SPEC® CINT2006 Result

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HITACHI

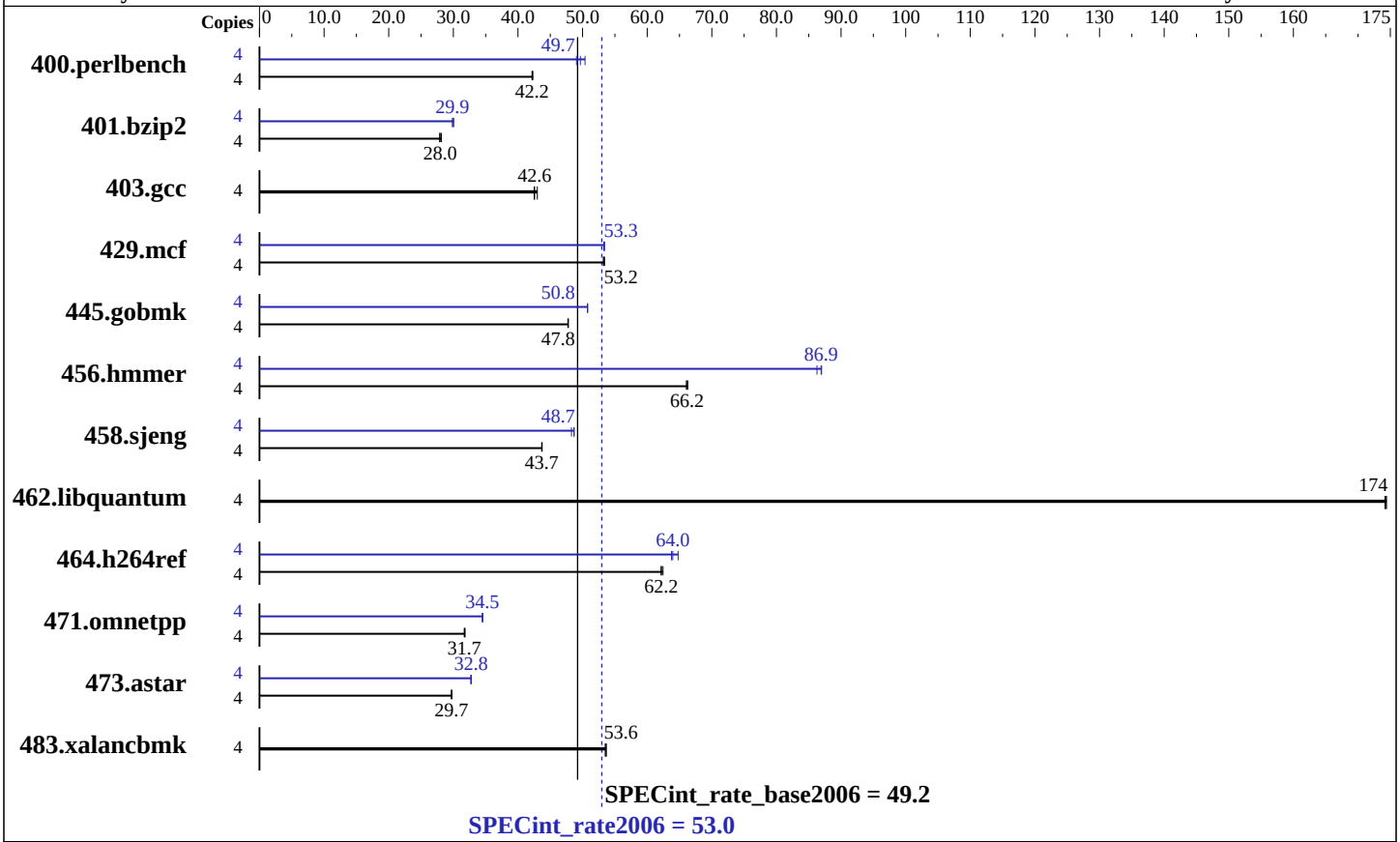
HA8000-bd (Intel Core i7-610E)

SPECint®_rate2006 = 53.0

SPECint_rate_base2006 = 49.2

CPU2006 license: 872
Test sponsor: HITACHI
Tested by: HITACHI

Test date: May-2010
Hardware Availability: Jul-2010
Software Availability: Dec-2009



Hardware

CPU Name:	Intel Core i7-610E
CPU Characteristics:	Intel Turbo Boost Technology disabled
CPU MHz:	2533
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip, 2 threads/core
CPU(s) orderable:	1 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:	4 MB I+D on chip per chip
Other Cache:	None
Memory:	8 GB(2 x 4 GB PC3-8500U, 2 rank, CL7)
Disk Subsystem:	1 x 160 GB 7200 rpm SATA2
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 5.4, Advanced Platform, Kernel 2.6.18-164.el5 on an x86_64
Compiler:	Intel C++ Compiler 11.1 for Linux Build 20091012 Package ID: l_cproc_p_11.1.059
Auto Parallel:	No
File System:	ext3
System State:	Multi-user run level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1

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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	4	924	42.3	926	42.2	**926**	**42.2**	4	**787**	**49.7**	797	49.1	776	50.4
401.bzip2	4	1385	27.9	**1381**	**28.0**	1371	28.2	4	1292	29.9	**1292**	**29.9**	1284	30.1
403.gcc	4	749	43.0	**756**	**42.6**	757	42.5	4	749	43.0	**756**	**42.6**	757	42.5
429.mcf	4	**685**	**53.2**	685	53.2	683	53.4	4	**684**	**53.3**	683	53.4	685	53.3
445.gobmk	4	878	47.8	879	47.7	**879**	**47.8**	4	826	50.8	827	50.8	**827**	**50.8**
456.hmmer	4	563	66.3	**564**	**66.2**	565	66.1	4	433	86.3	429	87.0	**429**	**86.9**
458.sjeng	4	1106	43.7	**1108**	**43.7**	1108	43.7	4	1002	48.3	994	48.7	**994**	**48.7**
462.libquantum	4	476	174	475	174	**476**	**174**	4	476	174	475	174	**476**	**174**
464.h264ref	4	1424	62.1	1417	62.4	**1423**	**62.2**	4	**1384**	**64.0**	1389	63.7	1366	64.8
471.omnetpp	4	786	31.8	789	31.7	**788**	**31.7**	4	723	34.6	725	34.5	**725**	**34.5**
473.astar	4	**945**	**29.7**	945	29.7	943	29.8	4	**857**	**32.8**	856	32.8	859	32.7
483.xalancbmk	4	514	53.7	516	53.5	**515**	**53.6**	4	514	53.7	516	53.5	**515**	**53.6**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

```
The config file option 'submit' was used.
'/usr/bin/numactl' used to bind processes to CPUs
```

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
```

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 -static -opt-prefetch`

C++ benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs`
`-L/home/bsc/smartheap/lib -lsmartheap`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
`icc -m32`

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks (except as noted below):
`icpc -m32`

473.astar: `icpc -m64`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LINUX`
473.astar: `-DSPEC_CPU_LP64`
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) -static(pass 2) -prof-use(pass 2) -ansi-alias

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32

403.gcc: basepeak = yes

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2 -ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(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) -static(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/home/bsc/smartheap/lib -lsmartheap

473.astar: -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=routine -Wl,-z,muldefs -L/home/bsc/smartheap/lib -lsmartheap64

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

Continued on next page

Peak Other Flags (Continued)

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-ic11.1-linux64-revE.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.xml`

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