SPEC® CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

Intel DQ77MK motherboard (Intel Pentium G2120T)

$SPECint^{®}\_rate2006 =$ 64.8

$SPECint\_rate\_base2006 =$ 60.6

Copies

Benchmark	Copies	Value
400.perlbench	2	56.4
400.perlbench	2	43.8
401.bzip2	2	31.0
401.bzip2	2	29.8
403.gcc	2	53.4
403.gcc	2	50.2
429.mcf	2	77.8
445.gobmk	2	41.6
445.gobmk	2	40.6
456.hmmer	2	93.0
456.hmmer	2	84.8
458.sjeng	2	43.4
458.sjeng	2	43.0
462.libquantum	2	456
462.libquantum	2	431
464.h264ref	2	85.6
464.h264ref	2	82.2
471.omnetpp	2	41.2
471.omnetpp	2	36.2
473.astar	2	38.8
473.astar	2	35.2
483.xalancbmk	2	72.2

SPECint_rate_base2006 = 60.6
SPECint_rate2006 = 64.8

Hardware

CPU Name:	Intel Pentium G2120T
CPU Characteristics:	
CPU MHz:	2700
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:	3 MB I+D on chip per chip
Other Cache:	None
Memory:	4 GB (2 x 2 GB 1Rx8 PC3-12800U-11)
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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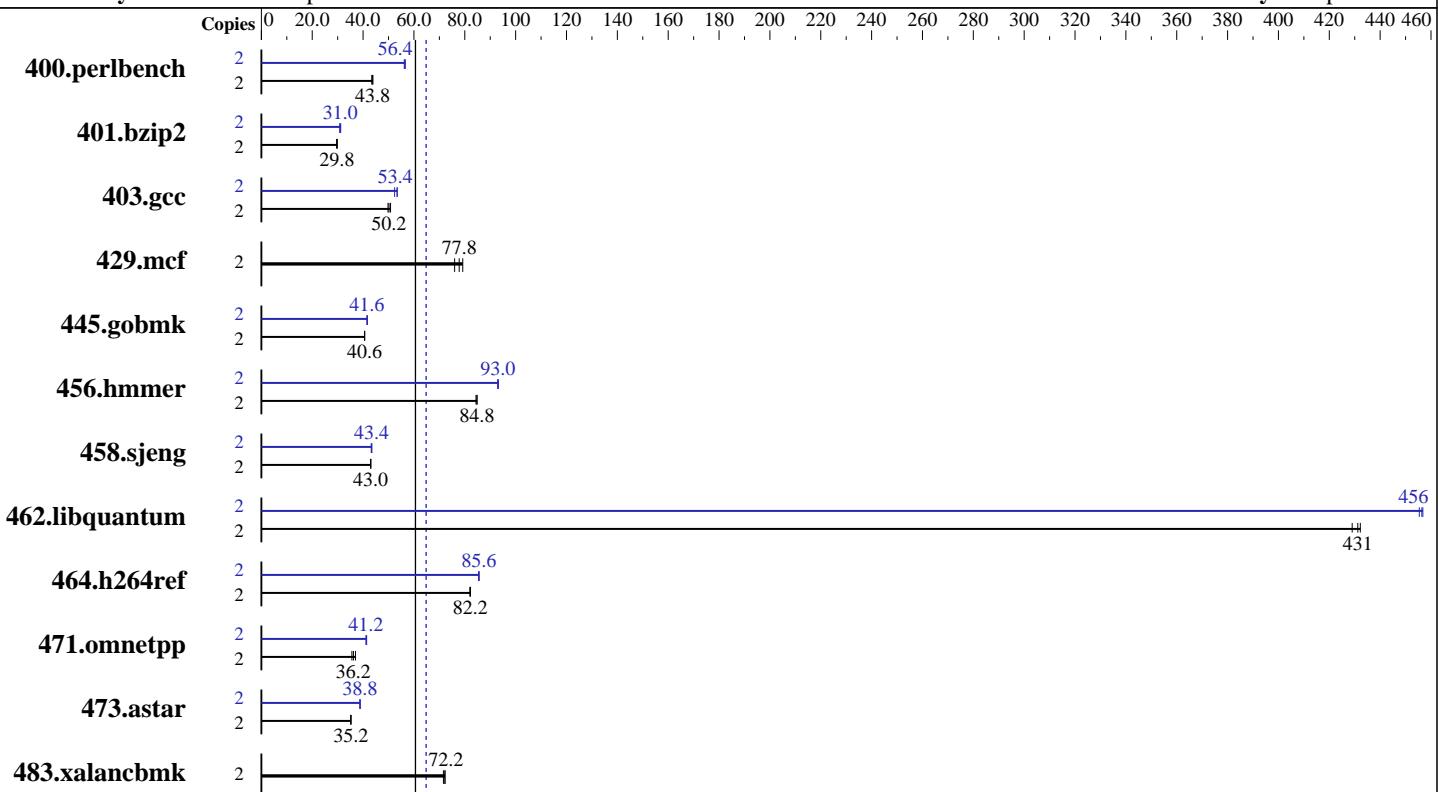SPECint_rate_base2006 = 60.6

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

Test date: Dec-2013
Hardware Availability: Jun-2013
Software Availability: Apr-2013

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	2	450	43.4	446	43.8	**446**	**43.8**	2	**346**	**56.4**	346	56.6	347	56.2
401.bzip2	2	654	29.6	647	29.8	**649**	**29.8**	2	628	30.8	**624**	**31.0**	620	31.2
403.gcc	2	324	49.8	317	50.8	**320**	**50.2**	2	308	52.4	**301**	**53.4**	301	53.4
429.mcf	2	231	79.2	240	76.0	**235**	**77.8**	2	231	79.2	240	76.0	**235**	**77.8**
445.gobmk	2	517	40.6	**517**	**40.6**	516	40.6	2	**504**	**41.6**	504	41.6	504	41.6
456.hmmer	2	221	84.4	220	84.8	**220**	**84.8**	2	**201**	**93.0**	201	93.0	200	93.2
458.sjeng	2	563	43.0	564	43.0	**564**	**43.0**	2	558	43.4	**558**	**43.4**	560	43.2
462.libquantum	2	**96.1**	**431**	95.9	432	96.6	429	2	90.7	457	**90.8**	**456**	91.0	455
464.h264ref	2	538	82.2	539	82.0	**538**	**82.2**	2	**517**	**85.6**	518	85.4	517	85.6
471.omnetpp	2	**345**	**36.2**	338	37.0	352	35.6	2	303	41.4	304	41.2	**303**	**41.2**
473.astar	2	**399**	**35.2**	399	35.2	399	35.2	2	362	38.8	**362**	**38.8**	363	38.8
483.xalancbmk	2	**191**	**72.2**	191	72.2	193	71.6	2	**191**	**72.2**	191	72.2	193	71.6

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 Clt7054D218890C Sat Dec  7 22:03:09 2013

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  : DQ77MK__
Processor(s)  : 1 Processor(s) Installed.
```

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Platform Notes (Continued)

```
      [01]: Intel64 Family 6 Model 58 Stepping 9 GenuineIntel ~2700 Mhz
   BIOS Version  : Intel Corp. MKQ7710H.86A.0054.2012.1120.1444, 11/20/2012
   Total Physical Memory: 3,912 MB

   Trying 'wmic cpu get /value'
   DeviceID       : CPU0
   L2CacheSize    : 512
   L3CacheSize    : 3072
   MaxClockSpeed  : 2700
   Name           : Intel(R) Pentium(R) CPU G2120T @ 2.70GHz
   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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Tested by: Intel Corporation

Test date: Dec-2013
Hardware Availability: Jun-2013
Software Availability: Apr-2013

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

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

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