



# SPEC<sup>®</sup> CINT2006 Result

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## NEC Corporation

Express5800/GT110b-S  
(Intel Pentium G6950)

SPECint<sup>®</sup>\_rate2006 = 42.5

SPECint\_rate\_base2006 = 39.2

CPU2006 license: 9006

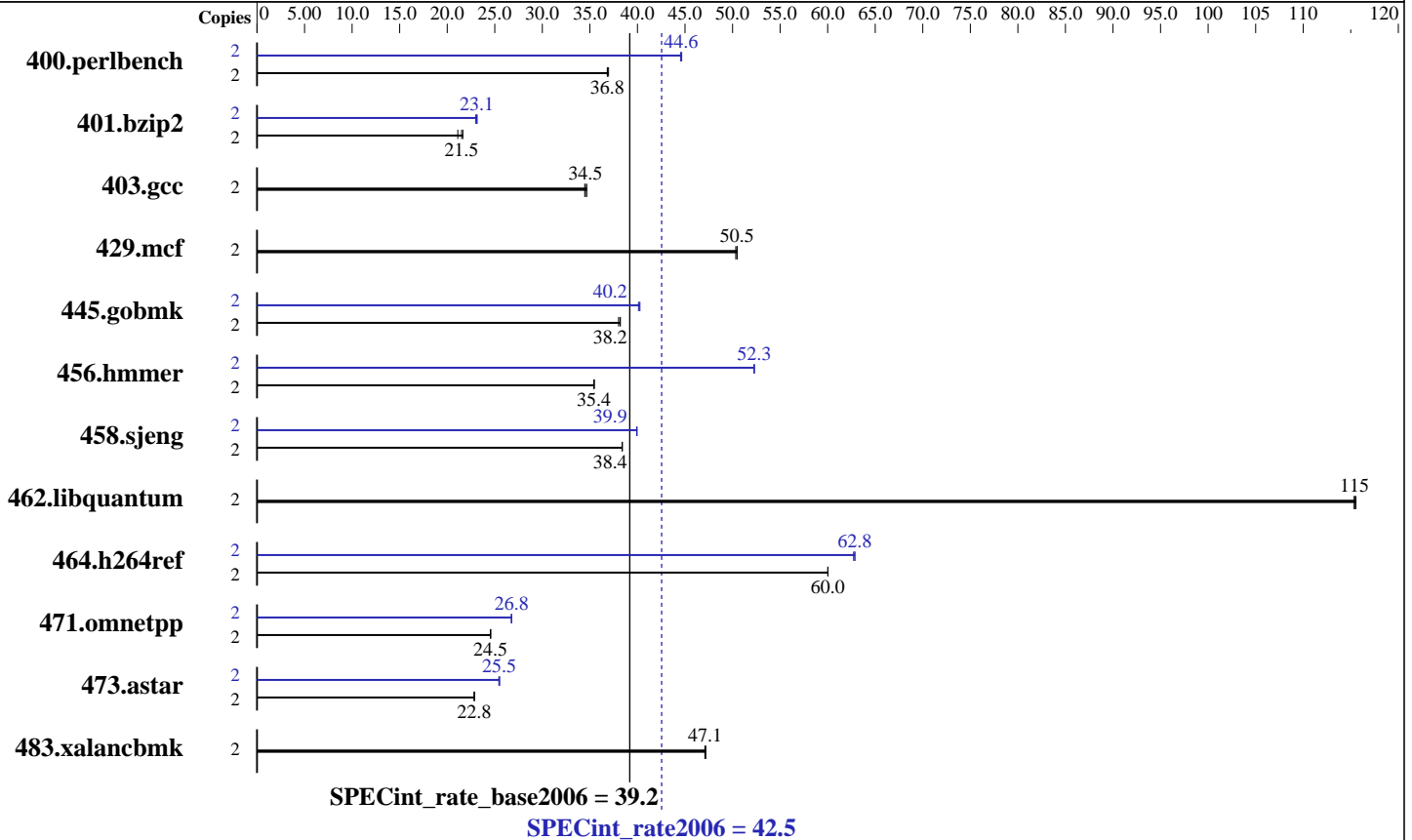
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Feb-2010

Hardware Availability: Apr-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: No  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 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	2	529	37.0	531	36.8	<b>530</b>	<b>36.8</b>	2	438	44.7	<b>438</b>	<b>44.6</b>	439	44.5
401.bzip2	2	914	21.1	<b>897</b>	<b>21.5</b>	892	21.6	2	839	23.0	<b>835</b>	<b>23.1</b>	834	23.1
403.gcc	2	<b>466</b>	<b>34.5</b>	464	34.7	467	34.5	2	<b>466</b>	<b>34.5</b>	464	34.7	467	34.5
429.mcf	2	362	50.3	<b>361</b>	<b>50.5</b>	361	50.5	2	362	50.3	<b>361</b>	<b>50.5</b>	361	50.5
445.gobmk	2	552	38.0	549	38.2	<b>550</b>	<b>38.2</b>	2	<b>522</b>	<b>40.2</b>	523	40.1	521	40.3
456.hammer	2	526	35.5	527	35.4	<b>527</b>	<b>35.4</b>	2	<b>357</b>	<b>52.3</b>	357	52.3	357	52.3
458.sjeng	2	630	38.4	<b>630</b>	<b>38.4</b>	630	38.4	2	606	40.0	606	39.9	<b>606</b>	<b>39.9</b>
462.libquantum	2	359	116	359	115	<b>359</b>	<b>115</b>	2	359	116	359	115	<b>359</b>	<b>115</b>
464.h264ref	2	737	60.0	<b>737</b>	<b>60.0</b>	738	60.0	2	704	62.9	706	62.7	<b>704</b>	<b>62.8</b>
471.omnetpp	2	508	24.6	<b>509</b>	<b>24.5</b>	510	24.5	2	467	26.8	467	26.7	<b>467</b>	<b>26.8</b>
473.astar	2	614	22.9	<b>615</b>	<b>22.8</b>	615	22.8	2	550	25.5	552	25.4	<b>551</b>	<b>25.5</b>
483.xalancbmk	2	292	47.2	<b>293</b>	<b>47.1</b>	293	47.1	2	292	47.2	<b>293</b>	<b>47.1</b>	293	47.1

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.  
taskset has been used to bind processes to cores

## Operating System Notes

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

## Platform Notes

Default BIOS settings were used.

## Base Compiler Invocation

C benchmarks:  
icc -m32  
  
C++ benchmarks:  
icpc -m32

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

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## Base Portability Flags (Continued)

462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xSSSE3 -ipo -O3 -no-prec-div -static -inline-calloc  
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:

-xSSSE3 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/opt/SmartHeap\_8.1/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

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  
462.libquantum: -DSPEC\_CPU\_LINUX  
473.astar: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LINUX



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## 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 -opt-prefetch -ansi-alias

403.gcc: basepeak = yes

429.mcf: basepeak = yes

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

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

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -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>



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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 questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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