



SPEC® CINT2006 Result

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Intel Corporation

SPECint®_rate2006 = 189

Intel DH77KC motherboard (Intel Core i7-3770K)

SPECint_rate_base2006 = 177

CPU2006 license: 13

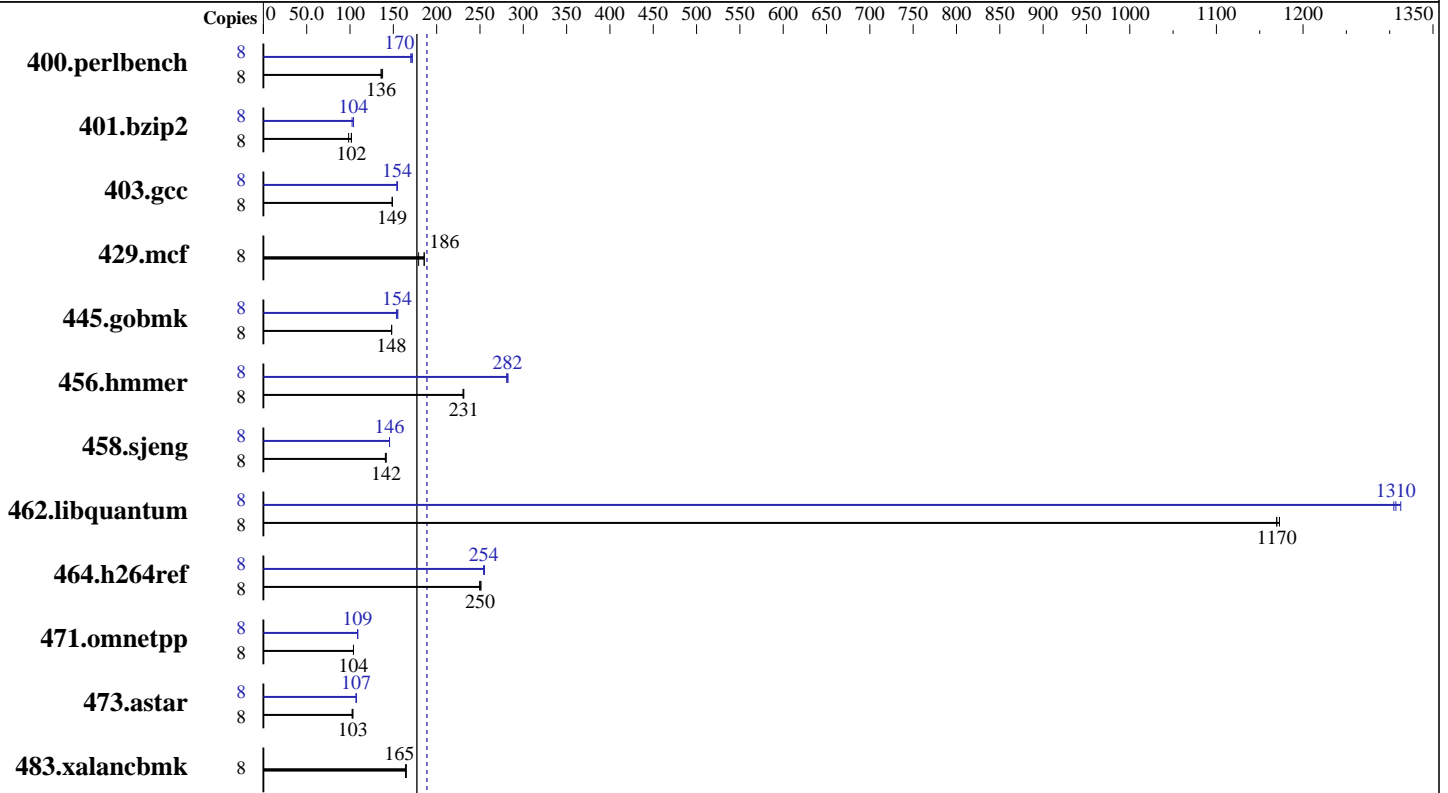
Test date: May-2012

Test sponsor: Intel Corporation

Hardware Availability: Apr-2012

Tested by: Intel Corporation

Software Availability: Apr-2011



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Hardware

CPU Name: Intel Core i7-3770K
 CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz
 CPU MHz: 3500
 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: 8 GB (2 x 4 GB 2Rx4 PC3-12800U-11)
 Disk Subsystem: 1 TB Seagate SATA, 7200 RPM
 Other Hardware: None

Software

Operating System: Microsoft Windows 7 Ultimate (64-bit)
 6.1.7601 Service Pack 1 Build 7601
 Compiler: C/C++: Version 12.1.0.229 of Intel C++ Studio XE for Windows;
 Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1
 Auto Parallel: No
 File System: NTFS
 System State: Default
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap Library Version 9.01 from <http://www.microquill.com/>



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	568	138	<u>575</u>	<u>136</u>	576	136	8	455	172	460	170	<u>458</u>	<u>170</u>
401.bzip2	8	784	98.4	<u>759</u>	<u>102</u>	758	102	8	754	102	740	104	<u>745</u>	<u>104</u>
403.gcc	8	432	149	433	149	<u>432</u>	<u>149</u>	8	417	154	417	154	<u>417</u>	<u>154</u>
429.mcf	8	407	179	393	186	<u>394</u>	<u>186</u>	8	407	179	393	186	<u>394</u>	<u>186</u>
445.gobmk	8	568	148	<u>568</u>	<u>148</u>	568	148	8	<u>545</u>	<u>154</u>	541	155	546	154
456.hammer	8	<u>323</u>	<u>231</u>	324	230	323	231	8	<u>265</u>	<u>282</u>	264	282	266	281
458.sjeng	8	<u>685</u>	<u>142</u>	685	142	687	141	8	<u>665</u>	<u>146</u>	665	146	665	146
462.libquantum	8	141	1170	<u>142</u>	<u>1170</u>	142	1170	8	126	1310	127	1300	<u>127</u>	<u>1310</u>
464.h264ref	8	710	250	<u>707</u>	<u>250</u>	704	251	8	694	255	<u>696</u>	<u>254</u>	696	254
471.omnetpp	8	480	104	480	104	<u>480</u>	<u>104</u>	8	<u>460</u>	<u>109</u>	460	109	459	109
473.astar	8	<u>546</u>	<u>103</u>	545	103	547	102	8	525	107	523	107	<u>524</u>	<u>107</u>
483.xalancbmk	8	336	164	335	165	<u>335</u>	<u>165</u>	8	336	164	335	165	<u>335</u>	<u>165</u>

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 was set up to generate 32-bit binaries with the command: "ipsxe-comp-vars.bat ia32 vs2008" (shortcut provided in the Intel(r) Parallel Studio XE 2011 program folder)

Submit Notes

Processes were bound to specific processors using the start command with the /affinity switch. The config file option 'submit' was used to generate the affinity mask for each process.

Platform Notes

Sysinfo program C:\CPU200~1.17A\Docs\sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 # \$ \8787f7622badcf24e01c368b1db4377c
running on CltE840F2070390 Sat May 5 07:19:16 2012

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 Ultimate
OS Version        : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: INTEL_
System Model       : DH77KC_
Processor(s)      : 1 Processor(s) Installed.
                   [01]: Intel64 Family 6 Model 58 Stepping 9 GenuineIntel ~3501 Mhz
BIOS Version      : Intel Corp. KCH7710H.86A.0069.2012.0224.1825, 2/24/2012
```

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Platform Notes (Continued)

Total Physical Memory: 8,090 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0

L2CacheSize : 1024

L3CacheSize : 8192

MaxClockSpeed : 3501

Name : Intel(R) Core(TM) i7-3770K CPU @ 3.50GHz

NumberOfCores : 4

NumberOfLogicalProcessors: 8

(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

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 -Qvc9 -Qstd=c99

C++ benchmarks:

icl -Qvc9

Base Portability Flags

403.gcc: -DSPEC_CPU_WIN32

464.h264ref: -DWIN32 -DSPEC_CPU_NO_INTTYPES

483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword

Base Optimization Flags

C benchmarks:

-QxAVX -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

C++ benchmarks:

-QxAVX -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
/F512000000 shlw32M.lib -link /FORCE:MULTIPLE



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Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icl -Qvc9 -Qstd=c99

456.hmmer: C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/bin/intel64/icl.exe

458.sjeng: C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/bin/intel64/icl.exe

462.libquantum: C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/bin/intel64/icl.exe
-Qstd=c99

C++ benchmarks (except as noted below):

icl -Qvc9

473.astar: C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/bin/intel64/icl.exe

Peak Portability Flags

403.gcc: -DSPEC_CPU_WIN32

456.hmmer: -DSPEC_CPU_P64

458.sjeng: -DSPEC_CPU_P64

462.libquantum: -DSPEC_CPU_P64

464.h264ref: -DWIN32 -DSPEC_CPU_NO_INTTYPES

473.astar: -DSPEC_CPU_P64

483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword

Peak Optimization Flags

C benchmarks:

400.perlbench: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qansi-alias -Qopt-prefetch /F512000000
shlw32M.lib -link /FORCE:MULTIPLE

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

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

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Peak Optimization Flags (Continued)

429.mcf: basepeak = yes

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

456.hmmer: -Qauto-ilp32 -QxAVX(pass 2) -Qprof_gen(pass 1)
-Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch
/F512000000

458.sjeng: -Qauto-ilp32 -QxAVX(pass 2) -Qprof_gen(pass 1)
-Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4
/F512000000

462.libquantum: -Qauto-ilp32 -QxAVX -Qipo -O3 -Qprec-div- -Qopt-prefetch
/F512000000

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

C++ benchmarks:

471.omnetpp: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qansi-alias
-Qopt-ra-region-strategy=block /F512000000 shlW32M.lib
-link /FORCE:MULTIPLE

473.astar: -Qauto-ilp32 -QxAVX -Qipo -O3 -Qprec-div- -Qopt-prefetch
/F512000000 shlW64M.lib -link /FORCE:MULTIPLE

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

456.hmmer: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/compiler/lib/intel64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

458.sjeng: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/compiler/lib/intel64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

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Peak Other Flags (Continued)

```

462.libquantum: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/compiler/lib/intel64
                -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64
                -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib
                -link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

```

C++ benchmarks:

```

473.astar: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/compiler/lib/intel64
           -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64
           -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib
           -link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

```

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-windows.20120117.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-windows.20120117.xml>

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

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