SPEC® CINT2006 Result

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Dell Inc.

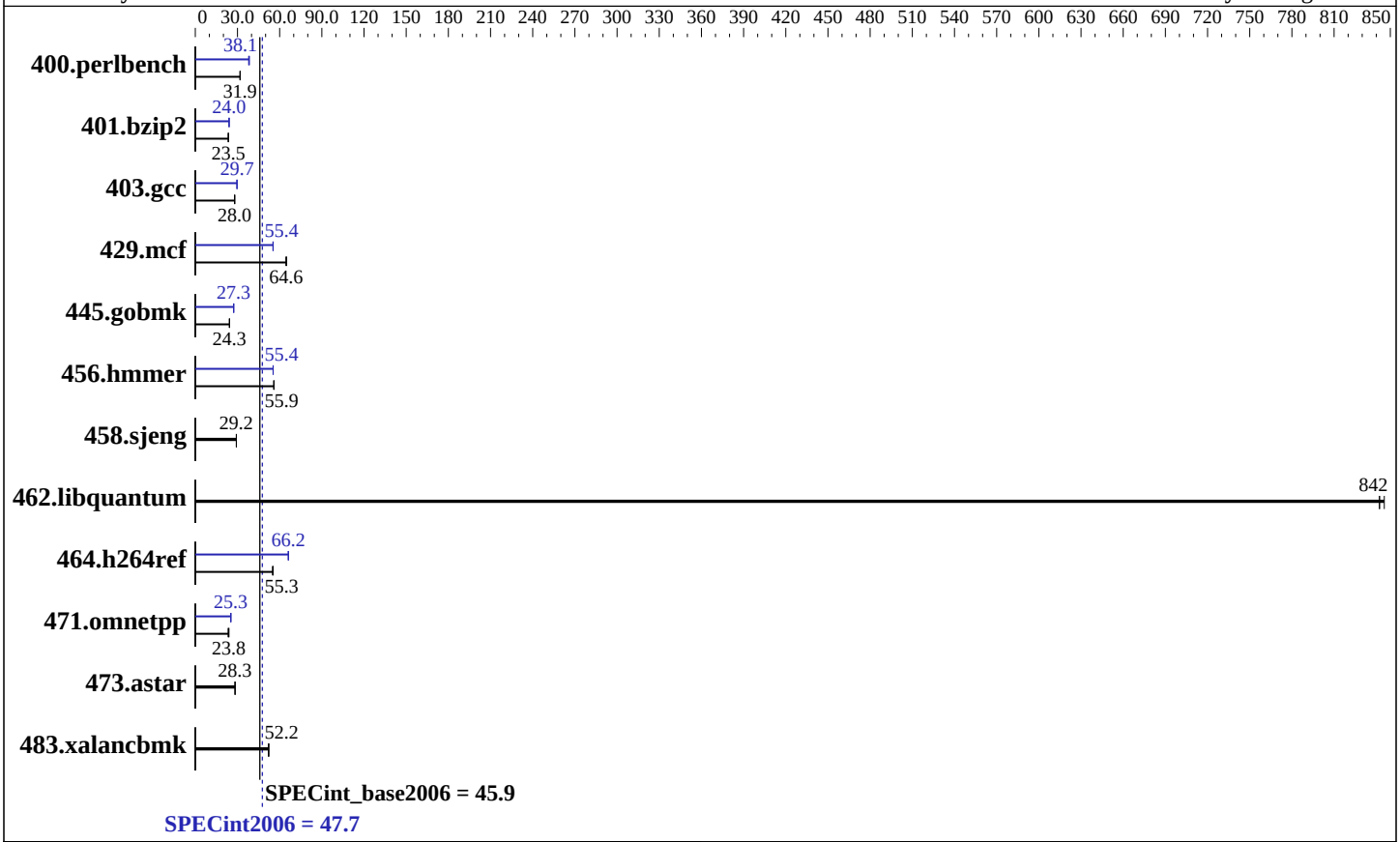
Dell Precision M3800 (Intel(R) Core(R) i7-4702HQ, 2.20 GHz)

SPECint®2006 = 47.7

SPECint_base2006 = 45.9

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

Test date: Nov-2013
Hardware Availability: Nov-2013
Software Availability: Aug-2011



Hardware

CPU Name:	Intel Core i7-4702HQ
CPU Characteristics:	Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz:	2200
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:	6 MB I+D on chip per chip
Other Cache:	None
Memory:	16 GB (2 x 8 GB 1Rx8 PC3L-12800U-11)
Disk Subsystem:	1 x 1 TB SATA III 7200 RPM
Other Hardware:	None

Software

Operating System:	Windows 7 Professional (64-bit) SP1
Compiler:	C/C++: Version 12.1.0.233 of Intel C++ Studio XE for Windows C/C++: Version 2010 of Microsoft Visual Studio
Auto Parallel:	Yes
File System:	NTFS
System State:	Default
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap Library 10.0

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	307	31.8	306	31.9	**306**	**31.9**	254	38.5	257	38.0	**256**	**38.1**
401.bzip2	**411**	**23.5**	411	23.5	411	23.5	401	24.0	**401**	**24.0**	401	24.1
403.gcc	**288**	**28.0**	288	28.0	288	28.0	272	29.6	272	29.7	**272**	**29.7**
429.mcf	140	65.0	141	64.5	**141**	**64.6**	165	55.4	165	55.2	**165**	**55.4**
445.gobmk	432	24.3	**432**	**24.3**	432	24.3	385	27.3	384	27.3	**384**	**27.3**
456.hmmer	167	55.9	**167**	**55.9**	167	55.9	168	55.4	**168**	**55.4**	169	55.3
458.sjeng	415	29.2	**414**	**29.2**	414	29.2	415	29.2	**414**	**29.2**	414	29.2
462.libquantum	**24.6**	**842**	24.5	846	24.6	842	**24.6**	**842**	24.5	846	24.6	842
464.h264ref	403	54.9	400	55.3	**400**	**55.3**	334	66.2	**334**	**66.2**	335	66.2
471.omnetpp	268	23.3	262	23.9	**263**	**23.8**	248	25.2	**247**	**25.3**	247	25.3
473.astar	248	28.3	**248**	**28.3**	248	28.3	248	28.3	**248**	**28.3**	248	28.3
483.xalancbmk	132	52.3	133	52.0	**132**	**52.2**	132	52.3	133	52.0	**132**	**52.2**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

```
OMP_NUM_THREADS=4 (number of cores)
Set power configuration to High Performance and disabled monitor blanking and sleep timer
KMP_AFFINITY=granularity=fine,scatter
```

Platform Notes

```
Sysinfo program c:\cpu2006.v1.2/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on M3800-SPEC-PC Mon Nov 18 16:37:31 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 Professional
OS Version    : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: Dell Inc.
System Model  : Dell Precision M3800
Processor(s)  : 1 Processor(s) Installed.
     [01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~2201 Mhz
BIOS Version  : Dell Inc. A00, 10/3/2013
Total Physical Memory: 16,287 MB

Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize   : 1024
```

Continued on next page

Platform Notes (Continued)

```
L3CacheSize   : 6144
MaxClockSpeed : 2201
Name          : Intel(R) Core(TM) i7-4702HQ CPU @ 2.20GHz
NumberOfCores : 4
NumberOfLogicalProcessors: 8

(End of data from sysinfo program)
```

General Notes

Binaries were compiled on a Precision T1600 system with a single Xeon E3-1200 CPU and 16GB memory using Windows 7 Professional 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_NO_NEED_VA_COPY -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 -DSPEC_CPU_NO_INTTYPES -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

Base Optimization Flags

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

C++ benchmarks:
```
-QxAVX -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: -Qprof_gen(pass 1) -QxAVX -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch -Qauto-ilp32 /F512000000 shlw64m.lib -link /FORCE:MULTIPLE

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

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

429.mcf: -QxAVX -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32 /F512000000

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

456.hmmer: -QxAVX -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias -Qauto-ilp32 /F512000000

458.sjeng: basepeak = yes

462.libquantum: basepeak = yes

Continued on next page

Peak Optimization Flags (Continued)

464.h264ref: `-Qprof_gen`(pass 1) `-QxAVX`(pass 2) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias -Qauto-ilp32 /F512000000`

C++ benchmarks:

471.omnetpp: `-Qprof_gen`(pass 1) `-QxAVX`(pass 2) `-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 files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Dell-ic12.1-Windows.html
http://www.spec.org/cpu2006/flags/Dell-platform-Precision.20131217.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Dell-ic12.1-Windows.xml
http://www.spec.org/cpu2006/flags/Dell-platform-Precision.20131217.xml

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

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