



# SPEC<sup>®</sup> CINT2006 Result

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## Cisco Systems

SPECint<sup>®</sup>\_rate2006 = 200

Cisco B200-M1 (Intel Xeon E5520, 2.26 GHz)

SPECint\_rate\_base2006 = 187

CPU2006 license: 9019

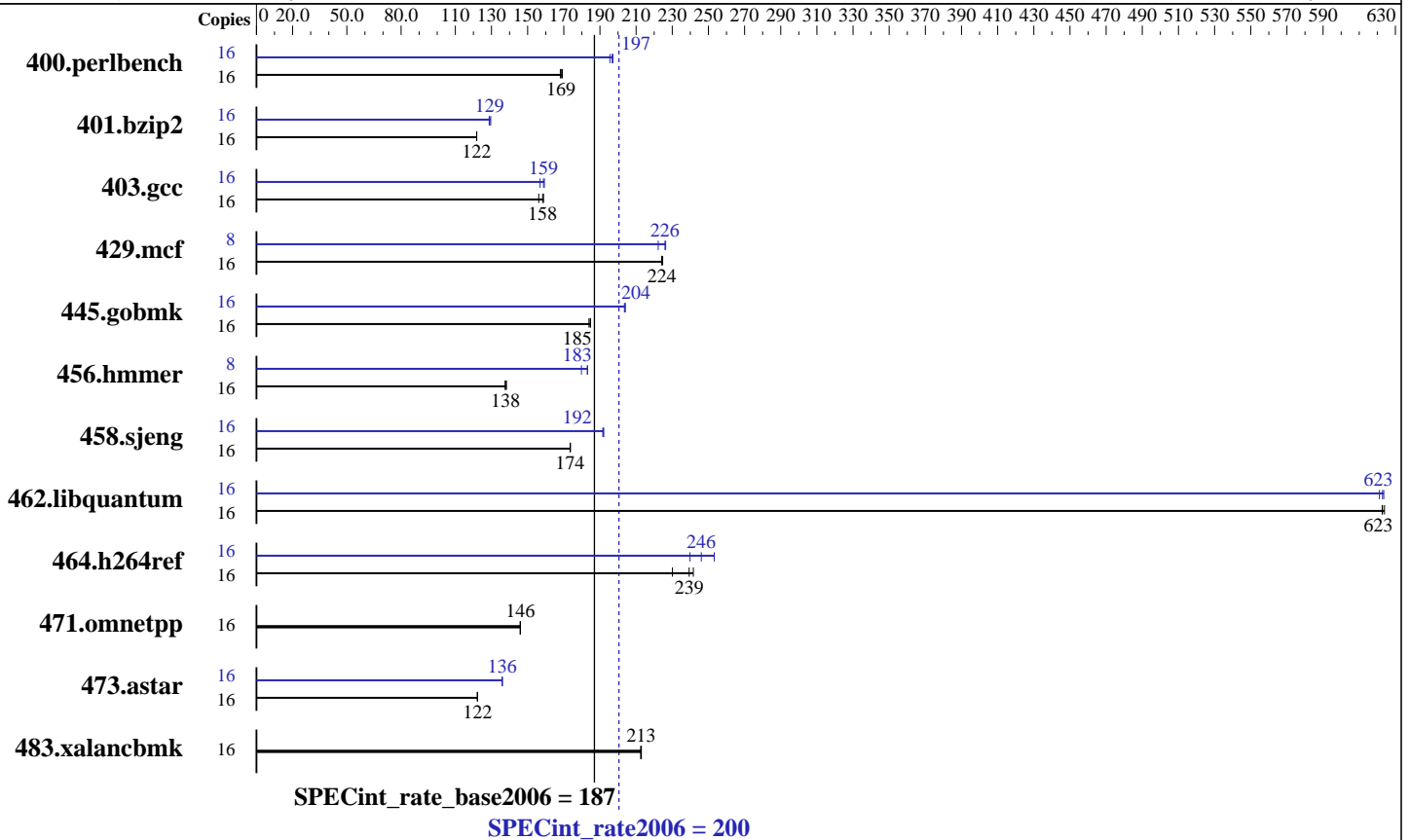
Test date: May-2009

Test sponsor: Cisco Systems

Hardware Availability: May-2009

Tested by: Cisco Systems

Software Availability: May-2009



### Hardware

CPU Name: Intel Xeon E5520  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.53 GHz  
 CPU MHz: 2267  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 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: 8 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 24 GB (12 x 2GB DDR3 1066 MHz)  
 Disk Subsystem: 73 GB SAS ST973451SS, 15000 RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64), Kernel 2.6.27.19-5-default, RC5  
 Compiler: Intel C++ Compiler 11.0 for Linux Build 20090131 Package ID: l\_cproc\_p\_11.0.080  
 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	16	<u>927</u>	<u>169</u>	924	169	930	168	16	<u>795</u>	<u>197</u>	793	197	800	196
401.bzip2	16	<u>1267</u>	<u>122</u>	1267	122	1268	122	16	1200	129	1191	130	<u>1196</u>	<u>129</u>
403.gcc	16	811	159	825	156	<u>814</u>	<u>158</u>	16	<u>811</u>	<u>159</u>	821	157	809	159
429.mcf	16	651	224	649	225	<u>651</u>	<u>224</u>	8	322	226	328	222	<u>323</u>	<u>226</u>
445.gobmk	16	908	185	913	184	<u>909</u>	<u>185</u>	16	825	204	<u>823</u>	<u>204</u>	823	204
456.hammer	16	<u>1084</u>	<u>138</u>	1085	138	1079	138	8	<u>408</u>	<u>183</u>	408	183	415	180
458.sjeng	16	1116	173	1115	174	<u>1115</u>	<u>174</u>	16	1008	192	1011	192	<u>1009</u>	<u>192</u>
462.libquantum	16	532	623	531	624	<u>532</u>	<u>623</u>	16	<u>532</u>	<u>623</u>	534	621	532	624
464.h264ref	16	1465	242	<u>1479</u>	<u>239</u>	1539	230	16	1398	253	<u>1439</u>	<u>246</u>	1476	240
471.omnetpp	16	<u>685</u>	<u>146</u>	685	146	685	146	16	<u>685</u>	<u>146</u>	685	146	685	146
473.astar	16	<u>919</u>	<u>122</u>	919	122	919	122	16	826	136	827	136	<u>827</u>	<u>136</u>
483.xalancbmk	16	<u>519</u>	<u>213</u>	519	213	519	213	16	<u>519</u>	<u>213</u>	519	213	519	213

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 --localalloc --physcpubind=\$BIND was used to bind copies to the cores  
 using following bind list:  
 bind = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

## Operating System Notes

ulimit -s unlimited was used to set the stack size

## General Notes

Submitted\_by: "Ven Immani (immaniv)" <immaniv@cisco.com>  
 Submitted: Mon Jun 1 19:05:24 EDT 2009  
 Submission: cpu2006-20090522-07481.sub

Submitted\_by: "Ven Immani (immaniv)" <immaniv@cisco.com>  
 Submitted: Wed Jun 10 17:42:49 EDT 2009  
 Submission: cpu2006-20090522-07481.sub

## Base Compiler Invocation

C benchmarks:  
icc

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## Base Compiler Invocation (Continued)

C++ benchmarks:  
icpc

## 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 -inline-alloc  
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/spec/cpu2006.1.1/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/11.0/080/bin/intel64/icc  
456.hmmer: /opt/intel/Compiler/11.0/080/bin/intel64/icc  
458.sjeng: /opt/intel/Compiler/11.0/080/bin/intel64/icc

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

473.astar: /opt/intel/Compiler/11.0/080/bin/intel64/icpc



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## 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\_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 -opt-prefetch

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: -xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc  
 -opt-malloc-options=3

429.mcf: -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

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  
 -opt-malloc-options=3 -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: basepeak = yes

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## 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 -auto-ilp32
          -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -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-ic11.0-int-linux64-revA.20090710.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.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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