# SPEC® CINT2006 Result



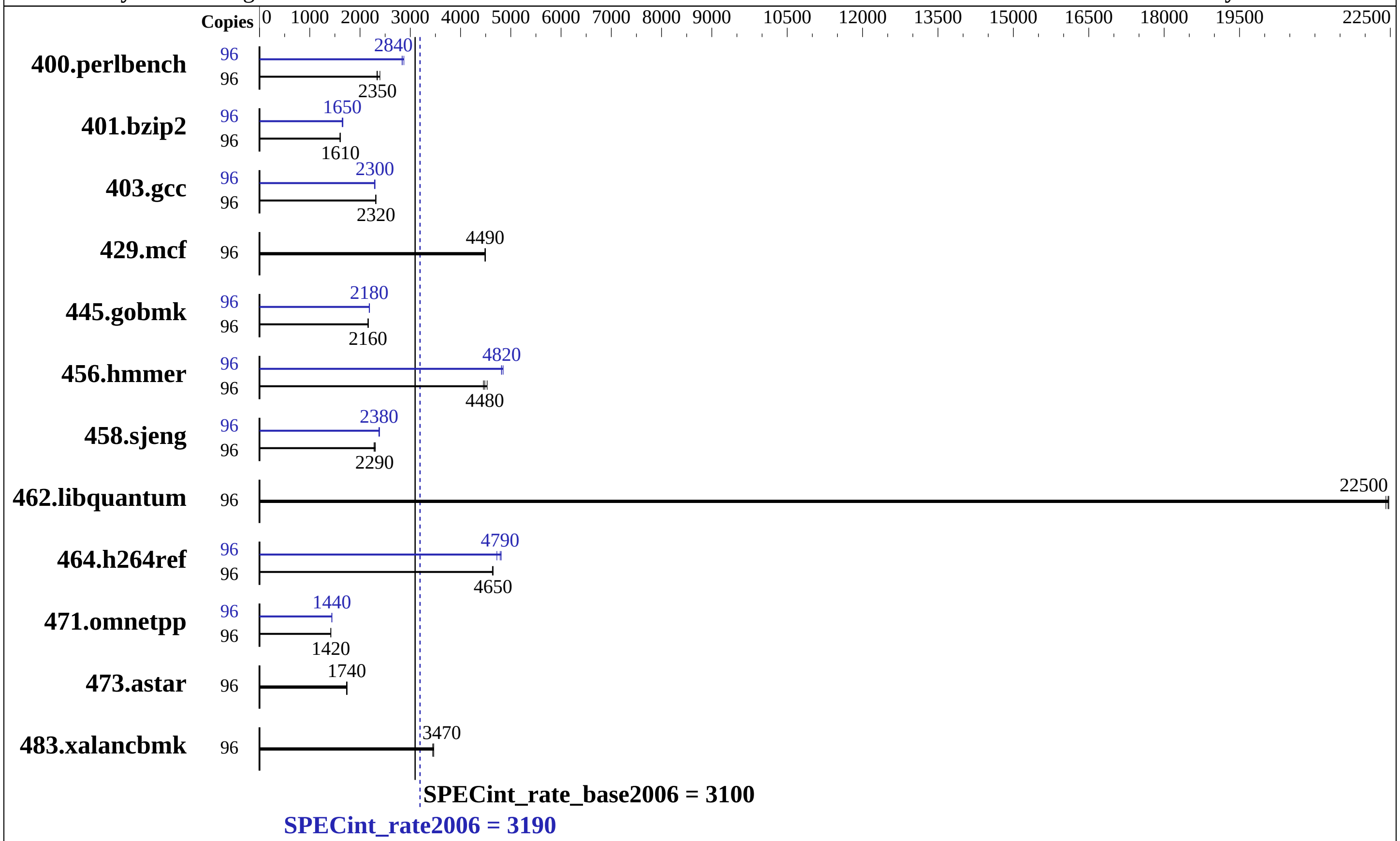
## Sugon

**I980-G10 (Intel Xeon E7-8857 v2, 3.0 GHz)**

SPECint®_rate2006 = 3190

SPECint_rate_base2006 = 3100

| | | | |
|---|---|---|---|
| **CPU2006 license:** | 9046 | **Test date:** | Feb-2014 |
| **Test sponsor:** | Sugon | **Hardware Availability:** | Feb-2014 |
| **Tested by:** | Sugon | **Software Availability:** | Jan-2014 |




## Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E7-8857 v2 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.60 GHz |
| CPU MHz: | 3000 |
| FPU: | Integrated |
| CPU(s) enabled: | 96 cores, 8 chips, 12 cores/chip |
| CPU(s) orderable: | 2,4,6,8 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: | 30 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 1 TB (128 x 8 GB 2Rx4 PC3-1600R-13, ECC) |
| Disk Subsystem: | 3 x 480 GB SAS 10K RPM, RAID 0 |
| Other Hardware: | None |

## Software

| | |
|---|---|
| Operating System: | SUSE Linux Enterprise Server 11 SP3 (x86_64) 3.0.76-0.11-default |
| Compiler: | C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux |
| Auto Parallel: | No |
| File System: | ext3 |
| System State: | Run level 3 (Full multiuser with network) |
| Base Pointers: | 32-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | Microquill SmartHeap V10.0 |

## Sugon

I980-G10 (Intel Xeon E7-8857 v2, 3.0 GHz)

SPECint_rate2006 = 3190

SPECint_rate_base2006 = 3100

**CPU2006 license:** 9046
**Test sponsor:** Sugon
**Tested by:** Sugon

**Test date:** Feb-2014
**Hardware Availability:** Feb-2014
**Software Availability:** Jan-2014

## Results Table

| | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Benchmark** | **Copies** | **Seconds** | **Ratio** | **Seconds** | **Ratio** | **Seconds** | **Ratio** | **Copies** | **Seconds** | **Ratio** | **Seconds** | **Ratio** | **Seconds** | **Ratio** |
| 400.perlbench | 96 | 391 | 2400 | 401 | 2340 | **400** | **2350** | 96 | 331 | 2840 | 326 | 2870 | **330** | **2840** |
| 401.bzip2 | 96 | **575** | **1610** | 580 | 1600 | 574 | 1610 | 96 | 563 | 1650 | 558 | 1660 | **562** | **1650** |
| 403.gcc | 96 | **333** | **2320** | 335 | 2310 | 333 | 2320 | 96 | 338 | 2290 | 336 | 2300 | **336** | **2300** |
| 429.mcf | 96 | 195 | 4500 | **195** | **4490** | 195 | 4490 | 96 | 195 | 4500 | **195** | **4490** | 195 | 4490 |
| 445.gobmk | 96 | 464 | 2170 | **467** | **2160** | 467 | 2160 | 96 | 461 | 2180 | 460 | 2190 | **461** | **2180** |
| 456.hmmer | 96 | 198 | 4530 | 201 | 4460 | **200** | **4480** | 96 | **186** | **4820** | 185 | 4850 | 186 | 4810 |
| 458.sjeng | 96 | 504 | 2310 | 510 | 2280 | **507** | **2290** | 96 | **488** | **2380** | 486 | 2390 | 489 | 2370 |
| 462.libquantum | 96 | 88.8 | 22400 | 88.5 | 22500 | **88.6** | **22500** | 96 | 88.8 | 22400 | 88.5 | 22500 | **88.6** | **22500** |
| 464.h264ref | 96 | **457** | **4650** | 458 | 4630 | 457 | 4650 | 96 | **444** | **4790** | 442 | 4810 | 450 | 4720 |
| 471.omnetpp | 96 | 422 | 1420 | 423 | 1420 | **423** | **1420** | 96 | **417** | **1440** | 416 | 1440 | 417 | 1440 |
| 473.astar | 96 | 390 | 1730 | 386 | 1740 | **388** | **1740** | 96 | 390 | 1730 | 386 | 1740 | **388** | **1740** |
| 483.xalancbmk | 96 | 191 | 3470 | **191** | **3470** | 192 | 3440 | 96 | 191 | 3470 | **191** | **3470** | 192 | 3440 |

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.rev6874
$Rev: 6874 $ $Date:: 2013-11-20 #$ 654bd3fcf53b06faef0efe54ed011998
running on I980-G10 Sun Jun 30 17:09:46 2013
The system date is incorrect,the actual date is: Feb 13 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 E7-8857 v2 @ 3.00GHz
      8 "physical id"s (chips)
      96 "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 : 12
      siblings  : 12
```

Continued on next page

## Platform Notes (Continued)

```
        physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
        physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
        physical 2: cores 0 1 2 3 4 5 8 9 10 11 12 13
        physical 3: cores 0 1 2 3 4 5 8 9 10 11 12 13
        physical 4: cores 0 1 2 3 4 5 8 9 10 11 12 13
        physical 5: cores 0 1 2 3 4 5 8 9 10 11 12 13
        physical 6: cores 0 1 2 3 4 5 8 9 10 11 12 13
        physical 7: cores 0 1 2 3 4 5 8 9 10 11 12 13
     cache size : 30720 KB

  From /proc/meminfo
     MemTotal:       1058725480 kB
     HugePages_Total:       0
     Hugepagesize:       2048 kB

  From /etc/*release* /etc/*version*
     SuSE-release:
        SUSE Linux Enterprise Server 11 (x86_64)
        VERSION = 11
        PATCHLEVEL = 3

  uname -a:
     Linux I980-G10 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013
     (ccab990) x86_64 x86_64 x86_64 GNU/Linux

  run-level 3 Jun 30 17:07 last=S

  SPEC is set to: /home/cpu2006
     Filesystem     Type  Size  Used Avail Use% Mounted on
     /dev/sda3      ext3  788G  9.3G  739G   2% /
  Additional information from dmidecode:

     Warning: Use caution when you interpret this section. The 'dmidecode' program
     reads system data which is "intended to allow hardware to be accurately
     determined", but the intent may not be met, as there are frequent changes to
     hardware, firmware, and the "DMTF SMBIOS" standard.

    BIOS American Megatrends Inc. 5.6.5 01/07/2014
    Memory:
     128x Hynix HMT41GR7AFR4A-PB 8 GB 1600 MHz, configured at 1333 MHz
     64x NO DIMM NO DIMM

  (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
```

Continued on next page

## General Notes (Continued)

```
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>
```

## 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`

Continued on next page

## Peak Compiler Invocation (Continued)

400.perlbench: `icc -m64`

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:
`icpc -m32`

## 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`

Continued on next page

## Peak Optimization Flags (Continued)

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`

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-linux64.20140128.html
http://www.spec.org/cpu2006/flags/Sugon-Platform-Settings-V1.2-IVB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/Sugon-Platform-Settings-V1.2-IVB.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 Thu Jul 24 23:30:30 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 22 April 2014.