



# SPEC® CINT2006 Result

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Fujitsu

**SPECint®\_rate2006 = 166**

PRIMERGY TX300 S6, Intel Xeon X5687, 3.60 GHz

**SPECint\_rate\_base2006 = 157**

CPU2006 license: 19

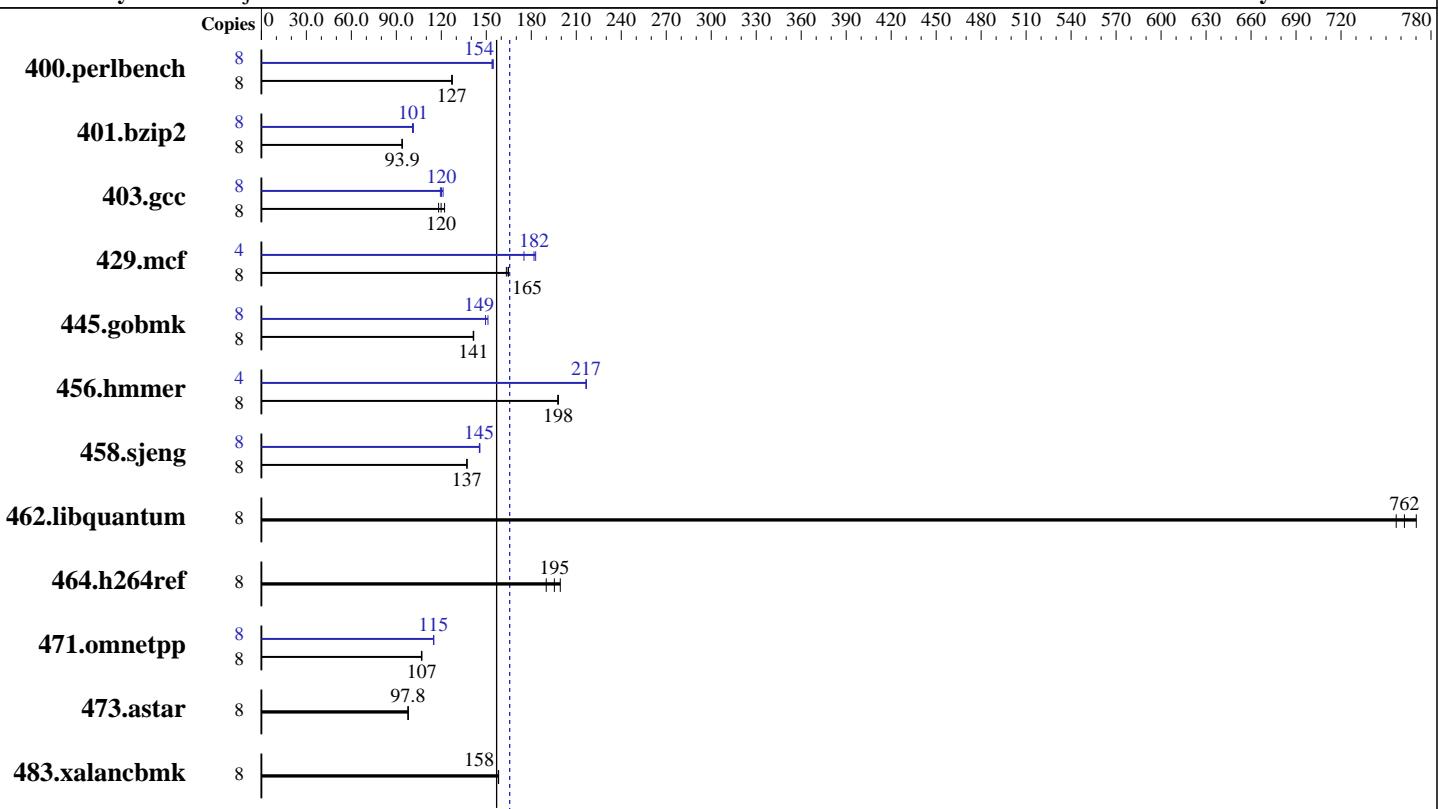
Test date: Dec-2010

Test sponsor: Fujitsu

Hardware Availability: Feb-2011

Tested by: Fujitsu

Software Availability: Nov-2010



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## Hardware

CPU Name: Intel Xeon X5687  
CPU Characteristics: Intel Turbo Boost Technology up to 3.87 GHz  
CPU MHz: 3600  
FPU: Integrated  
CPU(s) enabled: 4 cores, 1 chip, 4 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: 24 GB (6 x 4 GB 2Rx4 PC3-10600R-9, ECC)  
Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM  
Other Hardware: --

## Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64) with SP1, Kernel 2.6.32.12-0.7-default  
Compiler: Intel C++ Compiler XE for applications running on IA-32 Version 12.0.0.082 Build 20101006  
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>615</b>	<b>127</b>	614	127	616	127	8	505	155	508	154	<b>507</b>	<b>154</b>
401.bzip2	8	821	94.0	<b>822</b>	<b>93.9</b>	823	93.8	8	<b>763</b>	<b>101</b>	762	101	766	101
403.gcc	8	545	118	<b>537</b>	<b>120</b>	527	122	8	539	119	<b>536</b>	<b>120</b>	531	121
429.mcf	8	447	163	443	165	<b>444</b>	<b>165</b>	4	208	175	199	183	<b>201</b>	<b>182</b>
445.gobmk	8	594	141	<b>594</b>	<b>141</b>	593	142	8	555	151	<b>561</b>	<b>149</b>	561	149
456.hmmer	8	<b>377</b>	<b>198</b>	377	198	378	198	4	172	217	172	217	<b>172</b>	<b>217</b>
458.sjeng	8	706	137	706	137	<b>706</b>	<b>137</b>	8	666	145	<b>665</b>	<b>145</b>	664	146
462.libquantum	8	<b>217</b>	<b>762</b>	219	757	215	770	8	<b>217</b>	<b>762</b>	219	757	215	770
464.h264ref	8	888	199	932	190	<b>906</b>	<b>195</b>	8	888	199	932	190	<b>906</b>	<b>195</b>
471.omnetpp	8	467	107	468	107	<b>468</b>	<b>107</b>	8	<b>435</b>	<b>115</b>	435	115	435	115
473.astar	8	574	97.8	573	98.0	<b>574</b>	<b>97.8</b>	8	574	97.8	573	98.0	<b>574</b>	<b>97.8</b>
483.xalancbmk	8	349	158	349	158	<b>349</b>	<b>158</b>	8	349	158	349	158	<b>349</b>	<b>158</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 stacksize to unlimited prior to run  
Hugepages were not configured on the system

## Platform Notes

BIOS configuration:  
Data Reuse Optimization = Disable

## General Notes

This result was measured on the PRIMERGY TX300 S6. The PRIMERGY TX300 S6 and the PRIMERGY RX300 S6 are electronically equivalent.

For information about Fujitsu please visit: <http://www.fujitsu.com>  
Binaries were compiled on SLES 10 SP1 with Binutils 2.18.50.0.7.20080502



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## 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

## Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch  
-B /usr/share/libhugetlbf/ -Wl,-hugetlbf-link=BDT

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/smartheap -lsmartheap  
-B /usr/share/libhugetlbf/ -Wl,-hugetlbf-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.hmmr: icc -m64

458.sjeng: icc -m64

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## Peak Compiler Invocation (Continued)

C++ benchmarks:

icpc -m32

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LINUX  
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) -prof-use(pass 2)  
  
401.bzip2: -xSSE4.2(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  
  
403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT  
  
429.mcf: -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 -auto-ilp32  
  
445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -auto-ilp32  
  
456.hmmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll12 -auto-ilp32  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT  
  
458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll14 -auto-ilp32  
  
462.libquantum: basepeak = yes  
  
464.h264ref: basepeak = yes

C++ benchmarks:

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## Peak Optimization Flags (Continued)

```
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/smartheap -lsmartheap
```

```
473.astar: basepeak = yes
```

```
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-ic12.0-linux64-revA.20110222.00.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110222.00.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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