



# SPEC® CINT2006 Result

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ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)

**SPECint®\_rate2006 = 198**

ASUS Z170MPLUS motherboard (Intel Core i5-6600)

**SPECint\_rate\_base2006 = 190**

CPU2006 license: 13

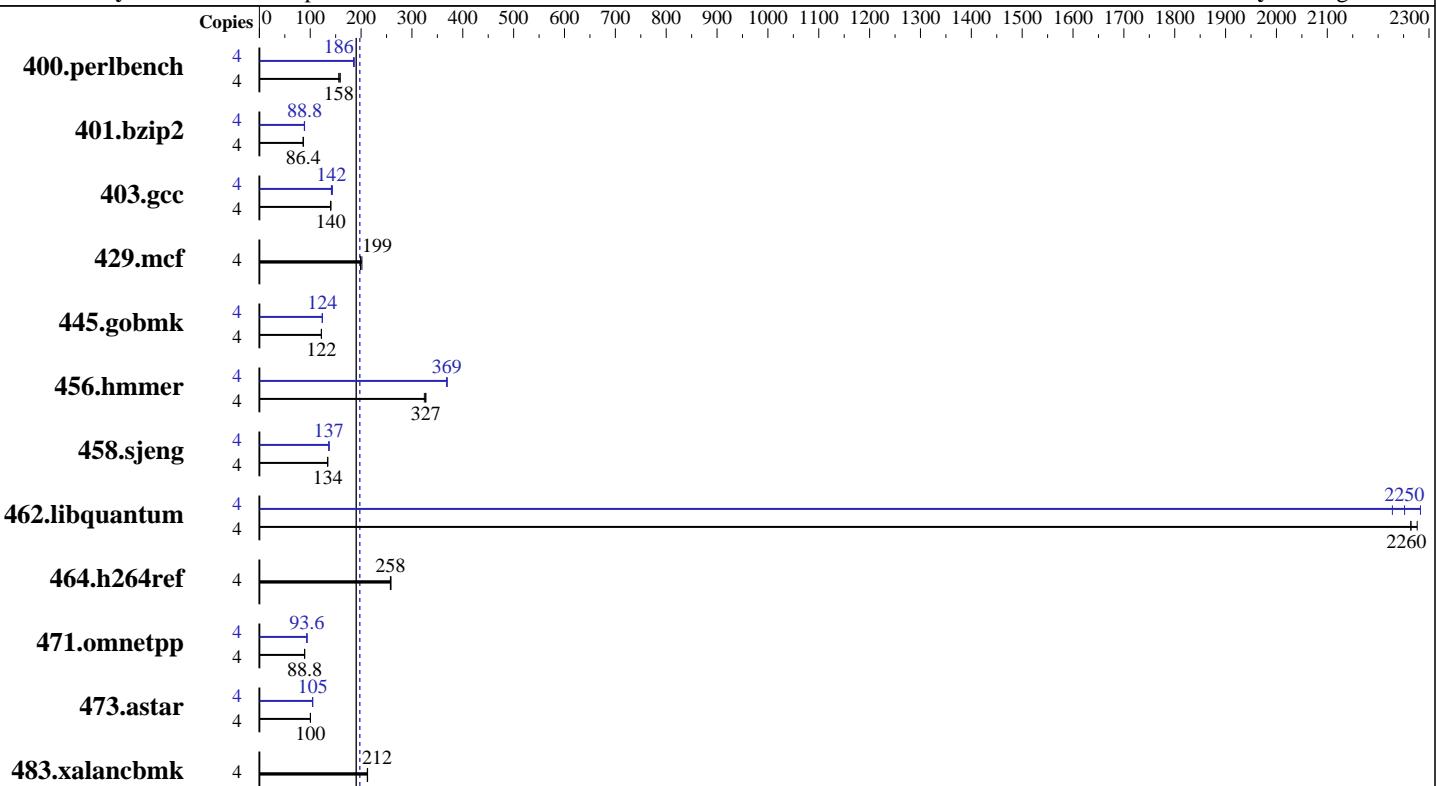
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2015

Hardware Availability: Sep-2015

Software Availability: Aug-2015



SPECint\_rate\_base2006 = 190

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## Hardware

CPU Name: Intel Core i5-6600  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz  
 CPU MHz: 3300  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 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  
 L3 Cache: 6 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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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	246	159	<b>247</b>	<b>158</b>	251	156	4	<b>211</b>	<b>186</b>	211	186	210	186
401.bzip2	4	449	86.0	446	86.8	<b>446</b>	<b>86.4</b>	4	437	88.4	434	88.8	<b>435</b>	<b>88.8</b>
403.gcc	4	230	140	<b>230</b>	<b>140</b>	230	140	4	<b>227</b>	<b>142</b>	227	142	224	144
429.mcf	4	<b>183</b>	<b>199</b>	181	202	184	199	4	<b>183</b>	<b>199</b>	181	202	184	199
445.gobmk	4	344	122	344	122	<b>344</b>	<b>122</b>	4	339	124	338	124	<b>339</b>	<b>124</b>
456.hmmer	4	<b>114</b>	<b>327</b>	114	327	115	324	4	<b>101</b>	<b>369</b>	101	368	101	369
458.sjeng	4	361	134	<b>361</b>	<b>134</b>	360	134	4	354	137	<b>354</b>	<b>137</b>	354	137
462.libquantum	4	<b>36.6</b>	<b>2260</b>	36.6	2260	36.4	2280	4	36.3	2280	<b>36.8</b>	<b>2250</b>	37.2	2230
464.h264ref	4	343	258	<b>343</b>	<b>258</b>	342	259	4	343	258	<b>343</b>	<b>258</b>	342	259
471.omnetpp	4	<b>281</b>	<b>88.8</b>	281	88.8	281	89.2	4	268	93.2	267	93.6	<b>268</b>	<b>93.6</b>
473.astar	4	<b>280</b>	<b>100</b>	279	100	280	100	4	269	104	<b>268</b>	<b>105</b>	268	105
483.xalancbmk	4	130	213	<b>130</b>	<b>212</b>	130	212	4	130	213	<b>130</b>	<b>212</b>	130	212

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 14 09:37:25 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 ~3301 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      : 6144  
MaxClockSpeed   : 3301  
Name            : Intel(R) Core(TM) i5-6600 CPU @ 3.30GHz  
NumberOfCores    : 4  
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

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  
/F25600000000 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.hmmr: -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 /F2560000000 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 questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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