SPEC® CINT2006 Result

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Dell Inc.

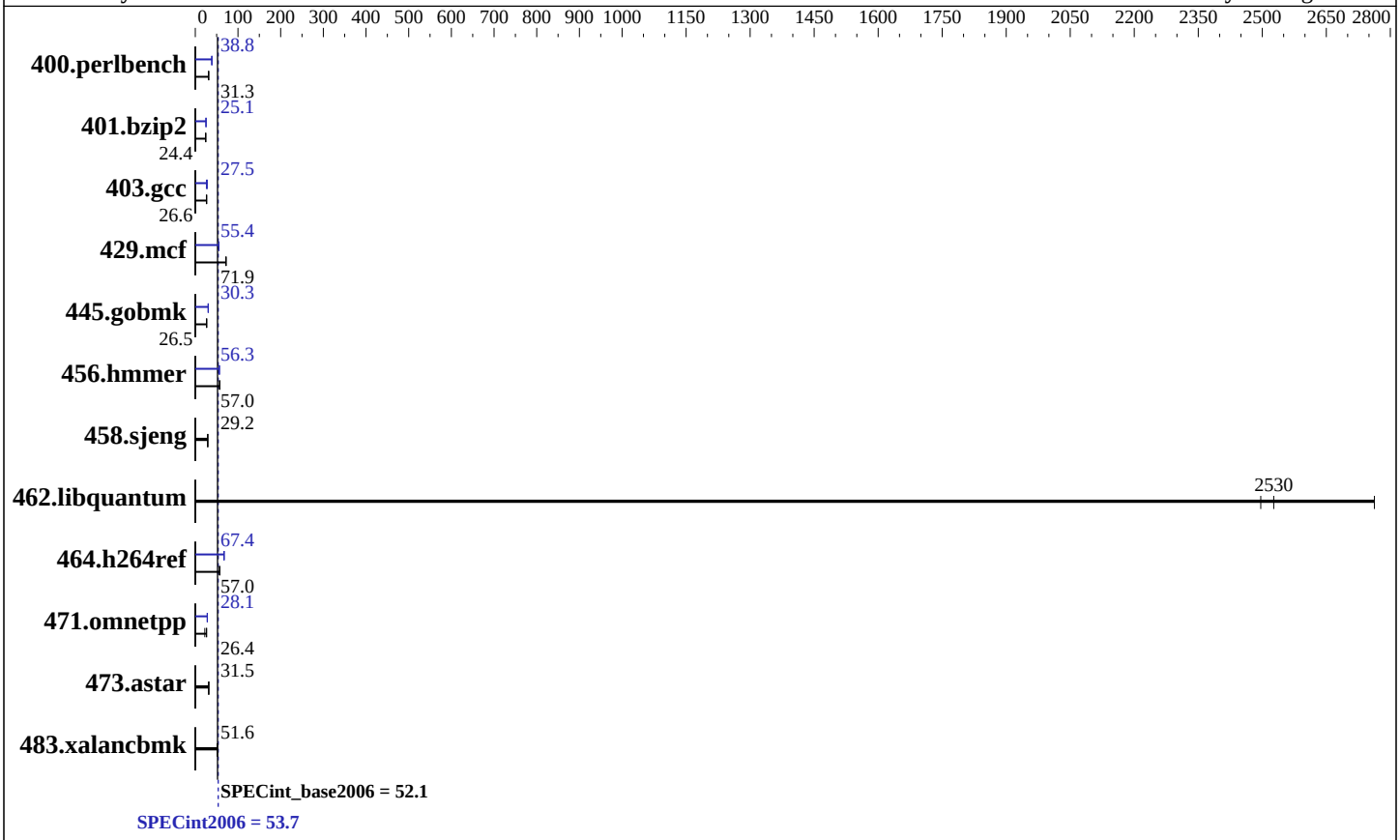
DELL Precision T7600 (Intel Xeon E5-2687W, 3.10GHz)

SPECint®2006 = 53.7

SPECint_base2006 = 52.1

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

Test date: Jan-2013
Hardware Availability: Aug-2012
Software Availability: Aug-2011



Hardware

CPU Name:	Intel Xeon E5-2687W
CPU Characteristics:	Intel Turbo Boost Technology up to 3.80 GHz
CPU MHz:	3100
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	1,2 chips
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:	64 GB (8 x 8 GB 2Rx4 PC3-12800R-9, ECC)
Disk Subsystem:	1 x 250 GB SATAIII 7200 RPM
Other Hardware:	None

Software

Operating System:	Windows 7 Professional (64-bit)
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	312	31.3	314	31.1	**313**	**31.3**	252	38.7	252	38.8	**252**	**38.8**
401.bzip2	396	24.3	395	24.4	**396**	**24.4**	384	25.1	385	25.1	**384**	**25.1**
403.gcc	310	26.0	303	26.6	**303**	**26.6**	289	27.9	310	26.0	**292**	**27.5**
429.mcf	127	71.9	**127**	**71.9**	127	72.0	165	55.3	**165**	**55.4**	165	55.4
445.gobmk	396	26.5	**396**	**26.5**	395	26.6	**346**	**30.3**	346	30.3	347	30.2
456.hmmer	164	57.0	**164**	**57.0**	164	57.0	166	56.3	**166**	**56.3**	166	56.3
458.sjeng	415	29.1	414	29.2	**415**	**29.2**	415	29.1	414	29.2	**415**	**29.2**
462.libquantum	**8.20**	**2530**	7.50	2760	8.30	2500	**8.20**	**2530**	7.50	2760	8.30	2500
464.h264ref	390	56.7	388	57.1	**388**	**57.0**	**328**	**67.4**	328	67.5	328	67.4
471.omnetpp	280	22.3	237	26.4	**237**	**26.4**	223	28.1	223	28.1	**223**	**28.1**
473.astar	223	31.5	**223**	**31.5**	223	31.4	223	31.5	**223**	**31.5**	223	31.4
483.xalancbmk	134	51.5	**134**	**51.6**	133	51.7	134	51.5	**134**	**51.6**	133	51.7

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

Operating System Notes

```
OMP_NUM_THREADS=16 (number of cores)
KMP_AFFINITY=granularity=fine,scatter
```

Platform Notes

```
Sysinfo program C:\cpu2006.v1.2/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on Spec-PC Fri Jan 18 18:33:43 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  : Precision T7600
Processor(s)  : 2 Processor(s) Installed.
     [01]: Intel64 Family 6 Model 45 Stepping 6 GenuineIntel ~2697 Mhz
     [02]: Intel64 Family 6 Model 45 Stepping 6 GenuineIntel ~2480 Mhz
BIOS Version  : Dell Inc. A05, 11/8/2012
Total Physical Memory: 65,462 MB

Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize   : 2048
```

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Platform Notes (Continued)

```
    L3CacheSize   : 4096
    MaxClockSpeed : 3101
    Name          : Intel(R) Xeon(R) CPU E5-2687W 0 @ 3.10GHz
    NumberOfCores : 8
    NumberOfLogicalProcessors: 16
    DeviceID      : CPU1
    L2CacheSize   : 2048
    L3CacheSize   : 4096
    MaxClockSpeed : 3101
    Name          : Intel(R) Xeon(R) CPU E5-2687W 0 @ 3.10GHz
    NumberOfCores : 8
    NumberOfLogicalProcessors: 16

    (End of data from sysinfo program)
```

General Notes

```
    Binaries were built on Windows 7 Professional (64-bit)

   Submitted_by: <Alex_Shows@DELL.com>
   Submitted: Mon Feb 11 17:38:59 EST 2013
   Submission: cpu2006-20130211-25514.sub
```

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`

Continued on next page

Peak Optimization Flags (Continued)

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

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 file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Dell-ic12.1-Windows.20130226.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Dell-ic12.1-Windows.20130226.xml

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