



# SPEC® CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

## Acer Incorporated

**SPECint®\_rate2006 = 2020**

### Altos R360 F4 (Intel Xeon Gold 6152)

**SPECint\_rate\_base2006 = 1920**

CPU2006 license: 97

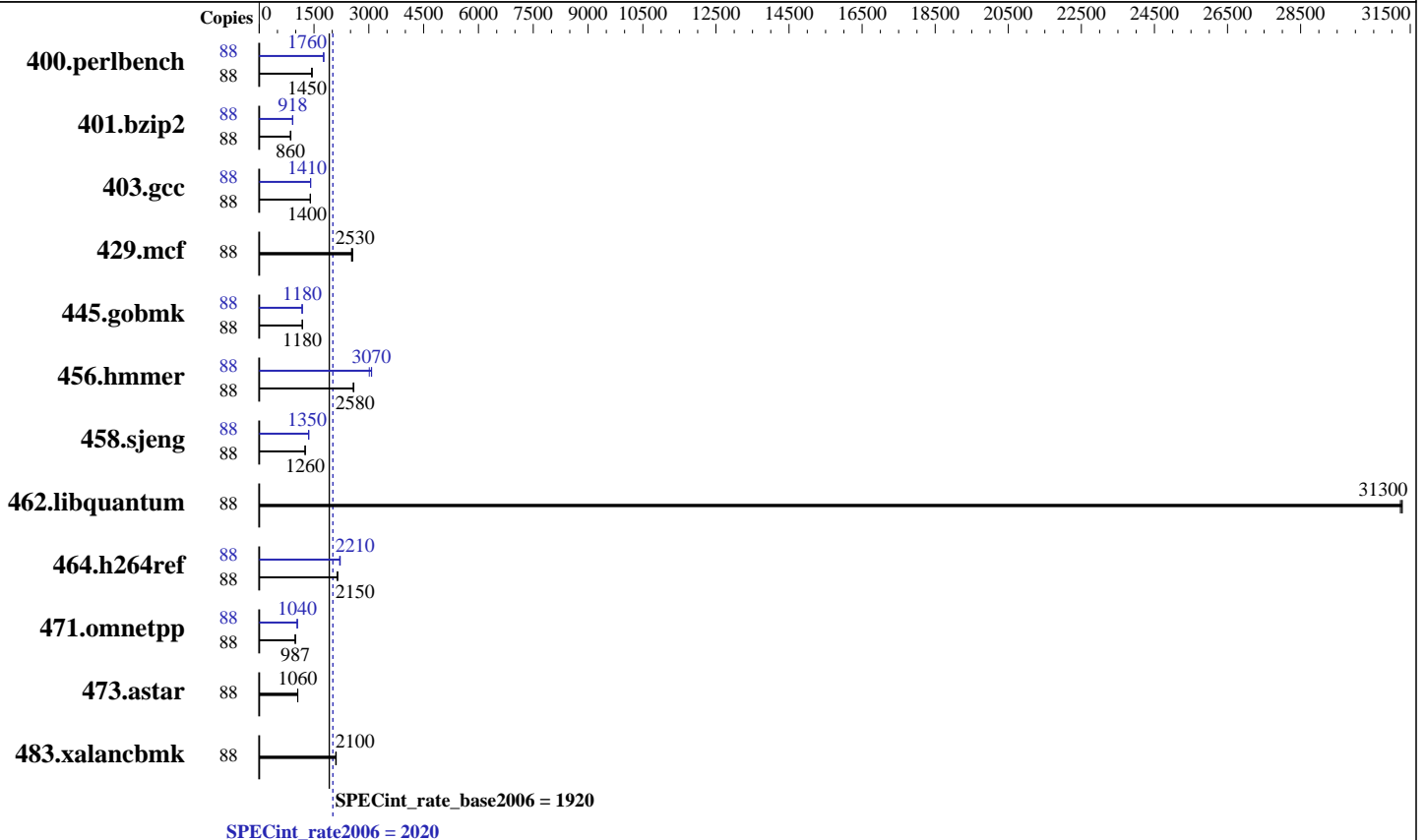
Test date: Jan-2015

Test sponsor: Acer Incorporated

Hardware Availability: Oct-2017

Tested by: Acer Incorporated

Software Availability: Apr-2017



### Hardware

CPU Name: Intel Xeon Gold 6152  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz  
 CPU MHz: 2100  
 FPU: Integrated  
 CPU(s) enabled: 44 cores, 2 chips, 22 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: 1 MB I+D on chip per core  
 L3 Cache: 30.25 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 768 GB (24 x 32 GB 2Rx4 PC4-2666V-R)  
 Disk Subsystem: 1 x 1000 GB SATA, 7200 RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 12 SP2  
 4.4.21-69-default  
 Compiler: C/C++: Version 17.0.3.191 of Intel C/C++  
 Compiler for Linux  
 Auto Parallel: Yes  
 File System: btrfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.2



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint\_rate2006 = 2020

Altos R360 F4 (Intel Xeon Gold 6152)

SPECint\_rate\_base2006 = 1920

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jan-2015

Hardware Availability: Oct-2017

Software Availability: Apr-2017

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	88	599	1440	<u>595</u>	<u>1450</u>	594	1450	88	487	1770	<u>487</u>	<u>1760</u>	488	1760
401.bzip2	88	979	868	<u>988</u>	<u>860</u>	994	854	88	<u>925</u>	<u>918</u>	923	920	933	910
403.gcc	88	507	1400	<u>506</u>	<u>1400</u>	504	1400	88	503	1410	<u>503</u>	<u>1410</u>	504	1410
429.mcf	88	317	2530	<u>317</u>	<u>2530</u>	314	2560	88	317	2530	<u>317</u>	<u>2530</u>	314	2560
445.gobmk	88	<u>782</u>	<u>1180</u>	782	1180	781	1180	88	784	1180	785	1180	<u>784</u>	<u>1180</u>
456.hammer	88	319	2570	<u>318</u>	<u>2580</u>	317	2590	88	267	3080	<u>267</u>	<u>3070</u>	273	3010
458.sjeng	88	<u>846</u>	<u>1260</u>	846	1260	847	1260	88	<u>786</u>	<u>1350</u>	786	1350	787	1350
462.libquantum	88	58.3	31300	58.4	31200	<u>58.3</u>	<u>31300</u>	88	58.3	31300	58.4	31200	<u>58.3</u>	<u>31300</u>
464.h264ref	88	907	2150	<u>908</u>	<u>2150</u>	913	2130	88	878	2220	<u>881</u>	<u>2210</u>	885	2200
471.omnetpp	88	<u>557</u>	<u>987</u>	557	987	555	991	88	528	1040	527	1040	<u>528</u>	<u>1040</u>
473.astar	88	<u>586</u>	<u>1060</u>	585	1060	587	1050	88	<u>586</u>	<u>1060</u>	585	1060	587	1050
483.xalancbmk	88	<u>289</u>	<u>2100</u>	289	2100	288	2110	88	<u>289</u>	<u>2100</u>	289	2100	288	2110

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:

CPU Power and Performance Policy set to Performance

IMC set to 1-way interleaving

Sub\_NUMA Cluster set to enabled

Set Fan Profile set to Performance

Sysinfo program /usr/cpu2006/config/sysinfo.rev6993

Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)

running on linux-4jae Thu Jan 1 08:05:19 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

model name : Intel(R) Xeon(R) Gold 6152 CPU @ 2.10GHz

2 "physical id"s (chips)

88 "processors"

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

<http://www.spec.org/>

Page 2



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint\_rate2006 = 2020

Altos R360 F4 (Intel Xeon Gold 6152)

SPECint\_rate\_base2006 = 1920

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jan-2015

Hardware Availability: Oct-2017

Software Availability: Apr-2017

## 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 : 22

siblings : 44

physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 16 17 18 19 20 21 24 25 26 27 28

physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 16 17 18 19 20 21 24 25 26 27 28

cache size : 30976 KB

From /proc/meminfo

MemTotal: 791025300 kB

HugePages\_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsc\_release -d

SUSE Linux Enterprise Server 12 SP2

From /etc/\*release\* /etc/\*version\*

SuSE-release:

SUSE Linux Enterprise Server 12 (x86\_64)

VERSION = 12

PATCHLEVEL = 2

# This file is deprecated and will be removed in a future service pack or release.

# Please check /etc/os-release for details about this release.

os-release:

NAME="SLES"

VERSION="12-SP2"

VERSION\_ID="12.2"

PRETTY\_NAME="SUSE Linux Enterprise Server 12 SP2"

ID="sles"

ANSI\_COLOR="0;32"

CPE\_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:

Linux linux-4jae 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016 (9464f67) x86\_64 x86\_64 x86\_64 GNU/Linux

run-level 3 Jan 1 08:03

SPEC is set to: /usr/cpu2006

Filesystem Type Size Used Avail Use% Mounted on

/dev/sda3 btrfs 930G 132G 797G 15% /

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.

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint\_rate2006 = 2020

Altos R360 F4 (Intel Xeon Gold 6152)

SPECint\_rate\_base2006 = 1920

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jan-2015

Hardware Availability: Oct-2017

Software Availability: Apr-2017

## Platform Notes (Continued)

BIOS Intel Corporation SE5C620.86B.00.01.0004.071220170215 07/12/2017

Memory:

24x Micron 36ASF4G72PZ-2G6D1 32 GB 2 rank 2666 MHz

(End of data from sysinfo program)

## General Notes

Environment variables set by runspec before the start of the run:

LD\_LIBRARY\_PATH = "/usr/cpu2006/lib/ia32:/usr/cpu2006/lib/intel64:/usr/cpu2006/sh10.2"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM  
memory using Redhat Enterprise Linux 7.2

Transparent Huge Pages enabled by default

Filesystem page cache cleared with:

shell invocation of 'sync; echo 3 > /proc/sys/vm/drop\_caches' prior to run

runspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>

Altos R360 F4 and Altos R380 F4 are electronically equivalent.

This result was measured on Altos R380 F4.

## Base Compiler Invocation

C benchmarks:

icc -m32 -L/opt/intel/compilers\_and\_libraries\_2017/linux/lib/ia32

C++ benchmarks:

icpc -m32 -L/opt/intel/compilers\_and\_libraries\_2017/linux/lib/ia32

## Base Portability Flags

400.perlbench: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -D\_FILE\_OFFSET\_BITS=64  
403.gcc: -D\_FILE\_OFFSET\_BITS=64  
429.mcf: -D\_FILE\_OFFSET\_BITS=64  
445.gobmk: -D\_FILE\_OFFSET\_BITS=64  
456.hmmer: -D\_FILE\_OFFSET\_BITS=64  
458.sjeng: -D\_FILE\_OFFSET\_BITS=64  
462.libquantum: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX  
464.h264ref: -D\_FILE\_OFFSET\_BITS=64  
471.omnetpp: -D\_FILE\_OFFSET\_BITS=64  
473.astar: -D\_FILE\_OFFSET\_BITS=64  
483.xalancbmk: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint\_rate2006 = 2020

Altos R360 F4 (Intel Xeon Gold 6152)

SPECint\_rate\_base2006 = 1920

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jan-2015

Hardware Availability: Oct-2017

Software Availability: Apr-2017

## Base Optimization Flags

C benchmarks:

```
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch  
-qopt-mem-layout-trans=3
```

C++ benchmarks:

```
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch  
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh10.2 -lsmartheap
```

## Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

## Peak Compiler Invocation

C benchmarks (except as noted below):

```
icc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32
```

```
400.perlbench: icc -m64
```

```
401.bzip2: icc -m64
```

```
456.hmmer: icc -m64
```

```
458.sjeng: icc -m64
```

C++ benchmarks:

```
icpc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32
```

## Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
```

```
401.bzip2: -DSPEC_CPU_LP64
```

```
403.gcc: -D_FILE_OFFSET_BITS=64
```

```
429.mcf: -D_FILE_OFFSET_BITS=64
```

```
445.gobmk: -D_FILE_OFFSET_BITS=64
```

```
456.hmmer: -DSPEC_CPU_LP64
```

```
458.sjeng: -DSPEC_CPU_LP64
```

```
462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
```

```
464.h264ref: -D_FILE_OFFSET_BITS=64
```

```
471.omnetpp: -D_FILE_OFFSET_BITS=64
```

```
473.astar: -D_FILE_OFFSET_BITS=64
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint\_rate2006 = 2020

Altos R360 F4 (Intel Xeon Gold 6152)

SPECint\_rate\_base2006 = 1920

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jan-2015

Hardware Availability: Oct-2017

Software Availability: Apr-2017

## Peak Portability Flags (Continued)

483.xalancbmk: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -auto-ilp32 -qopt-mem-layout-trans=3

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -qopt-prefetch -auto-ilp32  
-qopt-mem-layout-trans=3

403.gcc: -xCORE-AVX512 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=3

429.mcf: basepeak = yes

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -qopt-mem-layout-trans=3

456.hmmmer: -xCORE-AVX512 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-qopt-mem-layout-trans=3

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -unroll4 -auto-ilp32  
-qopt-mem-layout-trans=3

462.libquantum: basepeak = yes

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -unroll2 -qopt-mem-layout-trans=3

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2)  
-qopt-ra-region-strategy=block  
-qopt-mem-layout-trans=3 -Wl,-z,muldefs  
-L/sh10.2 -lsmartheap

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint\_rate2006 = 2020

Altos R360 F4 (Intel Xeon Gold 6152)

SPECint\_rate\_base2006 = 1920

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jan-2015

Hardware Availability: Oct-2017

Software Availability: Apr-2017

## Peak Optimization Flags (Continued)

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-ic17.0-official-linux64-revF.html>

<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.3-revC.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.xml>

<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.3-revC.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 Tue Oct 10 11:46:39 2017 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 9 October 2017.