



# 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

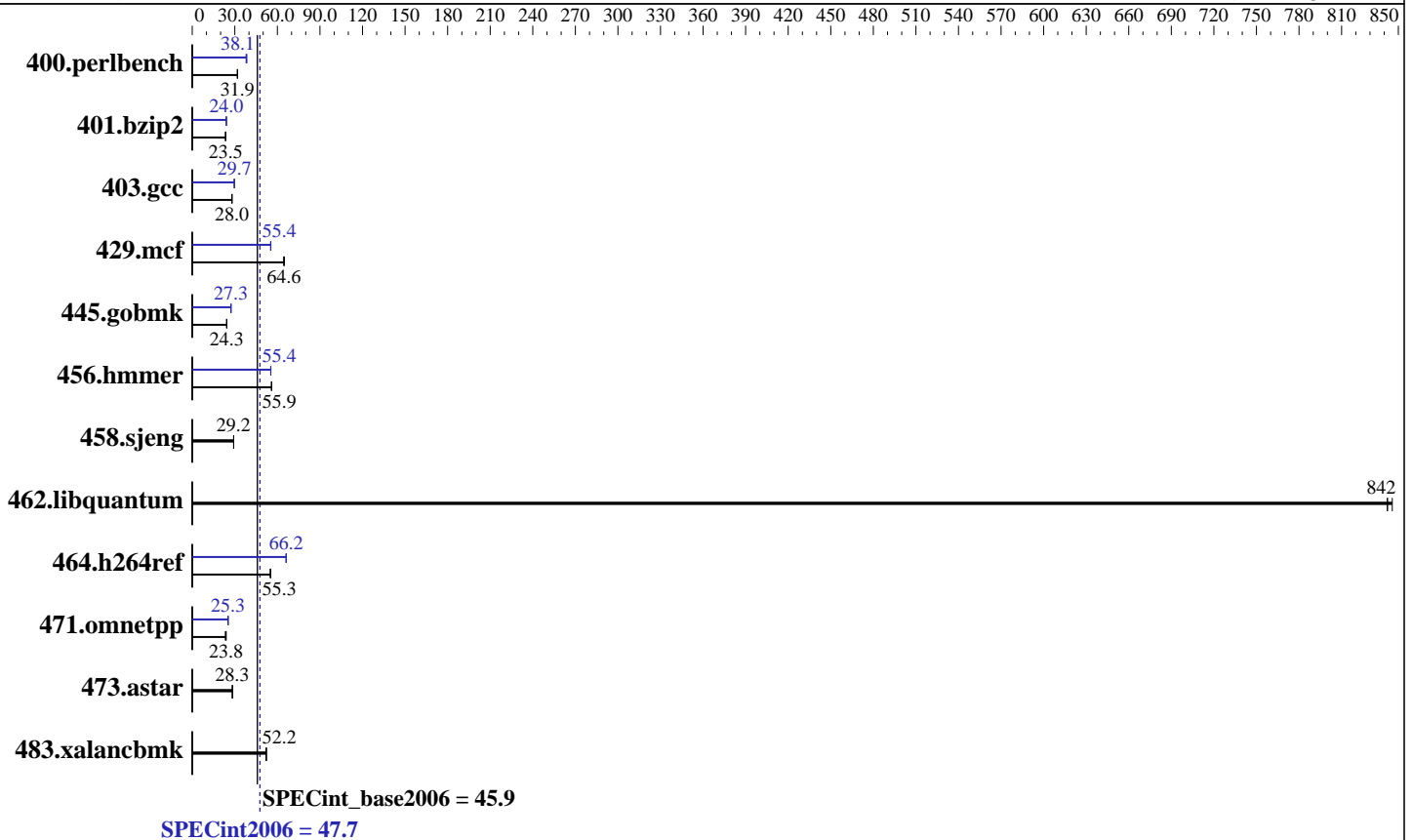
Test sponsor: Dell Inc.

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

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
```

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## 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



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## 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.bzp2: -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

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## 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 questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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