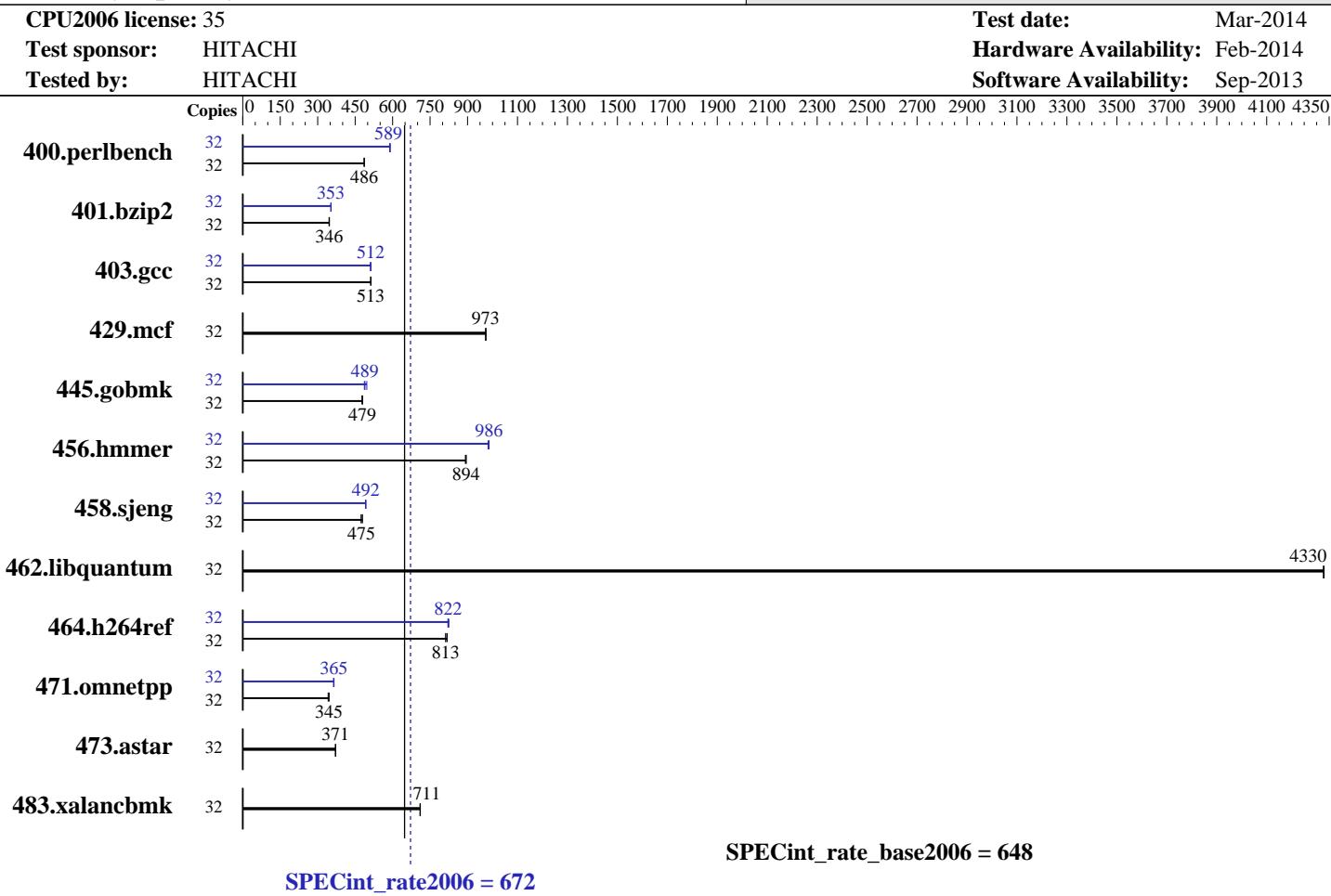# SPEC® CINT2006 Result
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HITACHI

BladeSymphony BS520H (Intel Xeon E5-2650 v2)

SPECint®_rate2006 =   672

SPECint_rate_base2006 =   648

CPU2006 license: 35	**Test date:** Mar-2014
Test sponsor: HITACHI	**Hardware Availability:** Feb-2014
Tested by: HITACHI	**Software Availability:** Sep-2013

Copies — benchmark results:

- 400.perlbench: 32 — 589; 32 — 486
- 401.bzip2: 32 — 353; 32 — 346
- 403.gcc: 32 — 512; 32 — 513
- 429.mcf: 32 — 973
- 445.gobmk: 32 — 489; 32 — 479
- 456.hmmer: 32 — 986; 32 — 894
- 458.sjeng: 32 — 492; 32 — 475
- 462.libquantum: 32 — 4330
- 464.h264ref: 32 — 822; 32 — 813
- 471.omnetpp: 32 — 365; 32 — 345
- 473.astar: 32 — 371
- 483.xalancbmk: 32 — 711

SPECint_rate_base2006 = 648

SPECint_rate2006 = 672

Hardware

CPU Name:	Intel Xeon E5-2650 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.40 GHz
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 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:	20 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (8 x 16 GB 2Rx4 PC3-14900R-13, ECC)
Disk Subsystem:	1 x 146 GB SAS, 15000 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.4 (Santiago) 2.6.32-358.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	32	643	487	**643**	**486**	643	486	32	532	588	530	590	**530**	**589**
401.bzip2	32	**892**	**346**	890	347	894	346	32	873	354	**874**	**353**	875	353
403.gcc	32	503	512	**503**	**513**	502	513	32	**503**	**512**	502	513	504	511
429.mcf	32	**300**	**973**	300	973	300	974	32	**300**	**973**	300	973	300	974
445.gobmk	32	**700**	**479**	703	477	700	480	32	676	497	**686**	**489**	690	487
456.hmmer	32	334	895	335	891	**334**	**894**	32	304	982	303	986	**303**	**986**
458.sjeng	32	807	480	817	474	**816**	**475**	32	787	492	786	493	**786**	**492**
462.libquantum	32	**153**	**4330**	153	4330	153	4330	32	**153**	**4330**	153	4330	153	4330
464.h264ref	32	865	819	**871**	**813**	872	812	32	**862**	**822**	862	822	858	825
471.omnetpp	32	**580**	**345**	580	345	585	342	32	550	363	547	365	**548**	**365**
473.astar	32	**605**	**371**	605	371	604	372	32	**605**	**371**	605	371	604	372
483.xalancbmk	32	**311**	**711**	311	710	310	711	32	**311**	**711**	311	710	310	711

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

    Sysinfo program /home/cpu2006/config/sysinfo.rev6818
    $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
    running on localhost.localdomain Thu Mar 13 02:18:44 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 E5-2650 v2 @ 2.60GHz
          2 "physical id"s (chips)
          32 "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 : 8
          siblings : 16

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Platform Notes (Continued)

```
      physical 0: cores 0 1 2 3 4 5 6 7
      physical 1: cores 0 1 2 3 4 5 6 7
    cache size : 20480 KB

  From /proc/meminfo
    MemTotal:       132335224 kB
    HugePages_Total:        0
    Hugepagesize:        2048 kB

  /usr/bin/lsb_release -d
    Red Hat Enterprise Linux Server release 6.4 (Santiago)

  From /etc/*release* /etc/*version*
    redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
    system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
    system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

  uname -a:
    Linux localhost.localdomain 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41
    EST 2013 x86_64 x86_64 x86_64 GNU/Linux

  run-level 3 Mar 13 02:02

  SPEC is set to: /home/cpu2006
    Filesystem     Type    Size  Used Avail Use% Mounted on
    /dev/mapper/VolGroup-lv_root
                   ext4    133G   16G  110G  13% /

  Additional information from dmidecode:
    BIOS HITACHI EP1043 02/04/2014
    Memory:
    16x Not Specified Not Specified
    8x 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:
 LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/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>
  BladeSymphony BS520H and Hitachi Compute Blade 520H are electronically equivalent.
  The results have been measured on a BladeSymphony BS520H
```

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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

HITACHI

BladeSymphony BS520H (Intel Xeon E5-2650 v2)

SPECint_rate2006 =　　672

SPECint_rate_base2006 =　648

CPU2006 license: 35　　　　　　　　　　　　　　　　　　　　　**Test date:**　　　　Mar-2014
Test sponsor:　HITACHI　　　　　　　　　　　　　　　　**Hardware Availability:**　Feb-2014
Tested by:　　HITACHI　　　　　　　　　　　　　　　　**Software Availability:**　Sep-2013

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: -xSSE4.2 -ipo -O3 -no-prec-div

         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
```

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Software Availability: Sep-2013

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-revC.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-ic14.0-official-linux64-revC.xml
http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.xml

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For other inquiries, please contact webmaster@spec.org.

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