SPEC® CFP2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

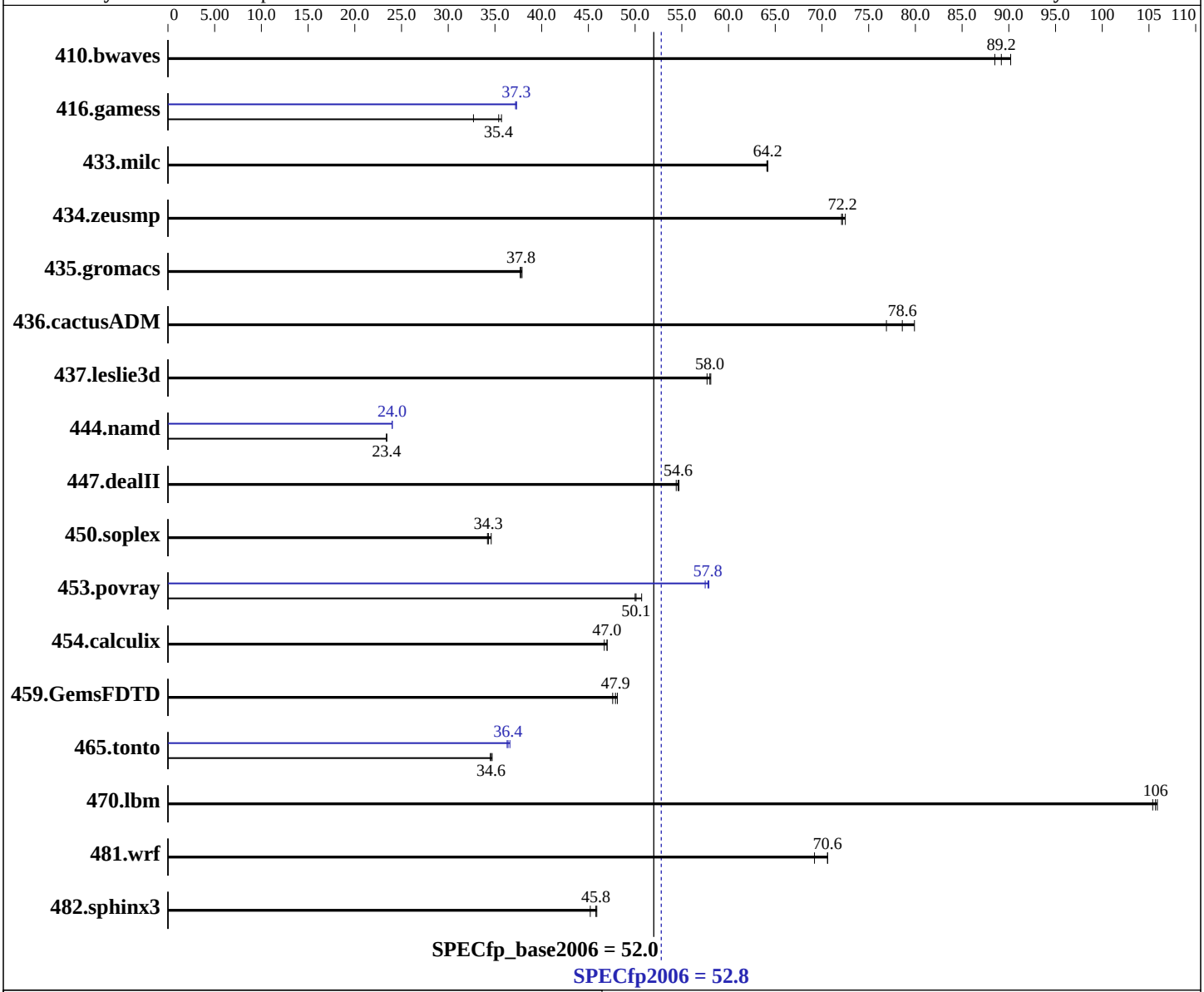
ASUS H97M-PLUS Motherboard (Intel Pentium G3250)

SPECfp®2006 = 52.8

SPECfp_base2006 = 52.0

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

Test date: Dec-2014
Hardware Availability: Jul-2014
Software Availability: Oct-2013



Hardware

CPU Name:	Intel Pentium G3250
CPU Characteristics:	
CPU MHz:	3200
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
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 8.1 Pro 6.3.9600 N/A Build 9600
Compiler:	C/C++: Version 14.0.1.139 of Intel C++ Studio XE for Windows; Fortran: Version 14.0.1.139 of Intel Fortran Studio XE for Windows; Libraries: Version 16.00.30319.01 of Microsoft Visual Studio 2010 Professional SP1
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, running at 1333 MHz and CL9)
Disk Subsystem: 1 TB Seagate SATA, 7200RPM
Other Hardware: None

File System: NTFS
System State: Default
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: SmartHeap Library Version 10.0 from http://www.microquill.com/

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	154	88.5	151	90.2	**152**	**89.2**	154	88.5	151	90.2	**152**	**89.2**
416.gamess	599	32.7	**553**	**35.4**	549	35.7	524	37.3	**526**	**37.3**	527	37.2
433.milc	143	64.1	143	64.2	**143**	**64.2**	143	64.1	143	64.2	**143**	**64.2**
434.zeusmp	126	72.5	126	72.1	**126**	**72.2**	126	72.5	126	72.1	**126**	**72.2**
435.gromacs	**189**	**37.8**	190	37.7	188	37.9	**189**	**37.8**	190	37.7	188	37.9
436.cactusADM	150	79.9	**152**	**78.6**	155	76.9	150	79.9	**152**	**78.6**	155	76.9
437.leslie3d	**162**	**58.0**	162	58.1	163	57.7	**162**	**58.0**	162	58.1	163	57.7
444.namd	343	23.4	343	23.4	**343**	**23.4**	**334**	**24.0**	334	24.0	334	24.0
447.dealII	210	54.4	**209**	**54.6**	209	54.7	210	54.4	**209**	**54.6**	209	54.7
450.soplex	244	34.2	**243**	**34.3**	241	34.6	244	34.2	**243**	**34.3**	241	34.6
453.povray	**106**	**50.1**	107	50.0	105	50.7	**92.0**	**57.8**	91.9	57.9	92.5	57.5
454.calculix	176	47.0	**176**	**47.0**	177	46.7	176	47.0	**176**	**47.0**	177	46.7
459.GemsFDTD	**221**	**47.9**	223	47.6	220	48.1	**221**	**47.9**	223	47.6	220	48.1
465.tonto	**285**	**34.6**	284	34.7	286	34.5	**270**	**36.4**	269	36.6	271	36.3
470.lbm	**130**	**106**	130	106	130	105	**130**	**106**	130	106	130	105
481.wrf	158	70.6	161	69.2	**158**	**70.6**	158	70.6	161	69.2	**158**	**70.6**
482.sphinx3	431	45.2	**426**	**45.8**	425	45.9	431	45.2	**426**	**45.8**	425	45.9

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 14.0 was set up to
generate 64-bit binaries with the command:
"ipsxe-comp-vars.bat intel64 vs2010" (shortcut provided in the Intel(r)
Parallel Studio XE 2013 program folder)
```

Platform Notes

```
Sysinfo program C:\SPEC14.0/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on Clt7824AF406A63 Tue Dec  2 19:40:12 2014

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 8.1 Pro
  OS Version     : 6.3.9600 N/A Build 9600
  System Manufacturer: ASUS
  System Model   : All Series
  Processor(s)   : 1 Processor(s) Installed.
       [01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~3200 Mhz
  BIOS Version   : American Megatrends Inc. 2001, 6/13/2014
  Total Physical Memory: 8,069 MB

  Trying 'wmic cpu get /value'
  DeviceID       : CPU0
  L2CacheSize    : 512
  L3CacheSize    : 3072
  MaxClockSpeed : 3200
  Name           : Intel(R) Pentium(R) CPU G3250 @ 3.20GHz
  NumberOfCores : 2
  NumberOfLogicalProcessors: 2

  (End of data from sysinfo program)
```

Component Notes

```
Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply
```

General Notes

```
OMP_NUM_THREADS set to number of processors cores
KMP_AFFINITY set to granularity=fine,scatter
Binaries compiled on a system with 1x Intel Core i7-860 CPU
+ 8GB memory using Windows 7 Enterprise 64-bit
```

Base Compiler Invocation

C benchmarks:
```
icl -Qvc10 -Qstd=c99
```

C++ benchmarks:
```
icl -Qvc10
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qvc10 -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
-Qoption,cpp,--ms_incompat_treatment_of_commas_in_macros
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_NEED_INVHYP -DNEED_INVHYP
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:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch -Qauto-ilp32 /F1000000000

C++ benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch -Qcxx-features -Qauto-ilp32 /F1000000000 shlW64M.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch /F1000000000

Benchmarks using both Fortran and C:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch -Qauto-ilp32 /F1000000000

Peak Compiler Invocation

C benchmarks:
icl -Qvc10 -Qstd=c99

C++ benchmarks:
icl -Qvc10

Continued on next page

Peak Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc10 -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: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Oa -Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias -Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F1000000000

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

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Peak Optimization Flags (Continued)

459.GemsFDTD: `basepeak = yes`

465.tonto: `-QxSSE4.2`(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-ic14.0-official-windows.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic14.0-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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