



# SPEC® CINT2006 Result

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## Fujitsu

SPECint®\_rate2006 = 151

PRIMERGY BX620 S6, Intel Xeon L5640, 2.27 GHz

SPECint\_rate\_base2006 = 141

CPU2006 license: 19

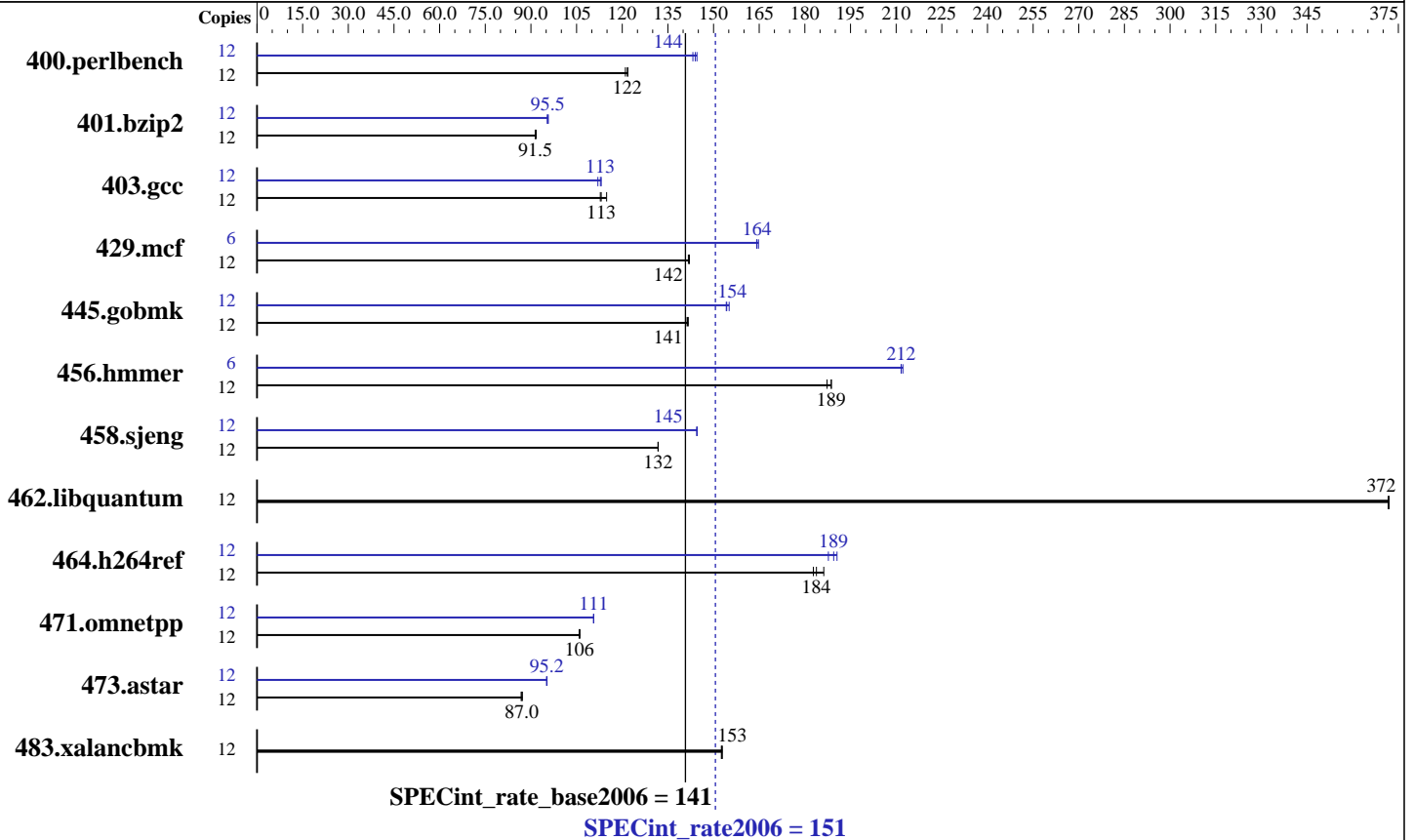
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Sep-2010

Hardware Availability: Jul-2010

Software Availability: Jan-2010



### Hardware

CPU Name: Intel Xeon L5640  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2267  
 FPU: Integrated  
 CPU(s) enabled: 6 cores, 1 chip, 6 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 12 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (6x8 GB PC3-10600R, 2 rank, CL9-9-9, ECC)  
 Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64), Kernel 2.6.27.19-5-default  
 Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l\_cproc\_p\_11.1.064  
 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 V8.1



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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	12	969	121	<b><u>963</u></b>	<b><u>122</u></b>	962	122	12	<b><u>814</u></b>	<b><u>144</u></b>	819	143	811	145
401.bzip2	12	1262	91.7	<b><u>1266</u></b>	<b><u>91.5</u></b>	1267	91.4	12	1210	95.7	1214	95.4	<b><u>1213</u></b>	<b><u>95.5</u></b>
403.gcc	12	841	115	856	113	<b><u>854</u></b>	<b><u>113</u></b>	12	854	113	<b><u>856</u></b>	<b><u>113</u></b>	863	112
429.mcf	12	772	142	<b><u>771</u></b>	<b><u>142</u></b>	770	142	6	<b><u>333</u></b>	<b><u>164</u></b>	333	164	332	165
445.gobmk	12	888	142	<b><u>890</u></b>	<b><u>141</u></b>	893	141	12	811	155	<b><u>816</u></b>	<b><u>154</u></b>	816	154
456.hammer	12	593	189	<b><u>593</u></b>	<b><u>189</u></b>	598	187	6	264	212	<b><u>264</u></b>	<b><u>212</u></b>	265	212
458.sjeng	12	<b><u>1102</u></b>	<b><u>132</u></b>	1101	132	1102	132	12	1004	145	<b><u>1005</u></b>	<b><u>145</u></b>	1005	144
462.libquantum	12	669	372	<b><u>669</u></b>	<b><u>372</u></b>	668	372	12	669	372	<b><u>669</u></b>	<b><u>372</u></b>	668	372
464.h264ref	12	1453	183	<b><u>1445</u></b>	<b><u>184</u></b>	1426	186	12	1394	191	1415	188	<b><u>1402</u></b>	<b><u>189</u></b>
471.omnetpp	12	<b><u>708</u></b>	<b><u>106</u></b>	709	106	707	106	12	678	111	<b><u>678</u></b>	<b><u>111</u></b>	678	111
473.astar	12	971	86.8	966	87.2	<b><u>968</u></b>	<b><u>87.0</u></b>	12	<b><u>885</u></b>	<b><u>95.2</u></b>	885	95.2	884	95.3
483.xalancbmk	12	<b><u>542</u></b>	<b><u>153</u></b>	543	153	542	153	12	<b><u>542</u></b>	<b><u>153</u></b>	543	153	542	153

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 stacksize to unlimited prior to run

## Platform Notes

BIOS configuration:  
Data Reuse Optimization = Disable  
Performance/Power Setting = Traditional

## General Notes

For information about Fujitsu please visit: <http://www.fujitsu.com>  
Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

## Base Compiler Invocation

C benchmarks:  
icc -m32

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## Base Compiler Invocation (Continued)

C++ benchmarks:  
icpc -m32

## Base Portability Flags

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

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.icl1.1/libicl1.1-32bit -lsmarheap

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks (except as noted below):  
icpc -m32

473.astar: icpc -m64



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## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LINUX  
473.astar: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)  
-prof-use(pass 2) -ansi-alias  
401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)  
-prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32  
403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static  
429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch  
445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2  
-ipo -no-prec-div -ansi-alias  
456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2  
-ansi-alias -auto-ilp32  
458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)  
-prof-use(pass 2) -unroll4 -auto-ilp32  
462.libquantum: basepeak = yes  
464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)  
-prof-use(pass 2) -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(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/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap

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## Peak Optimization Flags (Continued)

```
473.astar: -xSSE4.2(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=routine -Wl,-z,muldefs
           -L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64
```

483.xalancbmk: basepeak = yes

## 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/Intel-ic11.1-linux64-revE.20100708.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100708.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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