



# SPEC® CINT2006 Result

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## Fujitsu

### SPECint®\_rate2006 = 164

## CELSIUS W510, Intel Xeon E3-1270

### SPECint\_rate\_base2006 = 158

CPU2006 license: 19

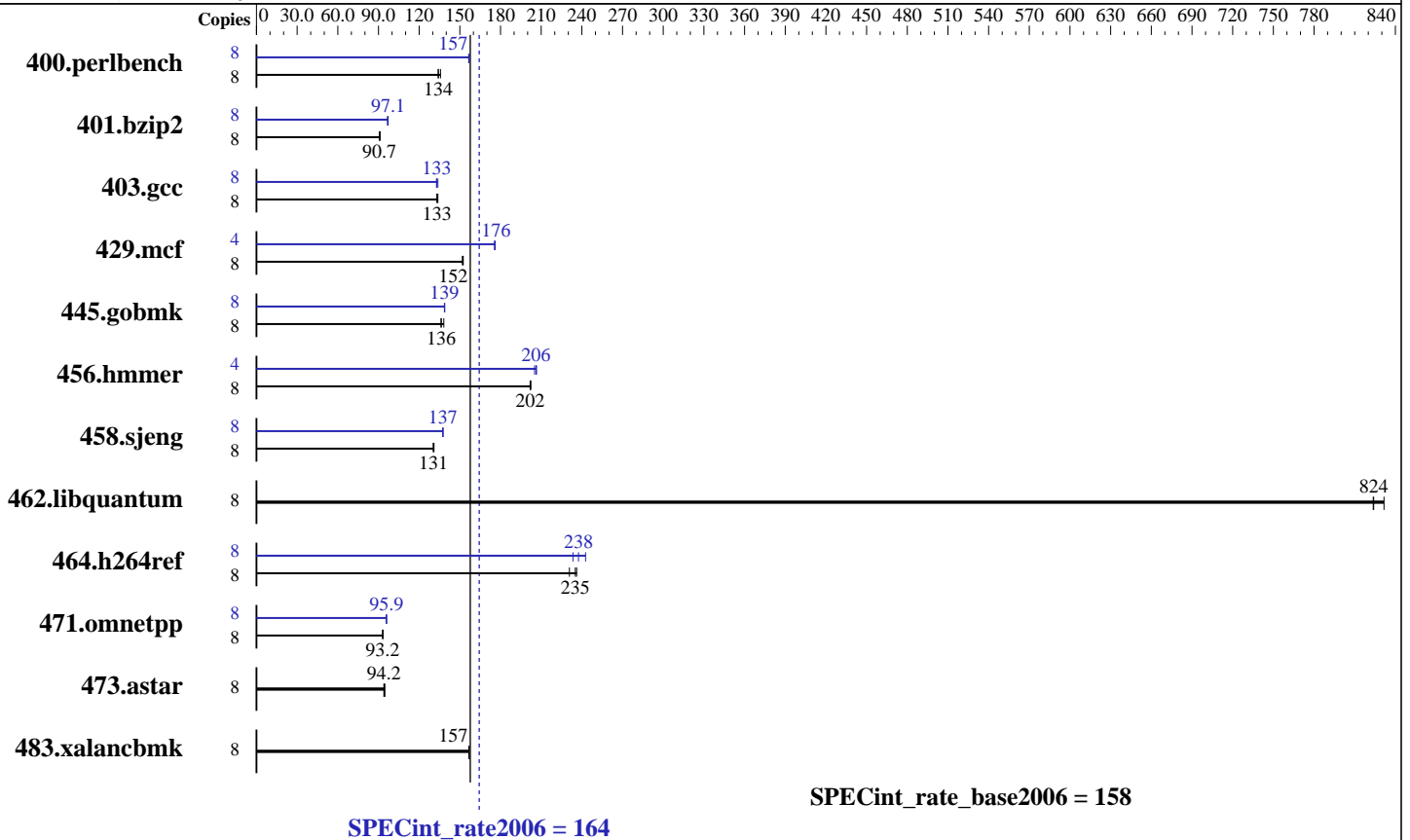
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Apr-2011

Hardware Availability: Apr-2011

Software Availability: Jan-2011



### Hardware

CPU Name: Intel Xeon E3-1270  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.8 GHz  
 CPU MHz: 3400  
 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 2Rx8 PC3-10600U-9, non-ECC)  
 Disk Subsystem: 1 x SATA II, 400 GB, 7200 rpm  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64) SP1, kernel 2.6.32.12-0.6-default  
 Compiler: Intel C++ Compiler XE for applications running on Intel 64 Version 12.0.2.137 Build 20110112  
 Auto Parallel: No  
 File System: ext3  
 System State: Run Level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V9.01



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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	576	136	<u>582</u>	<u>134</u>	583	134	8	<u>499</u>	<u>157</u>	499	157	499	157
401.bzip2	8	846	91.2	<u>851</u>	<u>90.7</u>	852	90.6	8	800	96.6	795	97.1	<u>795</u>	<u>97.1</u>
403.gcc	8	484	133	<u>484</u>	<u>133</u>	481	134	8	481	134	485	133	<u>484</u>	<u>133</u>
429.mcf	8	481	152	479	152	<u>479</u>	<u>152</u>	4	207	176	208	176	<u>208</u>	<u>176</u>
445.gobmk	8	607	138	617	136	<u>616</u>	<u>136</u>	8	604	139	<u>605</u>	<u>139</u>	605	139
456.hammer	8	369	202	370	202	<u>370</u>	<u>202</u>	4	182	205	181	207	<u>181</u>	<u>206</u>
458.sjeng	8	742	130	<u>742</u>	<u>131</u>	739	131	8	<u>704</u>	<u>137</u>	704	137	703	138
462.libquantum	8	199	832	201	824	<u>201</u>	<u>824</u>	8	199	832	201	824	<u>201</u>	<u>824</u>
464.h264ref	8	767	231	750	236	<u>753</u>	<u>235</u>	8	729	243	758	233	<u>745</u>	<u>238</u>
471.omnetpp	8	536	93.3	537	93.1	<u>537</u>	<u>93.2</u>	8	521	96.0	<u>522</u>	<u>95.9</u>	522	95.8
473.astar	8	593	94.7	597	94.0	<u>596</u>	<u>94.2</u>	8	593	94.7	597	94.0	<u>596</u>	<u>94.2</u>
483.xalancbmk	8	<u>352</u>	<u>157</u>	352	157	352	157	8	<u>352</u>	<u>157</u>	352	157	352	157

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.  
numactl was used to bind copies to the cores

## Operating System Notes

'ulimit -s unlimited' was used to set the stack size to unlimited prior to run  
Huge pages were not configured for this run

## Base Compiler Invocation

C benchmarks:  
icc -m32  
  
C++ benchmarks:  
icpc -m32

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX



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## Base Optimization Flags

C benchmarks:

```
-xAVX -ipo -O3 -no-prec-div -opt-prefetch  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT
```

C++ benchmarks:

```
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/opt/smartheap/ia32 -lsmartheap  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT
```

## Base Other Flags

C benchmarks:

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

## Peak Compiler Invocation

C benchmarks (except as noted below):

```
icc -m32
```

```
400.perlbench: icc -m64
```

```
401.bzip2: icc -m64
```

```
456.hmmer: icc -m64
```

```
458.sjeng: icc -m64
```

C++ benchmarks:

```
icpc -m32
```

## Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
```

```
401.bzip2: -DSPEC_CPU_LP64
```

```
456.hmmer: -DSPEC_CPU_LP64
```

```
458.sjeng: -DSPEC_CPU_LP64
```

```
462.libquantum: -DSPEC_CPU_LINUX
```

```
483.xalancbmk: -DSPEC_CPU_LINUX
```



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## Peak Optimization Flags

C benchmarks:

400.perlbench: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2)  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

401.bzip2: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch  
-auto-ilp32 -ansi-alias  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

403.gcc: -xAVX -ipo -O3 -no-prec-div  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

429.mcf: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -ansi-alias  
-auto-ilp32

445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -auto-ilp32

456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4  
-auto-ilp32  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

462.libquantum: basepeak = yes

464.h264ref: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
-ansi-alias

C++ benchmarks:

471.omnetpp: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -ansi-alias  
-opt-ra-region-strategy=block -Wl,-z,muldefs  
-L/opt/smartheap/ia32 -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes



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## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html>

<http://www.spec.org/cpu2006/flags/Platform.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>

<http://www.spec.org/cpu2006/flags/Platform.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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