



# SPEC® CINT2006 Result

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## Hewlett-Packard Company

**SPECint®2006 = 6.38**

HP BladeSystem bc2000 Blade PC  
(1.2GHz AMD Athlon 64 2100+)

**SPECint\_base2006 = 5.75**

CPU2006 license: 3

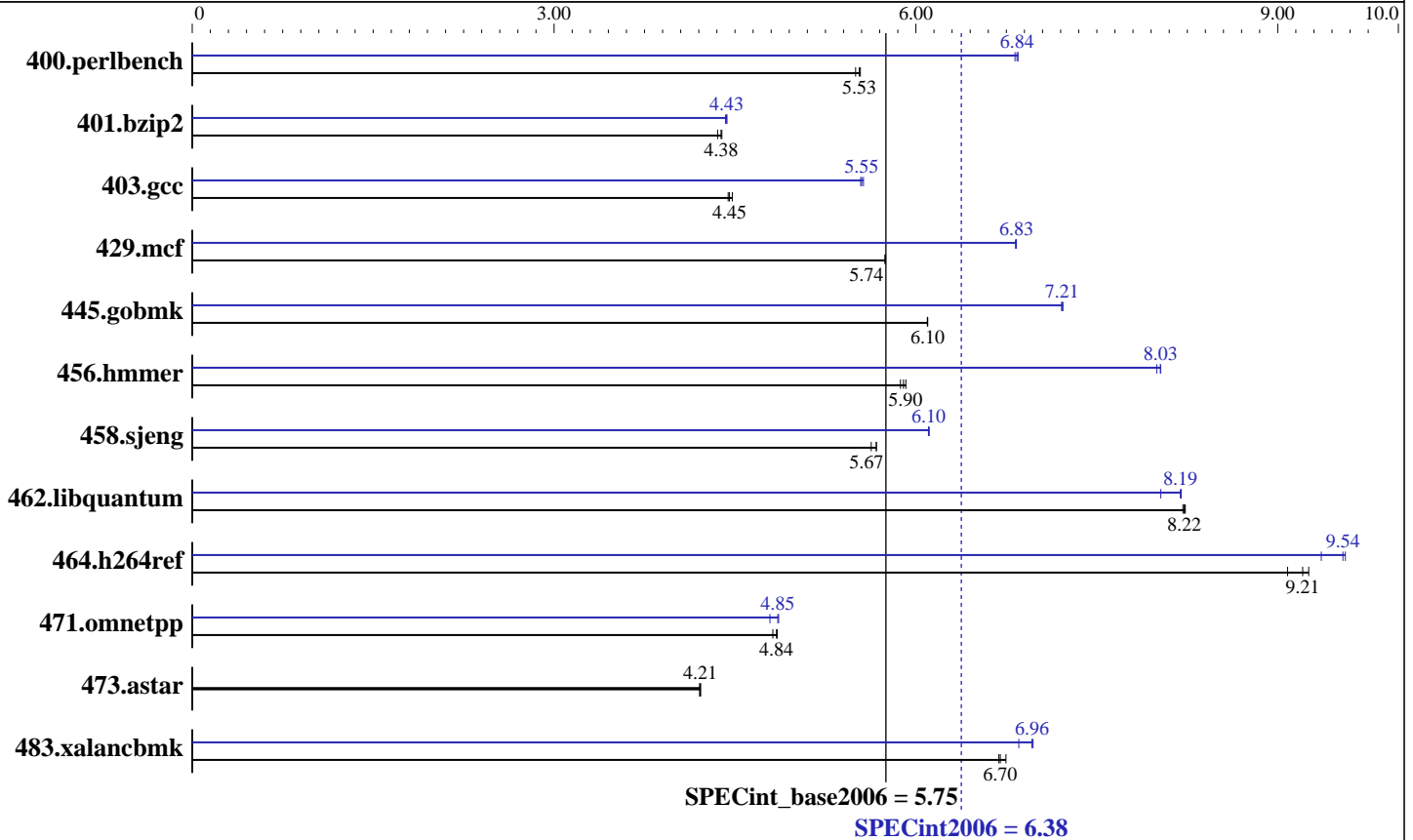
Test date: Dec-2007

Test sponsor: Hewlett-Packard Company

Hardware Availability: Jun-2007

Tested by: AMD Performance Labs

Software Availability: Mar-2008



### Hardware

CPU Name: AMD Athlon 64 2100+  
 CPU Characteristics:  
 CPU MHz: 1200  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
 CPU(s) orderable: 1 chip  
 Primary Cache: 64 KB I + 64 KB D on chip per chip  
 Secondary Cache: 512 KB I+D on chip per chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 2 GB (1x2GB, DDR2-667 CL5 ECC Reg Dual Rank)  
 Disk Subsystem: 1x80 GB SATA, 5400 RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP1, Kernel 2.6.16.46-0.12-default  
 Compiler: QLogic PathScale Compiler Suite, Release 3.0  
 Auto Parallel: No  
 File System: ext3  
 System State: Multi-user, run level 3  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap 8.0 32 bit Library for Linux



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	1764	5.54	<b>1767</b>	<b>5.53</b>	1776	5.50	1427	6.85	<b>1429</b>	<b>6.84</b>	1432	6.82
401.bzip2	2215	4.36	2197	4.39	<b>2201</b>	<b>4.38</b>	2183	4.42	2177	4.43	<b>2178</b>	<b>4.43</b>
403.gcc	1812	4.44	1798	4.48	<b>1807</b>	<b>4.45</b>	1446	5.57	<b>1450</b>	<b>5.55</b>	1453	5.54
429.mcf	1587	5.75	1588	5.74	<b>1588</b>	<b>5.74</b>	1336	6.83	<b>1335</b>	<b>6.83</b>	1335	6.83
445.gobmk	1721	6.09	1720	6.10	<b>1720</b>	<b>6.10</b>	1453	7.22	<b>1455</b>	<b>7.21</b>	1455	7.21
456.hmmer	1589	5.87	1577	5.92	<b>1582</b>	<b>5.90</b>	<b>1162</b>	<b>8.03</b>	1167	8.00	1162	8.03
458.sjeng	2149	5.63	<b>2134</b>	<b>5.67</b>	2133	5.67	1980	6.11	<b>1982</b>	<b>6.10</b>	1982	6.10
462.libquantum	2516	8.23	2523	8.21	<b>2519</b>	<b>8.22</b>	2580	8.03	2527	8.20	<b>2529</b>	<b>8.19</b>
464.h264ref	2391	9.26	2437	9.08	<b>2404</b>	<b>9.21</b>	2315	9.56	2364	9.36	<b>2320</b>	<b>9.54</b>
471.omnetpp	1298	4.81	1289	4.85	<b>1290</b>	<b>4.84</b>	1286	4.86	<b>1287</b>	<b>4.85</b>	1305	4.79
473.astar	1665	4.22	1669	4.21	<b>1667</b>	<b>4.21</b>	1665	4.22	1669	4.21	<b>1667</b>	<b>4.21</b>
483.xalancbmk	<b>1030</b>	<b>6.70</b>	1032	6.69	1023	6.75	1007	6.85	<b>991</b>	<b>6.96</b>	990	6.97

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

## Base Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC

## Base Portability Flags

```

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

```

## Base Optimization Flags

C benchmarks:  
-Ofast -OPT:malloc\_alg=1

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## Base Optimization Flags (Continued)

C++ benchmarks:

-Ofast -m32 -L/cpu2006/mpaton/1.0/amd514K8.lib/32 -lsmartheap

## Peak Compiler Invocation

C benchmarks:

pathcc

C++ benchmarks:

pathCC

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
445.gobmk: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
464.h264ref: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast  
-LNO:opt=0  
401.bzip2: -O3 -LNO:ou\_prod\_max=10 -OPT:Ofast -OPT:alias=disjoint  
403.gcc: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -m32 -O3  
-OPT:Ofast  
429.mcf: -m32 -O3 -ipa  
-L/cpu2006/mpaton/1.0/amd514K8.lib/32 -lsmartheap  
445.gobmk: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-OPT:alias=disjoint -LNO:simd=0 -LNO:minvariant=off  
-WOPT:retype\_expr=on  
456.hmmer: -O2 -OPT:alias=disjoint -OPT:malloc\_alg=1 -CG:cflow=0

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## Peak Optimization Flags (Continued)

458.sjeng: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=50000 -IPA:pu\_reorder=2

462.libquantum: -O3 -ipa -CG:local\_fwd\_sched=on -IPA:space=1000

464.h264ref: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=20000 -OPT:alias=disjoint -LNO:prefetch=0

C++ benchmarks:

471.omnetpp: -Ofast -CG:gcm=off -m32  
-L/cpu2006/mpaton/1.0/amd514K8.lib/32 -lsmarheap

473.astar: basepeak = yes

483.xalancbmk: -Ofast -m32 -OPT:unroll\_times\_max=8  
-L/cpu2006/mpaton/1.0/amd514K8.lib/32 -lsmarheap

The flags file that was used to format this result can be browsed at

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.html)

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.xml)

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

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