



# SPEC® CINT2006 Result

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## NEC Corporation

Express5800/i120Ra-e1  
(Intel Xeon L5215)

**SPECint®2006 = 17.9**

**SPECint\_base2006 = 15.8**

CPU2006 license: 9006

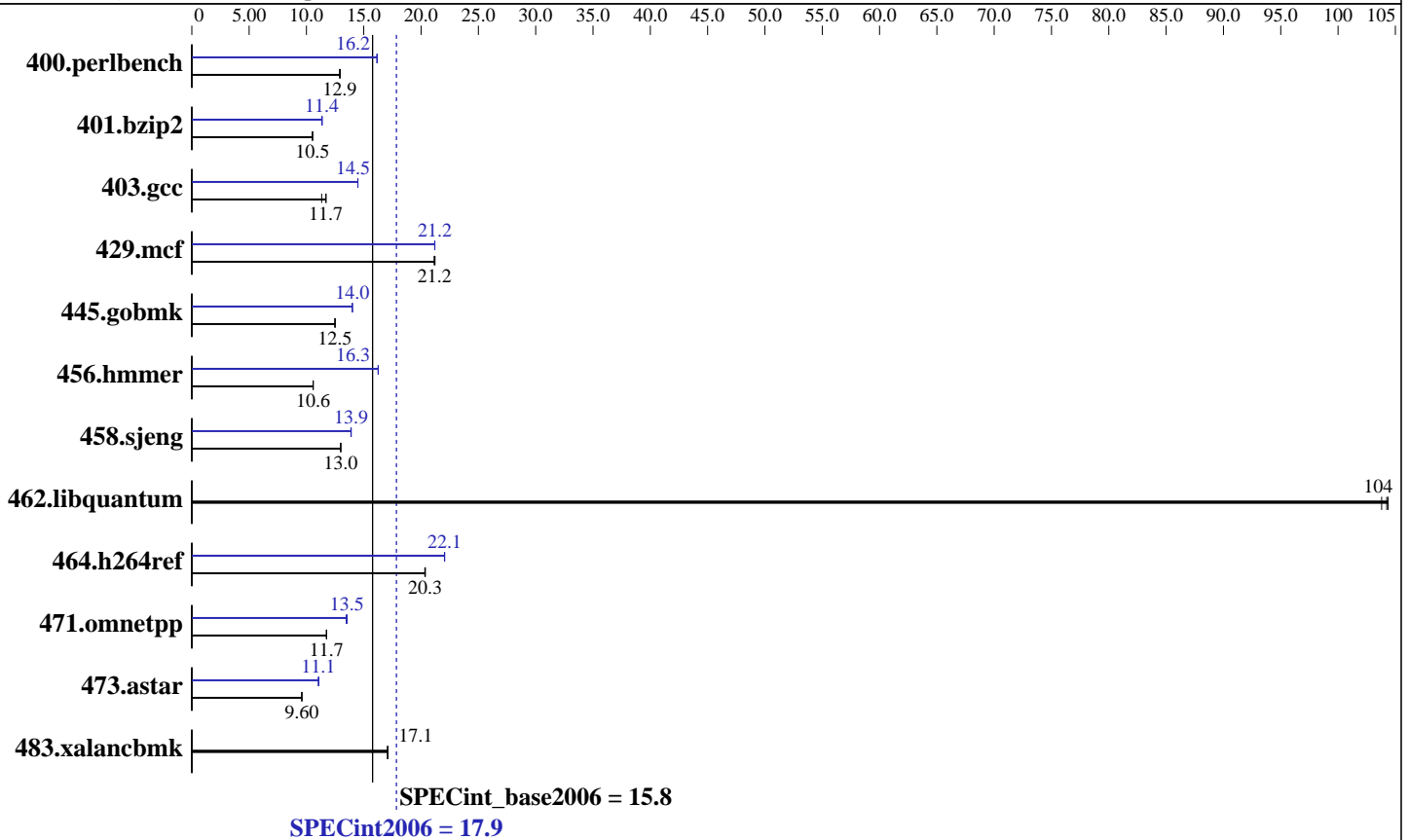
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jan-2009

Hardware Availability: Jan-2009

Software Availability: Nov-2008



### Hardware

CPU Name: Intel Xeon L5215  
 CPU Characteristics: 1066 MHz system bus  
 CPU MHz: 1867  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 6 MB I+D on chip per chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (4x4 GB PC2-5300P, 2 rank, CL5-5-5, ECC)  
 Disk Subsystem: 1x80 GB SATAII, 7200 RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP2, Kernel 2.6.16.60-0.21-smp  
 Compiler: Intel C++ Compiler 11.0 for Linux Build 20081105 Package ID: l\_cproc\_p\_11.0.074  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: MicroQuill SmartHeap Library 8.1 Binutils 2.18.50.0.7.20080502



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<u>757</u>	<u>12.9</u>	755	12.9	758	12.9	<u>604</u>	<u>16.2</u>	605	16.1	604	16.2
401.bzip2	916	10.5	918	10.5	<u>916</u>	<u>10.5</u>	<u>850</u>	<u>11.4</u>	849	11.4	851	11.3
403.gcc	688	11.7	<b>688</b>	<b>11.7</b>	711	11.3	556	14.5	556	14.5	<b>556</b>	<b>14.5</b>
429.mcf	431	21.1	<u>431</u>	<u>21.2</u>	430	21.2	430	21.2	<u>430</u>	<u>21.2</u>	430	21.2
445.gobmk	<b>840</b>	<b>12.5</b>	839	12.5	840	12.5	749	14.0	749	14.0	<b>749</b>	<b>14.0</b>
456.hammer	<b>881</b>	<b>10.6</b>	881	10.6	882	10.6	<u>574</u>	<u>16.3</u>	574	16.3	574	16.3
458.sjeng	931	13.0	932	13.0	<u>931</u>	<u>13.0</u>	870	13.9	<u>871</u>	<u>13.9</u>	872	13.9
462.libquantum	200	104	199	104	<u>199</u>	<u>104</u>	200	104	199	104	<u>199</u>	<u>104</u>
464.h264ref	<b>1088</b>	<b>20.3</b>	1089	20.3	1086	20.4	<u>1003</u>	<u>22.1</u>	1003	22.1	1004	22.0
471.omnetpp	532	11.7	532	11.8	<u>532</u>	<u>11.7</u>	462	13.5	<u>462</u>	<u>13.5</u>	464	13.5
473.astar	731	9.60	732	9.59	<u>731</u>	<u>9.60</u>	636	11.0	633	11.1	<b>635</b>	<b>11.1</b>
483.xalancbmk	404	17.1	<b>404</b>	<b>17.1</b>	403	17.1	404	17.1	<u>404</u>	<u>17.1</u>	403	17.1

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  
OMP\_NUM\_THREADS set to number of cores  
KMP\_AFFINITY set to "physical,0"

## Platform Notes

Bios settings:  
Hardware Prefetcher: Enabled  
Adjacent Cache Line Prefetch: Enabled

## Base Compiler Invocation

C benchmarks:  
icc  
  
C++ benchmarks:  
icpc

## Base Portability Flags

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

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## Base Portability Flags (Continued)

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel  
-par-runtime-control -opt-prefetch

C++ benchmarks:

-xSSE4.1 -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

401.bzip2: /opt/intel/Compiler/11.0/074/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/074/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/074/ipp/em64t/include

456.hmmer: /opt/intel/Compiler/11.0/074/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/074/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/074/ipp/em64t/include

C++ benchmarks:

icpc

## Peak Portability Flags

400.perlbenc: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX



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## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -ansi-alias -opt-prefetch

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

403.gcc: -xSSE4.1 -ipo -O3 -no-prec-div -static -inline-alloc  
-opt-malloc-options=3

429.mcf: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

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

456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2  
-ansi-alias -auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll4

462.libquantum: basepeak = yes

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs -L/opt/SmartHeap\_8.1/lib -lsmarheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs -L/opt/SmartHeap\_8.1/lib -lsmarheap

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca



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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revE.html>

<http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revB.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revE.xml>

<http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revB.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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