



# SPEC® CINT2006 Result

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## Cisco Systems

### SPECint®\_rate2006 = 215

### Cisco B200-M1 (Intel Xeon E5540, 2.53 GHz)

### SPECint\_rate\_base2006 = 201

CPU2006 license: 9019

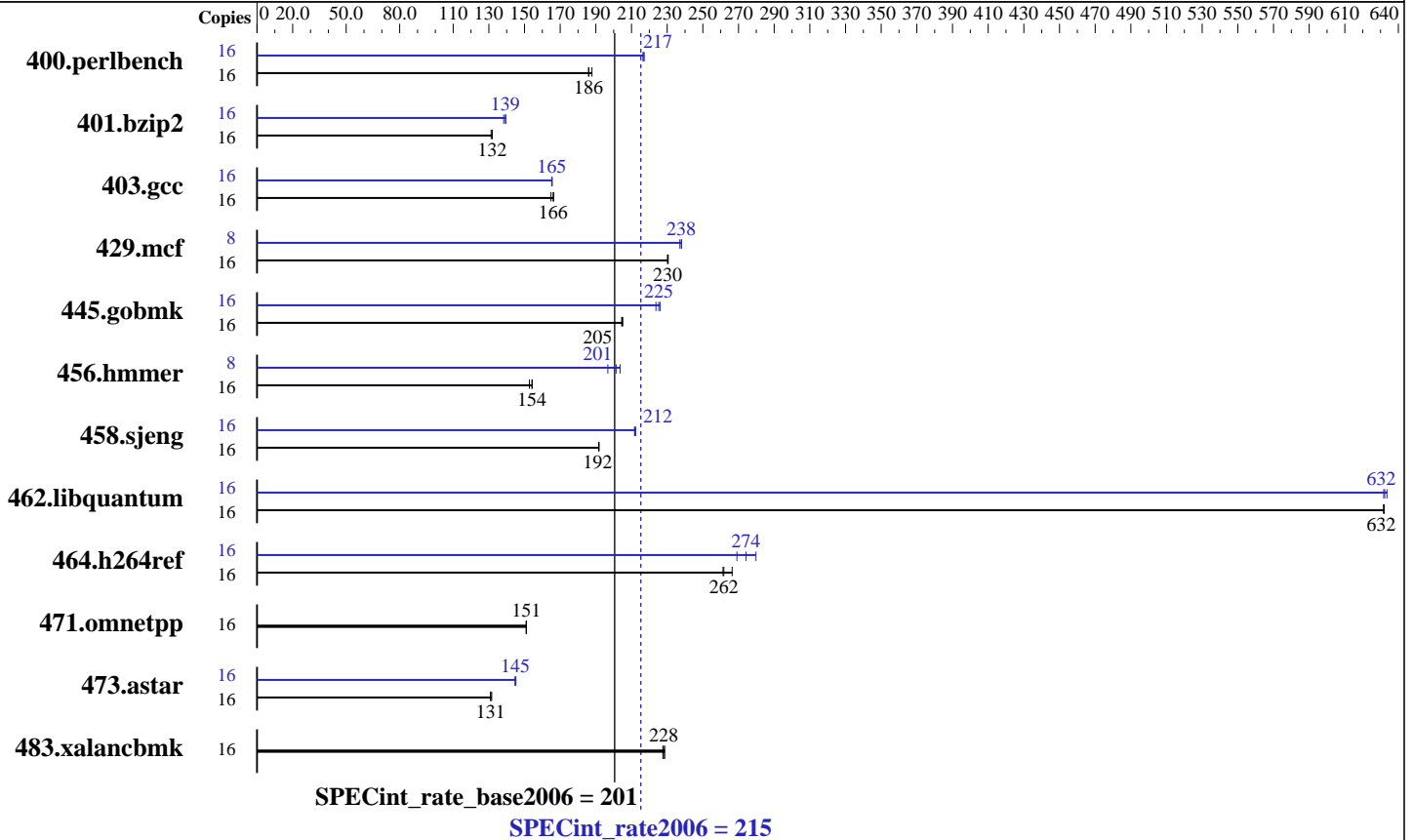
Test date: May-2009

Test sponsor: Cisco Systems

Hardware Availability: May-2009

Tested by: Cisco Systems

Software Availability: May-2009



### Hardware

CPU Name: Intel Xeon E5540  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2533  
 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: 143 GB SAS, 10000 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	<b>840</b>	<b>186</b>	841	186	832	188	16	720	217	<b>720</b>	<b>217</b>	722	216
401.bzip2	16	1176	131	1170	132	<b>1171</b>	<b>132</b>	16	1116	138	1107	140	<b>1109</b>	<b>139</b>
403.gcc	16	774	166	<b>776</b>	<b>166</b>	781	165	16	779	165	778	166	<b>779</b>	<b>165</b>
429.mcf	16	634	230	633	231	<b>634</b>	<b>230</b>	8	<b>307</b>	<b>238</b>	308	237	306	238
445.gobmk	16	<b>820</b>	<b>205</b>	818	205	820	205	16	<b>745</b>	<b>225</b>	742	226	750	224
456.hammer	16	967	154	977	153	<b>968</b>	<b>154</b>	8	<b>371</b>	<b>201</b>	379	197	367	204
458.sjeng	16	1009	192	1011	192	<b>1010</b>	<b>192</b>	16	911	212	915	212	<b>914</b>	<b>212</b>
462.libquantum	16	525	632	525	632	<b>525</b>	<b>632</b>	16	525	632	<b>524</b>	<b>632</b>	523	634
464.h264ref	16	1329	266	<b>1353</b>	<b>262</b>	1355	261	16	1266	280	<b>1291</b>	<b>274</b>	1316	269
471.omnetpp	16	<b>662</b>	<b>151</b>	662	151	662	151	16	<b>662</b>	<b>151</b>	662	151	662	151
473.astar	16	858	131	<b>857</b>	<b>131</b>	854	132	16	774	145	776	145	<b>775</b>	<b>145</b>
483.xalancbmk	16	483	229	485	228	<b>484</b>	<b>228</b>	16	483	229	485	228	<b>484</b>	<b>228</b>

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 19:16:32 EDT 2009  
 Submission: cpu2006-20090522-07482.sub

Submitted\_by: "Ven Immani (immaniv)" <immaniv@cisco.com>  
 Submitted: Wed Jun 10 17:43:42 EDT 2009  
 Submission: cpu2006-20090522-07482.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-calloc  
-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.hmmmer: /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-alloc  
 -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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