SPEC® CINT2006 Result
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ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

Asus P5E3 Premium (Intel Core 2 Quad Q9650)

$SPECint®2006 =$ 28.1

$SPECint\_base2006 =$ 25.6
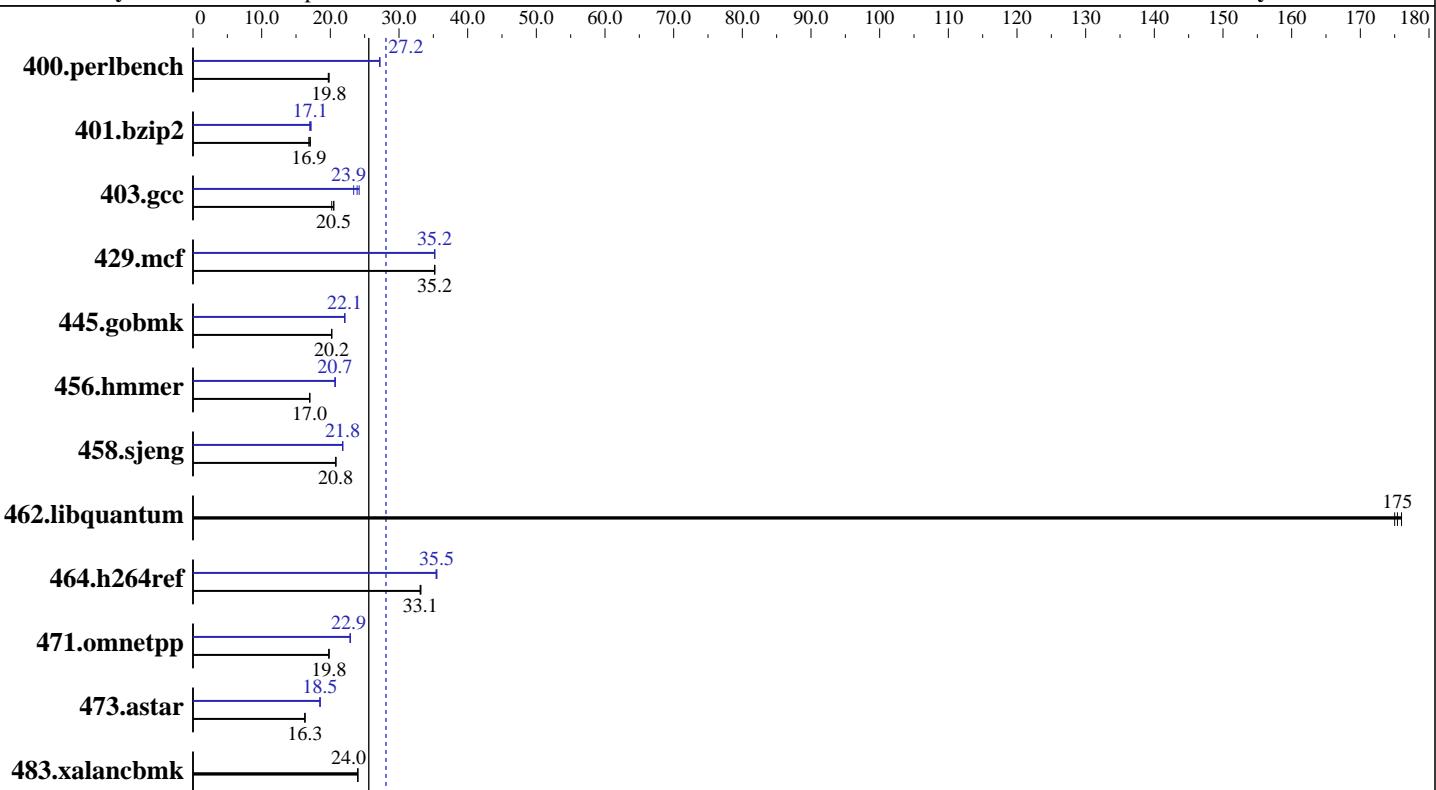
CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Oct-2008
Hardware Availability: Apr-2008
Software Availability: Nov-2008

400.perlbench 27.2 / 19.8
401.bzip2 17.1 / 16.9
403.gcc 23.9 / 20.5
429.mcf 35.2 / 35.2
445.gobmk 22.1 / 20.2
456.hmmer 20.7 / 17.0
458.sjeng 21.8 / 20.8
462.libquantum 175
464.h264ref 35.5 / 33.1
471.omnetpp 22.9 / 19.8
473.astar 18.5 / 16.3
483.xalancbmk 24.0

SPECint_base2006 = 25.6
SPECint2006 = 28.1

Hardware

CPU Name:	Intel Core 2 Quad Q9650
CPU Characteristics:	
CPU MHz:	3000
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:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	4 GB (4 x 1GB Corsair CM3X1024-1333C9DHX DDR3-1333 CL9)
Disk Subsystem:	80 GB Intel X-25M SATA Solid-State Drive
Other Hardware:	None

Software

Operating System:	Windows Vista Ultimate w/ SP1 (64-bit)
Compiler:	Intel C++ Compiler Professional 11.0 for IA32 Build 20080930 Package ID: w_cproc_p_11.0.054 Microsoft Visual Studio 2008 (for libraries)
Auto Parallel:	Yes
File System:	NTFS
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32-bit
Other Software:	None
	SmartHeap Library Version 8.1 from http://www.microquill.com/

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Results Table

Benchmark	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
400.perlbench	495	19.7	**494**	**19.8**	494	19.8	**359**	**27.2**	359	27.2	359	27.2
401.bzip2	571	16.9	**571**	**16.9**	565	17.1	562	17.2	568	17.0	**565**	**17.1**
403.gcc	**393**	**20.5**	398	20.2	392	20.5	344	23.4	333	24.2	**337**	**23.9**
429.mcf	259	35.2	**259**	**35.2**	259	35.2	259	35.2	**259**	**35.2**	259	35.2
445.gobmk	518	20.2	**518**	**20.2**	518	20.2	**474**	**22.1**	475	22.1	474	22.1
456.hmmer	**549**	**17.0**	549	17.0	549	17.0	**450**	**20.7**	450	20.7	450	20.7
458.sjeng	581	20.8	581	20.8	**581**	**20.8**	**554**	**21.8**	554	21.8	554	21.8
462.libquantum	**118**	**175**	118	176	118	175	**118**	**175**	118	176	118	175
464.h264ref	668	33.1	**668**	**33.1**	668	33.2	624	35.5	**624**	**35.5**	624	35.4
471.omnetpp	316	19.8	316	19.8	**316**	**19.8**	**273**	**22.9**	273	22.9	272	22.9
473.astar	**431**	**16.3**	431	16.3	431	16.3	380	18.5	380	18.5	**380**	**18.5**
483.xalancbmk	288	24.0	**288**	**24.0**	288	24.0	288	24.0	**288**	**24.0**	288	24.0

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

General Notes

```
Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply
The system bus runs at 1333 MHz
System was configured with nVidia GTX 280 discrete graphics card
Binaries were built on Windows Vista Ultimate (32-bit)
OMP_NUM_THREADS set to number of logical processors as seen by the OS
KMP_AFFINITY set to physical,0
```

Base Compiler Invocation

C benchmarks:
```
icl -Qvc9 -Qc99
```

C++ benchmarks:
```
icl -Qvc9
```

Base Portability Flags

```
    403.gcc: -DSPEC_CPU_WIN32
 464.h264ref: -DSPEC_CPU_NO_INTTYPES -DWIN32
483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword
```

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Base Optimization Flags

C benchmarks:
```
-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
-Qpar-runtime-control -Qvec-guard-write /F512000000
```

C++ benchmarks:
```
-QxSSE4.1 -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:
```
icl -Qvc9 -Qc99
```

C++ benchmarks:
```
icl -Qvc9
```

Peak Portability Flags

403.gcc: `-DSPEC_CPU_WIN32`
464.h264ref: `-DSPEC_CPU_NO_INTTYPES -DWIN32`
483.xalancbmk: `-Qoption,cpp,--no_wchar_t_keyword`

Peak Optimization Flags

C benchmarks:

400.perlbench: `-QxSSE4.1(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: `-QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)`
`-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias`
`/F512000000`

403.gcc: `-QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)`
`-Qipo -O3 -Qprec-div- /F512000000`

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Peak Optimization Flags (Continued)

```
   429.mcf: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch
            /F512000000

 445.gobmk: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
            -Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

 456.hmmer: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
            /F512000000

 458.sjeng: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
            -Qipo -O3 -Qprec-div- -Qunroll4 /F512000000

462.libquantum: basepeak = yes

 464.h264ref: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
            -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000
```

C++ benchmarks:

```
 471.omnetpp: -QxSSE4.1(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: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
            -Qipo -O3 -Qprec-div- -Qansi-alias
            -Qopt-ra-region-strategy=routine /F512000000 shlw32m.lib
                     -link /FORCE:MULTIPLE

483.xalancbmk: basepeak = yes
```

Peak Other Flags

C benchmarks:

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

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.20090713.html
http://www.spec.org/cpu2006/flags/Intel-Win32-Platform.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.20090713.xml
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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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