



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/R120b-1  
(Intel Xeon E5620)

SPECint®\_rate2006 = 114

SPECint\_rate\_base2006 = 107

CPU2006 license: 9006

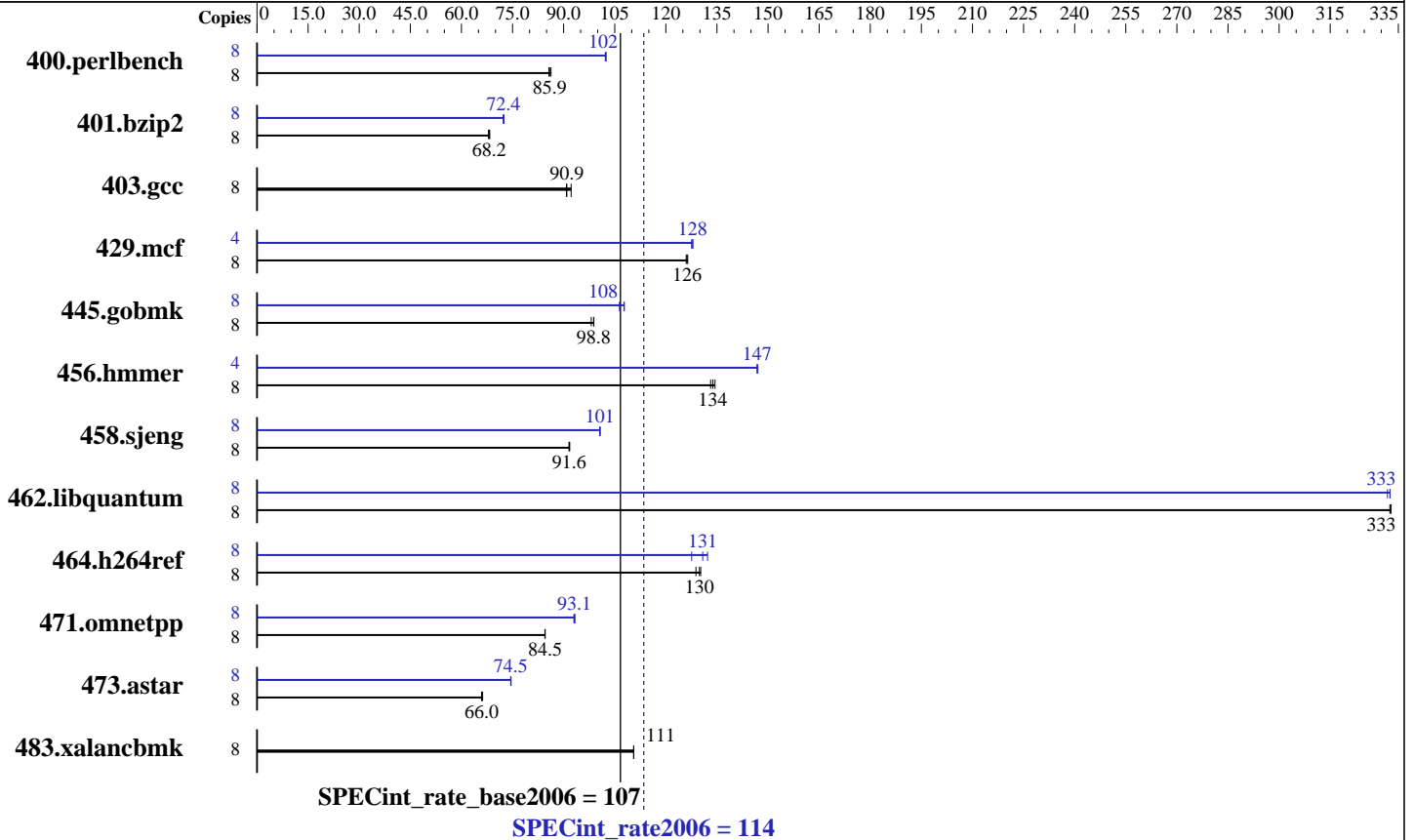
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jul-2010

Hardware Availability: Sep-2010

Software Availability: Dec-2009



### Hardware

CPU Name: Intel Xeon E5620  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.66 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 12 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (6 x 8 GB PC3L-10600R, 2 rank, CL9, ECC, 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 20091130 Package ID: l\_cproc\_p\_11.1.064  
 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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/R120b-1  
(Intel Xeon E5620)

SPECint\_rate2006 = 114

SPECint\_rate\_base2006 = 107

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jul-2010

Hardware Availability: Sep-2010

Software Availability: Dec-2009

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	912	85.7	906	86.3	<u>910</u>	<u>85.9</u>	8	<u>764</u>	<u>102</u>	765	102	763	102
401.bzip2	8	1130	68.3	1136	67.9	<u>1132</u>	<u>68.2</u>	8	1068	72.3	1065	72.5	<u>1067</u>	<u>72.4</u>
403.gcc	8	699	92.2	<u>708</u>	<u>90.9</u>	709	90.8	8	699	92.2	<u>708</u>	<u>90.9</u>	709	90.8
429.mcf	8	579	126	<u>578</u>	<u>126</u>	577	126	4	285	128	286	128	<u>285</u>	<u>128</u>
445.gobmk	8	855	98.1	849	98.9	<u>849</u>	<u>98.8</u>	8	<u>779</u>	<u>108</u>	778	108	789	106
456.hammer	8	561	133	<u>558</u>	<u>134</u>	555	134	4	254	147	254	147	<u>254</u>	<u>147</u>
458.sjeng	8	1057	91.6	1055	91.8	<u>1056</u>	<u>91.6</u>	8	963	101	<u>961</u>	<u>101</u>	961	101
462.libquantum	8	499	333	498	333	<u>498</u>	<u>333</u>	8	<u>498</u>	<u>333</u>	498	333	500	332
464.h264ref	8	1374	129	1359	130	<u>1363</u>	<u>130</u>	8	<u>1353</u>	<u>131</u>	1339	132	1388	128
471.omnetpp	8	<u>591</u>	<u>84.5</u>	591	84.6	592	84.5	8	536	93.3	537	93.0	<u>537</u>	<u>93.1</u>
473.astar	8	848	66.2	<u>851</u>	<u>66.0</u>	852	65.9	8	753	74.6	<u>754</u>	<u>74.5</u>	754	74.5
483.xalancbmk	8	<u>499</u>	<u>111</u>	499	111	499	111	8	<u>499</u>	<u>111</u>	499	111	499	111

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.  
numactl was used to bind copies to the cores

## Operating System Notes

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

## Platform Notes

BIOS setting:  
Performance/Watt: Traditional

## General Notes

The Express5800/R120b-1 and  
the Express5800/R120b-2 models are electronically equivalent.  
The results have been measured on the Express5800/R120b-1 model.

## Base Compiler Invocation

C benchmarks:  
icc -m32

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/R120b-1  
(Intel Xeon E5620)

**SPECint\_rate2006 = 114**

**SPECint\_rate\_base2006 = 107**

**CPU2006 license:** 9006  
**Test sponsor:** NEC Corporation  
**Tested by:** NEC Corporation

**Test date:** Jul-2010  
**Hardware Availability:** Sep-2010  
**Software Availability:** Dec-2009

## Base Compiler Invocation (Continued)

C++ benchmarks:  
icpc -m32

## Base Portability Flags

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

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:  
-xSSE4.2 -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

458.sjeng: icc -m64

462.libquantum: icc -m64

C++ benchmarks (except as noted below):  
icpc -m32

473.astar: icpc -m64



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

**SPECint\_rate2006 = 114**

Express5800/R120b-1  
(Intel Xeon E5620)

**SPECint\_rate\_base2006 = 107**

**CPU2006 license:** 9006

**Test date:** Jul-2010

**Test sponsor:** NEC Corporation

**Hardware Availability:** Sep-2010

**Tested by:** NEC Corporation

**Software Availability:** Dec-2009

## Peak Portability Flags

```

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

```

## Peak Optimization Flags

C benchmarks:

```

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

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

403.gcc: basepeak = yes

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

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

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
            -ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
            -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
            -prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
                -opt-prefetch

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

```

C++ benchmarks:

```

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
              -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
              -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
              -L/opt/SmartHeap_8.1/lib -lsmarheap

```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/R120b-1  
(Intel Xeon E5620)

**SPECint\_rate2006 = 114**

**SPECint\_rate\_base2006 = 107**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** Jul-2010

**Hardware Availability:** Sep-2010

**Software Availability:** Dec-2009

## Peak Optimization Flags (Continued)

```
473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
           -O3(pass 2) -no-prec-div(pass 2) -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-linux64-revE.20100823.00.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.20100823.00.xml>

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.1.

Report generated on Wed Jul 23 13:35:39 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 19 August 2010.