Continued)

```

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:

```
-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
```

C++ benchmarks:

```
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs
-L/smarterheap -lsmarterheap64
```

## 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
```

```
464.h264ref: icc -m32
```

C++ benchmarks (except as noted below):

```
icpc -m32
```

```
473.astar: icpc -m64
```



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**HITACHI**

**SPECint2006 = 46.5**

**Compute Blade 520H (Intel Xeon E5-2637)**

**SPECint\_base2006 = 44.1**

**CPU2006 license:** 35

**Test sponsor:** HITACHI

**Tested by:** HITACHI

**Test date:** Oct-2012

**Hardware Availability:** Nov-2012

**Software Availability:** Feb-2012

## 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: -xAVX(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: -xAVX(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: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
          -ansi-alias

456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
          -ansi-alias

458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
          -no-prec-div(pass 2) -prof-use(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: -xAVX(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: -xAVX(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

```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## HITACHI

SPECint2006 = 46.5

Compute Blade 520H (Intel Xeon E5-2637)

SPECint\_base2006 = 44.1

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Oct-2012

Hardware Availability: Nov-2012

Software Availability: Feb-2012

## Peak Optimization Flags (Continued)

473.astar: basepeak = yes

483.xalancbmk: -xAVX -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-linux64.20120829.html>

<http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120829.xml>

<http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.

Report generated on Thu Jul 24 14:03:37 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 20 November 2012.