



# SPEC® CINT2006 Result

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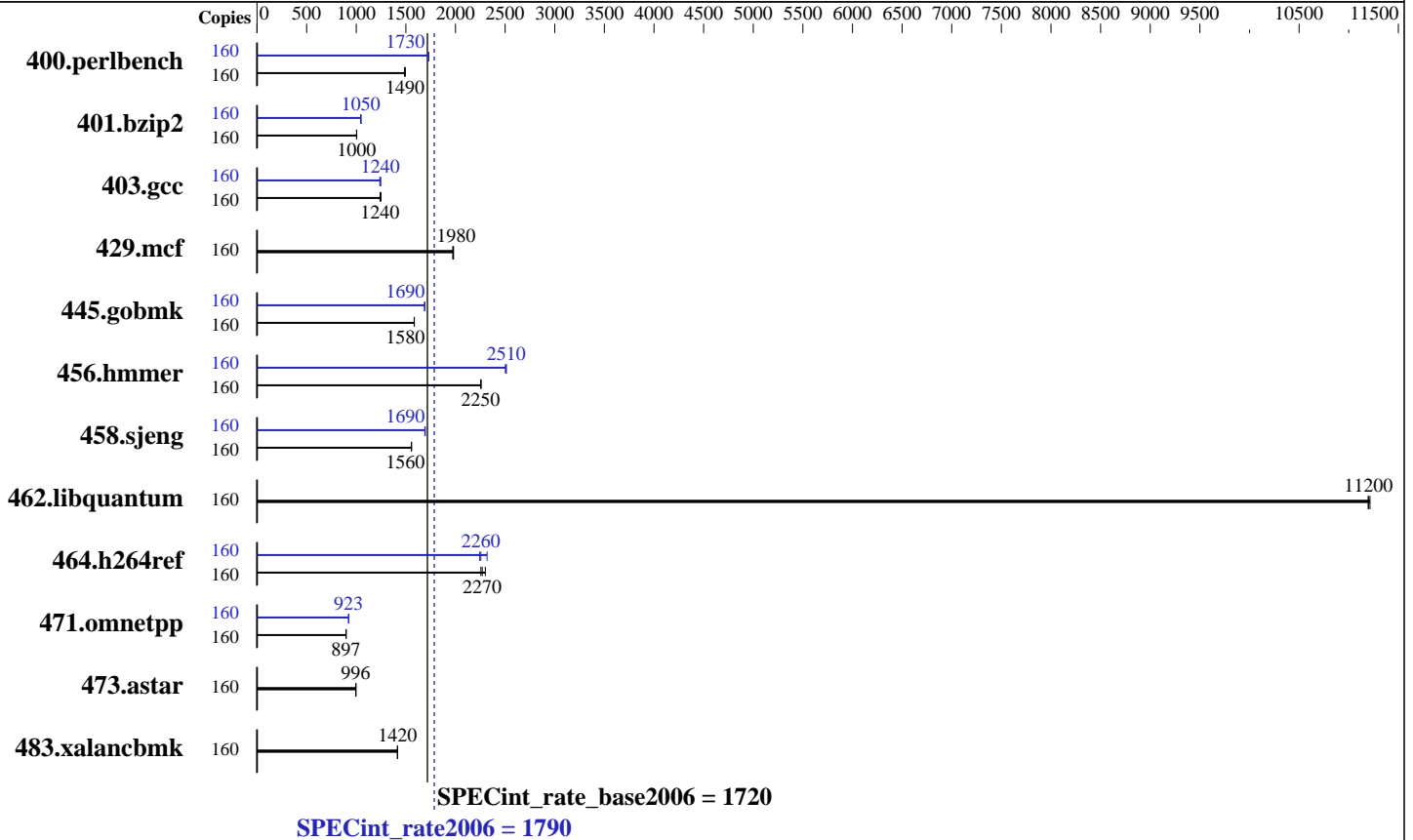
## Inspur Corporation K1 800

SPECint®\_rate2006 = 1790

SPECint\_rate\_base2006 = 1720

CPU2006 license: 3358  
Test sponsor: Inspur Corporation  
Tested by: Inspur Corporation

Test date: Dec-2013  
Hardware Availability: May-2012  
Software Availability: Sep-2013



### Hardware

CPU Name: Intel Xeon E7-8850  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.40 GHz  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 80 cores, 8 chips, 10 cores/chip, 2 threads/core  
 CPU(s) orderable: 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: 24 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 2 TB (64 x 8 GB 2Rx4 PC3L-10600R-9, ECC, running at 1066 MHz)

Disk Subsystem: 960GB (3 x 480GB SSD,2.5" SATA,RAID5)  
 Other Hardware: None

### Software

Operating System: Inspur K-UX Server release 2.2 (Inspur) 2.6.32-358.el6.x86\_64  
 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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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	160	1052	1490	1047	1490	<b>1048</b>	<b>1490</b>	160	905	1730	<b>903</b>	<b>1730</b>	903	1730
401.bzip2	160	1539	1000	1537	1000	<b>1539</b>	<b>1000</b>	160	<b>1475</b>	<b>1050</b>	1477	1050	1475	1050
403.gcc	160	<b>1038</b>	<b>1240</b>	1038	1240	1031	1250	160	1041	1240	1033	1250	<b>1037</b>	<b>1240</b>
429.mcf	160	<b>738</b>	<b>1980</b>	740	1970	737	1980	160	<b>738</b>	<b>1980</b>	740	1970	737	1980
445.gobmk	160	<b>1060</b>	<b>1580</b>	1060	1580	1059	1590	160	992	1690	995	1690	<b>993</b>	<b>1690</b>
456.hammer	160	<b>662</b>	<b>2250</b>	663	2250	661	2260	160	594	2510	597	2500	<b>595</b>	<b>2510</b>
458.sjeng	160	1245	1560	<b>1244</b>	<b>1560</b>	1244	1560	160	1145	1690	1142	1690	<b>1143</b>	<b>1690</b>
462.libquantum	160	<b>296</b>	<b>11200</b>	296	11200	296	11200	160	<b>296</b>	<b>11200</b>	296	11200	296	11200
464.h264ref	160	<b>1560</b>	<b>2270</b>	1539	2300	1570	2260	160	1527	2320	<b>1570</b>	<b>2260</b>	1578	2240
471.omnetpp	160	1113	898	1115	897	<b>1115</b>	<b>897</b>	160	<b>1083</b>	<b>923</b>	1082	924	1084	922
473.astar	160	1128	996	<b>1128</b>	<b>996</b>	1128	996	160	1128	996	<b>1128</b>	<b>996</b>	1128	996
483.xalancbmk	160	<b>780</b>	<b>1420</b>	781	1410	779	1420	160	<b>780</b>	<b>1420</b>	781	1410	779	1420

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 /spec/config/sysinfo.rev6818  
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191  
running on k1 Mon Jan 13 15:44:47 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- 8850 @ 2.00GHz  
8 "physical id"s (chips)  
160 "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 : 10  
siblings : 20

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## Platform Notes (Continued)

```
physical 0: cores 0 1 2 3 4 5 6 7 8 9
physical 1: cores 0 1 2 3 4 5 6 7 8 9
physical 2: cores 0 1 2 3 4 5 6 7 8 9
physical 3: cores 0 1 2 3 4 5 6 7 8 9
physical 4: cores 0 1 2 3 4 5 6 7 8 9
physical 5: cores 0 1 2 3 4 5 6 7 8 9
physical 6: cores 0 1 2 3 4 5 6 7 8 9
physical 7: cores 0 1 2 3 4 5 6 7 8 9
cache size : 24576 KB
```

```
From /proc/meminfo
MemTotal:      529219776 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

```
From /etc/*release* /etc/*version*
inspur-release: Inspur K-UX Server release 2.2 (Inspur)
system-release: Inspur K-UX Server release 2.2 (Inspur)
system-release-cpe: cpe:/o:inspur:k-ux:2.2:ga:server
```

```
uname -a:
Linux k1 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013 x86_64
x86_64 x86_64 GNU/Linux
```

```
run-level 3 Jan 13 15:02
```

```
SPEC is set to: /spec
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda3       ext4      736G  3.8G  695G   1% /spec
```

(End of data from sysinfo program)

## General Notes

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



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## 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  
  
400.perlbench: icc -m64  
401.bzip2: icc -m64  
456.hmmer: icc -m64  
458.sjeng: icc -m64  
  
C++ benchmarks:  
icpc -m32



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## 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  
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

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## Peak Optimization Flags (Continued)

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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