



SPEC® CINT2006 Result

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IBM Corporation

SPECint®2006 = 19.9

IBM System x3200 M3 (Intel Celeron G1101)

SPECint_base2006 = 18.4

CPU2006 license: 11

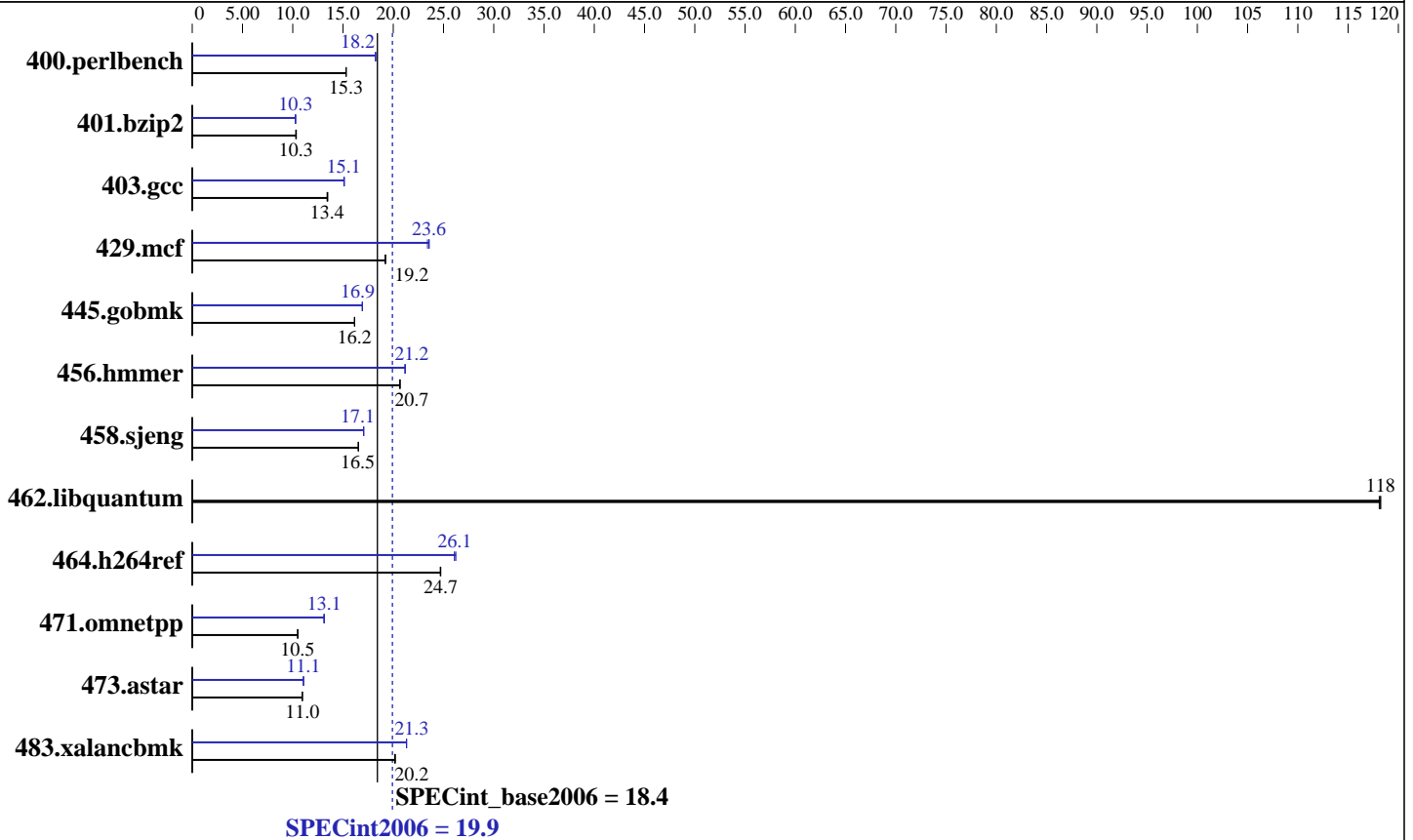
Test date: May-2010

Test sponsor: IBM Corporation

Hardware Availability: Jan-2010

Tested by: IBM Corporation

Software Availability: Jan-2010



Hardware

CPU Name: Intel Celeron G1101
 CPU Characteristics:
 CPU MHz: 2267
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 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: 2 MB I+D on chip per chip
 Other Cache: None
 Memory: 16 GB (4 x 4 GB PC3-10600E CL9, 2 Rank)
 Disk Subsystem: 1 x 73 GB SAS, 15000 RPM
 Other Hardware: None

Software

Operating System: SuSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
 Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1
 Build 20091130 Package ID: 1_cproc_p_11.1.064
 Auto Parallel: Yes
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V8.1



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	638	15.3	639	15.3	<u>638</u>	<u>15.3</u>	535	18.3	536	18.2	<u>536</u>	<u>18.2</u>
401.bzip2	931	10.4	<u>935</u>	<u>10.3</u>	936	10.3	937	10.3	942	10.2	<u>938</u>	<u>10.3</u>
403.gcc	597	13.5	<u>599</u>	<u>13.4</u>	600	13.4	<u>533</u>	<u>15.1</u>	534	15.1	532	15.1
429.mcf	474	19.2	475	19.2	<u>475</u>	<u>19.2</u>	390	23.4	<u>387</u>	<u>23.6</u>	387	23.6
445.gobmk	<u>650</u>	<u>16.2</u>	650	16.1	649	16.2	619	16.9	620	16.9	<u>620</u>	<u>16.9</u>
456.hammer	<u>451</u>	<u>20.7</u>	452	20.6	451	20.7	<u>440</u>	<u>21.2</u>	441	21.2	440	21.2
458.sjeng	731	16.6	<u>731</u>	<u>16.5</u>	733	16.5	<u>709</u>	<u>17.1</u>	709	17.1	710	17.0
462.libquantum	<u>175</u>	<u>118</u>	175	118	175	118	<u>175</u>	<u>118</u>	175	118	175	118
464.h264ref	897	24.7	895	24.7	<u>895</u>	<u>24.7</u>	844	26.2	<u>848</u>	<u>26.1</u>	848	26.1
471.omnetpp	596	10.5	595	10.5	<u>595</u>	<u>10.5</u>	476	13.1	<u>476</u>	<u>13.1</u>	477	13.1
473.astar	642	10.9	641	11.0	<u>641</u>	<u>11.0</u>	635	11.1	634	11.1	<u>635</u>	<u>11.1</u>
483.xalancbmk	341	20.2	<u>342</u>	<u>20.2</u>	343	20.1	<u>324</u>	<u>21.3</u>	324	21.3	323	21.3

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

Platform Notes

Turbo Mode Enable
Turbo Boost set to Traditional
CPU C State Enable

General Notes

Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502
'ulimit -s unlimited' was used to set the stack size to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64

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Base Portability Flags (Continued)

```

401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

```

Base Optimization Flags

C benchmarks:

`-xSSSE3 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch`

C++ benchmarks:

`-xSSSE3 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64`

Base Other Flags

C benchmarks:

`403.gcc: -Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):

`icc -m64`

`429.mcf: icc -m32`

C++ benchmarks (except as noted below):

`icpc -m32`

`473.astar: icpc -m64`



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Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
 401.bzip2: -DSPEC_CPU_LP64
 403.gcc: -DSPEC_CPU_LP64
 445.gobmk: -DSPEC_CPU_LP64
 456.hmmr: -DSPEC_CPU_LP64
 458.sjeng: -DSPEC_CPU_LP64
 462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
 464.h264ref: -DSPEC_CPU_LP64
 473.astar: -DSPEC_CPU_LP64
 483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3
 -no-prec-div -static -ansi-alias -opt-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3
 -no-prec-div -static -auto-ilp32 -opt-prefetch
 -ansi-alias

403.gcc: -xSSSE3 -ipo -O3 -no-prec-div -static -inline-calloc
 -opt-malloc-options=3

429.mcf: -xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -O2 -ipo
 -no-prec-div -ansi-alias

456.hmmr: -xSSSE3 -ipo -O3 -no-prec-div -static -unroll2
 -ansi-alias -auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3
 -no-prec-div -static -unroll4

462.libquantum: basepeak = yes

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3
 -no-prec-div -static -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3
 -no-prec-div -ansi-alias -opt-ra-region-strategy=block
 -Wl,-z,muldefs
 -L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap

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Peak Optimization Flags (Continued)

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine
-Wl,-z,muldefs
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64

483.xalancbmk: -xSSSE3 -ipo -O3 -no-prec-div -opt-prefetch
-Wl,-z,muldefs
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap

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-ic11.1-linux64-revE.20100601.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.20100601.xml>

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 08:45:05 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 18 June 2010.