



# SPEC<sup>®</sup> CINT2006 Result

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## Hewlett-Packard Company

SPECint<sup>®</sup>2006 = 10.2

HP Integrity rx2620  
(1.4GHz/12MB Dual-Core Intel Itanium 2)

SPECint\_base2006 = 9.73

CPU2006 license: 03

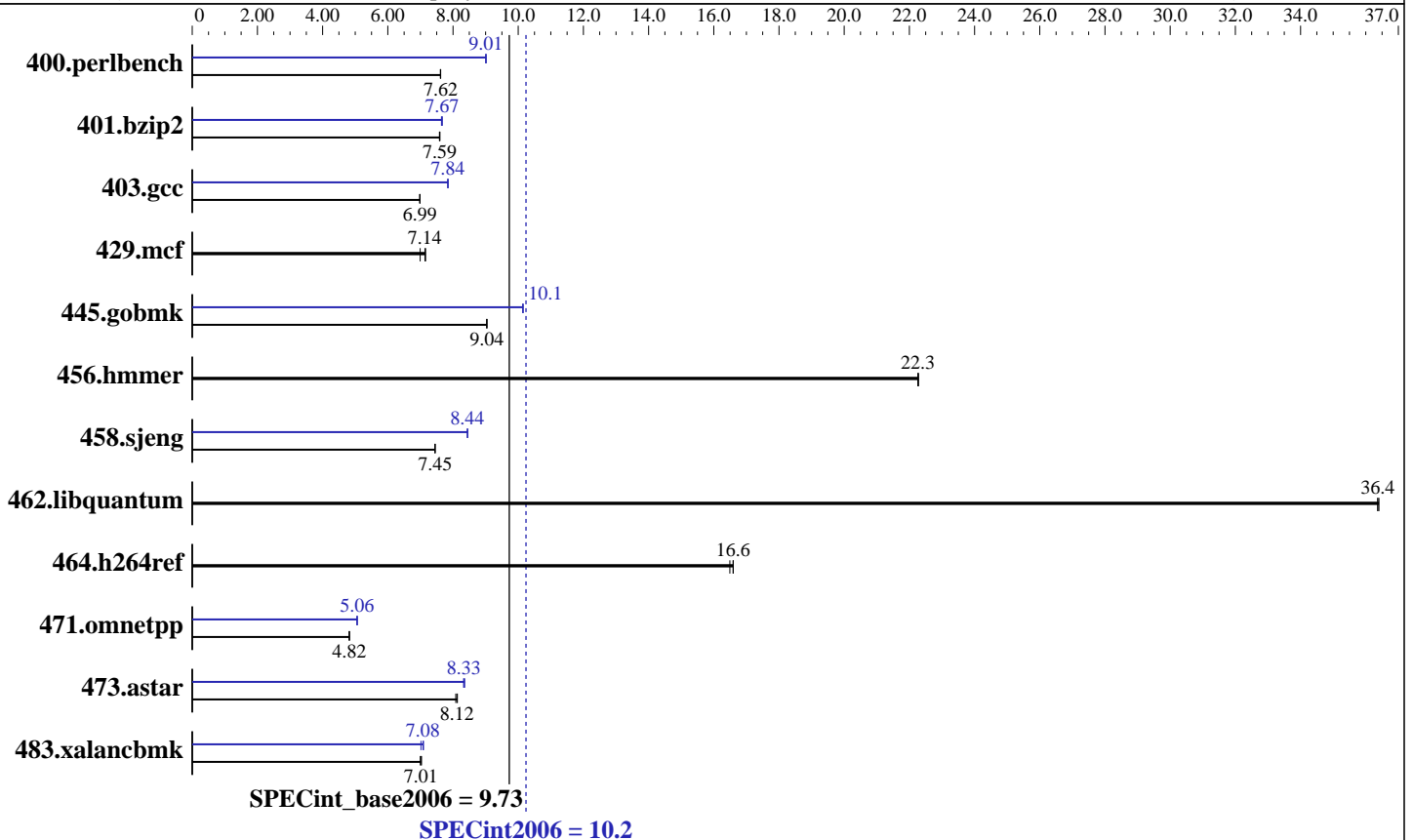
Test date: Nov-2006

Test sponsor: Hewlett-Packard Company

Hardware Availability: Sep-2006

Tested by: Hewlett-Packard Company

Software Availability: Nov-2006



### Hardware

CPU Name: Dual-Core Intel Itanium 2 9015  
 CPU Characteristics: 1.4GHz/12MB, 400MHz FSB  
 CPU MHz: 1400  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1-2 chips  
 Primary Cache: 16 KB I + 16 KB D on chip per core  
 Secondary Cache: 1 MB I + 256 KB D on chip per core  
 L3 Cache: 6 MB I+D on chip per core  
 Other Cache: None  
 Memory: 24 GB (12x2GB DIMMs)  
 Disk Subsystem: 146GB 10K RPM SCSI  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux AS release 4 (Update 4)  
 Compiler: Intel C++ Compiler for Itanium version 9.1 (Build 20060818)  
 Auto Parallel: No  
 File System: ext3  
 System State: Multi-user  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other Software: MicroQuill Smartheap 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	1284	7.61	1282	7.62	<u>1282</u>	<u>7.62</u>	<u>1085</u>	<u>9.01</u>	1084	9.02	1085	9.01
401.bzip2	1270	7.60	<u>1272</u>	<u>7.59</u>	1273	7.58	1259	7.67	<u>1259</u>	<u>7.67</u>	1262	7.64
403.gcc	<u>1152</u>	<u>6.99</u>	1152	6.99	1154	6.98	1026	7.85	<u>1027</u>	<u>7.84</u>	1027	7.84
429.mcf	<u>1278</u>	<u>7.14</u>	1304	6.99	1274	7.16	<u>1278</u>	<u>7.14</u>	1304	6.99	1274	7.16
445.gobmk	<u>1161</u>	<u>9.04</u>	1161	9.04	1161	9.03	1034	10.1	1034	10.1	<u>1034</u>	<u>10.1</u>
456.hmmer	419	22.3	419	22.3	<u>419</u>	<u>22.3</u>	419	22.3	419	22.3	<u>419</u>	<u>22.3</u>
458.sjeng	1624	7.45	1625	7.45	<u>1624</u>	<u>7.45</u>	<u>1433</u>	<u>8.44</u>	1433	8.44	1433	8.44
462.libquantum	<u>570</u>	<u>36.4</u>	570	36.4	569	36.4	<u>570</u>	<u>36.4</u>	570	36.4	569	36.4
464.h264ref	<u>1334</u>	<u>16.6</u>	1334	16.6	1342	16.5	<u>1334</u>	<u>16.6</u>	1334	16.6	1342	16.5
471.omnetpp	1298	4.81	<u>1296</u>	<u>4.82</u>	1296	4.82	1237	5.05	<u>1235</u>	<u>5.06</u>	1235	5.06
473.astar	868	8.08	<u>865</u>	<u>8.12</u>	863	8.13	843	8.33	<u>843</u>	<u>8.33</u>	840	8.36
483.xalancbmk	981	7.03	<u>984</u>	<u>7.01</u>	986	7.00	983	7.02	972	7.10	<u>975</u>	<u>7.08</u>

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

## Operating System Notes

stacksize set to unlimited prior to run

system was booted uniprocessor by setting "maxcpus=0"  
kernel parameter in elilo.conf

## Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

## Portability Flags

```

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_IA64
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

```

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## Portability Flags (Continued)

464.h264ref: -DSPEC\_CPU\_LP64  
471.omnetpp: -DSPEC\_CPU\_LP64  
473.astar: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-fast -IPF\_fp\_relaxed -ansi-alias

C++ benchmarks:

-fast -IPF\_fp\_relaxed -ansi-alias -Wl,-z,muldefs  
/opt/SmartHeap\_8/lib/libsmartheapC64.a  
/opt/SmartHeap\_8/lib/libsmartheap64.a

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof\_gen(pass 1) -prof\_use(pass 2) -fast -IPF\_fp\_relaxed  
-ansi-alias

401.bzip2: Same as 400.perlbench

403.gcc: Same as 400.perlbench

429.mcf: basepeak = yes

445.gobmk: Same as 400.perlbench

456.hmmmer: basepeak = yes

458.sjeng: Same as 400.perlbench

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -prof\_gen(pass 1) -prof\_use(pass 2) -fast -IPF\_fp\_relaxed  
-ansi-alias -Wl,-z,muldefs  
/opt/SmartHeap\_8/lib/libsmartheapC64.a  
/opt/SmartHeap\_8/lib/libsmartheap64.a

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## Peak Optimization Flags (Continued)

```
473.astar: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
          -ansi-alias -inline-factor=150 -Wl,-z,muldefs
          /opt/SmartHeap_8/lib/libsmartheapC64.a
          /opt/SmartHeap_8/lib/libsmartheap64.a
```

483.xalancbmk: Same as 471.omnetpp

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

[http://www.spec.org/cpu2006/flags/IPF\\_intel91\\_flags.html](http://www.spec.org/cpu2006/flags/IPF_intel91_flags.html)

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

[http://www.spec.org/cpu2006/flags/IPF\\_intel91\\_flags.xml](http://www.spec.org/cpu2006/flags/IPF_intel91_flags.xml)

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

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