## SPEC® CFP2006 Result

**ASUSTeK Computer Inc.**
(Test Sponsor: Intel Corporation)

ASUS Q170M-C motherboard (Intel Core i3-6300T)

<table>
<thead>
<tr>
<th>SPECfp®2006</th>
<th>SPECfp_base2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>78.1</td>
<td>76.9</td>
</tr>
</tbody>
</table>

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

### Hardware

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Core i3-6300T</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td></td>
</tr>
<tr>
<td>CPU MHz</td>
<td>3300</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled</td>
<td>2 cores, 1 chip, 2 cores/chip, 2 threads/core</td>
</tr>
<tr>
<td>CPU(s) orderable</td>
<td>1 chip</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>256 KB I+D on chip per core</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Microsoft Windows 7 Professional</td>
</tr>
<tr>
<td></td>
<td>6.1.7601 Service Pack 1 Build 7601</td>
</tr>
<tr>
<td>Auto Parallel</td>
<td>Yes</td>
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</table>

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

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L3 Cache: 4 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

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<tbody>
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<td>273</td>
<td>71.5</td>
<td>272</td>
<td>71.6</td>
</tr>
</tbody>
</table>

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 CltF832E4885654 Tue Apr 26 19:29:52 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

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)

ASUS Q170M-C motherboard (Intel Core i3-6300T)

SPECfp2006 = 78.1  
SPECfp_base2006 = 76.9

CPU2006 license: 13  
Test sponsor: Intel Corporation  
Test date: Apr-2016  
Hardware Availability: Sep-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 ~3301 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   : 4096
MaxClockSpeed : 3301
Name          : Intel(R) Core(TM) i3-6300T CPU @ 3.30GHz
NumberOfCores : 2
NumberOfLogicalProcessors: 4

(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): "cxxll_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): "cxxll_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

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ASUS Q170M-C motherboard (Intel Core i3-6300T)

SPECfp2006 = 78.1
SPECfp_base2006 = 76.9

CPU2006 license: 13
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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 -DSPEC_CPU_WINDOWS_ICL
450.soplex: -DSPEC_CPU_P64 -DSPEC_GETLINE_TEST
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER -names:lowercase
459.GemsFDTD: -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER -names:lowercase
465.tonto: -DSPEC_CPU_P64
466.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`

Continued on next page
Base Optimization Flags (Continued)

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
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ASUS Q170M-C motherboard (Intel Core i3-6300T)

SPECfp2006 = 78.1
SPECfp_base2006 = 76.9

Peak Optimization Flags (Continued)

453.povray: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)  
    -Qipo -O3 -Qprec-div -Qunroll14 -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 -Qunroll12 -Qansi-alias
    -Qscalar-rep- /F1000000000

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 -Qunroll14 -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

You can also download the XML flags source by saving the following link:

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For other inquiries, please contact webmaster@spec.org.

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