



SPEC® CINT2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

ASUS A88X-PRO motherboard (AMD A10-7850K APU with Radeon R7 Graphics)

SPECint®_rate2006 = 85.8

SPECint_rate_base2006 = 83.4

CPU2006 license: 13

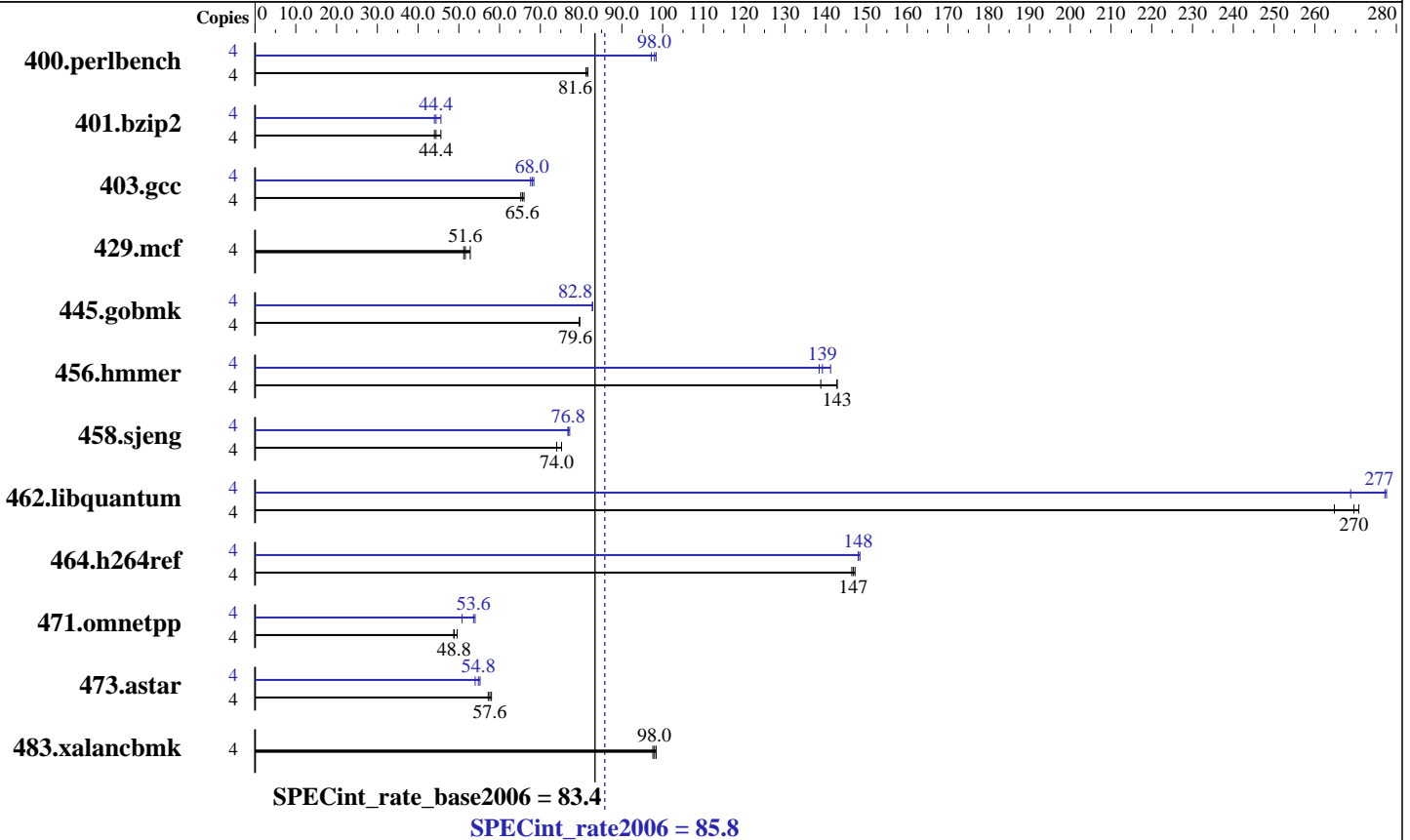
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Jun-2014

Hardware Availability: Jan-2014

Software Availability: Oct-2013



Hardware

CPU Name: AMD A10-7850K
 CPU Characteristics: AMD Turbo CORE technology up to 4.00 GHz
 CPU MHz: 3700
 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: 4 GB (2 x 2 GB 1Rx8 PC3-12800U-11)
 Disk Subsystem: 250 GB Seagate SATA HDD, 7200 RPM
 Other Hardware: None

Software

Operating System: Microsoft Windows 7 Enterprise 6.1.7601 Service Pack 1 Build 7601
 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: No
 File System: NTFS
 System State: Default
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap Library Version 10.0 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	479	81.6	480	81.2	480	81.6	4	398	98.4	402	97.2	400	98.0
401.bzip2	4	878	44.0	870	44.4	848	45.6	4	880	44.0	873	44.4	850	45.6
403.gcc	4	489	66.0	492	65.6	495	65.2	4	473	68.0	475	67.6	470	68.4
429.mcf	4	705	51.6	713	51.2	692	52.8	4	705	51.6	713	51.2	692	52.8
445.gobmk	4	527	79.6	527	79.6	526	79.6	4	506	82.8	508	82.8	508	82.8
456.hammer	4	261	143	261	143	269	139	4	264	141	268	139	270	138
458.sjeng	4	645	75.2	655	74.0	653	74.0	4	630	76.8	630	76.8	629	77.2
462.libquantum	4	308	270	306	271	313	265	4	299	277	298	278	308	269
464.h264ref	4	602	147	604	147	605	146	4	597	148	597	148	598	148
471.omnetpp	4	505	49.6	513	48.8	514	48.8	4	463	54.0	467	53.6	490	50.8
473.astar	4	484	58.0	489	57.6	490	57.2	4	510	55.2	511	54.8	521	54.0
483.xalancbmk	4	281	98.4	282	98.0	282	97.6	4	281	98.4	282	98.0	282	97.6

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 32-bit binaries with the command:
"ipsxe-comp-vars.bat ia32 vs2010" (shortcut provided in the Intel(r) Parallel Studio XE 2013 program folder)

Submit Notes

Processes were bound to specific processors using the start command with the /affinity switch. The config file option 'submit' was used to generate the affinity mask for each process.

Platform Notes

Sysinfo program C:\SPEC14.0\Docs\sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on A88XPRO-PC Sat Jun 28 20:16:15 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 7 Enterprise
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.

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Platform Notes (Continued)

[01]: AMD64 Family 21 Model 48 Stepping 1 AuthenticAMD ~3700 Mhz
BIOS Version : American Megatrends Inc. 0703, 12/30/2013
Total Physical Memory: 3,522 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0

L2CacheSize : 4096

L3CacheSize : 0

MaxClockSpeed : 3700

Name : AMD A10-7850K APU with Radeon(TM) R7 Graphics

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
Micron MT8JTF25664AZ-1G6 Series Memory DIMMs

General Notes

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

403.gcc: -DSPEC_CPU_WIN32

464.h264ref: -DWIN32 -DSPEC_CPU_NO_INTTYPES

483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword

Base Optimization Flags

C benchmarks:

/arch:AVX -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

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Page 3



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Base Optimization Flags (Continued)

C++ benchmarks:

```
/arch:AVX -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
/F512000000 shlw32M.lib -link /FORCE:MULTIPLE
```

Base Other Flags

C benchmarks:

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

Peak Compiler Invocation

C benchmarks (except as noted below):

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

```
456.hmmmer: C:\Program Files (x86)\Intel\Composer XE 2013 SP1/bin/intel64/icl.exe
```

```
458.sjeng: C:\Program Files (x86)\Intel\Composer XE 2013 SP1/bin/intel64/icl.exe
```

```
462.libquantum: C:\Program Files (x86)\Intel\Composer XE 2013 SP1/bin/intel64/icl.exe
-Qstd=c99
```

C++ benchmarks (except as noted below):

```
icl -Qvc10
```

```
473.astar: C:\Program Files (x86)\Intel\Composer XE 2013 SP1/bin/intel64/icl.exe
```

Peak Portability Flags

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

Peak Optimization Flags

C benchmarks:

Continued on next page



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Peak Optimization Flags (Continued)

400.perlbench: /arch:AVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
/F512000000 shlw32M.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
/F512000000

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

429.mcf: basepeak = yes

445.gobmk: /arch:AVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

456.hmmer: -Qauto-ilp32 /arch:AVX(pass 2) -Qprof_gen(pass 1)
-Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch
/F512000000

458.sjeng: -Qauto-ilp32 /arch:AVX(pass 2) -Qprof_gen(pass 1)
-Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4
/F512000000

462.libquantum: -Qauto-ilp32 /arch:AVX -Qipo -O3 -Qprec-div-
-Qopt-prefetch /F512000000

464.h264ref: /arch:AVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /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 /F512000000 shlw32M.lib
-link /FORCE:MULTIPLE

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

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

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Peak Other Flags (Continued)

403.gcc: -Dalloca=_alloca

456.hmmr: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2013 SP1/compiler/lib/intel64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

458.sjeng: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2013 SP1/compiler/lib/intel64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

462.libquantum: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2013 SP1/compiler/lib/intel64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

C++ benchmarks:

473.astar: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2013 SP1/compiler/lib/intel64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

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 other inquiries, please contact webmaster@spec.org.

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