



# SPEC<sup>®</sup> CINT2006 Result

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## Fujitsu

### SPECint<sup>®</sup>\_rate2006 = 161

## CELSIUS W510, Intel Xeon E3-1240

### SPECint\_rate\_base2006 = 155

CPU2006 license: 19

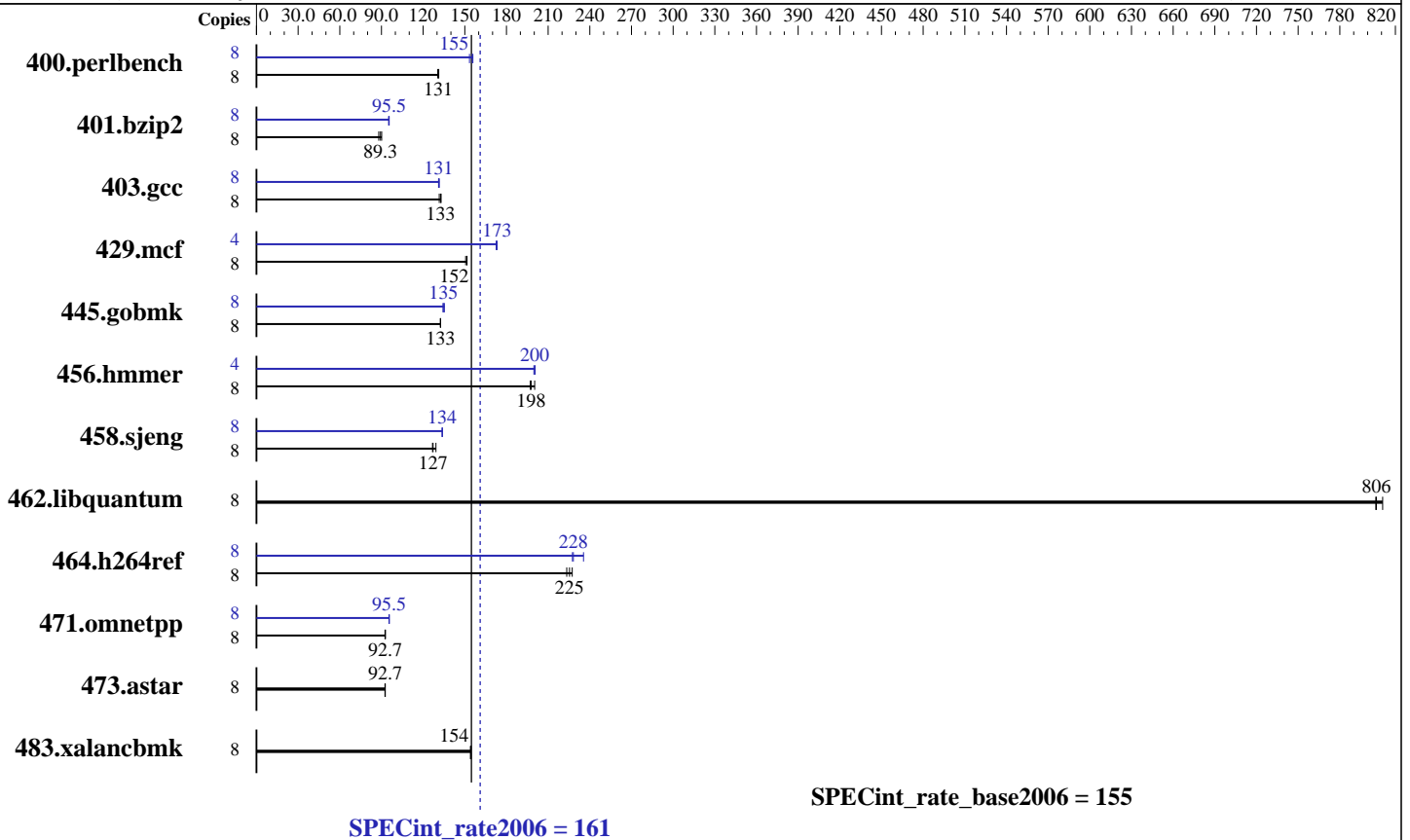
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Apr-2011

Hardware Availability: Apr-2011

Software Availability: Jan-2011



### Hardware

CPU Name: Intel Xeon E3-1240  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.7 GHz  
 CPU MHz: 3300  
 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	<b>597</b>	<b>131</b>	596	131	599	131	8	502	156	510	153	<b>503</b>	<b>155</b>
401.bzip2	8	877	88.1	<b>864</b>	<b>89.3</b>	856	90.1	8	<b>809</b>	<b>95.5</b>	811	95.1	808	95.5
403.gcc	8	485	133	<b>485</b>	<b>133</b>	489	132	8	489	132	<b>491</b>	<b>131</b>	491	131
429.mcf	8	481	152	484	151	<b>482</b>	<b>152</b>	4	<b>211</b>	<b>173</b>	211	173	211	173
445.gobmk	8	<b>633</b>	<b>133</b>	633	133	634	132	8	625	134	620	135	<b>623</b>	<b>135</b>
456.hammer	8	373	200	379	197	<b>377</b>	<b>198</b>	4	186	201	187	200	<b>186</b>	<b>200</b>
458.sjeng	8	764	127	749	129	<b>761</b>	<b>127</b>	8	<b>723</b>	<b>134</b>	724	134	723	134
462.libquantum	8	206	806	204	811	<b>206</b>	<b>806</b>	8	206	806	204	811	<b>206</b>	<b>806</b>
464.h264ref	8	779	227	792	223	<b>785</b>	<b>225</b>	8	778	227	752	235	<b>776</b>	<b>228</b>
471.omnetpp	8	540	92.5	<b>539</b>	<b>92.7</b>	539	92.8	8	<b>523</b>	<b>95.5</b>	524	95.4	523	95.6
473.astar	8	<b>606</b>	<b>92.7</b>	606	92.7	607	92.5	8	<b>606</b>	<b>92.7</b>	606	92.7	607	92.5
483.xalancbmk	8	357	154	358	154	<b>358</b>	<b>154</b>	8	357	154	358	154	<b>358</b>	<b>154</b>

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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