



# SPEC® CINT2006 Result

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ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)

**SPECint\_rate2006 = 115**

ASUS Sabertooth 990FX (AMD FX-8150)

**SPECint\_rate\_base2006 = 106**

CPU2006 license: 13

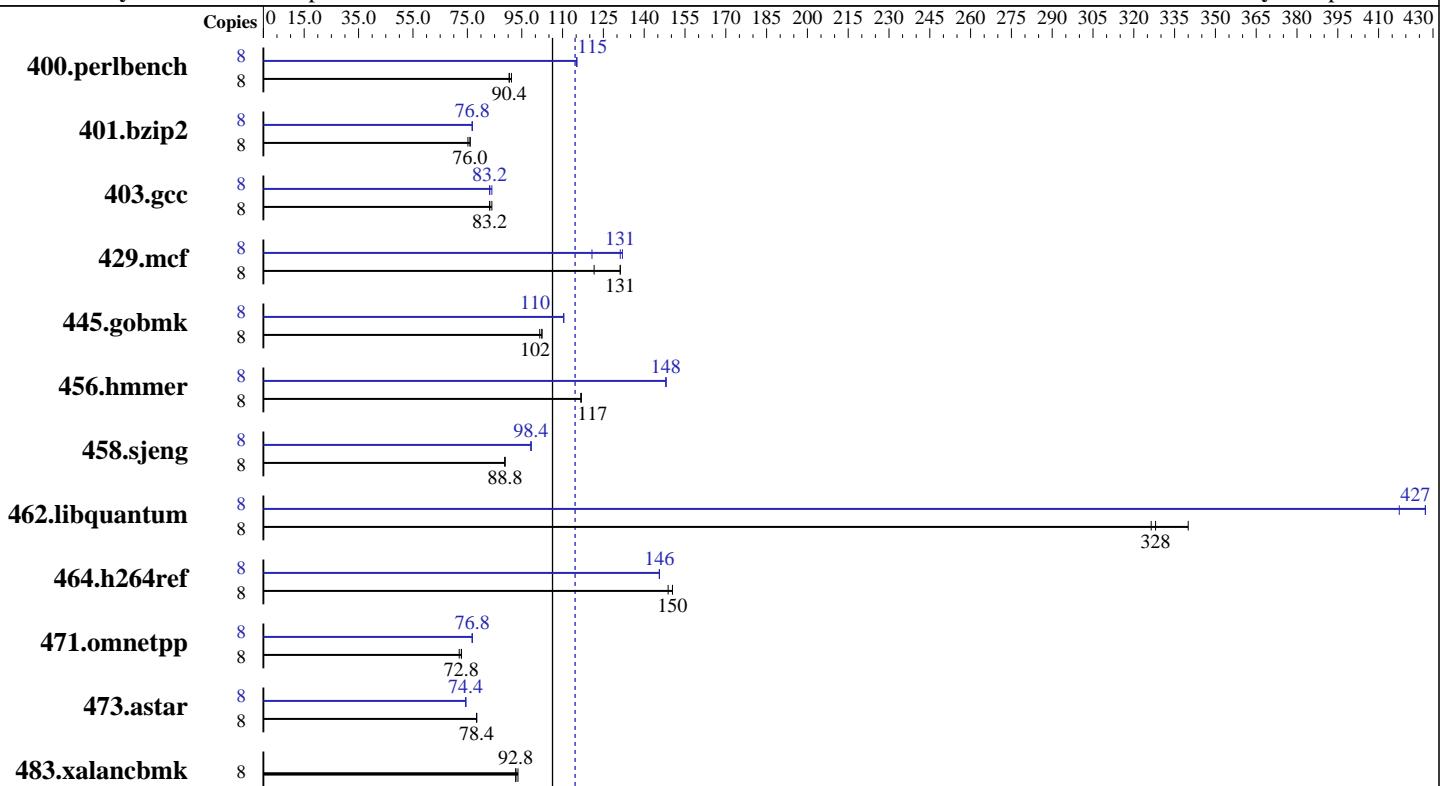
Test sponsor: Intel Corporation

Tested by: Intel Corporation

**Test date:** Oct-2011

**Hardware Availability:** Nov-2011

**Software Availability:** Apr-2011



**SPECint\_rate\_base2006 = 106**

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## Hardware

CPU Name: AMD FX-8150  
CPU Characteristics: AMD Turbo CORE technology up to 4.20 GHz  
CPU MHz: 3600  
FPU: Integrated  
CPU(s) enabled: 8 cores, 1 chip, 8 cores/chip  
CPU(s) orderable: 1 chip  
Primary Cache: 256 KB I on chip per chip,  
64 KB I shared / 2 cores;  
16 KB D on chip per core  
Secondary Cache: 8 MB I+D on chip per chip, 2 MB shared / 2 cores  
L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 8 GB (2 x 4 GB 2Rx4 PC3-10600U-9)  
Disk Subsystem: Intel 160GB SSD  
Other Hardware: None

## Software

Operating System: Windows 7 Ultimate SP1 (64-bit)  
Compiler: C/C++: Version 12.0.3.176 of Intel C++ Studio XE for Windows;  
Libraries: Version 15.0.30729.01 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	857	91.2	<b>862</b>	<b>90.4</b>	868	90.4	8	678	115	<b>679</b>	<b>115</b>	679	115
401.bzip2	8	<b>1017</b>	<b>76.0</b>	1024	75.2	1017	76.0	8	<b>1003</b>	<b>76.8</b>	1007	76.8	1002	76.8
403.gcc	8	<b>773</b>	<b>83.2</b>	775	83.2	769	84.0	8	<b>768</b>	84.0	777	83.2	<b>771</b>	<b>83.2</b>
429.mcf	8	557	131	599	122	<b>558</b>	<b>131</b>	8	<b>556</b>	<b>131</b>	603	121	552	132
445.gobmk	8	819	102	<b>820</b>	<b>102</b>	824	102	8	759	110	760	110	<b>759</b>	<b>110</b>
456.hmmer	8	<b>637</b>	<b>117</b>	637	117	640	117	8	504	148	<b>504</b>	<b>148</b>	506	148
458.sjeng	8	1086	88.8	<b>1086</b>	<b>88.8</b>	1091	88.8	8	982	98.4	981	98.4	<b>982</b>	<b>98.4</b>
462.libquantum	8	487	340	<b>506</b>	<b>328</b>	508	326	8	397	418	<b>388</b>	<b>427</b>	388	427
464.h264ref	8	1177	150	<b>1179</b>	<b>150</b>	1187	149	8	<b>1216</b>	<b>146</b>	1214	146	1218	146
471.omnetpp	8	685	72.8	<b>686</b>	<b>72.8</b>	692	72.0	8	650	76.8	654	76.8	<b>653</b>	<b>76.8</b>
473.astar	8	719	78.4	<b>719</b>	<b>78.4</b>	715	78.4	8	751	74.4	<b>751</b>	<b>74.4</b>	751	74.4
483.xalancbmk	8	591	93.6	<b>593</b>	<b>92.8</b>	595	92.8	8	591	93.6	<b>593</b>	<b>92.8</b>	595	92.8

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

## Submit Notes

The config file option 'submit' was used.

The start command with the /affinity switch was used to bind processes to cores

## Component Notes

Tested systems can be used with Shin-G ATX case,  
PC Power and Cooling 1200W power supply  
System was configured with an ATI HD 6990 discrete graphics card

## 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



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## Base Optimization Flags

C benchmarks:

```
/arch:SSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000
```

C++ benchmarks:

```
/arch:SSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features  
/F5120000000 shlw32M.lib -link /FORCE:MULTIPLE
```

## Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

## Peak Compiler Invocation

C benchmarks (except as noted below):

```
icl -Qvc9 -Qstd=c99
```

```
456.hmmr: C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe
```

```
458.sjeng: C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe
```

```
462.libquantum: C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe  
-Qstd=c99
```

C++ benchmarks (except as noted below):

```
icl -Qvc9
```

```
473.astar: C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe
```

## Peak Portability Flags

```
403.gcc: -DSPEC_CPU_WIN32
```

```
456.hmmr: -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
```



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## Peak Optimization Flags

C benchmarks:

```
400.perlbench: /arch:SSE3(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: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
            -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias
            /F512000000

403.gcc: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
          -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

429.mcf: /arch:SSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch
          /F512000000

445.gobmk: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
            -Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

456.hmmer: -Qauto-ilp32 /arch:SSE3(pass 2) -Qprof_gen(pass 1)
            -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch
            /F512000000

458.sjeng: -Qauto-ilp32 /arch:SSE3(pass 2) -Qprof_gen(pass 1)
            -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll14
            /F512000000

462.libquantum: -Qauto-ilp32 /arch:SSE3 -Qipo -O3 -Qprec-div-
                -Qopt-prefetch /F512000000

464.h264ref: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
              -Qipo -O3 -Qprec-div- -Qunroll12 -Qansi-alias /F512000000
```

C++ benchmarks:

```
471.omnetpp: /arch:SSE3(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 /arch:SSE3 -Qipo -O3 -Qprec-div-
            -Qopt-prefetch /F512000000 shlw64M.lib
            -link /FORCE:MULTIPLE

483.xalancbmk: basepeak = yes
```



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## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

456.hmmr: -link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/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/ComposerXE-2011/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

462.libquantum: -link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/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/ComposerXE-2011/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 files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12-win32-revC.20111012.html>  
<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12-win32-revC.20111012.xml>  
<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.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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