SPEC® CINT2006 Result
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Intel Corporation

Intel DQ87PG motherboard (Intel Celeron G1820T)
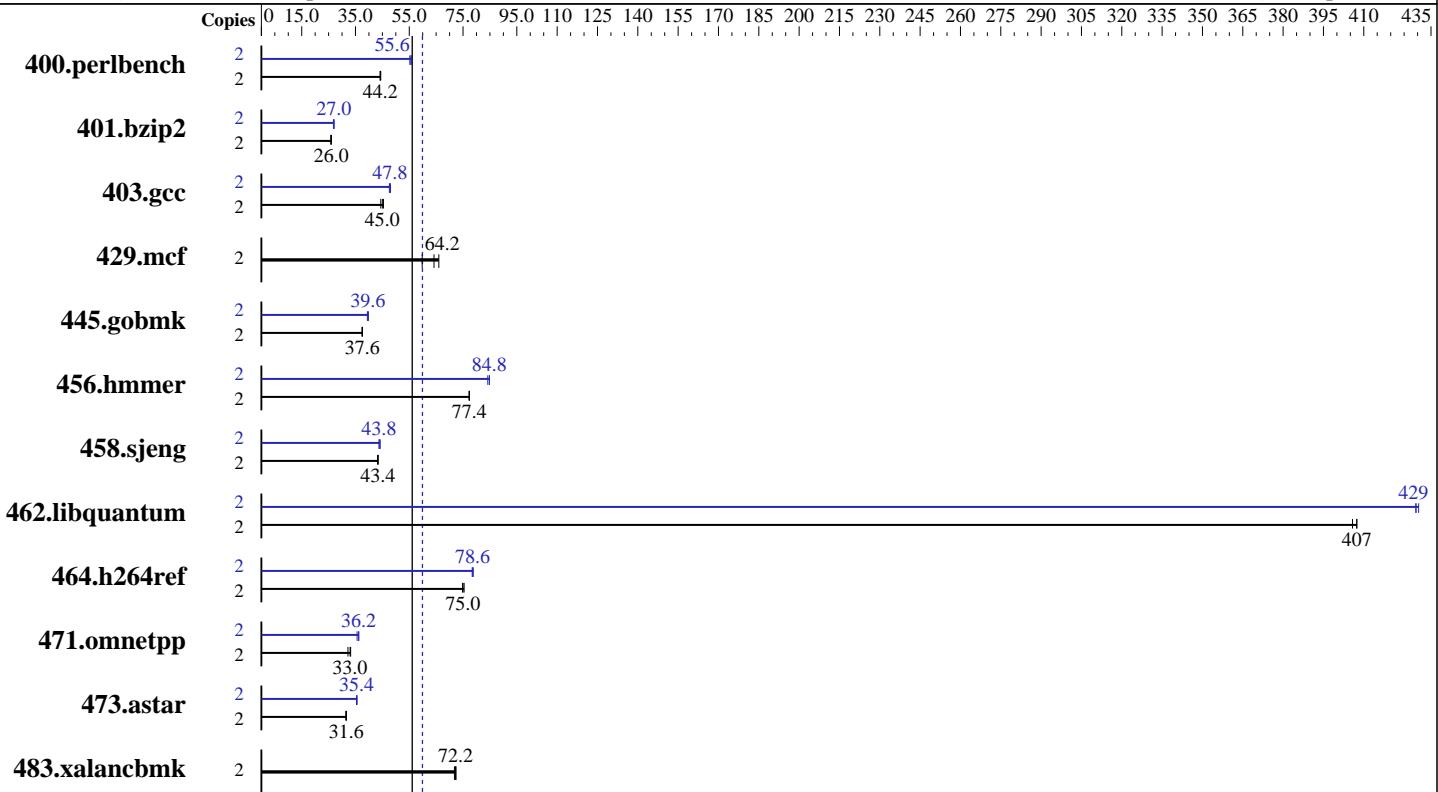
SPECint®_rate2006 =   59.9

SPECint_rate_base2006 = 56.1

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Mar-2014

Hardware Availability: Dec-2013

Software Availability: Apr-2013

Copies 0 15.0 35.0 55.0 75.0 95.0 110 125 140 155 170 185 200 215 230 245 260 275 290 305 320 335 350 365 380 395 410 435

400.perlbench 2 / 55.6 — 2 / 44.2

401.bzip2 2 / 27.0 — 2 / 26.0

403.gcc 2 / 47.8 — 2 / 45.0

429.mcf 2 / 64.2

445.gobmk 2 / 39.6 — 2 / 37.6

456.hmmer 2 / 84.8 — 2 / 77.4

458.sjeng 2 / 43.8 — 2 / 43.4

462.libquantum 2 / 429 — 2 / 407

464.h264ref 2 / 78.6 — 2 / 75.0

471.omnetpp 2 / 36.2 — 2 / 33.0

473.astar 2 / 35.4 — 2 / 31.6

483.xalancbmk 2 / 72.2

SPECint_rate_base2006 = 56.1

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Hardware

CPU Name: Intel Celeron G1820T

CPU Characteristics:

CPU MHz: 2400

FPU: Integrated

CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip

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: 2 MB I+D on chip per chip

Other Cache: None

Memory: 4 GB (2 x 2 GB 1Rx8 PC3-12800U-11, running at 1333 MHz and CL9)

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 13.1.1.171 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	2	**441**	**44.2**	441	44.4	442	44.2	2	353	55.2	351	55.8	**351**	**55.6**
401.bzip2	2	749	25.8	**744**	**26.0**	740	26.0	2	718	26.8	**717**	**27.0**	713	27.0
403.gcc	2	363	44.4	354	45.4	**358**	**45.0**	2	338	47.6	**337**	**47.8**	335	48.0
429.mcf	2	305	59.8	**284**	**64.2**	276	66.0	2	305	59.8	**284**	**64.2**	276	66.0
445.gobmk	2	560	37.4	**559**	**37.6**	559	37.6	2	**529**	**39.6**	528	39.8	531	39.4
456.hmmer	2	241	77.4	242	77.2	**241**	**77.4**	2	220	84.8	221	84.2	**220**	**84.8**
458.sjeng	2	**558**	**43.4**	560	43.2	557	43.4	2	548	44.2	**552**	**43.8**	552	43.8
462.libquantum	2	102	407	102	406	**102**	**407**	2	**96.5**	**429**	96.3	430	96.5	429
464.h264ref	2	**591**	**75.0**	591	74.8	587	75.4	2	565	78.4	562	78.8	**564**	**78.6**
471.omnetpp	2	376	33.2	387	32.2	**379**	**33.0**	2	344	36.2	351	35.6	**346**	**36.2**
473.astar	2	**445**	**31.6**	445	31.6	447	31.4	2	395	35.6	397	35.4	**396**	**35.4**
483.xalancbmk	2	192	71.8	**191**	**72.2**	191	72.4	2	192	71.8	**191**	**72.2**	191	72.4

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 13.1 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:\SPEC13.1/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on Clt7C05070FB382 Sat Mar  8 06:47:05 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: INTEL_
System Model  : DQ87PG__
Processor(s)  : 1 Processor(s) Installed.
```

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Platform Notes (Continued)

```
      [01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~2400 Mhz
    BIOS Version  : Intel(R) Corp. PGQ8710H.86A.0036.2013.0702.1908, 7/2/2013
    Total Physical Memory: 3,749 MB

    Trying 'wmic cpu get /value'
    DeviceID      : CPU0
    L2CacheSize   : 512
    L3CacheSize   : 2048
    MaxClockSpeed : 2400
    Name          : Intel(R) Celeron(R) CPU G1820T @ 2.40GHz
    NumberOfCores : 2
    NumberOfLogicalProcessors: 2

   (End of data from sysinfo program)
   BIOS: SATA mode set to RAID
   Windows Disk Driver: Intel Rapid Storage Technology 12.5.0.1066
   Windows Chipset Driver: Intel Chipset Driver 9.4.0.1027
```

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
```

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Base Optimization Flags

C benchmarks:
```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000
```

C++ benchmarks:
```
-QxSSE4.2 -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.hmmer: C:\Program Files (x86)\Intel\Composer XE 2013.171/bin/intel64/icl.exe
```

```
458.sjeng: C:\Program Files (x86)\Intel\Composer XE 2013.171/bin/intel64/icl.exe
```

```
462.libquantum: C:\Program Files (x86)\Intel\Composer XE 2013.171/bin/intel64/icl.exe
                -Qstd=c99
```

C++ benchmarks (except as noted below):
```
icl -Qvc10
```

```
473.astar: C:\Program Files (x86)\Intel\Composer XE 2013.171/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: -QxSSE4.2(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: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias
                /F512000000

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

         429.mcf: basepeak = yes

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

       456.hmmer: -Qauto-ilp32 -QxSSE4.2(pass 2) -Qprof_gen(pass 1)
                -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch
                /F512000000

        458.sjeng: -Qauto-ilp32 -QxSSE4.2(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: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000

C++ benchmarks:

      471.omnetpp: -QxSSE4.2(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

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Peak Other Flags

C benchmarks:

```
     403.gcc: -Dalloca=_alloca

   456.hmmer: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2013.171/compiler/lib/intel64
              -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD6
              -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 2013.171/compiler/lib/intel64
              -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD6
              -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 2013.171/compiler/lib/intel64
              -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD6
              -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 2013.171/compiler/lib/intel64
              -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD6
              -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-ic13.1-official-windows.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic13.1-official-windows.xml

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

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