**SPEC® CINT2006 Result**

**Sugon**

**Sugon I620-G20 (Intel Xeon E5-2685 v3)**

**SPECint®_rate2006** = 903

**SPECint_rate_base2006** = 873

**CPU2006 license:** 9046

**Test date:** Nov-2014

**Test sponsor:** Sugon

**Hardware Availability:** Sep-2014

**Tested by:** Sugon

**Software Availability:** Nov-2013

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**Software**

- **Operating System:** Red Hat Enterprise Linux Server release 6.5 (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 3 (multi-user)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V10.0

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**Hardware**

- **CPU Name:** Intel Xeon E5-2685 v3
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.30 GHz
- **CPU MHz:** 2600
- **FPU:** Integrated
- **CPU(s) enabled:** 24 cores, 2 chips, 12 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:** 30 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
- **Disk Subsystem:** 1 x 2.0 TB SATA 7200 RPM
- **Other Hardware:** None
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### Results Table

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<td>1030</td>
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<td>1030</td>
</tr>
</tbody>
</table>

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:  
- Enforce POR set to disabled  
- DDR Speed set to 2133  
- Early Snoop set to disabled  
- COD set to enable  
- Power Technology set to performance

Sysinfo program /home/cpu2006/config/sysinfo.rev6874
$Rev: 6874 $ $Date:: 2013-11-20 #$ 654bd3fcf53b06faef0efe54ed011998
running on localhost Mon Nov 17 14:10:46 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 E5-2685 v3 @ 2.60GHz  
- 2 "physical id"s (chips)
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Platform Notes (Continued)

24 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
cautions.)
cpu cores : 12
siblings : 12
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
cache size : 15360 KB

From /proc/meminfo
MemTotal: 264479860 kb
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)

uname -a:
Linux localhost 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 Nov 17 13:53
SPEC is set to: /home/cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3  ext4 1.8T 81G 1.7T 5% /

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. 068 08/15/2014
Memory:
16x Hynix Semiconductor HMA42GR7MFR4N-TFTD 16 GB 2 rank 2133 MHz
8x 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"

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

Submitted by: Tian Yuwan <tianyw@sugon.com>
Submitted: Mon Nov 24 19:24:05 EST 2014
Submission: cpu2006-20141117-33042.sub

Submitted by: Tian Yuwan <tianyw@sugon.com>
Submitted: Wed Nov 26 05:11:52 EST 2014
Submission: cpu2006-20141117-33042.sub

Submitted by: Tian Yuwan <tianyw@sugon.com>
Submitted: Thu Nov 27 00:57:34 EST 2014
Submission: cpu2006-20141117-33042.sub

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  -ismartheap
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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
  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
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:
400.perlbench: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
  -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
  -auto-1lp32
401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
  -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
  -opt-prefetch -auto-1lp32 -ansi-alias
403.gcc: basepeak = yes
429.mcf: basepeak = yes
445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
  -ansi-alias -opt-mem-layout-trans=3
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Peak Optimization Flags (Continued)

456.hmmer: basepeak = yes
458.sjeng: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2(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

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Sugon-Platform-Settings-V1.2-HSW-revA.20141203.xml
Sugon
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SPECint\_rate2006 = \textcolor{red}{903}
SPECint\_rate\_base2006 = \textcolor{red}{873}

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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