SPEC® CINT2006 Result

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Intel Corporation

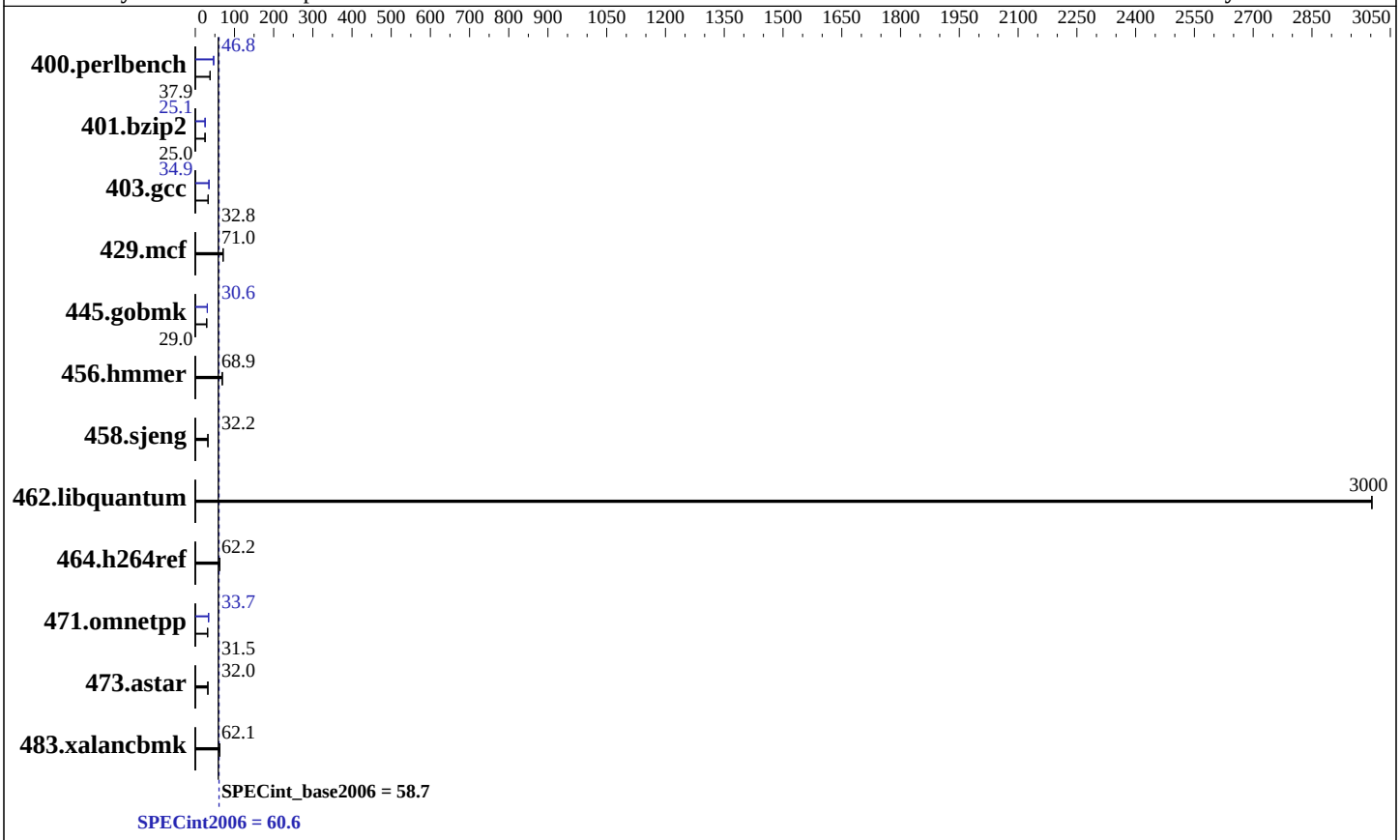
Gigabyte X99-SOC Force-CF Motherboard (Intel Core i7-5960X)

SPECint®2006 = 60.6

SPECint_base2006 = 58.7

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

Test date: Aug-2014
Hardware Availability: Aug-2014
Software Availability: Oct-2013



Hardware

CPU Name:	Intel Core i7-5960X
CPU Characteristics:	Intel Turbo Boost Technology up to 3.50 GHz
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	8 cores, 1 chip, 8 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:	20 MB I+D on chip per chip
Other Cache:	None
Memory:	16 GB (4 x 4 GB 1Rx8 PC4-2133N-U)
Disk Subsystem:	480 GB Intel 520 Series SATA SSD
Other Hardware:	None

Software

Operating System:	Microsoft Windows 8.1 Pro 6.3.9600 N/A Build 9600
Compiler:	C/C++: Version 14.0.1.139 of Intel C++ Studio XE for Windows; Libraries: Version 16.00.30319.01 of Microsoft Visual Studio 2010 Professional SP1
Auto Parallel:	Yes
File System:	NTFS
System State:	Default
Base Pointers:	32/64-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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	258	37.9	260	37.6	**258**	**37.9**	**209**	**46.8**	209	46.7	209	46.8
401.bzip2	387	24.9	**386**	**25.0**	386	25.0	384	25.1	386	25.0	**384**	**25.1**
403.gcc	**245**	**32.8**	245	32.8	245	32.8	232	34.8	230	35.1	**231**	**34.9**
429.mcf	129	71.0	129	70.9	**129**	**71.0**	129	71.0	129	70.9	**129**	**71.0**
445.gobmk	362	29.0	361	29.0	**361**	**29.0**	343	30.6	**342**	**30.6**	342	30.7
456.hmmer	135	68.9	136	68.8	**135**	**68.9**	135	68.9	136	68.8	**135**	**68.9**
458.sjeng	**375**	**32.2**	376	32.2	375	32.2	**375**	**32.2**	376	32.2	375	32.2
462.libquantum	6.90	3000	**6.90**	**3000**	6.90	3000	6.90	3000	**6.90**	**3000**	6.90	3000
464.h264ref	356	62.2	**356**	**62.2**	356	62.2	356	62.2	**356**	**62.2**	356	62.2
471.omnetpp	198	31.6	**198**	**31.5**	202	31.0	**185**	**33.7**	183	34.1	186	33.7
473.astar	**219**	**32.0**	219	32.0	219	32.1	**219**	**32.0**	219	32.0	219	32.1
483.xalancbmk	111	62.2	**111**	**62.1**	111	62.1	111	62.2	**111**	**62.1**	111	62.1

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 14.0 was set up to
generate 64-bit binaries with the command:
"ipsxe-comp-vars.bat intel64 vs2010" (shortcut provided in the Intel(r)
Parallel Studio XE 2013 program folder)
```

Platform Notes

```
Sysinfo program C:\SPEC14.0/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on Clt888888888788 Sun Aug 17 12:36:19 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 8.1 Pro
OS Version    : 6.3.9600 N/A Build 9600
System Manufacturer: Gigabyte Technology Co., Ltd.
System Model  : To be filled by O.E.M.
Processor(s)  : 1 Processor(s) Installed.
     [01]: Intel64 Family 6 Model 63 Stepping 2 GenuineIntel ~3001 Mhz
BIOS Version  : American Megatrends Inc. F1o, 7/22/2014
Total Physical Memory: 16,218 MB

Trying 'wmic cpu get /value'
DeviceID      : CPU0
```

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Platform Notes (Continued)

```
L2CacheSize   : 2048
L3CacheSize   : 4096
MaxClockSpeed : 3001
Name          : Intel(R) Core(TM) i7-5960X CPU @ 3.00GHz
NumberOfCores : 8
NumberOfLogicalProcessors: 16

(End of data from sysinfo program)
```

Component Notes

```
Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply
```

General Notes

```
OMP_NUM_THREADS set to number of processors cores
KMP_AFFINITY set to granularity=fine,scatter
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

```
400.perlbench: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64_X64
               -DSPEC_CPU_NO_NEED_VA_COPY
  401.bzip2: -DSPEC_CPU_P64
    403.gcc: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64
    429.mcf: -DSPEC_CPU_P64
  445.gobmk: -DSPEC_CPU_P64
  456.hmmer: -DSPEC_CPU_P64
  458.sjeng: -DSPEC_CPU_P64
462.libquantum: -DSPEC_CPU_P64
  464.h264ref: -DSPEC_CPU_P64 -DWIN32 -DSPEC_CPU_NO_INTTYPES
  471.omnetpp: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64
    473.astar: -DSPEC_CPU_P64
483.xalancbmk: -DSPEC_CPU_P64 -Qoption,cpp,--no_wchar_t_keyword
```

Base Optimization Flags

C benchmarks:
```
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
-Qauto-ilp32 /F512000000
```

C++ benchmarks:
```
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
-Qauto-ilp32 /F512000000 shlW64M.lib            -link /FORCE:MULTIPLE
```

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks:
```
icl -Qvc10 -Qstd=c99
```

C++ benchmarks:
```
icl -Qvc10
```

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

400.perlbench: `-QxCORE-AVX2`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2)
`-Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch`
`-Qauto-ilp32 /F512000000 shlW64M.lib`
`-link /FORCE:MULTIPLE`

401.bzip2: `-QxCORE-AVX2`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2)
`-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias`
`-Qauto-ilp32 /F512000000`

403.gcc: `-QxCORE-AVX2`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2)
`-Qipo -O3 -Qprec-div- -Qauto-ilp32 /F512000000`

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Peak Optimization Flags (Continued)

429.mcf: basepeak = yes

445.gobmk: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O2 -Qprec-div- -Qansi-alias -Qauto-ilp32 /F512000000

456.hmmer: basepeak = yes

458.sjeng: basepeak = yes

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-ra-region-strategy=block -Qauto-ilp32 /F512000000 shlW64M.lib -link /FORCE:MULTIPLE

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-windows.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-windows.xml

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