SPEC® CINT2006 Result

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Fujitsu Siemens Computers

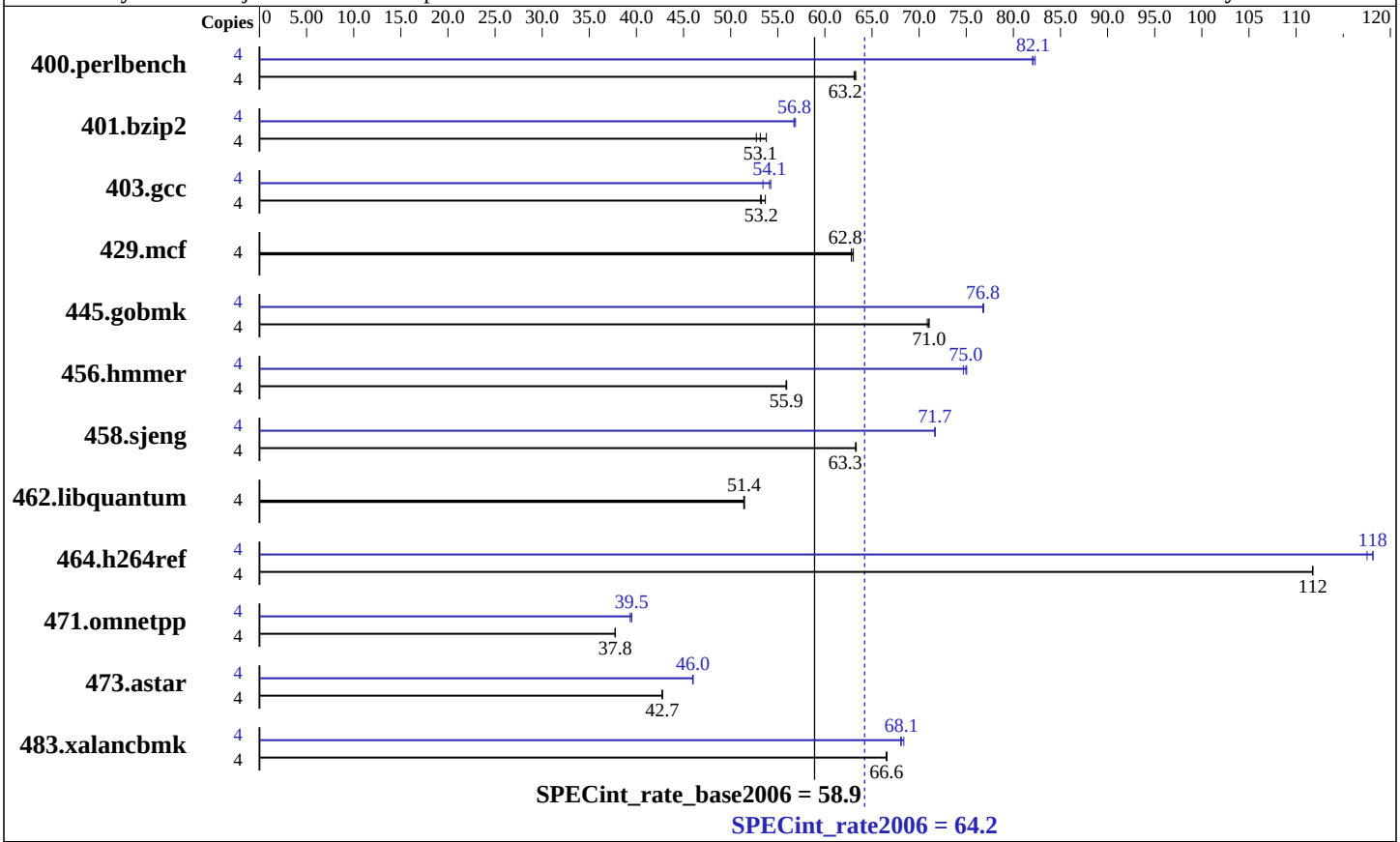
CELSIUS M460, Intel Core 2 Quad Q9450

SPECint®_rate2006 = 64.2

SPECint_rate_base2006 = 58.9

CPU2006 license: 22
Test sponsor: Fujitsu Siemens Computers
Tested by: Fujitsu Siemens Computers

Test date: Mar-2008
Hardware Availability: Mar-2008
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Core 2 Quad Q9450
CPU Characteristics:	
CPU MHz:	2667
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	4 GB (4x1 GB PC2-6400 CL6 SDRAM)
Disk Subsystem:	1 x 400 GB SATA 7200 RPM
Other Hardware:	None

Software

Operating System:	Windows Vista64 Ultimate
Compiler:	Intel C++ Compiler for applications running on IA-32, Version 10.1, Build 20070913 Intel C++ Compiler for applications running on Intel 64, Version 10.1, Build 20070913 Microsoft Visual Studio 2005 with SP1 (for libraries)
Auto Parallel:	No
File System:	NTFS
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	SmartHeap Library Version 8.1 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	4	618	63.3	619	63.1	**618**	**63.2**	4	475	82.3	476	82.0	**476**	**82.1**
401.bzip2	4	732	52.7	**726**	**53.1**	718	53.8	4	681	56.7	679	56.9	**680**	**56.8**
403.gcc	4	606	53.2	600	53.7	**605**	**53.2**	4	**595**	**54.1**	603	53.4	593	54.3
429.mcf	4	**581**	**62.8**	579	63.0	581	62.8	4	**581**	**62.8**	579	63.0	581	62.8
445.gobmk	4	592	70.9	590	71.1	**591**	**71.0**	4	547	76.8	546	76.8	**547**	**76.8**
456.hmmer	4	667	55.9	668	55.9	**667**	**55.9**	4	497	75.0	500	74.7	**498**	**75.0**
458.sjeng	4	**765**	**63.3**	765	63.2	764	63.3	4	675	71.7	**675**	**71.7**	675	71.7
462.libquantum	4	**1611**	**51.4**	1613	51.4	1610	51.5	4	**1611**	**51.4**	1613	51.4	1610	51.5
464.h264ref	4	792	112	792	112	**792**	**112**	4	749	118	**749**	**118**	753	118
471.omnetpp	4	662	37.8	**662**	**37.8**	662	37.7	4	633	39.5	**633**	**39.5**	636	39.3
473.astar	4	657	42.8	**657**	**42.7**	657	42.7	4	610	46.0	611	46.0	**610**	**46.0**
483.xalancbmk	4	415	66.5	**415**	**66.6**	415	66.6	4	404	68.4	**405**	**68.1**	406	68.0

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

Platform Notes

```
BIOS default settings have been used.
```

General Notes

```
 All binaries were built with 32-bit Intel compiler except:
 401.bzip2 and 456.hmmer in peak were built with 64-bit Intel
 compiler by changing the path for include and library files.

For information about Fujitsu Siemens Computers please see:
http://www.fujitsu-siemens.com/
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc8 -Qc99
```

C++ benchmarks:

```
icl -Qvc8
```

Base Portability Flags

403.gcc: -DSPEC_CPU_WIN32
464.h264ref: -DSPEC_CPU_NO_INTTYPES -DWIN32
483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword

Base Optimization Flags

C benchmarks:
-fast -Qvec-guard-write -F512000000

C++ benchmarks:
-fast -Qcxx_features -F512000000 shlW32M.lib -link -FORCE:MULTIPLE

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icl -Qvc8 -Qc99

401.bzip2: C:\\DevelTools\\Intel\\Compiler\\C++\\10.1.011\\EM64T\\Bin\\icl.exe
-IC:\\DevelTools\\Intel\\Compiler\\C++\\10.1.011\\EM64T\\Include
-link -LIBPATH:C:\\DevelTools\\Intel\\Compiler\\C++\\10.1.011\\EM64T\\Lib
-link -LIBPATH:"C:\\Program Files\\Microsoft Visual Studio 8\\vc\\lib"
-link -LIBPATH:"C:\\Program Files\\Microsoft Visual Studio 8\\vc\\lib\\amd64"

456.hmmer: C:\\DevelTools\\Intel\\Compiler\\C++\\10.1.011\\EM64T\\Bin\\icl.exe
-IC:\\DevelTools\\Intel\\Compiler\\C++\\10.1.011\\EM64T\\Include
-link -LIBPATH:C:\\DevelTools\\Intel\\Compiler\\C++\\10.1.011\\EM64T\\Lib
-link -LIBPATH:"C:\\Program Files\\Microsoft Visual Studio 8\\vc\\lib"
-link -LIBPATH:"C:\\Program Files\\Microsoft Visual Studio 8\\vc\\lib\\amd64"

C++ benchmarks:
icl -Qvc8

Peak Portability Flags

401.bzip2: -DSPEC_CPU_P64

Continued on next page

Peak Portability Flags (Continued)

403.gcc: -DSPEC_CPU_WIN32
456.hmmer: -DSPEC_CPU_P64
464.h264ref: -DSPEC_CPU_NO_INTTYPES -DWIN32
483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword

Peak Optimization Flags

C benchmarks:

400.perlbench: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qansi-alias -Qprefetch -F512000000 shlW32M.lib -link -FORCE:MULTIPLE

401.bzip2: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qprefetch -F512000000

403.gcc: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -F512000000

429.mcf: basepeak = yes

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

456.hmmer: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2 -Qansi-alias -Qopt-multi-version-aggressive -F512000000

458.sjeng: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll4 -F512000000

462.libquantum: basepeak = yes

464.h264ref: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2 -Qansi-alias -F512000000

C++ benchmarks:

471.omnetpp: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qansi-alias -Qopt-ra-region-strategy=block -Qcxx_features -F512000000 shlW32M.lib -link -FORCE:MULTIPLE

473.astar: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qansi-alias -Qopt-ra-region-strategy=routine -Qcxx_features -F512000000 shlW32M.lib -link -FORCE:MULTIPLE

483.xalancbmk: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qansi-alias -Qcxx_features -F512000000 shlW32M.lib -link -FORCE:MULTIPLE

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/CPU2006_flags.20090713.02.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.02.xml`

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