SPEC® CFP2006 Result

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Hewlett-Packard Company

(Test Sponsor: Intel Corporation)

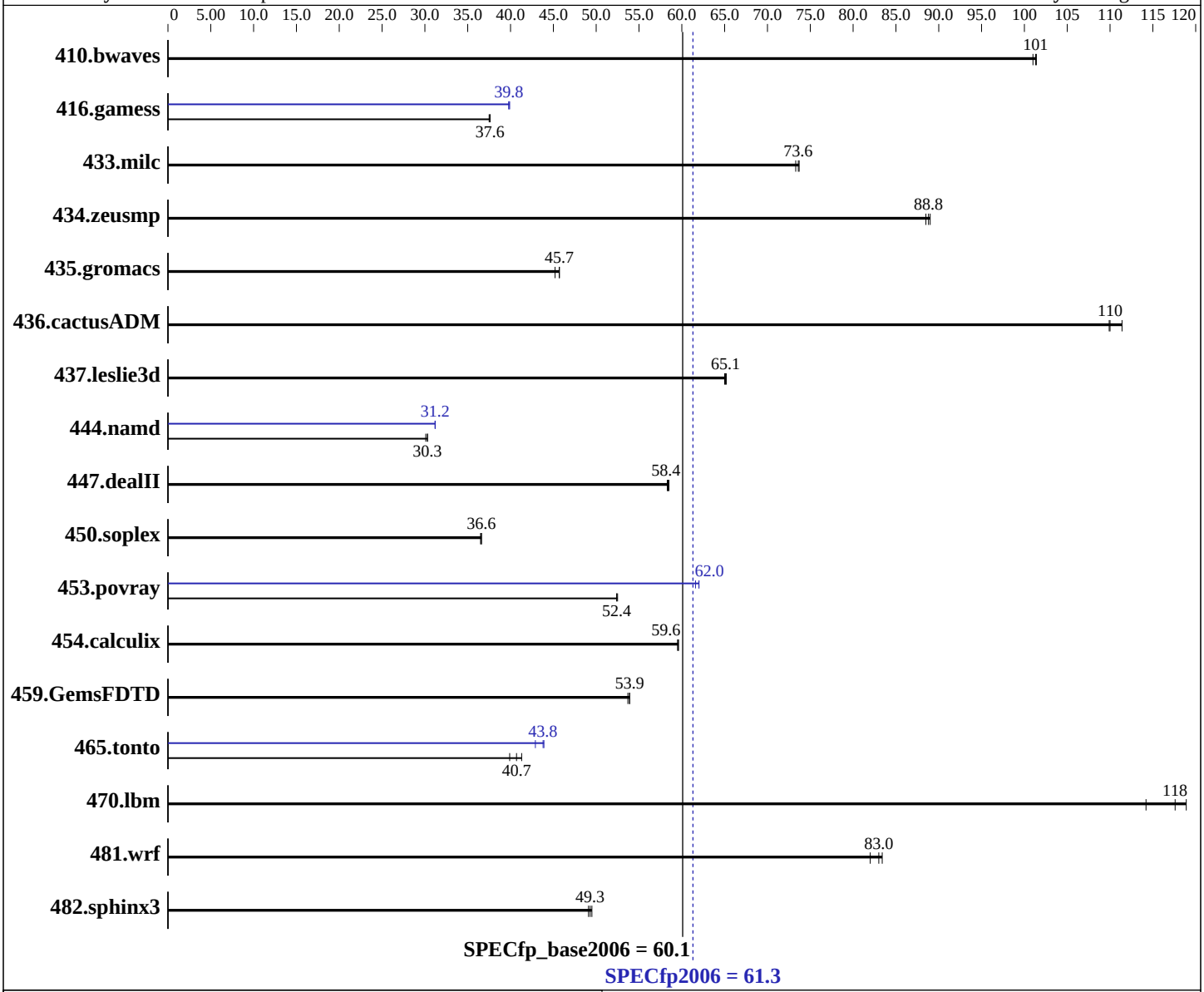
HP ENVY 15 Notebook PC 15t-j100 (Intel Core i5-4340M)

SPECfp®2006 = 61.3

SPECfp_base2006 = 60.1

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

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



Hardware

CPU Name:	Intel Core i5-4340M
CPU Characteristics:	Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz:	2900
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

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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; Fortran: Version 16.0.0.110 of Intel Fortran Studio XE for Windows; Libraries: Version 18.00.30723 of Microsoft Visual Studio 2013
Auto Parallel:	Yes

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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

File System:	NTFS
System State:	Default
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	SmartHeap Library Version 11.0 from http://www.microquill.com/

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	135	101	**134**	**101**	134	101	135	101	**134**	**101**	134	101
416.gamess	522	37.5	521	37.6	**521**	**37.6**	**492**	**39.8**	492	39.8	491	39.9
433.milc	125	73.3	125	73.7	**125**	**73.6**	125	73.3	125	73.7	**125**	**73.6**
434.zeusmp	103	88.5	**103**	**88.8**	102	89.0	103	88.5	**103**	**88.8**	102	89.0
435.gromacs	158	45.2	**156**	**45.7**	156	45.7	158	45.2	**156**	**45.7**	156	45.7
436.cactusADM	109	110	107	111	**109**	**110**	109	110	107	111	**109**	**110**
437.leslie3d	144	65.2	**145**	**65.1**	145	65.0	144	65.2	**145**	**65.1**	145	65.0
444.namd	**264**	**30.3**	266	30.1	264	30.3	257	31.2	**257**	**31.2**	257	31.2
447.dealII	195	58.5	196	58.3	**196**	**58.4**	195	58.5	196	58.3	**196**	**58.4**
450.soplex	229	36.5	**228**	**36.6**	228	36.6	229	36.5	**228**	**36.6**	228	36.6
453.povray	101	52.5	**102**	**52.4**	102	52.4	86.4	61.6	85.8	62.0	**85.8**	**62.0**
454.calculix	139	59.6	139	59.5	**139**	**59.6**	139	59.6	139	59.5	**139**	**59.6**
459.GemsFDTD	197	53.9	**197**	**53.9**	197	53.7	197	53.9	**197**	**53.9**	197	53.7
465.tonto	247	39.9	**242**	**40.7**	238	41.3	230	42.9	224	43.9	**225**	**43.8**
470.lbm	**117**	**118**	116	119	120	114	**117**	**118**	116	119	120	114
481.wrf	**135**	**83.0**	134	83.4	136	82.0	**135**	**83.0**	134	83.4	136	82.0
482.sphinx3	394	49.5	397	49.1	**396**	**49.3**	394	49.5	397	49.1	**396**	**49.3**

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 64-bit binaries with the command:
"psxevars.bat intel64" (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 CltA01D48C0E889 Wed Nov 11 22:53:29 2015

This section contains SUT (System Under Test) info as seen by
some common utilities.  To remove or add to this section, see:
```

Continued on next page

Platform Notes (Continued)

```
  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 ~1200 Mhz
 BIOS Version  : Insyde F.36, 10/24/2013
 Total Physical Memory: 8,128 MB

 Trying 'wmic cpu get /value'
 DeviceID      : CPU0
 L2CacheSize   : 256
 L3CacheSize   : 3072
 MaxClockSpeed : 2901
 Name          : Intel(R) Core(TM) i5-4340M CPU @ 2.90GHz
 NumberOfCores : 2
 NumberOfLogicalProcessors: 4

 (End of data from sysinfo program)
```

General Notes

```
450.soplex (base): "getline_test" src.alt was used.

447.dealII (base): "max_prototype" src.alt was used.
447.dealII (base): "cxx11_make_pair" src.alt was used.

450.soplex (base): "getline_test" src.alt was used.

447.dealII (base): "max_prototype" src.alt was used.
447.dealII (base): "cxx11_make_pair" src.alt was used.

 OMP_NUM_THREADS set to number of processors cores
 KMP_AFFINITY set to granularity=fine,scatter
 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
```

Continued on next page

Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc12 -Qstd=c99 ifort

Base Portability Flags

410.bwaves: -DSPEC_CPU_P64
416.gamess: -DSPEC_CPU_P64
433.milc: -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -DSPEC_CPU_P64
436.cactusADM: -DSPEC_CPU_P64 -names:lowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -DSPEC_CPU_P64 -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG -DSPEC_CPU_BOOST_CONFIG_MSC_VER -DSPEC_NEED_ALGORITHM
450.soplex: -DSPEC_CPU_P64 -DSPEC_GETLINE_TEST
453.povray: -DSPEC_CPU_P64
454.calculix: -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER -names:lowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -DSPEC_CPU_P64

Base Optimization Flags

C benchmarks:
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch /F1000000000

C++ benchmarks:
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch -Qcxx-features /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch /F1000000000

Benchmarks using both Fortran and C:
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch /F1000000000

Peak Compiler Invocation

C benchmarks:
icl -Qvc12 -Qstd=c99

C++ benchmarks:
icl -Qvc12

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc12 -Qstd=c99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Oa /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F1000000000

Continued on next page

Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 -Qauto -Qinline-calloc /F1000000000

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

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

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

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