**HITACHI**

BladeSymphony BS520X (Intel Xeon E7-8890 v3)

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**CPU2006 license:** 35  
**Test sponsor:** HITACHI  
**Tested by:** HITACHI  
**Test date:** May-2015  
**Hardware Availability:** Jun-2015  
**Software Availability:** Oct-2014

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**Hardware**

- **CPU Name:** Intel Xeon E7-8890 v3  
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.30 GHz  
- **CPU MHz:** 2500  
- **FPU:** Integrated  
- **CPU(s) enabled:** 72 cores, 4 chips, 18 cores/chip, 2 threads/core  
- **CPU(s) orderable:** 2.4 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:** 45 MB I+D on chip per chip  
- **Other Cache:** None  
- **Memory:** 1 TB (64 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)  
- **Disk Subsystem:** 2 x 300 GB SAS, 15000 RPM, RAID1  
- **Other Hardware:** None

**Software**

- **Operating System:** Red Hat Enterprise Linux Server release 6.6 (Santiago)  
- **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 5  
- **Base Pointers:** 32-bit  
- **Peak Pointers:** 32/64-bit  
- **Other Software:** Microquill SmartHeap V10.0
## SPEC CINT2006 Result

**HITACHI**

BladeSymphony BS520X (Intel Xeon E7-8890 v3)

**SPECint_rate2006 = Not Run**

**SPECint_rate_base2006 = 2740**

CPU2006 license: 35  
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### Results Table

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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:
- C-State = Disable
- C1 Enhanced Mode = Disable
- Active Energy Manager = Capping Disabled
- Platform Controlled Type = Maximum Performance
- Memory Power Management = Disable
- Patrol Scrub = Disable

Sysinfo program /home/cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 $$ e86d102572650a6e4d596a3cee98f191
running on localhost Wed May 13 17:11:30 2015

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

Continued on next page
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CPU2006 license: 35
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Platform Notes (Continued)

model name : Intel(R) Xeon(R) CPU E7-8890 v3 @ 2.50GHz
4 "physical id"s (chips)
144 "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 : 18
siblings : 36
physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 2: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 3: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27

cache size : 46080 KB

From /proc/meminfo
MemTotal: 1058391176 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.6 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.6 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.6 (Santiago)

uname -a:
Linux localhost 2.6.32-504.el6.x86_64 #1 SMP Tue Sep 16 01:56:35 EDT 2014
x86_64 x86_64 x86_64 GNU/Linux

run-level 5 May 13 16:10

SPEC is set to: /home/cpu2006
filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/vg_rhel6-lv_home ext4 221G 4.9G 205G 3% /home

Additional information from dmidecode:
BIOS HITACHI 09-07 04/28/2015
Memory:
32x NO DIMM Unknown
64x Samsung M393A2G40DB0-CPB 16 GB 1600 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"

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#### General Notes (Continued)

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  
runcmd command invoked through numactl i.e.:  
numactl --interleave=all runspec <etc>

Bladesymphony BS520X, Bladesymphony BS2500 and Hitachi Compute Blade 520X are electronically equivalent. The results have been measured on a Hitachi Compute Blade 520X.

#### 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:**  
  -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
  -opt-mem-layout-trans=3

- **C++ benchmarks:**  
  -xCORE-AVX2 -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
# SPEC CINT2006 Result

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The flags files that were used to format this result can be browsed at:

- [http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.20150602.html](http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.20150602.html)

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

- [http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.20150602.xml](http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.20150602.xml)

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For questions about this result, please contact the tester.

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

Tested with SPEC CPU2006 v1.2.


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