



# SPEC® CINT2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

ASUS A88X-PRO Motherboard (AMD A10 PRO-7800B with Radeon R7 Graphics)

SPECint®2006 = 29.9

SPECint\_base2006 = 28.6

CPU2006 license: 13

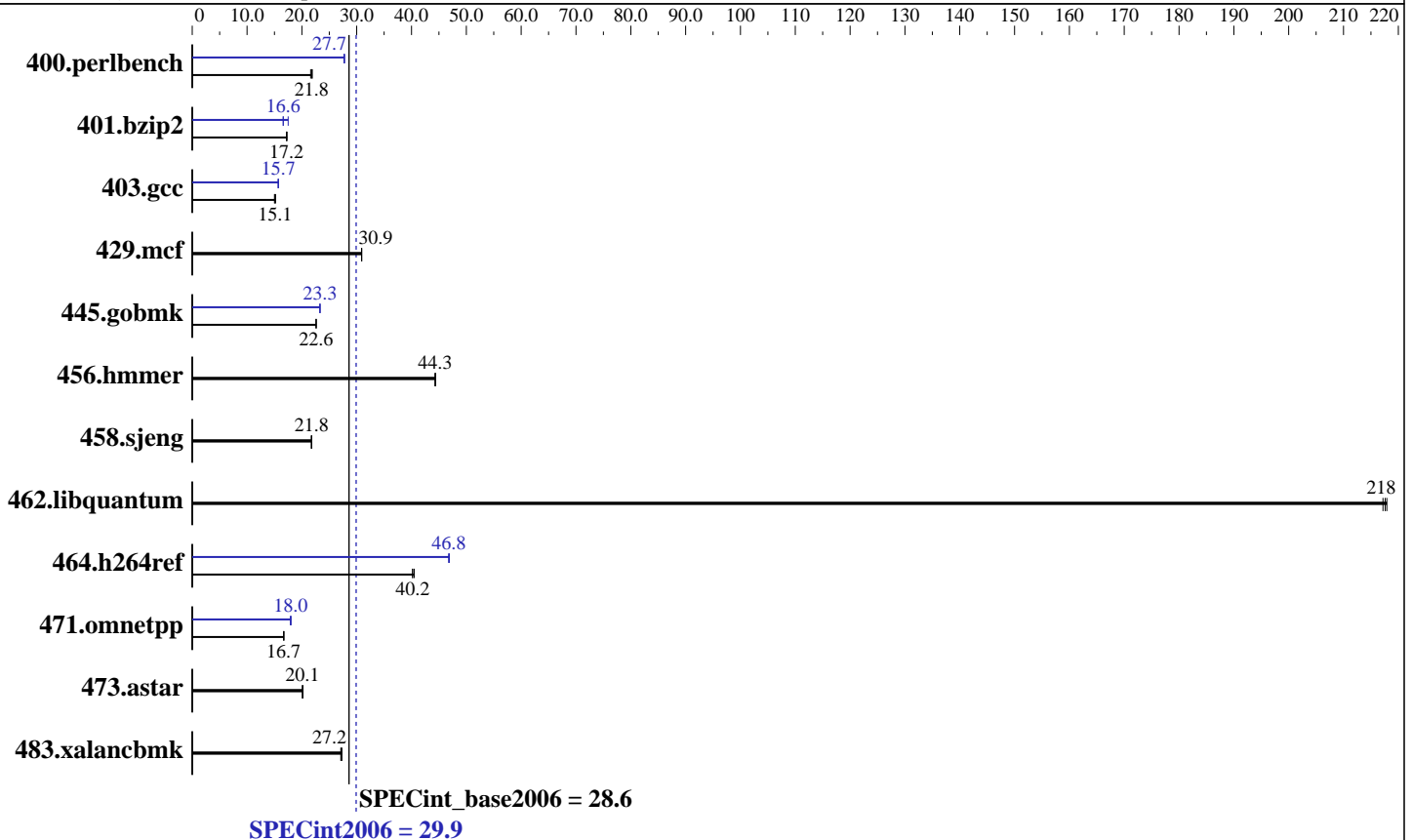
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Nov-2014

Hardware Availability: Jul-2014

Software Availability: Oct-2013



## Hardware

CPU Name: AMD A10 PRO-7800B  
 CPU Characteristics: AMD Turbo CORE technology up to 3.90 GHz  
 CPU MHz: 3500  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip  
 CPU(s) orderable: 1 chip  
 Primary Cache: 192 KB I on chip per chip, 96 KB I shared / 2 cores; 16 KB D on chip per core  
 Secondary Cache: 4 MB I+D on chip per chip, 2 MB shared / 2 cores  
 L3 Cache: None  
 Other Cache: None  
 Memory: 8 GB (2 x 4 GB 2Rx4 PC3-17000U-14)  
 Disk Subsystem: 160 GB Western Digital SATA HDD, 7200 RPM  
 Other Hardware: None

## 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;  
 Libraries: Version 16.00.30319.01 of Microsoft Visual Studio 2010 Professional SP1  
 Auto Parallel: Yes  
 File System: NTFS  
 System State: Default  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.0



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b>447</b>	<b>21.8</b>	453	21.6	445	21.9	352	27.8	<b>352</b>	<b>27.7</b>	353	27.7
401.bzip2	<b>562</b>	<b>17.2</b>	562	17.2	558	17.3	582	16.6	552	17.5	<b>580</b>	<b>16.6</b>
403.gcc	<b>533</b>	<b>15.1</b>	535	15.0	531	15.2	514	15.7	514	15.7	<b>514</b>	<b>15.7</b>
429.mcf	<b>295</b>	<b>30.9</b>	295	30.9	296	30.9	<b>295</b>	<b>30.9</b>	295	30.9	296	30.9
445.gobmk	464	22.6	<b>464</b>	<b>22.6</b>	464	22.6	<b>450</b>	<b>23.3</b>	450	23.3	450	23.3
456.hmmer	<b>210</b>	<b>44.3</b>	211	44.3	210	44.4	<b>210</b>	<b>44.3</b>	211	44.3	210	44.4
458.sjeng	555	21.8	<b>555</b>	<b>21.8</b>	557	21.7	555	21.8	<b>555</b>	<b>21.8</b>	557	21.7
462.libquantum	95.1	218	<b>95.2</b>	<b>218</b>	95.4	217	95.1	218	<b>95.2</b>	<b>218</b>	95.4	217
464.h264ref	<b>551</b>	<b>40.2</b>	547	40.5	551	40.2	473	46.8	472	46.9	<b>473</b>	<b>46.8</b>
471.omnetpp	<b>375</b>	<b>16.7</b>	375	16.7	374	16.7	348	18.0	348	17.9	<b>348</b>	<b>18.0</b>
473.astar	350	20.1	348	20.2	<b>350</b>	<b>20.1</b>	350	20.1	348	20.2	<b>350</b>	<b>20.1</b>
483.xalancbmk	<b>254</b>	<b>27.2</b>	254	27.1	253	27.3	<b>254</b>	<b>27.2</b>	254	27.1	253	27.3

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 CltE03F49B01DC4 Wed Nov 5 22:28:18 2014

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 8.1 Pro
OS Version    : 6.3.9600 N/A Build 9600
System Manufacturer: System manufacturer
System Model   : System Product Name
Processor(s)  : 1 Processor(s) Installed.
               [01]: AMD64 Family 21 Model 48 Stepping 1 AuthenticAMD ~3500 Mhz
BIOS Version  : American Megatrends Inc. 1301, 6/24/2014
Total Physical Memory: 7,105 MB
```

```
Trying 'wmic cpu get /value'
DeviceID      : CPU0
```

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## Platform Notes (Continued)

L2CacheSize : 25359  
L3CacheSize : 0  
MaxClockSpeed : 3500  
Name : AMD A10-7800 Radeon R7, 12 Compute Cores 4C+8G  
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

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

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_WIN64\_X64  
-DSPEC\_CPU\_NO\_NEED\_VA\_COPY  
401.bzip2: -DSPEC\_CPU\_P64  
403.gcc: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_WIN64  
429.mcf: -DSPEC\_CPU\_P64  
445.gobmk: -DSPEC\_CPU\_P64  
456.hmmer: -DSPEC\_CPU\_P64  
458.sjeng: -DSPEC\_CPU\_P64  
462.libquantum: -DSPEC\_CPU\_P64  
464.h264ref: -DSPEC\_CPU\_P64 -DWIN32 -DSPEC\_CPU\_NO\_INTTYPES  
471.omnetpp: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_WIN64  
473.astar: -DSPEC\_CPU\_P64  
483.xalancbmk: -DSPEC\_CPU\_P64 -Qoption,cpp,--no\_wchar\_t\_keyword



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## Base Optimization Flags

C benchmarks:

```
/arch:AVX -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
-Qauto-ilp32 /F512000000
```

C++ benchmarks:

```
/arch:AVX -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
-Qauto-ilp32 /F512000000 shlw64M.lib -link /FORCE:MULTIPLE
```

## Base Other Flags

C benchmarks:

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

## Peak Compiler Invocation

C benchmarks:

```
icl -Qvc10 -Qstd=c99
```

C++ benchmarks:

```
icl -Qvc10
```

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

```
400.perlbenc: /arch:AVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F512000000 shlw64M.lib
-link /FORCE:MULTIPLE
```

```
401.bzip2: /arch:AVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias
-Qauto-ilp32 /F512000000
```

```
403.gcc: /arch:AVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qauto-ilp32 /F512000000
```

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## Peak Optimization Flags (Continued)

429.mcf: basepeak = yes

445.gobmk: /arch:AVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O2 -Qprec-div- -Qansi-alias -Qauto-ilp32  
/F512000000

456.hmmer: basepeak = yes

458.sjeng: basepeak = yes

462.libquantum: basepeak = yes

464.h264ref: /arch:AVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias  
-Qauto-ilp32 /F512000000

C++ benchmarks:

471.omnetpp: /arch:AVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qansi-alias  
-Qopt-ra-region-strategy=block -Qauto-ilp32 /F512000000  
shlW64M.lib -link /FORCE:MULTIPLE

473.astar: basepeak = yes

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-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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Tue Jan 27 13:34:52 2015 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 27 January 2015.