



# SPEC® CINT2006 Result

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## Hewlett-Packard Company

ProLiant BL20p G4  
(1.86 GHz, Intel Xeon processor E5320)

**SPECint®2006 = 11.9**

**SPECint\_base2006 = 11.4**

CPU2006 license: 3

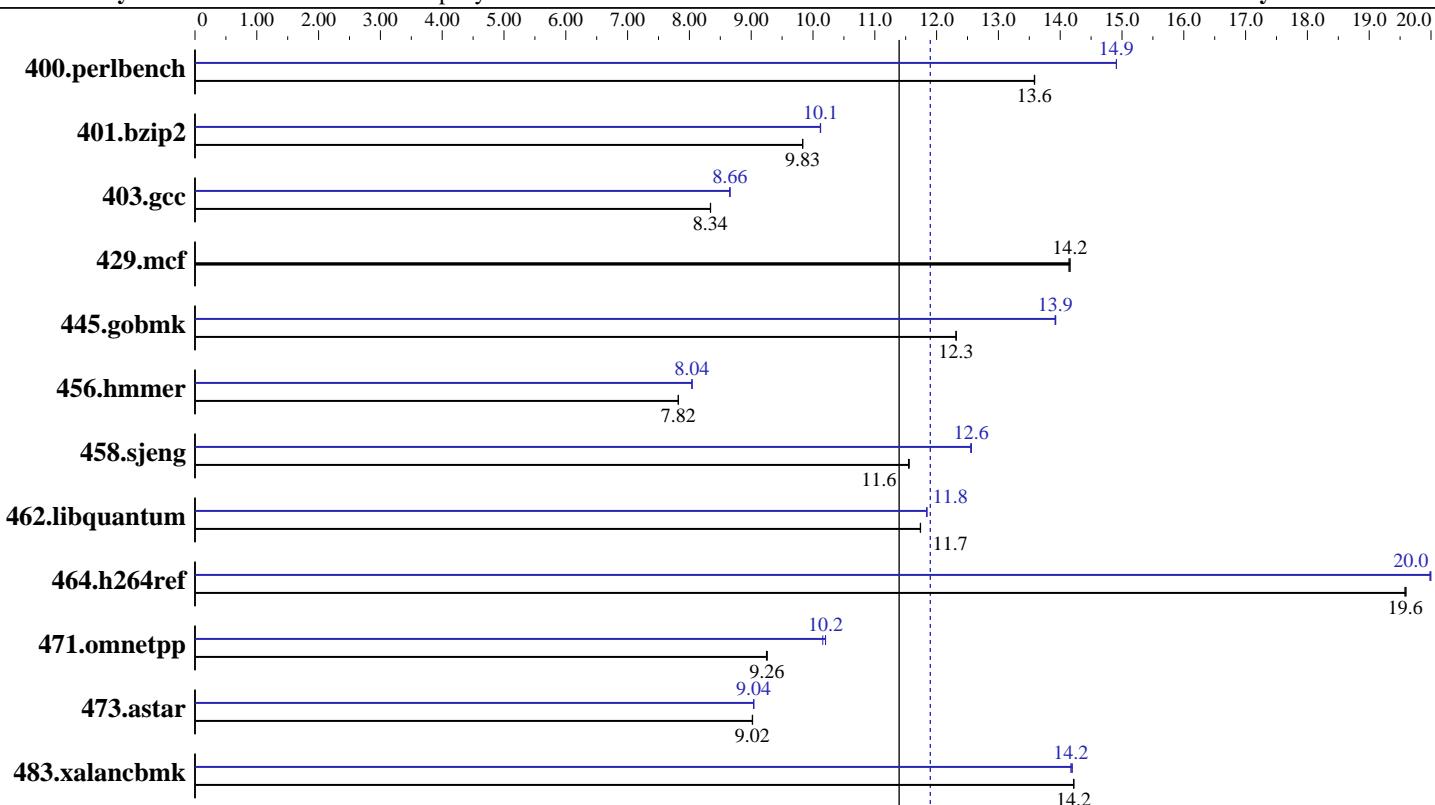
Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Feb-2007

Hardware Availability: Jan-2007

Software Availability: Nov-2006



**SPECint\_base2006 = 11.4**

**SPECint®2006 = 11.9**

### Hardware

CPU Name: Intel Xeon E5320  
CPU Characteristics: 1.86 GHz, 2x4 MB L2 shared, 1066 MHz system bus  
CPU MHz: 1860  
FPU: Integrated  
CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip  
CPU(s) orderable: 1,2 chips  
Primary Cache: 32 KB I + 32 KB D on chip per core  
Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores  
L3 Cache: None  
Other Cache: None  
Memory: 16 GB (8x2 GB PC2-5300 CL5)  
Disk Subsystem: 2x72 GB 10k SAS  
Other Hardware: None

### Software

Operating System: Windows Server 2003 Enterprise x64 Edition SP1  
Compiler: Intel C++ Compiler for 32-bit applications, Version 9.1, Build 20061103Z  
Package ID: W\_CC\_C\_9.1.033  
Microsoft Visual Studio .NET 2003 (v7.1.3088, for libraries)  
Auto Parallel: No  
File System: NTFS  
System State: Default  
Base Pointers: 32-bit  
Peak Pointers: 32-bit  
Other Software: MicroQuill SmartHeap Library 8.0



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b>719</b>	<b>13.6</b>	719	13.6	719	13.6	655	14.9	<b>655</b>	<b>14.9</b>	655	14.9
401.bzip2	<b>982</b>	<b>9.83</b>	981	9.84	982	9.83	953	10.1	<b>953</b>	<b>10.1</b>	954	10.1
403.gcc	965	8.34	965	8.34	<b>965</b>	<b>8.34</b>	<b>930</b>	<b>8.66</b>	930	8.66	930	8.65
429.mcf	<b>644</b>	<b>14.2</b>	644	14.2	645	14.1	<b>644</b>	<b>14.2</b>	644	14.2	645	14.1
445.gobmk	852	12.3	<b>852</b>	<b>12.3</b>	852	12.3	<b>754</b>	<b>13.9</b>	753	13.9	754	13.9
456.hmmer	1193	7.82	<b>1193</b>	<b>7.82</b>	1193	7.82	1160	8.04	<b>1160</b>	<b>8.04</b>	1160	8.04
458.sjeng	1047	11.6	<b>1047</b>	<b>11.6</b>	1048	11.5	<b>963</b>	<b>12.6</b>	963	12.6	964	12.6
462.libquantum	<b>1765</b>	<b>11.7</b>	1765	11.7	1765	11.7	1749	11.8	<b>1750</b>	<b>11.8</b>	1750	11.8
464.h264ref	<b>1130</b>	<b>19.6</b>	1130	19.6	1129	19.6	<b>1107</b>	<b>20.0</b>	1107	20.0	1107	20.0
471.omnetpp	<b>675</b>	<b>9.26</b>	676	9.25	675	9.26	<b>613</b>	<b>10.2</b>	613	10.2	<b>615</b>	10.2
473.astar	778	9.02	<b>778</b>	<b>9.02</b>	778	9.02	<b>776</b>	<b>9.04</b>	776	9.04	777	9.04
483.xalancbmk	<b>485</b>	<b>14.2</b>	485	14.2	485	14.2	<b>487</b>	<b>14.2</b>	486	14.2	<b>487</b>	<b>14.2</b>

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

## Platform Notes

Power Regulator set to Static High Performance Mode in BIOS.  
Adjacent Sector Prefetch disabled in BIOS.

## Base Compiler Invocation

C benchmarks:

  icl -Qvc7.1 -Qc99

C++ benchmarks:

  icl -Qvc7.1

## Base Portability Flags

403.gcc: -DSPEC\_CPU\_WIN32

464.h264ref: -DSPEC\_CPU\_NO\_INTTYPES -DWIN32

## Base Optimization Flags

C benchmarks:

  -fast /F512000000 shlw32m.lib

  -link /FORCE:MULTIPLE

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## Base Optimization Flags (Continued)

C++ benchmarks:

```
-fast -Qcxx_features /F512000000 shlw32m.lib  
-link /FORCE:MULTIPLE
```

## Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

## Peak Compiler Invocation

C benchmarks:

```
icl -Qvc7.1 -Qc99
```

C++ benchmarks:

```
icl -Qvc7.1
```

## Peak Portability Flags

```
403.gcc: -DSPEC_CPU_WIN32  
464.h264ref: -DSPEC_CPU_NO_INTTYPES -DWIN32
```

## Peak Optimization Flags

C benchmarks:

```
400.perlbench: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F512000000  
shlw32m.lib  
-link /FORCE:MULTIPLE
```

401.bzip2: Same as 400.perlbench

403.gcc: Same as 400.perlbench

429.mcf: basepeak = yes

445.gobmk: Same as 400.perlbench

456.hmmer: Same as 400.perlbench

458.sjeng: Same as 400.perlbench

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## Peak Optimization Flags (Continued)

462.libquantum: Same as 400.perlbench

464.h264ref: Same as 400.perlbench

C++ benchmarks:

```
-Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features  
/F512000000 shlw32m.lib -link /FORCE:MULTIPLE
```

## 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/hp-ic91-flags.20090715.02.html>

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

<http://www.spec.org/cpu2006/flags/hp-ic91-flags.20090715.02.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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