SPEC® CINT2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

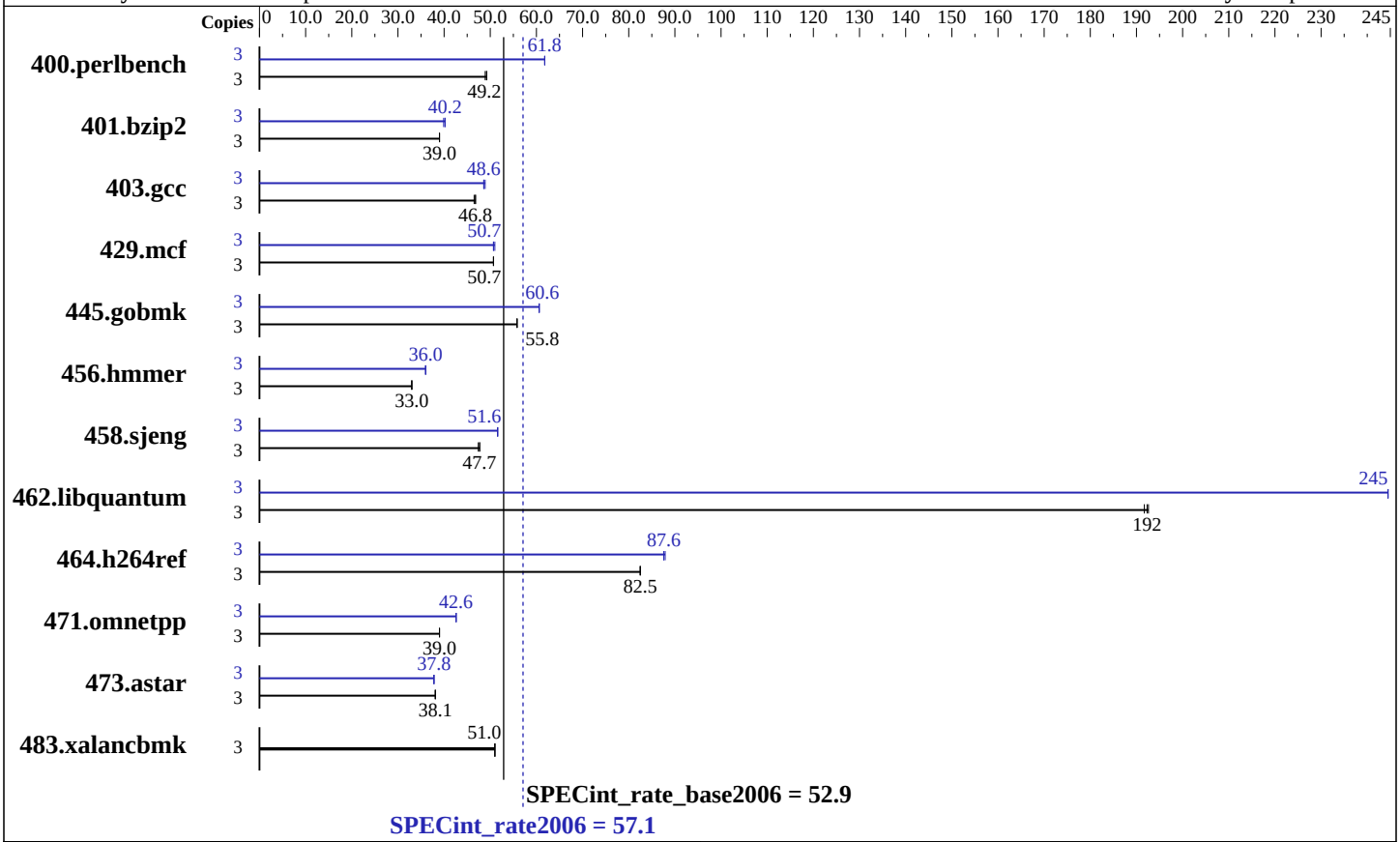
ASUSTek M4A89GTD PRO/USB3 (Phenom II X3 720)

SPECint®_rate2006 = 57.1

SPECint_rate_base2006 = 52.9

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

Test date: Jun-2011
Hardware Availability: Feb-2011
Software Availability: Apr-2011



Hardware

CPU Name:	AMD Phenom II X3 720
CPU Characteristics:	
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	3 cores, 1 chip, 3 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	512 KB I+D on chip per core
L3 Cache:	6 MB I+D on chip per chip
Other Cache:	None
Memory:	4 GB (2 x 2 GB 2Rx4 PC3-10600U-9)
Disk Subsystem:	1 TB Seagate SATA, 7200 RPM
Other Hardware:	None

Software

Operating System:	Windows 7 Ultimate (64-bit)
Compiler:	Intel C++ Compiler XE for IA32 and Intel 64 Version 12.0.3.176 Build 20110309 Microsoft Visual Studio 2008 Professional SP1 (for libraries)
Auto Parallel:	No
File System:	NTFS
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	SmartHeap Library Version 9.01 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	3	600	48.9	597	49.2	**597**	**49.2**	3	**473**	**61.8**	474	61.8	473	61.8
401.bzip2	3	742	39.0	**740**	**39.0**	740	39.0	3	725	39.9	722	40.2	**723**	**40.2**
403.gcc	3	**517**	**46.8**	521	46.5	516	46.8	3	495	48.9	496	48.6	**496**	**48.6**
429.mcf	3	540	50.7	**539**	**50.7**	539	50.7	3	538	51.0	**539**	**50.7**	539	50.7
445.gobmk	3	565	55.8	565	55.8	**565**	**55.8**	3	520	60.6	520	60.6	**520**	**60.6**
456.hmmer	3	847	33.0	848	33.0	**847**	**33.0**	3	775	36.0	**775**	**36.0**	775	36.0
458.sjeng	3	764	47.4	763	47.7	**763**	**47.7**	3	**703**	**51.6**	702	51.6	703	51.6
462.libquantum	3	323	193	324	192	**323**	**192**	3	254	245	254	245	**254**	**245**
464.h264ref	3	804	82.5	804	82.5	**804**	**82.5**	3	757	87.6	757	87.9	**757**	**87.6**
471.omnetpp	3	481	39.0	**481**	**39.0**	482	39.0	3	**440**	**42.6**	440	42.6	440	42.6
473.astar	3	552	38.1	553	38.1	**552**	**38.1**	3	**556**	**37.8**	557	37.8	556	37.8
483.xalancbmk	3	**405**	**51.0**	405	51.0	405	51.0	3	**405**	**51.0**	405	51.0	405	51.0

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

```
The config file option 'submit' was used.
 The start command with the /affinity switch was used to bind processes to cores
```

General Notes

```
 Tested systems can be used with Shin-G ATX case,
 PC Power and Cooling 1200W power supply
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc9 -Qstd=c99
```

C++ benchmarks:

```
icl -Qvc9
```

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:SSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000
```

C++ benchmarks:
```
/arch:SSE3 -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 -Qvc9 -Qstd=c99
```

456.hmmer: `C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe`

458.sjeng: `C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe`

462.libquantum: `C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe -Qstd=c99`

C++ benchmarks (except as noted below):
```
icl -Qvc9
```

473.astar: `C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe`

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 -DSPEC_CPU_NO_INTTYPES`
473.astar: `-DSPEC_CPU_P64`
483.xalancbmk: `-Qoption,cpp,--no_wchar_t_keyword`

Peak Optimization Flags

C benchmarks:

400.perlbench: /arch:SSE3(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:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias /F512000000

403.gcc: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

429.mcf: /arch:SSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

445.gobmk: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

456.hmmer: -Qauto-ilp32 /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

458.sjeng: -Qauto-ilp32 /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 /F512000000

462.libquantum: -Qauto-ilp32 /arch:SSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

464.h264ref: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000

C++ benchmarks:

471.omnetpp: /arch:SSE3(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:SSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000 shlW64M.lib -link /FORCE:MULTIPLE

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

456.hmmer: `-link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/compiler/lib/intel64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64`

458.sjeng: `-link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/compiler/lib/intel64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64`

462.libquantum: `-link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/compiler/lib/intel64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/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/ComposerXE-2011/compiler/lib/intel64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic12-win32-revC.html`
`http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Intel-ic12-win32-revC.xml`
`http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.xml`

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 22:25:15 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 20 September 2011.