SPEC® CINT2006 Result
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Hewlett-Packard Company
(Test Sponsor: Intel Corporation)

HP ENVY 15 Notebook PC 15t-j100 (Intel Core i5-4300M)

$SPECint^®\_rate2006 =$ 102

$SPECint\_rate\_base2006 =$ 97.0

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Nov-2015
Hardware Availability: May-2014
Software Availability: Aug-2015

Benchmark	Copies	Value
400.perlbench	4	80.0
400.perlbench	4	69.6
401.bzip2	4	47.2
401.bzip2	4	46.4
403.gcc	4	76.4
403.gcc	4	76.0
429.mcf	4	108
445.gobmk	4	68.4
445.gobmk	4	65.6
456.hmmer	4	178
456.hmmer	4	137
458.sjeng	4	68.0
458.sjeng	4	68.4
462.libquantum	4	1220
462.libquantum	4	1190
464.h264ref	4	110
471.omnetpp	4	58.8
471.omnetpp	4	54.8
473.astar	4	57.6
473.astar	4	54.8
483.xalancbmk	4	108

SPECint_rate_base2006 = 97.0

SPECint_rate2006 = 102

Hardware

CPU Name:	Intel Core i5-4300M
CPU Characteristics:	Intel Turbo Boost Technology up to 3.30 GHz
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip, 2 threads/core
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	3 MB I+D on chip per chip
Other Cache:	None
Memory:	8 GB (2 x 4 GB 2Rx4 PC3-12800U-11)
Disk Subsystem:	1 TB HDD, 5400 RPM
Other Hardware:	None

Software

Operating System:	Microsoft Windows 10 Pro 10.0.10240 N/A Build 10240
Compiler:	C/C++: Version 16.0.0.110 of Intel C++ Studio XE for Windows; Libraries: Version 18.00.30723 of Microsoft Visual Studio 2013
Auto Parallel:	No
File System:	NTFS
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	SmartHeap Library Version 11.0 from http://www.microquill.com/

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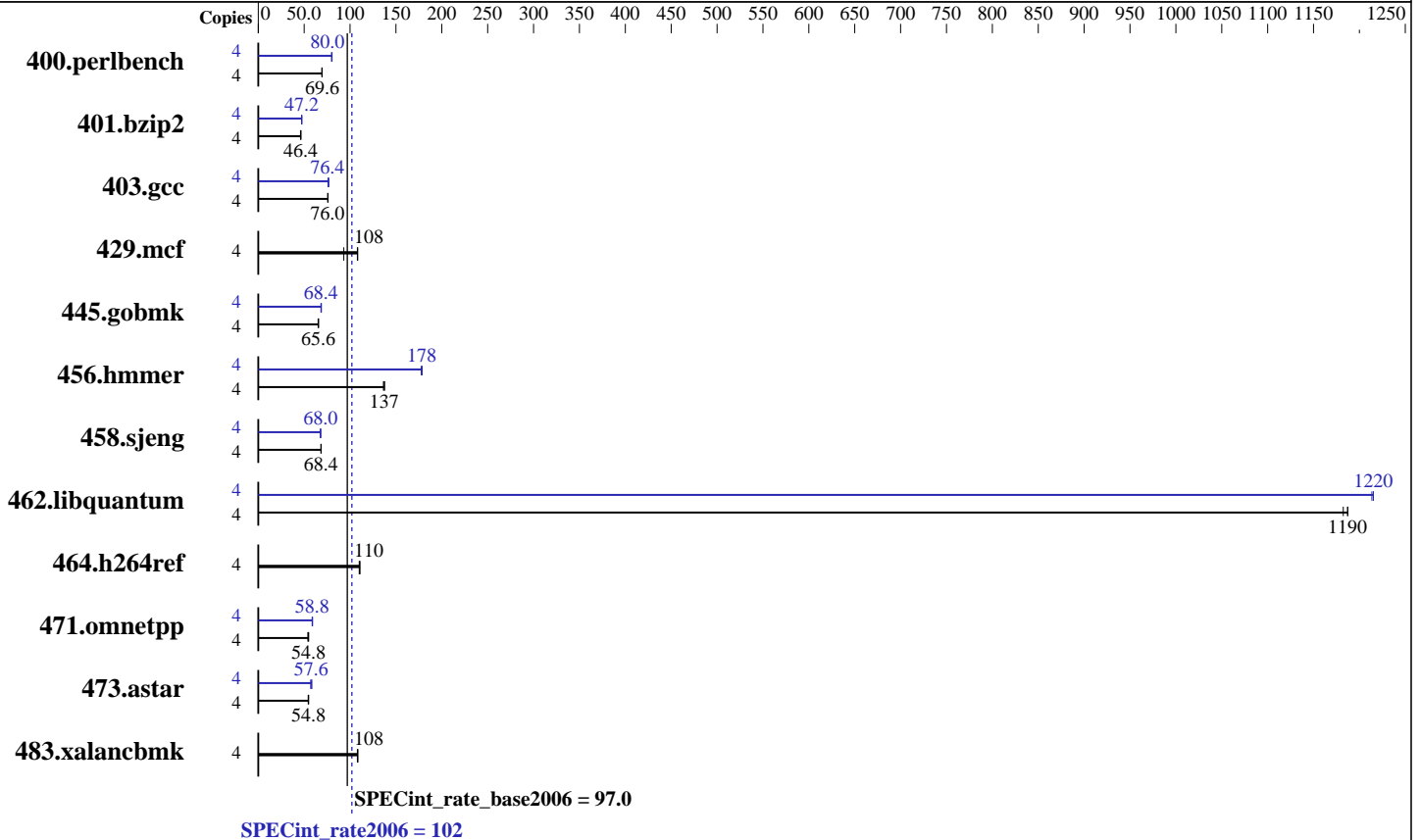
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Results Table

Benchmark	Base Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Peak Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	**562**	**69.6**	564	69.2	560	69.6	4	489	80.0	486	80.4	**488**	**80.0**
401.bzip2	4	834	46.4	**835**	**46.4**	839	46.0	4	820	47.2	814	47.6	**816**	**47.2**
403.gcc	4	423	76.0	425	75.6	**424**	**76.0**	4	424	76.0	**423**	**76.4**	418	76.8
429.mcf	4	**338**	**108**	337	108	391	93.2	4	**338**	**108**	337	108	391	93.2
445.gobmk	4	642	65.2	**641**	**65.6**	640	65.6	4	**612**	**68.4**	613	68.4	610	68.8
456.hmmer	4	274	136	**272**	**137**	271	138	4	210	178	209	178	**209**	**178**
458.sjeng	4	**708**	**68.4**	708	68.4	709	68.4	4	**713**	**68.0**	714	67.6	713	68.0
462.libquantum	4	69.8	1190	70.1	1180	**69.8**	**1190**	4	68.2	1220	**68.2**	**1220**	68.3	1210
464.h264ref	4	806	110	**802**	**110**	798	111	4	806	110	**802**	**110**	798	111
471.omnetpp	4	457	54.8	**457**	**54.8**	462	54.0	4	423	59.2	426	58.8	**425**	**58.8**
473.astar	4	515	54.4	511	54.8	**514**	**54.8**	4	492	57.2	480	58.4	**486**	**57.6**
483.xalancbmk	4	254	108	256	108	**255**	**108**	4	254	108	256	108	**255**	**108**

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

Compiler Invocation Notes

```
To compile these binaries, the Intel Compiler 16.0 was set up to
generate 32-bit binaries with the command:
"ipsxe-comp-vars.bat ia32 vs2010" (shortcut provided in the Intel(r)
Parallel Studio XE 2016 program folder)
```

Platform Notes

```
Sysinfo program C:\SPEC16.0/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on Clt9CB654C10CA6 Thu Nov 12 06:33:09 2015

This section contains SUT (System Under Test) info as seen by
some common utilities.  To remove or add to this section, see:
  http://www.spec.org/cpu2006/Docs/config.html#sysinfo

Trying 'systeminfo'
OS Name        : Microsoft Windows 10 Pro
OS Version     : 10.0.10240 N/A Build 10240
System Manufacturer: Hewlett-Packard
System Model   : HP ENVY 15 Notebook PC
Processor(s)   : 1 Processor(s) Installed.
    [01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~2601 Mhz
BIOS Version   : Insyde F.35, 10/3/2013
Total Physical Memory: 8,128 MB

Trying 'wmic cpu get /value'
DeviceID       : CPU0
```

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Platform Notes (Continued)

```
 L2CacheSize    : 256
 L3CacheSize    : 3072
 MaxClockSpeed : 2601
 Name           : Intel(R) Core(TM) i5-4300M CPU @ 2.60GHz
 NumberOfCores : 2
 NumberOfLogicalProcessors: 4

 (End of data from sysinfo program)
```

General Notes

```
 Binaries compiled on a system with 1x Intel Xeon E5-2699 v3 CPU
 + 64GB memory using Windows 8.1 Enterprise 64-bit
```

Base Compiler Invocation

C benchmarks:
```
    icl -Qvc12 -Qstd=c99
```

C++ benchmarks:
```
    icl -Qvc12
```

Base Portability Flags

```
       403.gcc: -DSPEC_CPU_WIN32
    464.h264ref: -DWIN32
  483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword
```

Base Optimization Flags

C benchmarks:
```
    -QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F256000000
```

C++ benchmarks:
```
    -QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
    /F256000000 shlW32M.lib            -link /FORCE:MULTIPLE
```

Base Other Flags

C benchmarks:

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

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Peak Compiler Invocation

C benchmarks (except as noted below):
```
icl -Qvc12 -Qstd=c99
```

C++ benchmarks (except as noted below):
```
icl -Qvc12
```

Peak Portability Flags

```
       403.gcc: -DSPEC_CPU_WIN32
    456.hmmer: -DSPEC_CPU_P64
     458.sjeng: -DSPEC_CPU_P64
 462.libquantum: -DSPEC_CPU_P64
   464.h264ref: -DWIN32
      473.astar: -DSPEC_CPU_P64
 483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword
```

Peak Optimization Flags

C benchmarks:

```
  400.perlbench: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
                 /F256000000 shlW32M.lib          -link /FORCE:MULTIPLE

     401.bzip2: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias
                 /F256000000

      403.gcc: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F256000000

      429.mcf: basepeak = yes

    445.gobmk: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                 -Qipo -O2 -Qprec-div- -Qansi-alias /F256000000

   464.h264ref: basepeak = yes
```

C++ benchmarks:

```
   471.omnetpp: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                 -Qipo -O3 -Qprec-div- -Qansi-alias
                 -Qopt-ra-region-strategy=block /F256000000 shlW32M.lib
                        -link /FORCE:MULTIPLE
```

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Peak Optimization Flags (Continued)

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-ic16.0-official-windows.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-windows.xml`