



SPEC® CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

SPECfp®2006 = 58.7

ASUS Q170M-C motherboard (Intel Celeron G3900)

SPECfp_base2006 = 57.9

CPU2006 license: 13

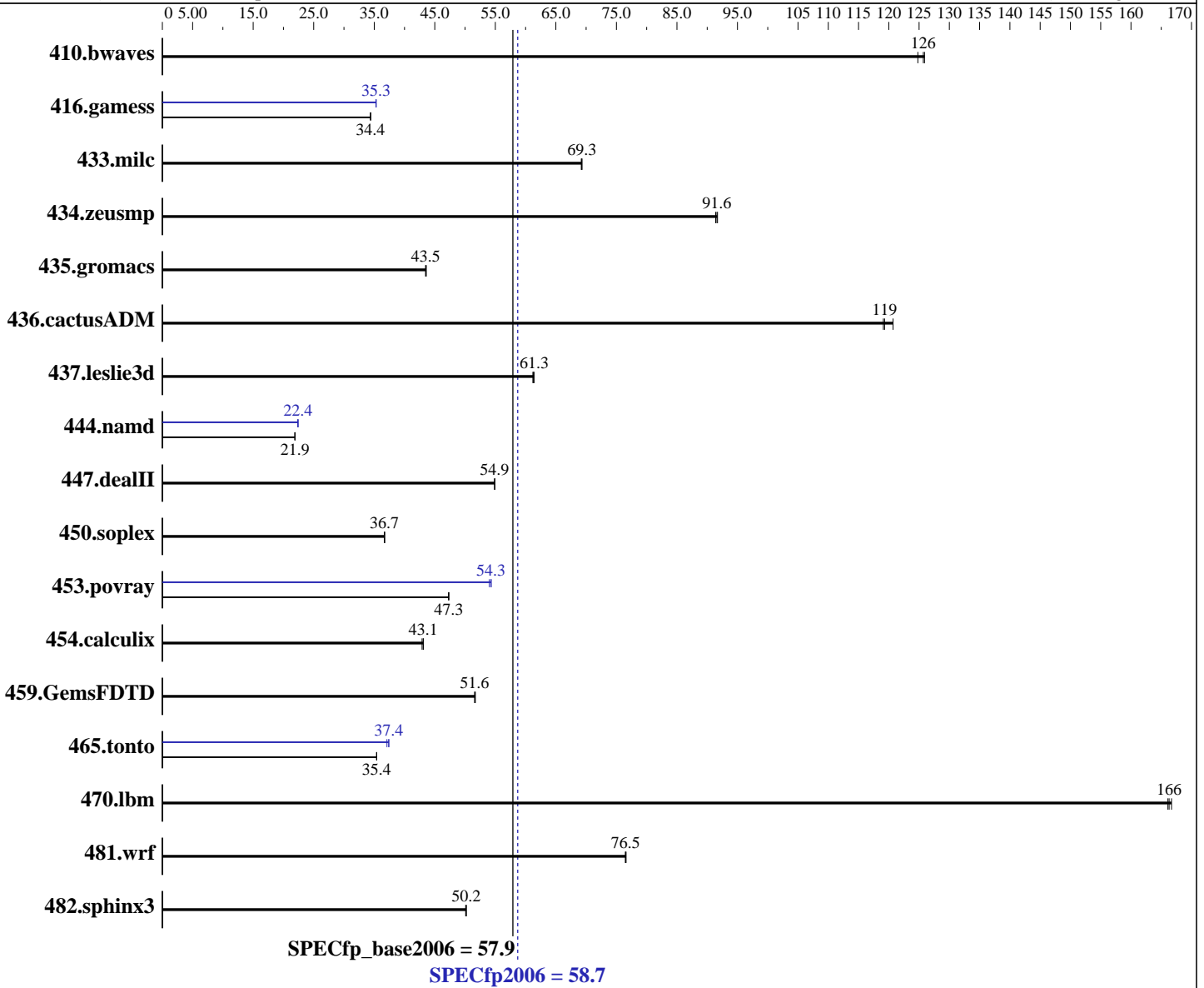
Test date: Apr-2016

Test sponsor: Intel Corporation

Hardware Availability: Dec-2015

Tested by: Intel Corporation

Software Availability: Aug-2015



Hardware

CPU Name: Intel Celeron G3900
 CPU Characteristics:
 CPU MHz: 2800
 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

Continued on next page

Software

Operating System: Microsoft Windows 7 Professional 6.1.7601 Service Pack 1 Build 7601
 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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

SPECfp2006 = **58.7**

ASUS Q170M-C motherboard (Intel Celeron G3900)

SPECfp_base2006 = **57.9**

CPU2006 license: 13

Test date: Apr-2016

Test sponsor: Intel Corporation

Hardware Availability: Dec-2015

Tested by: Intel Corporation

Software Availability: Aug-2015

L3 Cache: 2 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 2Rx4 PC4-2133P-U)
Disk Subsystem: 1 TB Seagate Barracuda HDD, 7200 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	109	125	108	126	108	126	109	125	108	126	108	126
416.gamess	569	34.4	569	34.4	569	34.4	555	35.3	555	35.3	555	35.3
433.milc	133	69.3	133	69.2	132	69.3	133	69.3	133	69.2	132	69.3
434.zeusmp	99.2	91.7	99.3	91.6	99.6	91.4	99.2	91.7	99.3	91.6	99.6	91.4
435.gromacs	164	43.5	164	43.5	164	43.6	164	43.5	164	43.5	164	43.6
436.cactusADM	100	119	99.0	121	100	119	100	119	99.0	121	100	119
437.leslie3d	153	61.3	153	61.4	154	61.2	153	61.3	153	61.4	154	61.2
444.namd	367	21.9	367	21.9	367	21.9	358	22.4	358	22.4	358	22.4
447.dealII	208	54.9	208	54.9	208	54.9	208	54.9	208	54.9	208	54.9
450.soplex	227	36.7	227	36.7	227	36.7	227	36.7	227	36.7	227	36.7
453.povray	113	47.3	113	47.3	112	47.3	98.6	54.0	98.0	54.3	98.0	54.3
454.calculix	192	43.1	192	43.1	192	42.9	192	43.1	192	43.1	192	42.9
459.GemsFDTD	206	51.6	205	51.7	206	51.6	206	51.6	205	51.7	206	51.6
465.tonto	278	35.4	278	35.4	278	35.4	263	37.4	265	37.1	263	37.4
470.lbm	82.7	166	82.6	166	82.4	167	82.7	166	82.6	166	82.4	167
481.wrf	146	76.5	146	76.6	146	76.5	146	76.5	146	76.6	146	76.5
482.sphinx3	388	50.2	389	50.1	388	50.2	388	50.2	389	50.1	388	50.2

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)

Platform Notes

Sysinfo program C:\SPEC16.0\Docs\sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on Clt2C56DC769A36 Sat Apr 23 09:10:10 2016

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



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

SPECfp2006 = 58.7

ASUS Q170M-C motherboard (Intel Celeron G3900)

SPECfp_base2006 = 57.9

CPU2006 license: 13

Test date: Apr-2016

Test sponsor: Intel Corporation

Hardware Availability: Dec-2015

Tested by: Intel Corporation

Software Availability: Aug-2015

Platform Notes (Continued)

<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

Trying 'systeminfo'

```
OS Name       : Microsoft Windows 7 Professional
OS Version    : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: System manufacturer
System Model   : System Product Name
Processor(s)  : 1 Processor(s) Installed.
               [01]: Intel64 Family 6 Model 94 Stepping 3 GenuineIntel ~2800 Mhz
BIOS Version  : American Megatrends Inc. 0704, 1/12/2016
Total Physical Memory: 8,070 MB
```

Trying 'wmic cpu get /value'

```
DeviceID      : CPU0
L2CacheSize   : 512
L3CacheSize   : 2048
MaxClockSpeed : 2800
Name          : Intel(R) Celeron(R) CPU G3900 @ 2.80GHz
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

```
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
```



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

SPECfp2006 = 58.7

ASUS Q170M-C motherboard (Intel Celeron G3900)

SPECfp_base2006 = 57.9

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

Test date: Apr-2016
Hardware Availability: Dec-2015
Software Availability: Aug-2015

Base 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

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:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch /F1000000000
C++ benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch -Qcxx-features /F1000000000 shlw64M.lib
-link /FORCE:MULTIPLE
Fortran benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch /F1000000000

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

SPECfp2006 = 58.7

ASUS Q170M-C motherboard (Intel Celeron G3900)

SPECfp_base2006 = 57.9

CPU2006 license: 13

Test date: Apr-2016

Test sponsor: Intel Corporation

Hardware Availability: Dec-2015

Tested by: Intel Corporation

Software Availability: Aug-2015

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

-QxSSE4.2 -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: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Oa /F1000000000 sh1W64M.lib
-link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: basepeak = yes

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

SPECfp2006 = 58.7

ASUS Q170M-C motherboard (Intel Celeron G3900)

SPECfp_base2006 = 57.9

CPU2006 license: 13

Test date: Apr-2016

Test sponsor: Intel Corporation

Hardware Availability: Dec-2015

Tested by: Intel Corporation

Software Availability: Aug-2015

Peak Optimization Flags (Continued)

```
453.povray: -QxSSE4.2(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: -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

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-alloc
           /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>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.2.
Report generated on Tue Jul 12 11:02:37 2016 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 12 July 2016.