





# SPEC CINT2006 Result

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## NEC Corporation

SPECint2006 = **57.5**

Express5800/GT110f-S (Intel Xeon E3-1220 v3)

SPECint\_base2006 = **55.3**

CPU2006 license: 9006

Test date: Jun-2013

Test sponsor: NEC Corporation

Hardware Availability: Jul-2013

Tested by: NEC Corporation

Software Availability: Mar-2013

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	238	41.0	<b><u>240</u></b>	<b><u>40.8</u></b>	240	40.8	<b><u>216</u></b>	<b><u>45.3</u></b>	216	45.3	215	45.3
401.bzip2	<b><u>366</u></b>	<b><u>26.4</u></b>	366	26.3	366	26.4	<b><u>360</u></b>	<b><u>26.8</u></b>	359	26.9	360	26.8
403.gcc	218	37.0	<b><u>218</u></b>	<b><u>36.9</u></b>	218	36.9	216	37.3	<b><u>216</u></b>	<b><u>37.3</u></b>	216	37.3
429.mcf	126	72.2	<b><u>125</u></b>	<b><u>73.2</u></b>	124	73.3	126	72.2	<b><u>125</u></b>	<b><u>73.2</u></b>	124	73.3
445.gobmk	<b><u>386</u></b>	<b><u>27.2</u></b>	386	27.2	386	27.2	366	28.6	367	28.6	<b><u>367</u></b>	<b><u>28.6</u></b>
456.hammer	138	67.7	137	68.0	<b><u>138</u></b>	<b><u>67.8</u></b>	138	67.7	137	68.0	<b><u>138</u></b>	<b><u>67.8</u></b>
458.sjeng	355	34.1	356	34.0	<b><u>356</u></b>	<b><u>34.0</u></b>	355	34.1	356	34.0	<b><u>356</u></b>	<b><u>34.0</u></b>
462.libquantum	14.2	1460	14.6	1420	<b><u>14.4</u></b>	<b><u>1440</u></b>	14.2	1460	14.6	1420	<b><u>14.4</u></b>	<b><u>1440</u></b>
464.h264ref	414	53.5	<b><u>413</u></b>	<b><u>53.5</u></b>	413	53.6	414	53.5	<b><u>413</u></b>	<b><u>53.5</u></b>	413	53.6
471.omnetpp	<b><u>226</u></b>	<b><u>27.7</u></b>	226	27.7	226	27.6	181	34.5	<b><u>182</u></b>	<b><u>34.3</u></b>	182	34.3
473.astar	213	32.9	<b><u>212</u></b>	<b><u>33.0</u></b>	212	33.1	213	32.9	<b><u>212</u></b>	<b><u>33.0</u></b>	212	33.1
483.xalancbmk	108	64.1	<b><u>108</u></b>	<b><u>63.9</u></b>	109	63.5	102	67.9	<b><u>102</u></b>	<b><u>67.7</u></b>	102	67.6

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

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Platform Notes

BIOS Settings:  
Energy Performance: Performance

## General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"  
OMP\_NUM\_THREADS = "4"

Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled

## Base Compiler Invocation

C benchmarks:  
icc -m64

C++ benchmarks:  
icpc -m64



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## Base Portability Flags

```

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
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:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32  
-Wl,-z,muldefs -L/sh -lsmartheap64

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

400.perlbench: icc -m32

445.gobmk: 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_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -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: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
               -opt-prefetch -ansi-alias

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
           -O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32
           -opt-prefetch -ansi-alias

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc
         -opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
          -ansi-alias

456.hmmr: basepeak = yes

458.sjeng: basepeak = yes

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

```

C++ benchmarks:

```

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
             -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
             -opt-ra-region-strategy=block -ansi-alias
             -Wl,-z,muldefs -L/sh -lsmartheap

473.astar: basepeak = yes

```

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## Peak Optimization Flags (Continued)

483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
-ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130702.html>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120d-RevA.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130702.xml>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120d-RevA.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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