SPEC® CINT2006 Result

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

ASUS Z170MPLUS motherboard (Intel Core i7-6700K)

$SPECint®\_rate2006 = 245$

$SPECint\_rate\_base2006 = 237$

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2015

Hardware Availability: Sep-2015

Software Availability: Aug-2015

Copies 0 100 200 300 400 500 600 700 800 900 1000 1150 1300 1450 1600 1750 1900 2050 2200 2350 2500 2700

Benchmark	Copies	Value
400.perlbench	8	239
400.perlbench	8	202
401.bzip2	8	120
401.bzip2	8	119
403.gcc	8	184
403.gcc	8	183
429.mcf	8	171
445.gobmk	8	185
445.gobmk	8	180
456.hmmer	8	489
456.hmmer	8	395
458.sjeng	8	187
458.sjeng	8	186
462.libquantum	8	2640
462.libquantum	8	2640
464.h264ref	8	329
471.omnetpp	8	110
471.omnetpp	8	105
473.astar	8	126
473.astar	8	128
483.xalancbmk	8	262

SPECint_rate_base2006 = 237

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Hardware

CPU Name:	Intel Core i7-6700K
CPU Characteristics:	Intel Turbo Boost Technology up to 4.20 GHz
CPU MHz:	4000
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 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
L3 Cache:	8 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 SATA HDD, 7200 RPM
Other Hardware:	None

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; Libraries: Version 18.00.30723 of Microsoft Visual Studio 2013
Auto Parallel:	No
File System:	NTFS
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	SmartHeap Library Version 11.0 from http://www.microquill.com/

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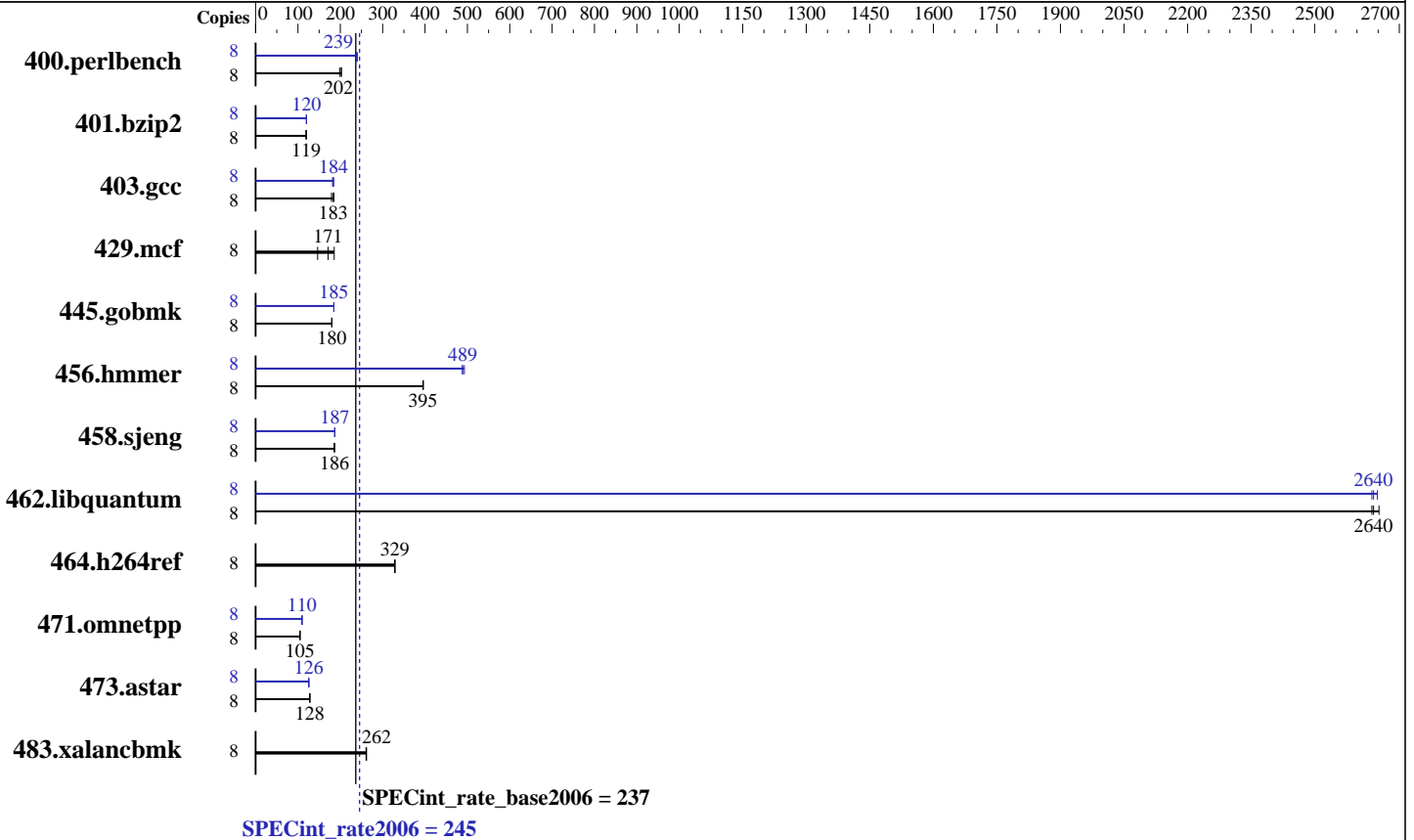**ASUSTeK Computer Inc.**
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Results Table

Benchmark	Base Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
400.perlbench	8	394	198	**386**	**202**	386	202	8	326	240	328	238	**327**	**239**
401.bzip2	8	**646**	**119**	644	120	649	119	8	**642**	**120**	643	120	642	120
403.gcc	8	359	179	349	185	**351**	**183**	8	350	184	355	182	**350**	**184**
429.mcf	8	392	186	498	146	**426**	**171**	8	392	186	498	146	**426**	**171**
445.gobmk	8	**466**	**180**	466	180	467	180	8	**454**	**185**	454	185	455	185
456.hmmer	8	189	396	189	395	**189**	**395**	8	152	493	153	488	**153**	**489**
458.sjeng	8	520	186	521	186	**520**	**186**	8	**518**	**187**	518	187	519	186
462.libquantum	8	62.5	2650	**62.8**	**2640**	62.9	2640	8	62.9	2640	62.6	2650	**62.8**	**2640**
464.h264ref	8	538	329	538	329	**538**	**329**	8	538	329	538	329	**538**	**329**
471.omnetpp	8	476	105	476	105	**476**	**105**	8	455	110	**455**	**110**	455	110
473.astar	8	439	128	438	128	**439**	**128**	8	446	126	447	126	**447**	**126**
483.xalancbmk	8	212	261	211	262	**211**	**262**	8	212	261	211	262	**211**	**262**

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 32-bit binaries with the command:
    "ipsxe-comp-vars.bat ia32 vs2010" (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 Clt305A3A7B76F6 Wed Oct 7 23:30:08 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: System manufacturer
    System Model   : System Product Name
    Processor(s)   : 1 Processor(s) Installed.
        [01]: Intel64 Family 6 Model 94 Stepping 3 GenuineIntel ~4001 Mhz
    BIOS Version   : American Megatrends Inc. 0408, 8/28/2015
    Total Physical Memory: 8,084 MB

    Trying 'wmic cpu get /value'
    DeviceID   : CPU0

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Platform Notes (Continued)

```
    L2CacheSize    : 1024
    L3CacheSize    : 8192
    MaxClockSpeed : 4001
    Name           : Intel(R) Core(TM) i7-6700K CPU @ 4.00GHz
    NumberOfCores : 4
    NumberOfLogicalProcessors: 8

    (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

```
    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
```

Base Portability Flags

```
        403.gcc: -DSPEC_CPU_WIN32
     464.h264ref: -DWIN32
   483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword
```

Base Optimization Flags

C benchmarks:
```
    -QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F256000000
```

C++ benchmarks:
```
    -QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
    /F256000000 shlW32M.lib          -link /FORCE:MULTIPLE
```

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Base Other Flags

C benchmarks:

        403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
    icl -Qvc12 -Qstd=c99

C++ benchmarks (except as noted below):
    icl -Qvc12

Peak Portability Flags

        403.gcc: -DSPEC_CPU_WIN32
     456.hmmer: -DSPEC_CPU_P64
      458.sjeng: -DSPEC_CPU_P64
 462.libquantum: -DSPEC_CPU_P64
     464.h264ref: -DWIN32
       473.astar: -DSPEC_CPU_P64
 483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword

Peak Optimization Flags

C benchmarks:

    400.perlbench: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                  -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
                  /F256000000 shlW32M.lib   -link /FORCE:MULTIPLE

       401.bzip2: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                  -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias
                  /F256000000

        403.gcc: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                  -Qipo -O3 -Qprec-div- -Qopt-prefetch /F256000000

        429.mcf: basepeak = yes

      445.gobmk: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                  -Qipo -O2 -Qprec-div- -Qansi-alias /F256000000

     464.h264ref: basepeak = yes

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Peak Optimization Flags (Continued)

C++ benchmarks:

```
471.omnetpp: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
             -Qipo -O3 -Qprec-div- -Qansi-alias
             -Qopt-ra-region-strategy=block /F256000000 shlW32M.lib
                     -link /FORCE:MULTIPLE
```

```
483.xalancbmk: basepeak = yes
```

Peak Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

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 other inquiries, please contact webmaster@spec.org.

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