



SPEC® CINT2006 Result

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ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

SPECint®_rate2006 = 44.6

Asus M4A89GTD-PRO (Phenom II X2 555)

SPECint_rate_base2006 = 39.7

CPU2006 license: 13

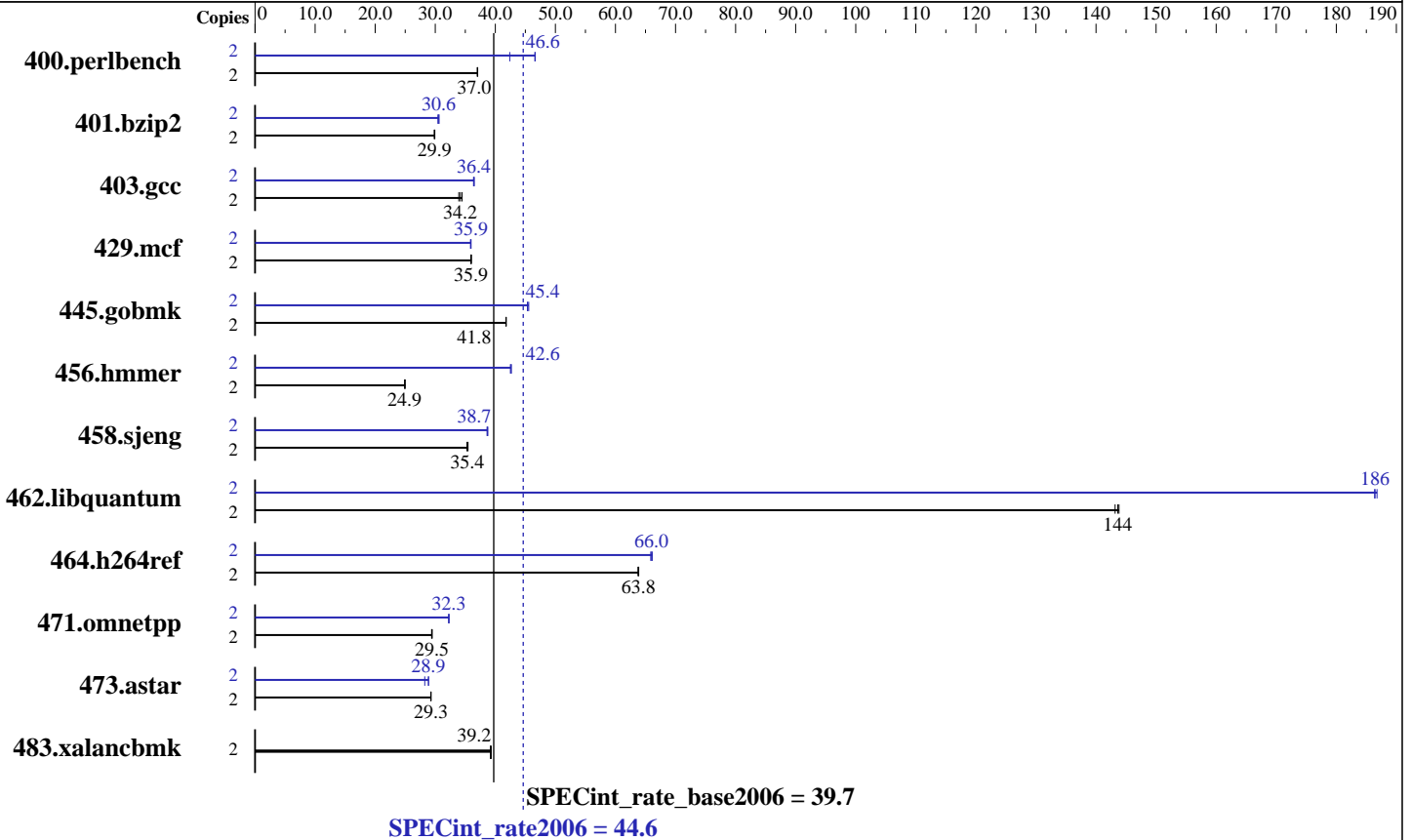
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2011

Hardware Availability: Apr-2010

Software Availability: Apr-2011



Hardware

CPU Name: AMD Phenom II X2 555
 CPU Characteristics:
 CPU MHz: 3200
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 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: 8 GB (2 x 4 GB 2Rx8 PC3-10600U-9)
 Disk Subsystem: Seagate 1 TB 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	2	528	37.0	527	37.1	<u>528</u>	<u>37.0</u>	2	419	46.6	<u>419</u>	<u>46.6</u>	461	42.4
401.bzip2	2	647	29.9	<u>646</u>	<u>29.9</u>	645	29.9	2	630	30.6	634	30.4	<u>631</u>	<u>30.6</u>
403.gcc	2	475	33.9	467	34.5	<u>471</u>	<u>34.2</u>	2	441	36.5	443	36.4	<u>442</u>	<u>36.4</u>
429.mcf	2	508	35.9	506	36.0	<u>507</u>	<u>35.9</u>	2	507	36.0	509	35.9	<u>508</u>	<u>35.9</u>
445.gobmk	2	502	41.8	<u>502</u>	<u>41.8</u>	502	41.8	2	463	45.3	460	45.6	<u>462</u>	<u>45.4</u>
456.hammer	2	749	24.9	<u>749</u>	<u>24.9</u>	747	25.0	2	437	42.7	<u>438</u>	<u>42.6</u>	439	42.5
458.sjeng	2	686	35.3	<u>684</u>	<u>35.4</u>	683	35.5	2	625	38.7	<u>625</u>	<u>38.7</u>	627	38.6
462.libquantum	2	288	144	<u>289</u>	<u>144</u>	289	143	2	222	187	<u>222</u>	<u>186</u>	222	186
464.h264ref	2	694	63.7	693	63.9	<u>693</u>	<u>63.8</u>	2	672	65.9	669	66.1	<u>671</u>	<u>66.0</u>
471.omnetpp	2	425	29.4	424	29.5	<u>424</u>	<u>29.5</u>	2	388	32.3	387	32.3	<u>387</u>	<u>32.3</u>
473.astar	2	479	29.3	<u>480</u>	<u>29.3</u>	480	29.3	2	486	28.9	497	28.3	<u>486</u>	<u>28.9</u>
483.xalancbmk	2	<u>352</u>	<u>39.2</u>	352	39.2	351	39.3	2	<u>352</u>	<u>39.2</u>	352	39.2	351	39.3

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
```



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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.hmmr: 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.hmmr: -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
```



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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.hmmr: -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



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Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

456.hmmcr: -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-revB.20110511.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-revB.20110511.xml>

<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.xml>

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For other inquiries, please contact webmaster@spec.org.

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