



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Sugon

SPECint®\_rate2006 = 744

I620-G10 (Intel Xeon E5-2660 v2, 2.20 GHz)

SPECint\_rate\_base2006 = 718

CPU2006 license: 9046

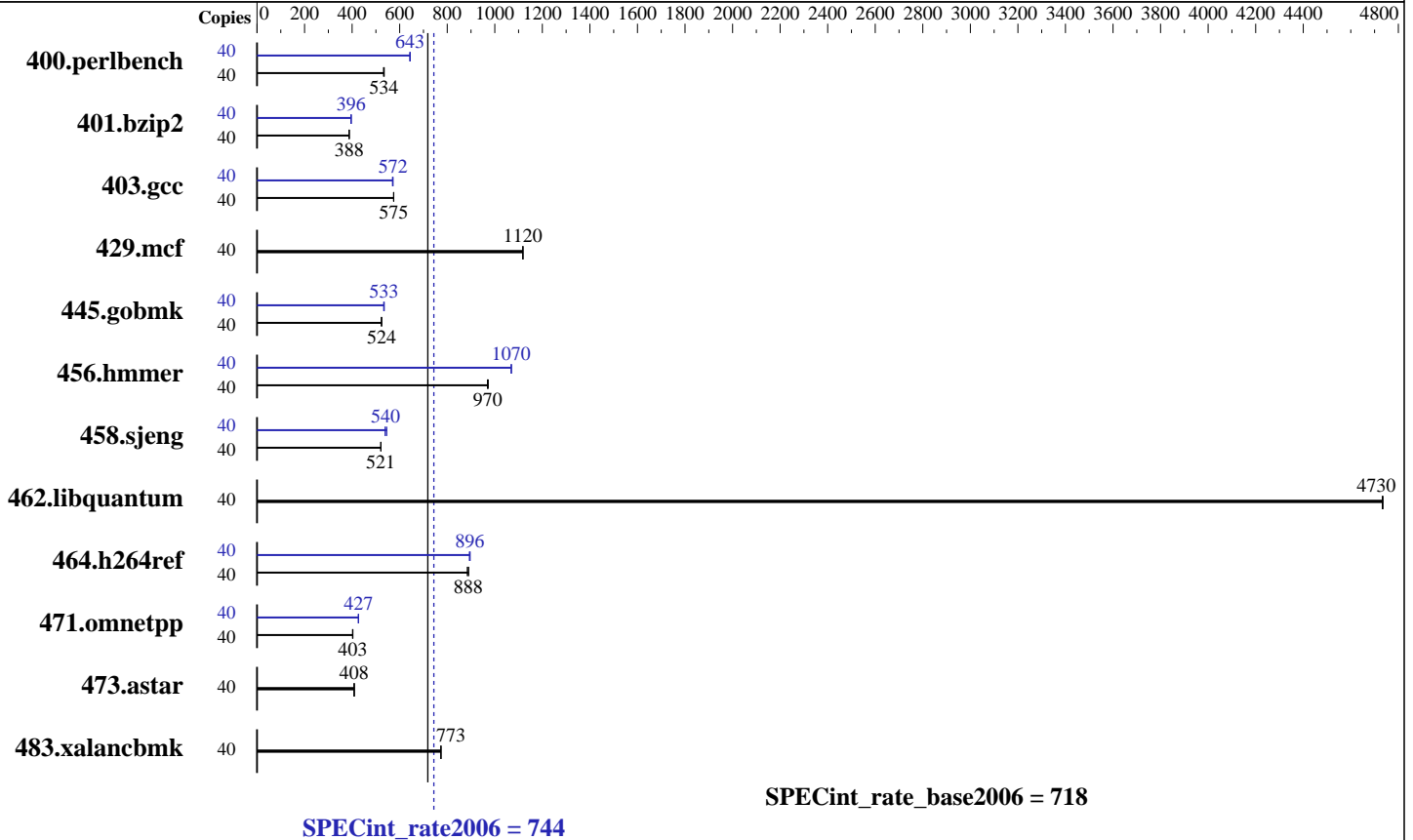
Test sponsor: Sugon

Tested by: Sugon

Test date: Nov-2013

Hardware Availability: Nov-2013

Software Availability: Nov-2013



### Hardware

CPU Name: Intel Xeon E5-2660 v2  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.00 GHz  
 CPU MHz: 2200  
 FPU: Integrated  
 CPU(s) enabled: 20 cores, 2 chips, 10 cores/chip, 2 threads/core  
 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: 25 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC)  
 Disk Subsystem: 4 x 450 GB SAS 10K RPM, RAID0  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Sugon

SPECint\_rate2006 = 744

I620-G10 (Intel Xeon E5-2660 v2, 2.20 GHz)

SPECint\_rate\_base2006 = 718

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

Test date: Nov-2013  
Hardware Availability: Nov-2013  
Software Availability: Nov-2013

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	40	735	532	731	535	<u>731</u>	<u>534</u>	40	608	643	606	645	<u>607</u>	<u>643</u>
401.bzip2	40	<u>996</u>	<u>388</u>	994	388	996	387	40	973	397	977	395	<u>976</u>	<u>396</u>
403.gcc	40	561	574	560	575	<u>560</u>	<u>575</u>	40	565	570	563	572	<u>563</u>	<u>572</u>
429.mcf	40	326	1120	326	1120	<u>326</u>	<u>1120</u>	40	326	1120	326	1120	<u>326</u>	<u>1120</u>
445.gobmk	40	802	523	<u>801</u>	<u>524</u>	800	524	40	787	533	<u>787</u>	<u>533</u>	784	535
456.hammer	40	385	969	384	972	<u>385</u>	<u>970</u>	40	<u>349</u>	<u>1070</u>	349	1070	349	1070
458.sjeng	40	<u>929</u>	<u>521</u>	929	521	929	521	40	<u>896</u>	<u>540</u>	898	539	887	546
462.libquantum	40	175	4730	<u>175</u>	<u>4730</u>	175	4740	40	175	4730	<u>175</u>	<u>4730</u>	175	4740
464.h264ref	40	<u>997</u>	<u>888</u>	1001	884	994	890	40	<u>988</u>	<u>896</u>	991	893	988	896
471.omnetpp	40	<u>621</u>	<u>403</u>	620	403	623	402	40	<u>586</u>	<u>427</u>	586	427	586	426
473.astar	40	685	410	<u>688</u>	<u>408</u>	689	408	40	685	410	<u>688</u>	<u>408</u>	689	408
483.xalancbmk	40	357	773	<u>357</u>	<u>773</u>	357	774	40	357	773	<u>357</u>	<u>773</u>	357	774

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:

Intel Virtualization technology set to disabled  
Power Technology set to performance  
Turbo boost set to enabled  
DDR Speed set to force 1866  
Sysinfo program /home/spec/config/sysinfo.rev6818  
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191  
running on linux-tn7k Mon Nov 18 21:25:59 2013

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 E5-2660 v2 @ 2.20GHz
2 "physical id"s (chips)
40 "processors"
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Sugon

SPECint\_rate2006 = 744

I620-G10 (Intel Xeon E5-2660 v2, 2.20 GHz)

SPECint\_rate\_base2006 = 718

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

Test date: Nov-2013  
Hardware Availability: Nov-2013  
Software Availability: Nov-2013

### Platform Notes (Continued)

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 : 10
siblings  : 20
physical 0: cores 0 1 2 3 4 8 9 10 11 12
physical 1: cores 0 1 2 3 4 8 9 10 11 12
cache size : 25600 KB
```

```
From /proc/meminfo
MemTotal:      264516912 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 11 (x86_64)
```

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

```
uname -a:
Linux linux-tn7k 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 Nov 18 21:09 last=S
```

```
SPEC is set to: /home/spec
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/md124p1    ext3  784G   77G  668G  11% /home/spec
```

```
Additional information from dmidecode:
BIOS American Megatrends Inc. 3.0a 10/10/2013
Memory:
16x 16 GB
16x Hynix Semiconducto HMT42GR7AFR4C 16 GB 1866 MHz
```

(End of data from sysinfo program)  
There is a error in sysinfo output. There are only 16 DIMMs in this system. The cause of this error is the sysinfo itself. The sysinfo of revsion 6818 can't identify the correct memory information. The memory information should be:

```
Memory:
16x Hynix Semiconducto HMT42GR7AFR4C 16 GB 1866 MHz
```



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sugon

SPECint\_rate2006 = 744

I620-G10 (Intel Xeon E5-2660 v2, 2.20 GHz)

SPECint\_rate\_base2006 = 718

CPU2006 license: 9046

Test sponsor: Sugon

Tested by: Sugon

Test date: Nov-2013

Hardware Availability: Nov-2013

Software Availability: Nov-2013

## General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/home/spec/libs/32:/home/spec/libs/64:/home/spec/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>

## 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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sugon

SPECint\_rate2006 = 744

I620-G10 (Intel Xeon E5-2660 v2, 2.20 GHz)

SPECint\_rate\_base2006 = 718

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

Test date: Nov-2013  
Hardware Availability: Nov-2013  
Software Availability: Nov-2013

## 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

## 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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sugon

SPECint\_rate2006 = 744

I620-G10 (Intel Xeon E5-2660 v2, 2.20 GHz)

SPECint\_rate\_base2006 = 718

CPU2006 license: 9046

Test sponsor: Sugon

Tested by: Sugon

Test date: Nov-2013

Hardware Availability: Nov-2013

Software Availability: Nov-2013

## 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>

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 19:32:10 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 17 December 2013.