



# SPEC® CINT2006 Result

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## Fujitsu Siemens Computers

**SPECint®2006 = 23.5**

## CELSIUS M460, Intel Core 2 Duo E8400

**SPECint\_base2006 = 21.2**

CPU2006 license: 22

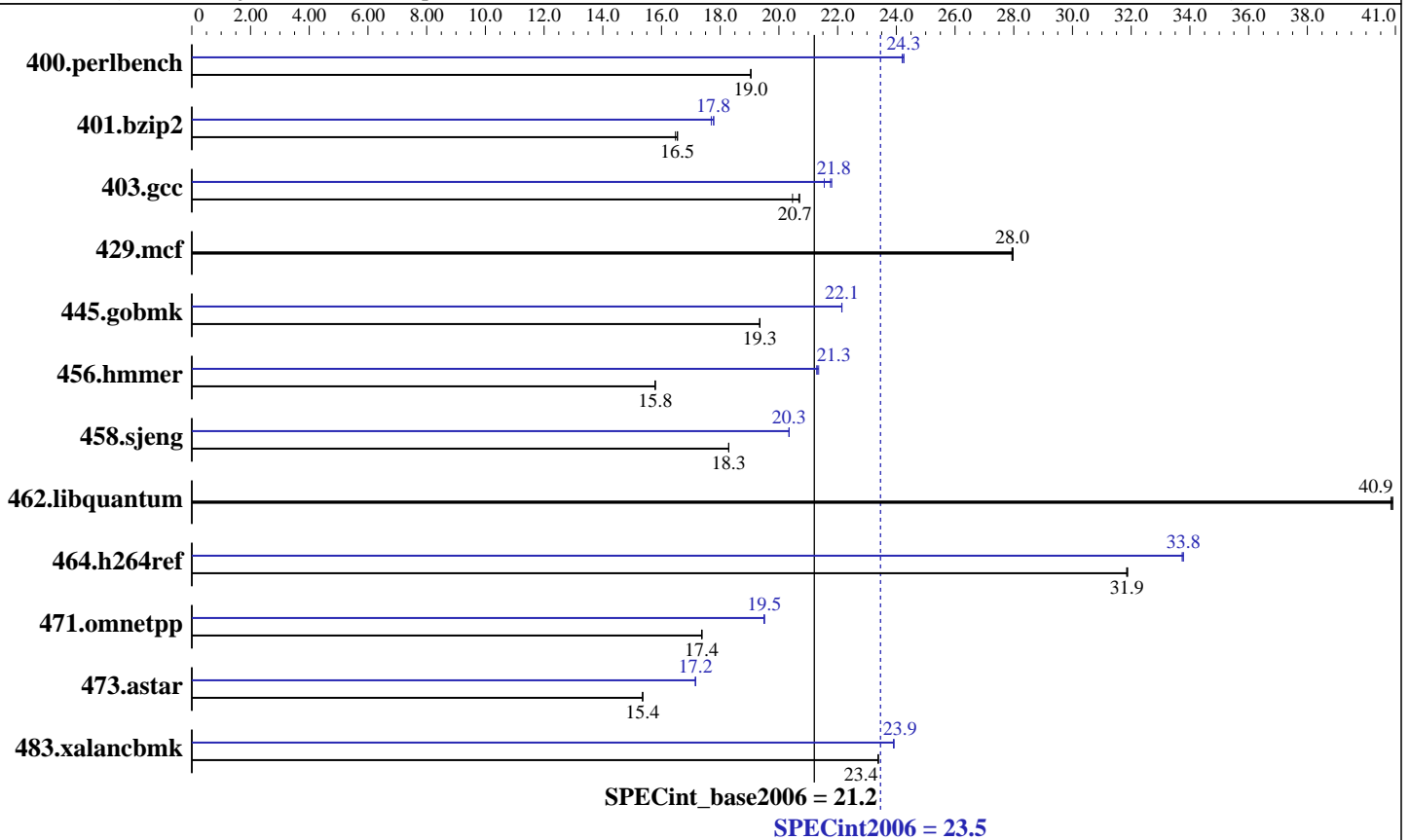
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Mar-2008

Hardware Availability: Mar-2008

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Core 2 Duo E8400  
 CPU Characteristics:  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1 chip  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 6 MB I+D on chip per chip  
 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 Vista Ultimate, 64 bit Version  
 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: Yes  
 File System: NTFS  
 System State: Default  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: MicroQuill SmartHeap Library 8.1



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	513	19.0	<u>513</u>	<u>19.0</u>	513	19.0	404	24.2	403	24.3	<u>403</u>	<u>24.3</u>
401.bzip2	583	16.5	586	16.5	<u>584</u>	<u>16.5</u>	545	17.7	543	17.8	<u>543</u>	<u>17.8</u>
403.gcc	<u>389</u>	<u>20.7</u>	393	20.5	389	20.7	374	21.5	<u>370</u>	<u>21.8</u>	369	21.8
429.mcf	326	27.9	<u>326</u>	<u>28.0</u>	326	28.0	326	27.9	<u>326</u>	<u>28.0</u>	326	28.0
445.gobmk	542	19.4	542	19.3	<u>542</u>	<u>19.3</u>	474	22.1	<u>474</u>	<u>22.1</u>	474	22.1
456.hmmmer	591	15.8	591	15.8	<u>591</u>	<u>15.8</u>	438	21.3	437	21.4	<u>438</u>	<u>21.3</u>
458.sjeng	661	18.3	<u>662</u>	<u>18.3</u>	662	18.3	595	20.3	<u>595</u>	<u>20.3</u>	595	20.3
462.libquantum	507	40.8	507	40.9	<u>507</u>	<u>40.9</u>	507	40.8	507	40.9	<u>507</u>	<u>40.9</u>
464.h264ref	<u>695</u>	<u>31.9</u>	694	31.9	695	31.8	656	33.7	<u>655</u>	<u>33.8</u>	655	33.8
471.omnetpp	360	17.4	<u>360</u>	<u>17.4</u>	360	17.4	321	19.5	<u>321</u>	<u>19.5</u>	320	19.5
473.astar	457	15.4	<u>457</u>	<u>15.4</u>	457	15.4	<u>409</u>	<u>17.2</u>	409	17.2	409	17.2
483.xalancbmk	295	23.4	<u>295</u>	<u>23.4</u>	295	23.4	<u>289</u>	<u>23.9</u>	289	23.9	288	23.9

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.hmmmer 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



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## 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 -Qparallel -Qvec-guard-write -Qpar-runtime-control -F512000000  
libguide40.lib

C++ benchmarks:

-fast -Qcxx-features -F512000000 libguide40.lib 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.hmmr: 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



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## Peak Portability Flags

401.bzip2: -DSPEC\_CPU\_P64  
 403.gcc: -DSPEC\_CPU\_WIN32  
 456.hmmr: -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 -Qparallel  
 -Qpar-runtime-control -Qansi-alias -Qprefetch -F512000000  
 libguide40.lib shlw32m.lib -link -FORCE:MULTIPLE

401.bzip2: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qprefetch  
 -F512000000 libguide40.lib

403.gcc: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -F512000000  
 libguide40.lib

429.mcf: basepeak = yes

445.gobmk: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -O2 -Qipo -QxT  
 -Qprec-div- -Qansi-alias -F512000000

456.hmmr: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qunroll2  
 -Qansi-alias -Qopt-multi-version-aggressive -F512000000  
 libguide40.lib

458.sjeng: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qunroll4  
 -F512000000 libguide40.lib

462.libquantum: basepeak = yes

464.h264ref: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qunroll2  
 -Qansi-alias -F512000000 libguide40.lib

C++ benchmarks:

471.omnetpp: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qcxx-features  
 -Qansi-alias -Qopt-ra-region-strategy=block -F512000000  
 libguide40.lib shlw32m.lib -link -FORCE:MULTIPLE

473.astar: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qcxx-features  
 -Qansi-alias -Qopt-ra-region-strategy=routine -F512000000  
 libguide40.lib shlw32m.lib -link -FORCE:MULTIPLE

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## Peak Optimization Flags (Continued)

```
483.xalanbmk: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx-features
              -Qansi-alias -F512000000 libguide40.lib shlw32M.lib
              -link -FORCE:MULTIPLE
```

## Peak Other Flags

Same as Base Other Flags

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](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](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.02.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).

Tested with SPEC CPU2006 v1.0.  
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