



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®_rate2006 = 94.4

SPECfp_rate_base2006 = 91.4

CPU2006 license: 13

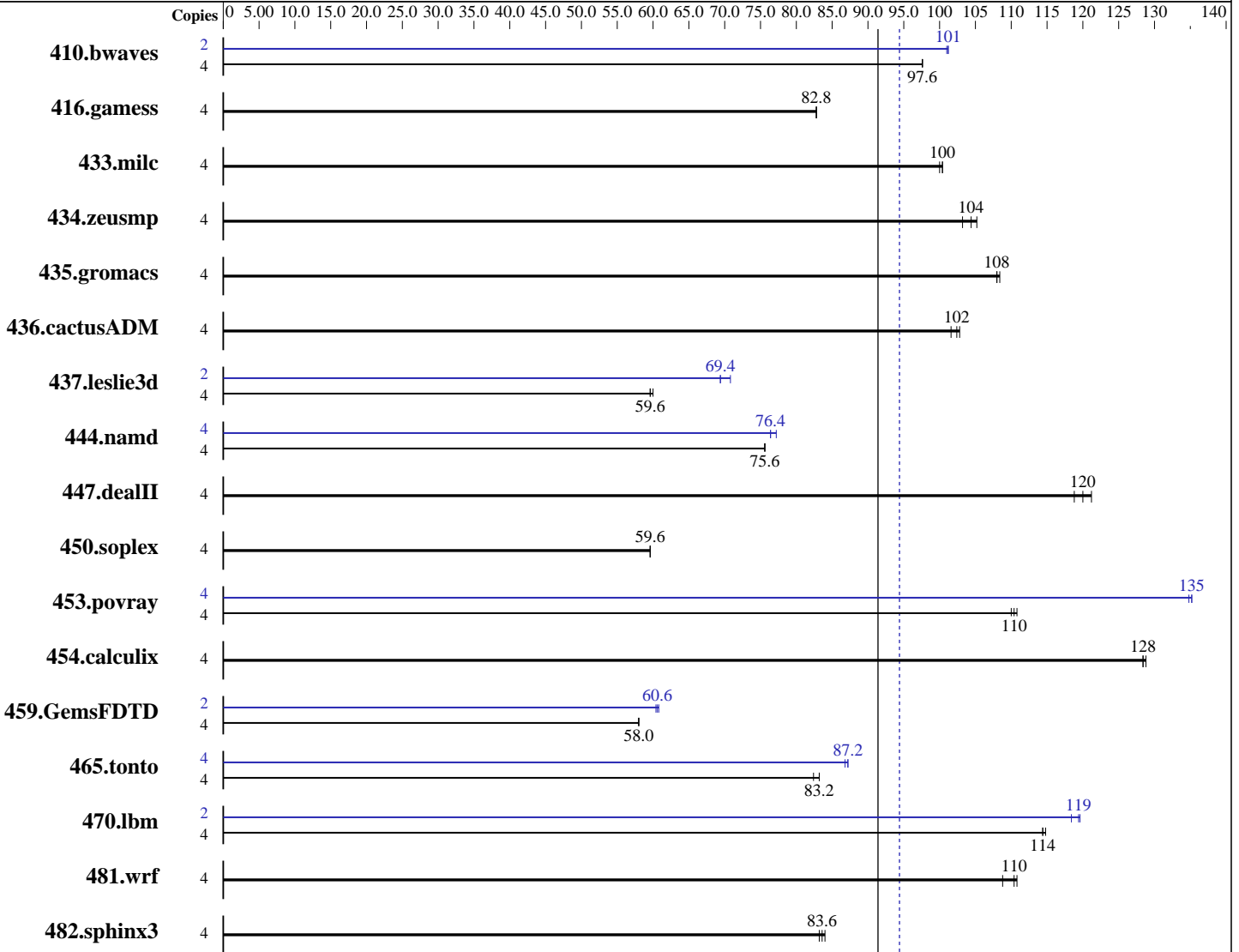
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Nov-2015

Hardware Availability: May-2014

Software Availability: Aug-2015



SPECfp_rate_base2006 = 91.4

SPECfp_rate2006 = 94.4

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: No

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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							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	557	97.6	557	97.6	557	97.6	2	269	101	269	101	269	101
416.gamess	4	946	82.8	946	82.8	945	82.8	4	946	82.8	946	82.8	945	82.8
433.milc	4	366	100	367	100	366	100	4	366	100	367	100	366	100
434.zeusmp	4	349	104	346	105	352	103	4	349	104	346	105	352	103
435.gromacs	4	264	108	264	108	264	108	4	264	108	264	108	264	108
436.cactusADM	4	470	102	466	102	466	103	4	470	102	466	102	466	103
437.leslie3d	4	628	60.0	630	59.6	632	59.6	2	271	69.4	266	70.8	271	69.4
444.namd	4	425	75.6	424	75.6	424	75.6	4	420	76.4	420	76.4	417	77.2
447.dealII	4	385	119	382	120	378	121	4	385	119	382	120	378	121
450.soplex	4	560	59.6	558	59.6	559	59.6	4	560	59.6	558	59.6	559	59.6
453.povray	4	193	110	192	111	194	110	4	157	135	158	135	158	135
454.calculix	4	257	128	257	128	256	129	4	257	128	257	128	256	129
459.GemsFDTD	4	731	58.0	731	58.0	730	58.0	2	351	60.4	350	60.6	349	60.8
465.tonto	4	473	83.2	479	82.4	474	83.2	4	452	87.2	453	86.8	452	87.2
470.lbm	4	480	115	480	114	480	114	2	230	119	230	120	232	118
481.wrf	4	411	109	403	111	405	110	4	411	109	403	111	405	110
482.sphinx3	4	930	84.0	933	83.6	937	83.2	4	930	84.0	933	83.6	937	83.2

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)

Submit Notes

Processes were bound to specific processors using the start command with the /affinity switch. The config file option 'submit' was used to generate the affinity mask for each process.



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Platform Notes

Sysinfo program C:\SPEC16.0/Docs/sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on CltA01D48C0E889 Thu Nov 12 14:02:10 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 ~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.

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

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Base Compiler Invocation (Continued)

C++ benchmarks:

icl -Qvc12

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- -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000 shlw64M.lib -link /FORCE:MULTIPLE

C++ benchmarks:

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qcxx-features -Qauto-ilp32 /F1000000000 shlw64M.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
/F1000000000 shlw64M.lib -link /FORCE:MULTIPLE

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

`-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000 sh1W64M.lib -link /FORCE:MULTIPLE`

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: `-QxCORE-AVX2 -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qansi-alias -Qopt-prefetch -Qauto-ilp32
/F1000000000 sh1W64M.lib -link /FORCE:MULTIPLE`

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 -Qauto-ilp32 /F1000000000
sh1W64M.lib -link /FORCE:MULTIPLE`

447.dealIII: basepeak = yes

450.soplex: basepeak = yes

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Peak Optimization Flags (Continued)

```
453.povray: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32
/F1000000000 sh1W64M.lib -link /FORCE:MULTIPLE
```

Fortran benchmarks:

```
410.bwaves: -QxCORE-AVX2 -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qansi-alias -Qopt-prefetch /F1000000000
sh1W64M.lib -link /FORCE:MULTIPLE
```

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: Same as 410.bwaves

459.GemsFDTD: Same as 410.bwaves

```
465.tonto: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll4 -Qauto /F1000000000
sh1W64M.lib -link /FORCE:MULTIPLE
```

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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