SPEC® CINT2006 Result

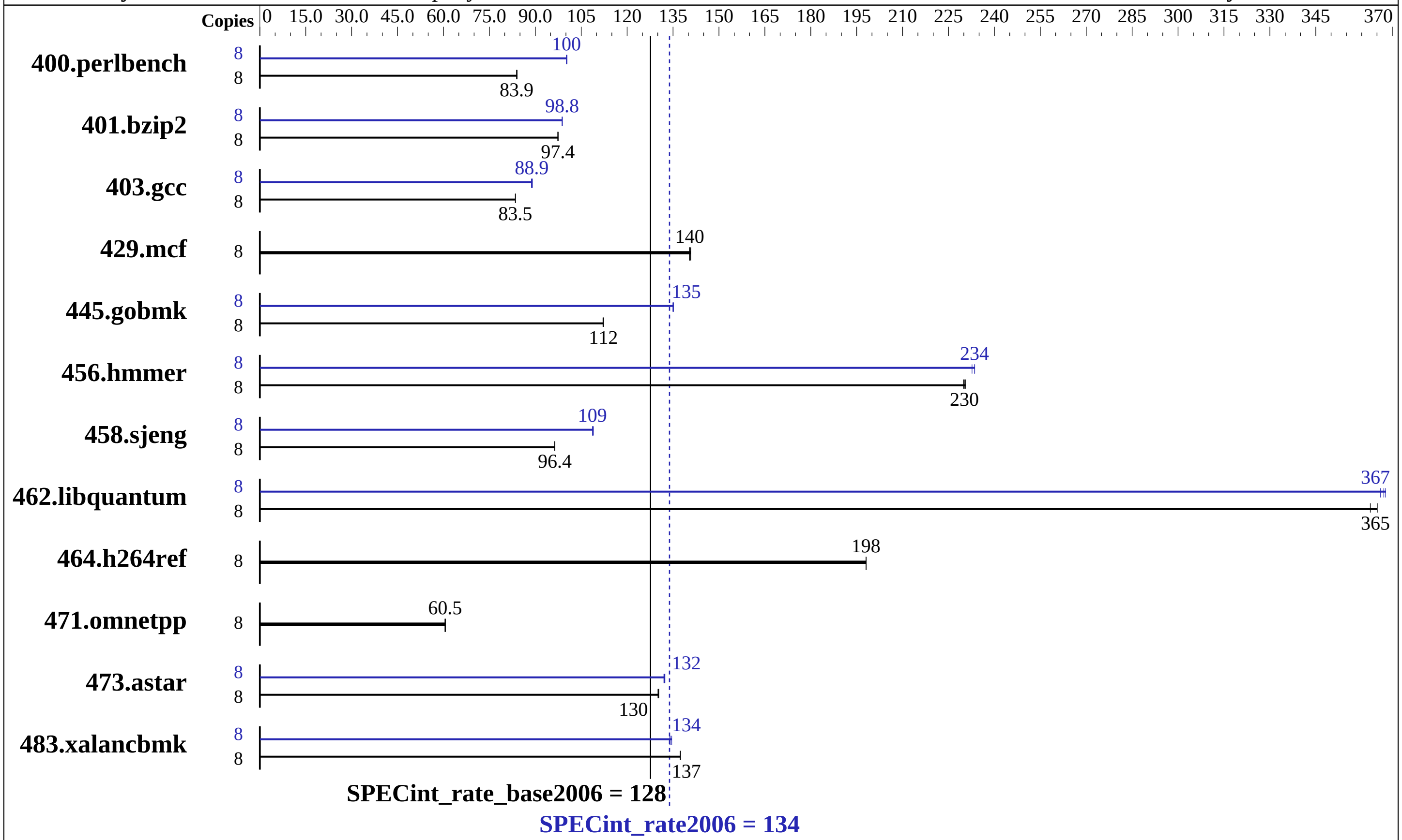
Hewlett-Packard Company

HP Integrity BL860c i2 (1.73 GHz/24MB
Quad-Core Intel Itanium 9350)

SPECint®_rate2006 = 134

SPECint_rate_base2006 = 128

CPU2006 license: 03		**Test date:**	Jan-2010
Test sponsor:	Hewlett-Packard Company	**Hardware Availability:**	May-2010
Tested by:	Hewlett-Packard Company	**Software Availability:**	Mar-2010



Hardware

CPU Name:	Intel Itanium 9350
CPU Characteristics:	Intel Turbo Boost Technology up to 1.86 GHz
CPU MHz:	1730
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1-2 chips
Primary Cache:	16 KB I + 16 KB D on chip per core
Secondary Cache:	512 KB I + 256 KB D on chip per core
L3 Cache:	6 MB I+D on chip per core
Other Cache:	None
Memory:	32 GB (16 x 2GB 2Rx8 PC3-10600R)
Disk Subsystem:	1 x 73 GB 15K RPM SAS
Other Hardware:	None

Software

Operating System:	HP-UX 11i v3 Data Center Operating Environment B.11.31.1003
Compiler:	HP C/aC++ Developer's Bundle C.11.31.05
Auto Parallel:	No
File System:	vxfs
System State:	Multi-user
Base Pointers:	32-bit
Peak Pointers:	32-bit
Other Software:	MallocNextGen B.11.31.0903.02

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Results Table

	Base							Peak						
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
400.perlbench	8	932	83.9	930	84.1	**932**	**83.9**	8	**780**	**100**	779	100	781	100
401.bzip2	8	**793**	**97.4**	793	97.3	792	97.5	8	**782**	**98.8**	781	98.9	782	98.7
403.gcc	8	771	83.5	772	83.5	**771**	**83.5**	8	**725**	**88.9**	723	89.1	726	88.7
429.mcf	8	520	140	518	141	**519**	**140**	8	520	140	518	141	**519**	**140**
445.gobmk	8	**748**	**112**	747	112	749	112	8	622	135	621	135	**621**	**135**
456.hmmer	8	324	231	**324**	**230**	325	230	8	321	233	320	234	**320**	**234**
458.sjeng	8	1004	96.4	1005	96.3	**1004**	**96.4**	8	**891**	**109**	891	109	888	109
462.libquantum	8	**454**	**365**	457	363	454	365	8	**451**	**367**	453	366	451	368
464.h264ref	8	894	198	**894**	**198**	894	198	8	894	198	**894**	**198**	894	198
471.omnetpp	8	827	60.5	**826**	**60.5**	824	60.7	8	827	60.5	**826**	**60.5**	824	60.7
473.astar	8	431	130	**431**	**130**	432	130	8	**425**	**132**	426	132	424	132
483.xalancbmk	8	**402**	**137**	402	137	402	137	8	412	134	**412**	**134**	410	135

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.
```

Operating System Notes

```
The following kernel tunables were set, in addition to the
defaults set by the Base Operating Environment:

filecache_max=25%
filecache_min=25%
maxdsiz=3221225472
fcache_fb_policy=1
base_pagesize=64
pagezero_daemon_enabled=0
vxfs_ifree_timelag=-1
maxssiz=0x17f00000
lcpu_attr=0
```

Platform Notes

```
Use of Hardware Threading by the OS was disabled via kctune
The following config file entry was used to bind
processes to cores using the HP-UX "mpsched" utility:
submit = let "MYCPU=\$SPECCOPYNUM*2" ;mpsched -c \$MYCPU $command
```

Base Compiler Invocation

C benchmarks:
`/opt/ansic/bin/cc -AC99`

C++ benchmarks:
`/opt/aCC/bin/aCC -Aa`

Base Portability Flags

400.perlbench: `-DSPEC_CPU_HPUX_IA64`
403.gcc: `-DSPEC_CPU_HPUX`
462.libquantum: `-DSPEC_CPU_HPUX`
483.xalancbmk: `-DSPEC_CPU_HPUX_IA64`

Base Optimization Flags

C benchmarks:
`+Ofaster +Otype_safety=ansi -Wl,-aarchive_shared -Wl,+pd,64M -Wl,+pi,64K -Wl,-N`

C++ benchmarks:
`+Ofaster +Otype_safety=ansi -Wl,-aarchive_shared -Wl,+pd,64M -Wl,+pi,64K -Wl,-N -lmallocng`

Peak Compiler Invocation

C benchmarks:
`/opt/ansic/bin/cc -AC99`

C++ benchmarks:
`/opt/aCC/bin/aCC -Aa`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_HPUX_IA64`
403.gcc: `-DSPEC_CPU_HPUX`
462.libquantum: `-DSPEC_CPU_HPUX`
483.xalancbmk: `-DSPEC_CPU_HPUX_IA64`

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Peak Optimization Flags

C benchmarks:

400.perlbench: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2) +Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M -Wl,-N

401.bzip2: Same as 400.perlbench

403.gcc: Same as 400.perlbench

429.mcf: basepeak = yes

445.gobmk: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2) +Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M +Odataprefetch=direct -Wl,-N

456.hmmer: Same as 400.perlbench

458.sjeng: Same as 445.gobmk

462.libquantum: Same as 400.perlbench

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: basepeak = yes

473.astar: +Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M +Onoparmsoverlap -Wl,-N -lmallocng

483.xalancbmk: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2) +Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M +Onoparmsoverlap -Wl,-N -lmallocng

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Itanium-HPUX-1003-flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Itanium-HPUX-1003-flags.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 06:46:15 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 March 2010.