



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/R110b-1
(Intel Pentium G6950)

SPECint®2006 = 24.3

SPECint_base2006 = 22.4

CPU2006 license: 9006

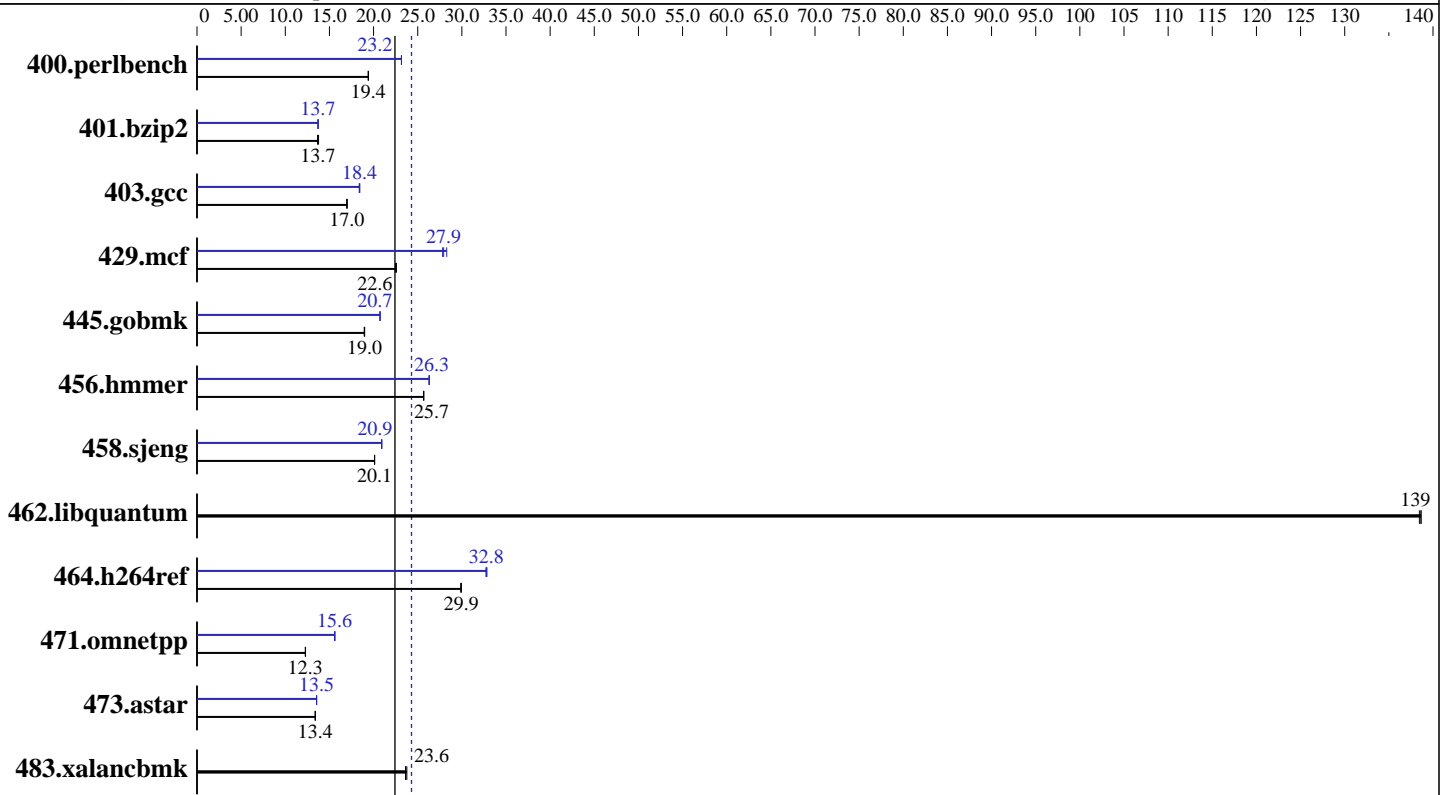
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Feb-2010

Hardware Availability: Jan-2010

Software Availability: Nov-2009



Hardware

CPU Name: Intel Pentium G6950
 CPU Characteristics:
 CPU MHz: 2800
 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: 3 MB I+D on chip per chip
 Other Cache: None
 Memory: 8 GB (4 x 2 GB PC3-10600E running at 1066 MHz)
 Disk Subsystem: 1x160 GB SATA, 7200 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 20091012 Package ID: l_cproc_p_11.1.059
 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	504	19.4	503	19.4	504	19.4	422	23.2	422	23.2	422	23.2
401.bzip2	701	13.8	707	13.6	704	13.7	704	13.7	703	13.7	705	13.7
403.gcc	473	17.0	474	17.0	475	17.0	437	18.4	438	18.4	437	18.4
429.mcf	404	22.6	404	22.6	406	22.5	328	27.8	326	27.9	322	28.3
445.gobmk	553	19.0	552	19.0	554	18.9	506	20.7	506	20.7	506	20.7
456.hammer	363	25.7	363	25.7	363	25.7	355	26.3	355	26.3	355	26.3
458.sjeng	602	20.1	601	20.1	602	20.1	578	20.9	578	20.9	578	20.9
462.libquantum	150	138	149	139	149	139	150	138	149	139	149	139
464.h264ref	740	29.9	739	29.9	741	29.9	674	32.8	676	32.7	675	32.8
471.omnetpp	508	12.3	509	12.3	509	12.3	400	15.6	401	15.6	401	15.6
473.astar	523	13.4	524	13.4	525	13.4	518	13.5	518	13.5	518	13.5
483.xalancbmk	290	23.8	292	23.6	292	23.6	290	23.8	292	23.6	292	23.6

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

Operating System Notes

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

Platform Notes

Default BIOS settings were used.

General Notes

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.hmmmer: -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
-par-runtime-control -opt-prefetch

```

C++ benchmarks:

```

-xSSSE3 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/opt/SmartHeap_8.1/lib64 -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 -m64

```

```

471.omnetpp: icpc -m32

```



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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_LP64 -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/opt/SmartHeap_8.1/lib -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/opt/SmartHeap_8.1/lib64 -lsmartheap64
```

```
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-ic11.1-int-linux64-revE.20100302.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-int-linux64-revE.20100302.xml>

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

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