SPEC® CINT2006 Result

Dell Inc.

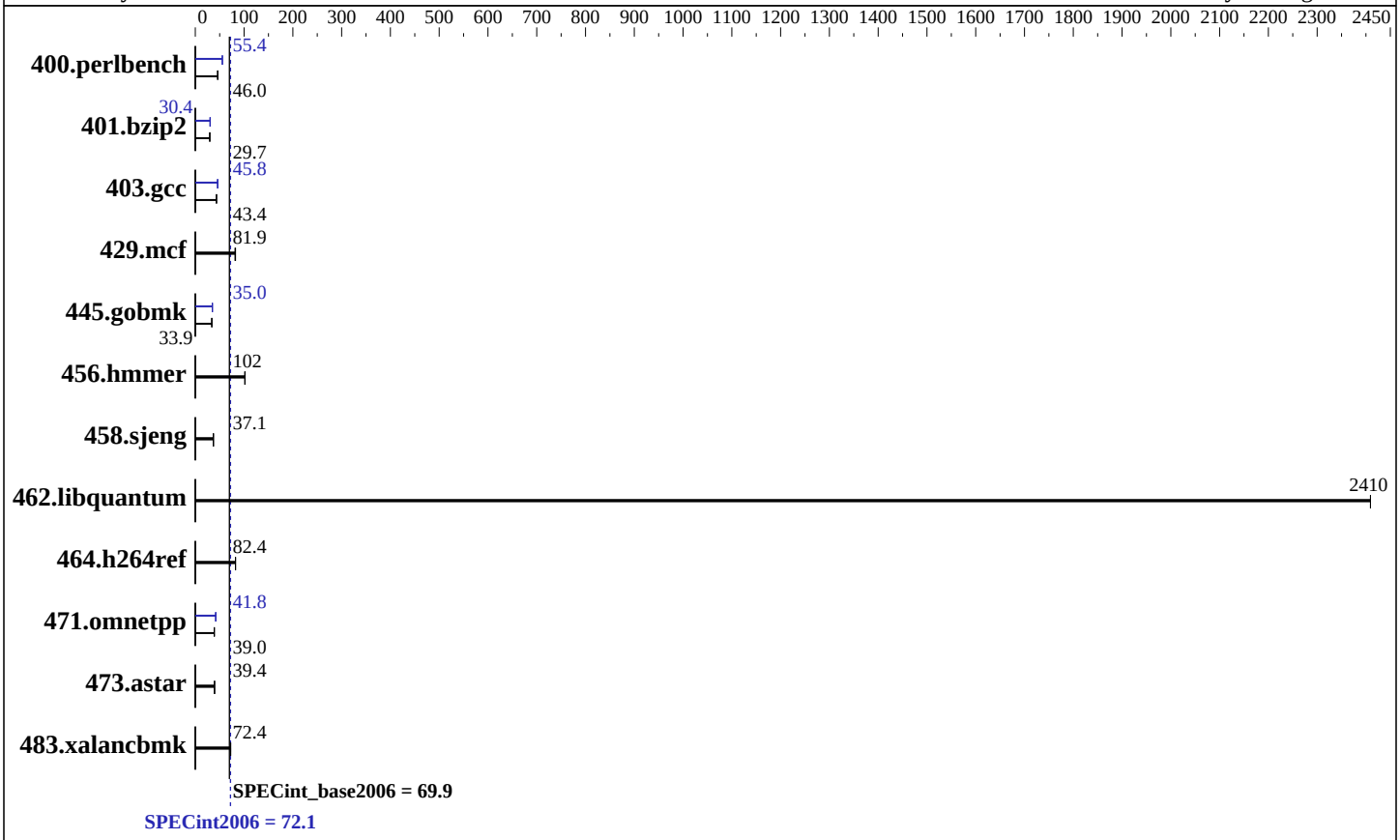
Precision 7710 (Intel Xeon E3-1575M v5, 3.00 GHz)

SPECint®2006 = 72.1

SPECint_base2006 = 69.9

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Aug-2016
Hardware Availability: Aug-2016
Software Availability: Aug-2016



Hardware

CPU Name:	Intel Xeon E3-1575M v5
CPU Characteristics:	Intel Turbo Boost Technology up to 3.90 GHz
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 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:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	64 GB (4 x 16 GB 2Rx4 PC4-2133P-E)
Disk Subsystem:	512 GB Samsung NVMe SSD
Other Hardware:	None

Software

Operating System:	Microsoft Windows 10 Pro Build 10586
Compiler:	C/C++: Version 16.0.0.110 of Intel C++ Studio XE for Windows; Libraries: Version 18.00.30723 of Microsoft Visual Studio 2013
Auto Parallel:	Yes
File System:	NTFS
System State:	Default
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	SmartHeap Library Version 11.0 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	**212**	**46.0**	213	45.8	212	46.0	**176**	**55.4**	176	55.4	177	55.4
401.bzip2	325	29.7	325	29.7	**325**	**29.7**	318	30.3	**318**	**30.4**	318	30.4
403.gcc	185	43.5	186	43.3	**185**	**43.4**	176	45.8	**176**	**45.8**	176	45.7
429.mcf	111	82.5	112	81.6	**111**	**81.9**	111	82.5	112	81.6	**111**	**81.9**
445.gobmk	310	33.9	310	33.8	**310**	**33.9**	300	35.0	299	35.1	**299**	**35.0**
456.hmmer	91.8	102	91.5	102	**91.7**	**102**	91.8	102	91.5	102	**91.7**	**102**
458.sjeng	326	37.1	**326**	**37.1**	326	37.1	326	37.1	**326**	**37.1**	326	37.1
462.libquantum	8.60	2410	**8.60**	**2410**	8.60	2410	8.60	2410	**8.60**	**2410**	8.60	2410
464.h264ref	269	82.4	268	82.5	**269**	**82.4**	269	82.4	268	82.5	**269**	**82.4**
471.omnetpp	161	38.8	160	39.1	**160**	**39.0**	148	42.1	**150**	**41.8**	150	41.8
473.astar	178	39.5	178	39.4	**178**	**39.4**	178	39.5	178	39.4	**178**	**39.4**
483.xalancbmk	**95.3**	**72.4**	95.0	72.6	95.3	72.4	**95.3**	**72.4**	95.0	72.6	95.3	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 16.0 was set up to
generate 64-bit binaries with the command:
"psxevars.bat intel64" (shortcut provided in the Intel(r)
Parallel Studio XE 2016 program folder)
```

Platform Notes

```
Sysinfo program c:\CPU200~1.0-2/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on DESKTOP-DQ7JMF0 Thu Aug 11 17:01:13 2016

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 10 Pro
OS Version    : 10.0.10586 N/A Build 10586
System Manufacturer: Dell Inc.
System Model  : Precision 7710
Processor(s)  : 1 Processor(s) Installed.
     [01]: Intel64 Family 6 Model 94 Stepping 3 GenuineIntel ~3000 Mhz
BIOS Version  : Dell Inc. 01.06.06, 7/27/2016
Total Physical Memory: 65,420 MB

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

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Platform Notes (Continued)

```
 L2CacheSize   : 1024
 L3CacheSize   : 8192
 MaxClockSpeed : 3000
 Name          : Intel(R) Xeon(R) CPU E3-1575M v5 @ 3.00GHz
 NumberOfCores : 4
 NumberOfLogicalProcessors: 8

 (End of data from sysinfo program)
```

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 Xeon E5-2699 v3 CPU
+ 64GB memory using Windows 8.1 Enterprise 64-bit
```

Base Compiler Invocation

C benchmarks:
```
icl -Qvc12 -Qstd=c99
```

C++ benchmarks:
```
icl -Qvc12
```

Base Portability Flags

400.perlbench: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64_X64
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
471.omnetpp: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64
473.astar: -DSPEC_CPU_P64
483.xalancbmk: -DSPEC_CPU_P64 -Qoption,cpp,--no_wchar_t_keyword -DWIN64

Base Optimization Flags

C benchmarks:
```
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
-Qauto-ilp32 /F64000000
```

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Base Optimization Flags (Continued)

C++ benchmarks:
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
-Qauto-ilp32 /F64000000 shlW64M.lib -link /FORCE:MULTIPLE

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks:
icl -Qvc12 -Qstd=c99

C++ benchmarks:
icl -Qvc12

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 /F64000000 shlW64M.lib
/F256000000 -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 /F64000000

403.gcc: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qauto-ilp32 /F64000000

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
/F64000000

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Peak Optimization Flags (Continued)

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 /F64000000 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-ic16.0-official-windows.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-windows.xml

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

Tested with SPEC CPU2006 v1.2.
Report generated on Tue Sep 6 16:57:10 2016 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 6 September 2016.