Intel Corporation

Intel DH77KC motherboard (Intel Core i7-3770S)

SPEC® CFP2006 Result

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

SPECfp®_rate2006 = 127
SPECfp_rate_base2006 = 125

Hardware
CPU Name: Intel Core i7-3770S
CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz
CPU MHz: 3100
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

Software
Operating System: Microsoft Windows 7 Ultimate (64-bit)
Compiler: C/C++: Version 12.1.0.229 of Intel C++ Studio XE for Windows;
Fortran: Version 12.1.0.229 of Intel Fortran Studio XE for Windows;
Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1
Auto Parallel: No
File System: NTFS

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SPECfp_rate_base2006 = 125:

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SPEC CFP2006 Result

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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

System State: Default
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: SmartHeap Library Version 9.01 from http://www.microquill.com/

Results Table

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</table>

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 64-bit binaries with the command: "ipsxe-comp-vars.bat intel64 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.
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Platform Notes

Sysinfo program C:\CPU200~1.17A/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on CltE840F206A3A6 Sat May  5 17:58:26 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 ~3101 Mhz
Total Physical Memory: 8,090 MB

Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize   : 1024
L3CacheSize   : 8192
MaxClockSpeed : 3101
Name          : Intel(R) Core(TM) i7-3770S CPU @ 3.10GHz
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

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Hardware Availability: Apr-2012
Software Availability: Apr-2011

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Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc9 -Qstd=c99 ifort

Base Portability Flags

410.bwaves: -DSPEC_CPU_P64 -names:lowercase
416.games: -DSPEC_CPU_P64
433.milc: -DSPEC_CPU_P64
434.cesmp: -DSPEC_CPU_P64
435.gromacs: -DSPEC_CPU_P64
436.cactusADM: -DSPEC_CPU_P64 /names:lowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -DSPEC_CPU_P64 -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER /names:lowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -DSPEC_CPU_P64

Base Optimization Flags

C benchmarks:
-QxAVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch
-Qauto-1lp32 /F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:
-QxAVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch
-Qcxx-features -Qauto-1lp32 /F1000000000 shlw64M.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:
-QxAVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch
/F1000000000 -link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-QxAVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch
-Qauto-1lp32 /F1000000000 -link /FORCE:MULTIPLE
Peak Compiler Invocation

C benchmarks:
   icl -Qvc9 -Qstd=c99

C++ benchmarks:
   icl -Qvc9

Fortran benchmarks:
   ifort

Benchmarks using both Fortran and C:
   icl -Qvc9 -Qstd=c99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
   433.milc: basepeak = yes
   470.lbm: basepeak = yes
   482.sphinx3: -QxAVX -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
               -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:
   444.namd: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
              -O3 -Qprec-div- -Oa -Qauto-ilp32 /F1000000000 shlW64M.lib
              -link /FORCE:MULTIPLE
   447.dealII: basepeak = yes
   450.soplex: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
                -O3 -Qauto-ilp32 /F1000000000 shlW64M.lib
                -link /FORCE:MULTIPLE
   453.povray: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
               -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32 /F1000000000
               shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

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Peak Optimization Flags (Continued)

410.bwaves: basepeak = yes
416.gamess: basepeak = yes
434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: basepeak = yes
465.tonto: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-03 -Qprec-div -Qunroll4 -Qauto /F1000000000
- link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
435.gromacs: basepeak = yes
436.cactusADM: basepeak = yes
454.calculix: basepeak = yes
481.wrf: basepeak = yes

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

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

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

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