



# SPEC® CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

## Inspur Corporation

SPECint®\_rate2006 = 1360

### Inspur SA5112M4 (Intel Xeon E5-2683 v4)

SPECint\_rate\_base2006 = 1310

CPU2006 license: 3358

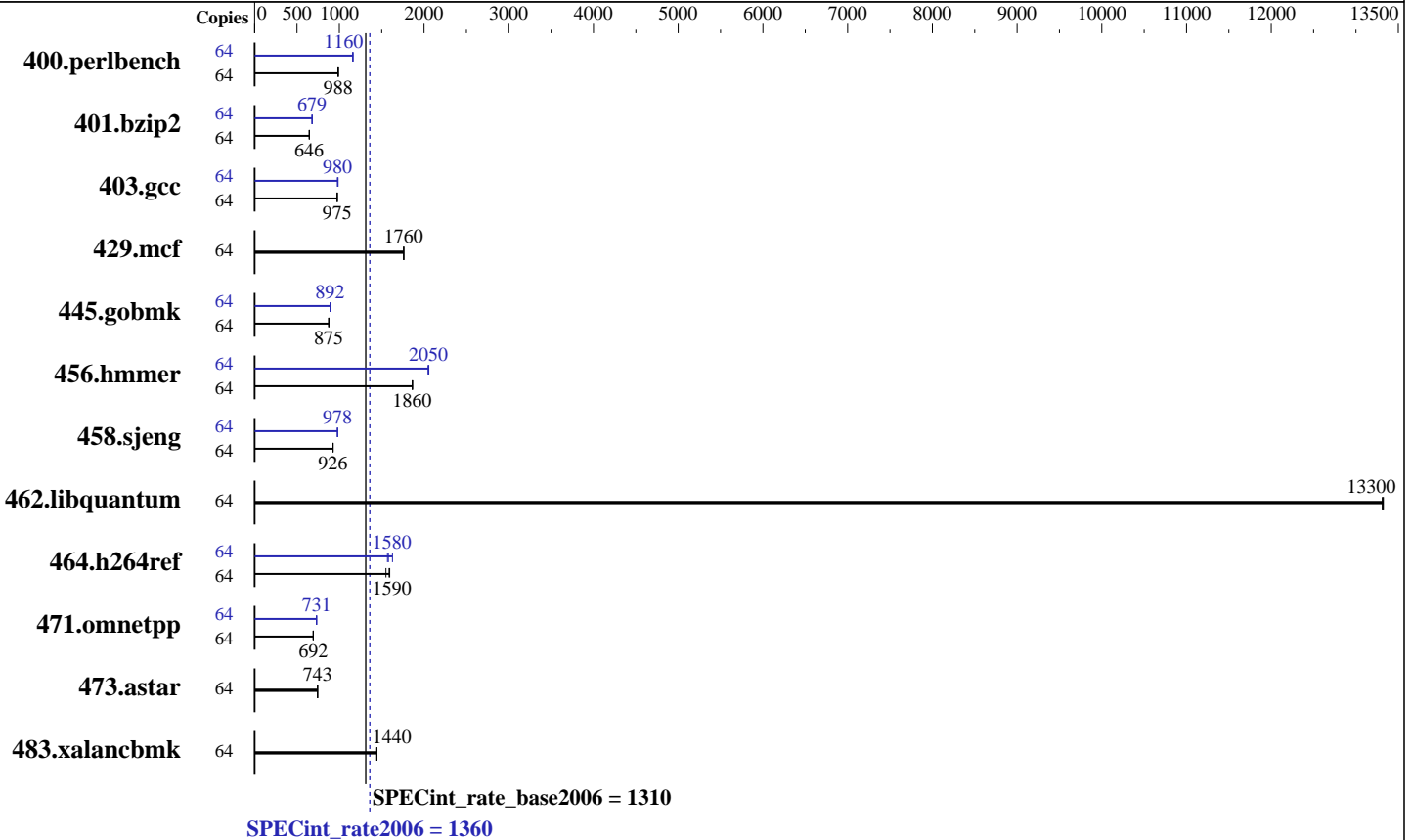
Test date: Feb-2017

Test sponsor: Inspur Corporation

Hardware Availability: Apr-2016

Tested by: Inspur Corporation

Software Availability: Sep-2016



### Hardware

CPU Name: Intel Xeon E5-2683 v4  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.00 GHz  
 CPU MHz: 2100  
 FPU: Integrated  
 CPU(s) enabled: 32 cores, 2 chips, 16 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: 256 KB I+D on chip per core  
 L3 Cache: 40 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R)  
 Disk Subsystem: 1 x 450 GB SATA SSD  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 7.2 (Maipo)  
 3.10.0-327.el7.x86\_64  
 Compiler: C/C++: Version 17.0.0.098 of Intel C/C++ Compiler for Linux  
 Auto Parallel: No  
 File System: xfs  
 System State: Run level 5 (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

## Inspur Corporation

SPECint\_rate2006 = 1360

## Inspur SA5112M4 (Intel Xeon E5-2683 v4)

SPECint\_rate\_base2006 = 1310

CPU2006 license: 3358

Test date: Feb-2017

Test sponsor: Inspur Corporation

Hardware Availability: Apr-2016

Tested by: Inspur Corporation

Software Availability: Sep-2016

### Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	64	632	989	<b><u>633</u></b>	<b><u>988</u></b>	636	983	64	538	1160	540	1160	<b><u>539</u></b>	<b><u>1160</u></b>
401.bzip2	64	956	646	<b><u>957</u></b>	<b><u>646</u></b>	957	645	64	909	679	<b><u>910</u></b>	<b><u>679</u></b>	911	678
403.gcc	64	527	977	<b><u>528</u></b>	<b><u>975</u></b>	529	973	64	527	979	523	985	<b><u>526</u></b>	<b><u>980</u></b>
429.mcf	64	332	1760	<b><u>332</u></b>	<b><u>1760</u></b>	331	1760	64	332	1760	<b><u>332</u></b>	<b><u>1760</u></b>	331	1760
445.gobmk	64	765	877	<b><u>767</u></b>	<b><u>875</u></b>	768	875	64	753	892	753	891	<b><u>753</u></b>	<b><u>892</u></b>
456.hammer	64	321	1860	<b><u>321</u></b>	<b><u>1860</u></b>	320	1870	64	292	2050	290	2060	<b><u>291</u></b>	<b><u>2050</u></b>
458.sjeng	64	<b><u>836</u></b>	<b><u>926</u></b>	837	925	836	926	64	792	978	791	979	<b><u>791</u></b>	<b><u>978</u></b>
462.libquantum	64	<b><u>99.6</u></b>	<b><u>13300</u></b>	99.5	13300	99.6	13300	64	<b><u>99.6</u></b>	<b><u>13300</u></b>	99.5	13300	99.6	13300
464.h264ref	64	888	1590	<b><u>892</u></b>	<b><u>1590</u></b>	914	1550	64	903	1570	<b><u>897</u></b>	<b><u>1580</u></b>	870	1630
471.omnetpp	64	579	691	<b><u>578</u></b>	<b><u>692</u></b>	577	693	64	<b><u>547</u></b>	<b><u>731</u></b>	546	732	547	731
473.astar	64	605	743	603	745	<b><u>605</u></b>	<b><u>743</u></b>	64	605	743	603	745	<b><u>605</u></b>	<b><u>743</u></b>
483.xalancbmk	64	<b><u>306</u></b>	<b><u>1440</u></b>	306	1440	306	1440	64	<b><u>306</u></b>	<b><u>1440</u></b>	306	1440	306	1440

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 and OS configuration:  
SCALING\_GOVERNOR set to Performance  
Hardware Prefetch set to Disable  
VT Support set to Disable  
C1E Support set to Disable  
Sysinfo program /home/CPU2006/config/sysinfo.rev6993  
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)  
running on localhost.localdomain Fri Feb 17 06:07:38 2017

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 E5-2683 v4 @ 2.10GHz  
2 "physical id"s (chips)  
64 "processors"

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint\_rate2006 = 1360

Inspur SA5112M4 (Intel Xeon E5-2683 v4)

SPECint\_rate\_base2006 = 1310

CPU2006 license: 3358

Test date: Feb-2017

Test sponsor: Inspur Corporation

Hardware Availability: Apr-2016

Tested by: Inspur Corporation

Software Availability: Sep-2016

## 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 : 16
siblings  : 32
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
cache size : 20480 KB
```

From /proc/meminfo

```
MemTotal:      263847556 kB
HugePages_Total:    0
Hugepagesize:    2048 kB
```

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

```
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.2 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.2"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.2 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.2:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.2:ga:server
```

uname -a:

```
Linux localhost.localdomain 3.10.0-327.el7.x86_64 #1 SMP Thu Oct 29 17:29:29
EDT 2015 x86_64 x86_64 x86_64 GNU/Linux
```

run-level 5 Feb 16 11:43

SPEC is set to: /home/CPU2006

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs   393G   62G  332G  16% /home
```

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. 4.1.15 01/06/2017

Memory:

```
4x NO DIMM NO DIMM
16x Samsung M393A2G40EB1-CRC 16 GB 2 rank 2400 MHz
```

(End of data from sysinfo program)



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint\_rate2006 = 1360

Inspur SA5112M4 (Intel Xeon E5-2683 v4)

SPECint\_rate\_base2006 = 1310

CPU2006 license: 3358

Test date: Feb-2017

Test sponsor: Inspur Corporation

Hardware Availability: Apr-2016

Tested by: Inspur Corporation

Software Availability: Sep-2016

## 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/sh10.2"

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

Transparent Huge Pages enabled by default

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 -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
```

## Base Optimization Flags

C benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh10.2 -lsmartheap
```



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint\_rate2006 = 1360

Inspur SA5112M4 (Intel Xeon E5-2683 v4)

SPECint\_rate\_base2006 = 1310

CPU2006 license: 3358

Test sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test date: Feb-2017

Hardware Availability: Apr-2016

Software Availability: Sep-2016

## 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

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-AVX2(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

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint\_rate2006 = 1360

Inspur SA5112M4 (Intel Xeon E5-2683 v4)

SPECint\_rate\_base2006 = 1310

CPU2006 license: 3358

Test date: Feb-2017

Test sponsor: Inspur Corporation

Hardware Availability: Apr-2016

Tested by: Inspur Corporation

Software Availability: Sep-2016

## Peak Optimization Flags (Continued)

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(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-AVX2 -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-AVX2(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-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-qopt-mem-layout-trans=3

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(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-AVX2(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-AVX2(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

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint\_rate2006 = 1360

Inspur SA5112M4 (Intel Xeon E5-2683 v4)

SPECint\_rate\_base2006 = 1310

CPU2006 license: 3358

Test date: Feb-2017

Test sponsor: Inspur Corporation

Hardware Availability: Apr-2016

Tested by: Inspur Corporation

Software Availability: Sep-2016

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.html>

<http://www.spec.org/cpu2006/flags/Inspur-Platform-Settings-V1.0-HSW.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.xml>

<http://www.spec.org/cpu2006/flags/Inspur-Platform-Settings-V1.0-HSW.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 Mar 7 16:14:13 2017 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 7 March 2017.