



# SPEC<sup>®</sup> CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

## NEC Corporation

SPECint<sup>®</sup>\_rate2006 = 217

Express5800/T110i-S (Intel Xeon E3-1225 v6)

SPECint\_rate\_base2006 = 210

CPU2006 license: 9006

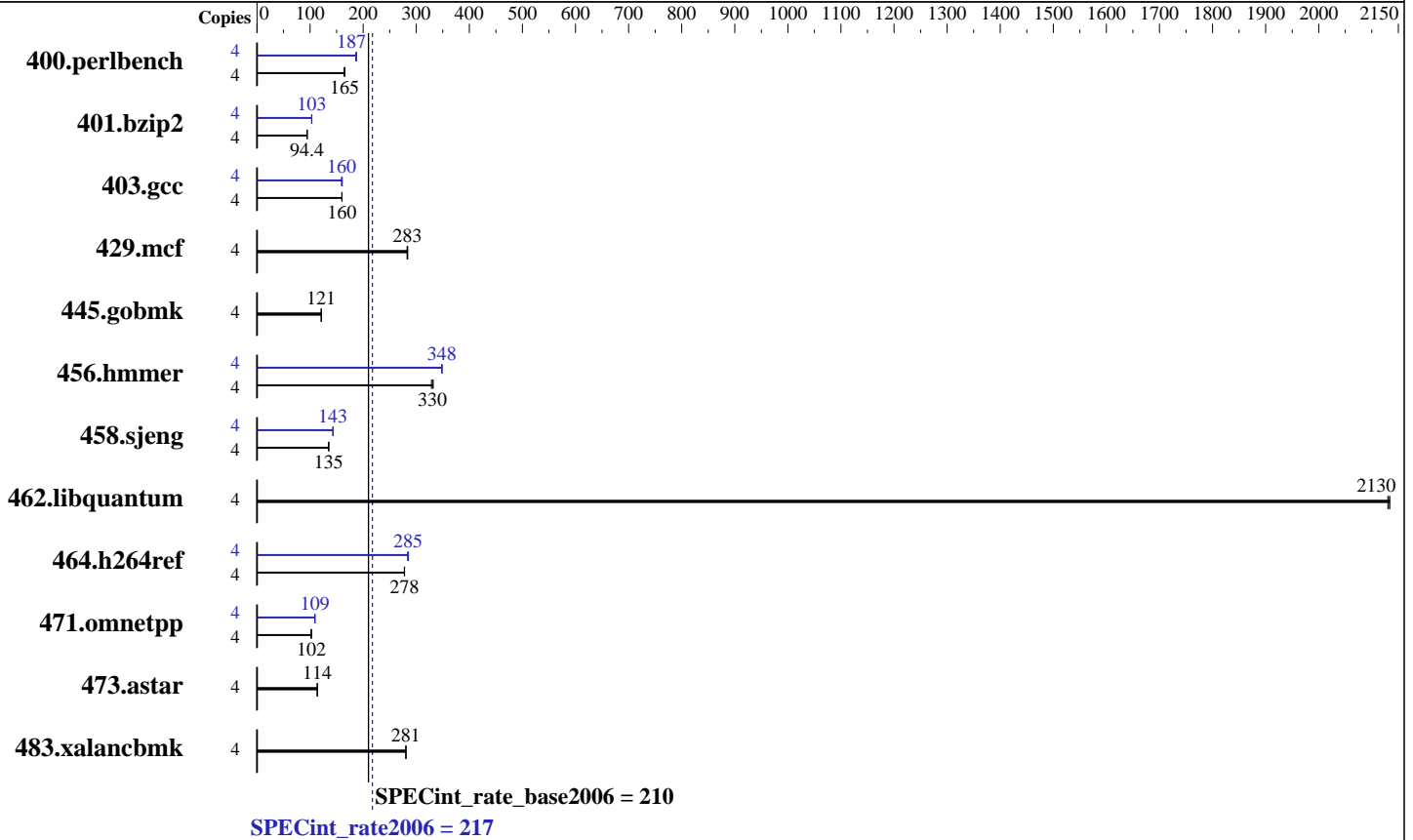
Test date: Mar-2017

Test sponsor: NEC Corporation

Hardware Availability: Apr-2017

Tested by: NEC Corporation

Software Availability: Jan-2017



### Hardware

CPU Name: Intel Xeon E3-1225 v6  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz  
 CPU MHz: 3300  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 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: 8 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 32 GB (2 x 16 GB 2Rx8 PC4-2400T-E)  
 Disk Subsystem: 1 x 1 TB SATA, 7200 RPM  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 7.3 (Maipo)  
 Kernel 3.10.0-514.6.1.el7.x86\_64  
 Compiler: C/C++: Version 17.0.0.098 of Intel C/C++ Compiler for Linux  
 Auto Parallel: No  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.2



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

## NEC Corporation

SPECint\_rate2006 = 217

Express5800/T110i-S (Intel Xeon E3-1225 v6)

SPECint\_rate\_base2006 = 210

CPU2006 license: 9006

Test date: Mar-2017

Test sponsor: NEC Corporation

Hardware Availability: Apr-2017

Tested by: NEC Corporation

Software Availability: Jan-2017

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	236	166	<u>237</u>	<u>165</u>	238	164	4	<u>209</u>	<u>187</u>	208	187	210	186
401.bzip2	4	<u>409</u>	<u>94.4</u>	408	94.6	409	94.3	4	<u>375</u>	<u>103</u>	373	103	375	103
403.gcc	4	202	160	<u>201</u>	<u>160</u>	201	160	4	202	159	200	161	<u>201</u>	<u>160</u>
429.mcf	4	129	283	128	284	<u>129</u>	<u>283</u>	4	129	283	128	284	<u>129</u>	<u>283</u>
445.gobmk	4	346	121	<u>347</u>	<u>121</u>	347	121	4	346	121	<u>347</u>	<u>121</u>	347	121
456.hammer	4	112	332	<u>113</u>	<u>330</u>	114	329	4	107	349	107	348	<u>107</u>	<u>348</u>
458.sjeng	4	358	135	358	135	<u>358</u>	<u>135</u>	4	<u>338</u>	<u>143</u>	338	143	339	143
462.libquantum	4	38.9	2130	38.8	2130	<u>38.9</u>	<u>2130</u>	4	38.9	2130	38.8	2130	<u>38.9</u>	<u>2130</u>
464.h264ref	4	<u>319</u>	<u>278</u>	318	278	319	278	4	<u>311</u>	<u>285</u>	310	285	312	284
471.omnetpp	4	245	102	244	102	<u>244</u>	<u>102</u>	4	229	109	<u>229</u>	<u>109</u>	229	109
473.astar	4	247	114	<u>247</u>	<u>114</u>	247	114	4	247	114	<u>247</u>	<u>114</u>	247	114
483.xalancbmk	4	98.3	281	98.4	280	<u>98.4</u>	<u>281</u>	4	98.3	281	98.4	280	<u>98.4</u>	<u>281</u>

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

## Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset commands to bind each copy to a specific processor. For details, please see the config file.

## Operating System Notes

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

## Platform Notes

BIOS Settings:  
Power Management Policy: Custom  
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/sh10.2"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM  
memory using Redhat Enterprise Linux 7.2  
Transparent Huge Pages enabled by default



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

NEC Corporation

SPECint\_rate2006 = 217

Express5800/T110i-S (Intel Xeon E3-1225 v6)

SPECint\_rate\_base2006 = 210

CPU2006 license: 9006

Test date: Mar-2017

Test sponsor: NEC Corporation

Hardware Availability: Apr-2017

Tested by: NEC Corporation

Software Availability: Jan-2017

## Base Compiler Invocation

C benchmarks:

icc -m32 -L/opt/intel/compilers\_and\_libraries\_2017/linux/lib/ia32

C++ benchmarks:

icpc -m32 -L/opt/intel/compilers\_and\_libraries\_2017/linux/lib/ia32

## Base Portability Flags

400.perlbench: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX\_IA32  
 401.bzip2: -D\_FILE\_OFFSET\_BITS=64  
 403.gcc: -D\_FILE\_OFFSET\_BITS=64  
 429.mcf: -D\_FILE\_OFFSET\_BITS=64  
 445.gobmk: -D\_FILE\_OFFSET\_BITS=64  
 456.hmmer: -D\_FILE\_OFFSET\_BITS=64  
 458.sjeng: -D\_FILE\_OFFSET\_BITS=64  
 462.libquantum: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX  
 464.h264ref: -D\_FILE\_OFFSET\_BITS=64  
 471.omnetpp: -D\_FILE\_OFFSET\_BITS=64  
 473.astar: -D\_FILE\_OFFSET\_BITS=64  
 483.xalancbmk: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-qopt-mem-layout-trans=3

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh10.2 -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32 -L/opt/intel/compilers\_and\_libraries\_2017/linux/lib/ia32

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

NEC Corporation

SPECint\_rate2006 = 217

Express5800/T110i-S (Intel Xeon E3-1225 v6)

SPECint\_rate\_base2006 = 210

CPU2006 license: 9006

Test date: Mar-2017

Test sponsor: NEC Corporation

Hardware Availability: Apr-2017

Tested by: NEC Corporation

Software Availability: Jan-2017

## Peak Compiler Invocation (Continued)

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32 -L/opt/intel/compilers\_and\_libraries\_2017/linux/lib/ia32

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64

401.bzip2: -DSPEC\_CPU\_LP64

403.gcc: -D\_FILE\_OFFSET\_BITS=64

429.mcf: -D\_FILE\_OFFSET\_BITS=64

445.gobmk: -D\_FILE\_OFFSET\_BITS=64

456.hmmer: -DSPEC\_CPU\_LP64

458.sjeng: -DSPEC\_CPU\_LP64

462.libquantum: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX

464.h264ref: -D\_FILE\_OFFSET\_BITS=64

471.omnetpp: -D\_FILE\_OFFSET\_BITS=64

473.astar: -D\_FILE\_OFFSET\_BITS=64

483.xalancbmk: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -auto-ilp32 -qopt-mem-layout-trans=3

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -qopt-prefetch -auto-ilp32  
-qopt-mem-layout-trans=3

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=3

429.mcf: basepeak = yes

445.gobmk: basepeak = yes

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

NEC Corporation

SPECint\_rate2006 = 217

Express5800/T110i-S (Intel Xeon E3-1225 v6)

SPECint\_rate\_base2006 = 210

CPU2006 license: 9006

Test date: Mar-2017

Test sponsor: NEC Corporation

Hardware Availability: Apr-2017

Tested by: NEC Corporation

Software Availability: Jan-2017

## Peak Optimization Flags (Continued)

456.hmmr: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-qopt-mem-layout-trans=3

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -unroll4 -auto-ilp32  
-qopt-mem-layout-trans=3

462.libquantum: basepeak = yes

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -unroll2 -qopt-mem-layout-trans=3

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2)  
-qopt-ra-region-strategy=block  
-qopt-mem-layout-trans=3 -Wl,-z,muldefs  
-L/sh10.2 -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## 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-ic17.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-110i-RevA.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-110i-RevA.xml>



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

NEC Corporation

SPECint\_rate2006 = 217

Express5800/T110i-S (Intel Xeon E3-1225 v6)

SPECint\_rate\_base2006 = 210

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Mar-2017

Hardware Availability: Apr-2017

Software Availability: Jan-2017

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 v1.2.  
Report generated on Tue May 30 15:31:53 2017 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 30 May 2017.