SPEC® CINT2006 Result
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Intel Corporation

Intel DX79SI motherboard (Intel Core i7-3960X Extreme Edition)

SPECint®_rate2006 = 267
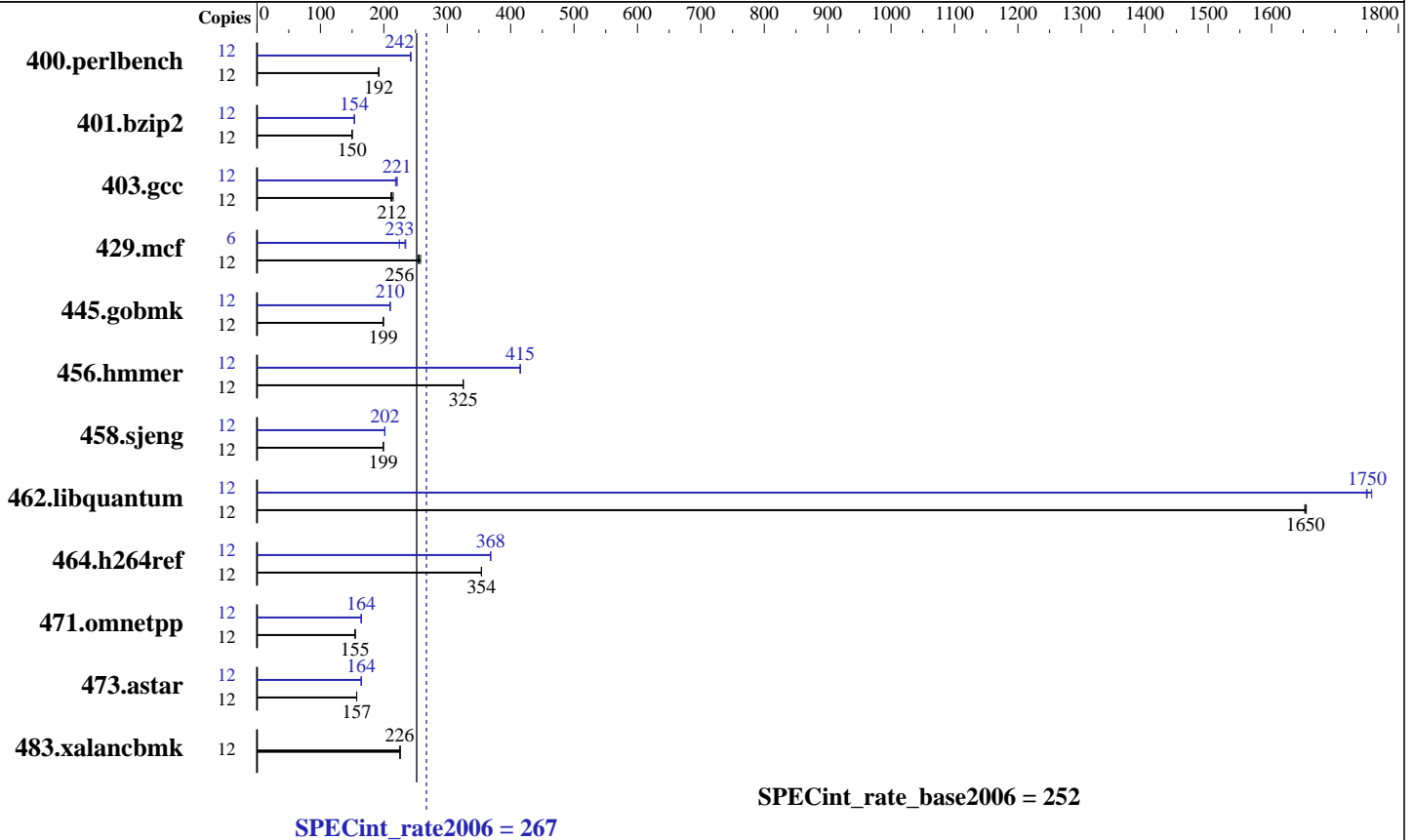
SPECint_rate_base2006 = 252

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2011

Hardware Availability: Nov-2011

Software Availability: Apr-2011

Benchmark	Copies	Peak	Base
400.perlbench	12 / 12	242	192
401.bzip2	12 / 12	154	150
403.gcc	12 / 12	221	212
429.mcf	6 / 12	233	256
445.gobmk	12 / 12	210	199
456.hmmer	12 / 12	415	325
458.sjeng	12 / 12	202	199
462.libquantum	12 / 12	1750	1650
464.h264ref	12 / 12	368	354
471.omnetpp	12 / 12	164	155
473.astar	12 / 12	164	157
483.xalancbmk	12	226	

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Hardware

CPU Name:	Intel Core i7-3960X Extreme Edition
CPU Characteristics:	Intel Turbo Boost Technology up to 3.90 GHz
CPU MHz:	3300
FPU:	Integrated
CPU(s) enabled:	6 cores, 1 chip, 6 cores/chip, 2 threads/core
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	15 MB I+D on chip per chip
Other Cache:	None
Memory:	16 GB (4 x 4 GB 2Rx8 PC3-12800U-11)
Disk Subsystem:	Intel 160 GB SSD
Other Hardware:	None

Software

Operating System:	Windows 7 Ultimate SP1 (64-bit)
Compiler:	C/C++: Version 12.0.3.176 of Intel C++ Studio XE for Windows; Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 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 9.01 from http://www.microquill.com/

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Results Table

Benchmark	Base Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
400.perlbench	12	611	192	**611**	**192**	611	192	12	484	242	483	242	**483**	**242**
401.bzip2	12	775	150	**774**	**150**	773	150	12	754	154	752	154	**752**	**154**
403.gcc	12	458	211	451	215	**455**	**212**	12	**438**	**221**	442	218	437	221
429.mcf	12	429	254	**428**	**256**	424	258	6	233	235	**234**	**233**	244	224
445.gobmk	12	630	199	**631**	**199**	631	199	12	**599**	**210**	599	210	598	210
456.hmmer	12	**344**	**325**	345	325	344	325	12	270	415	270	415	**270**	**415**
458.sjeng	12	**727**	**199**	727	199	727	199	12	721	202	**721**	**202**	721	202
462.libquantum	12	**150**	**1650**	150	1650	151	1650	12	142	1750	**142**	**1750**	141	1760
464.h264ref	12	750	354	749	354	**749**	**354**	12	721	368	**721**	**368**	721	368
471.omnetpp	12	**483**	**155**	483	155	484	155	12	456	164	457	164	**457**	**164**
473.astar	12	536	157	535	157	**535**	**157**	12	514	164	**513**	**164**	513	164
483.xalancbmk	12	**367**	**226**	367	226	368	226	12	**367**	**226**	367	226	368	226

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

Component Notes

    Tested systems can be used with Shin-G ATX case,
    PC Power and Cooling 1200W power supply
    System was configured with an ATI HD 6990 discrete graphics card

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

C++ benchmarks:
```
-QxAVX -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
```

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Peak Optimization Flags

C benchmarks:

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

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

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

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

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

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

  462.libquantum: -Qauto-ilp32 -QxSSE4.2 -Qipo -O3 -Qprec-div-
                  -Qopt-prefetch /F512000000

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

C++ benchmarks:

```
    471.omnetpp: -QxAVX(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 -QxSSE4.2 -Qipo -O3 -Qprec-div-
                  -Qopt-prefetch /F512000000 shlW64M.lib
                              -link /FORCE:MULTIPLE

  483.xalancbmk: basepeak = yes
```

Peak Other Flags

C benchmarks:

Continued on next page

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Test date: Oct-2011

Hardware Availability: Nov-2011

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Peak Other Flags (Continued)

```
     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.20111012.html
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12-win32-revC.20111012.xml
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.xml

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

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