



# SPEC® CINT2006 Result

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## Supermicro

SuperServer 1026T-6RTF+ (X8DTU-6TF+, Intel Xeon E5607)

SPECint®\_rate2006 = 172

SPECint\_rate\_base2006 = 161

CPU2006 license: 001176

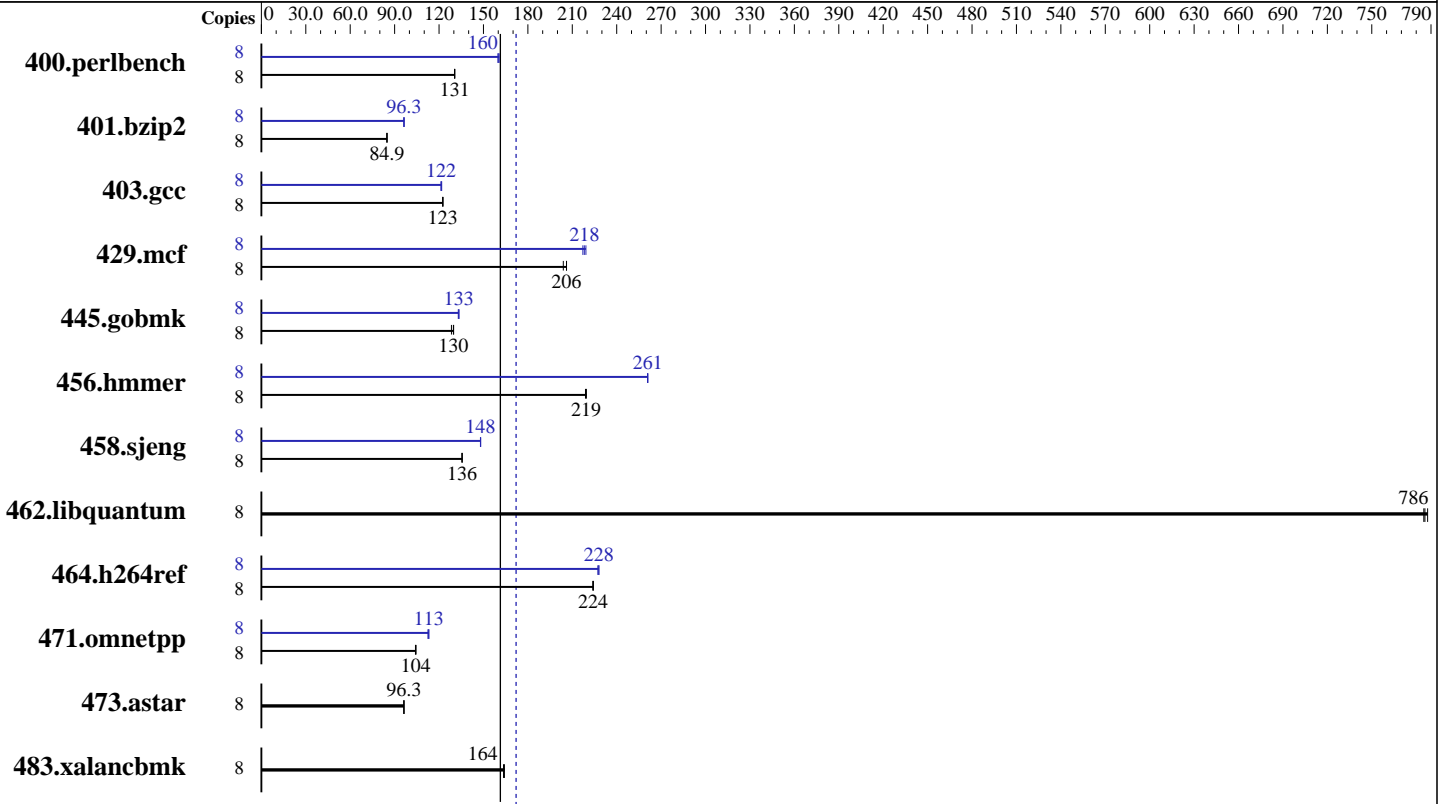
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Mar-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011



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### Hardware

CPU Name: Intel Xeon E5607  
 CPU Characteristics:  
 CPU MHz: 2267  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 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: 8 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (12 x 4 GB 2Rx4 PC3-8500R-7, ECC)  
 Disk Subsystem: 1 x 600 GB SAS 6.0 Gb/s, 10000 RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64) SP1  
 Kernel 2.6.32.12-0.7-default  
 Compiler: Intel C++ Compiler XE for applications running on IA-32  
 Version 12.0.1.116 Build 20101116  
 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	598	131	599	130	<b>599</b>	<b>131</b>	8	489	160	<b>489</b>	<b>160</b>	487	161
401.bzip2	8	<b>910</b>	<b>84.9</b>	909	84.9	911	84.7	8	802	96.2	801	96.4	<b>801</b>	<b>96.3</b>
403.gcc	8	526	122	<b>525</b>	<b>123</b>	525	123	8	529	122	<b>530</b>	<b>122</b>	531	121
429.mcf	8	358	204	<b>354</b>	<b>206</b>	354	206	8	333	219	<b>334</b>	<b>218</b>	336	217
445.gobmk	8	646	130	<b>647</b>	<b>130</b>	654	128	8	<b>629</b>	<b>133</b>	629	133	631	133
456.hammer	8	340	219	341	219	<b>340</b>	<b>219</b>	8	<b>286</b>	<b>261</b>	286	261	286	261
458.sjeng	8	714	136	<b>714</b>	<b>136</b>	714	136	8	654	148	653	148	<b>654</b>	<b>148</b>
462.libquantum	8	210	788	211	785	<b>211</b>	<b>786</b>	8	210	788	211	785	<b>211</b>	<b>786</b>
464.h264ref	8	<b>790</b>	<b>224</b>	791	224	790	224	8	<b>777</b>	<b>228</b>	777	228	779	227
471.omnetpp	8	479	104	<b>480</b>	<b>104</b>	480	104	8	<b>442</b>	<b>113</b>	442	113	444	113
473.astar	8	<b>583</b>	<b>96.3</b>	583	96.3	584	96.2	8	<b>583</b>	<b>96.3</b>	583	96.3	584	96.2
483.xalancbmk	8	337	164	336	164	<b>337</b>	<b>164</b>	8	337	164	336	164	<b>337</b>	<b>164</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
Hugepages was enabled with the following:
nodev /mnt/hugepages hugetlbfs defaults 0 0' added to /etc/fstab
echo 3600 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
```

## Platform Notes

Fan speed set to Full Speed and Data Reuse Optimization disabled in BIOS Setup.

## General Notes

Binaries compiled on RHEL5.5 with binutils-2.17.50.0.6-14.el5

## 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 -opt-prefetch  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/smartheap -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



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## 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

## 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)  
 -B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

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  
 -B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

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.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -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)  
 -unroll4 -auto-ilp32  
 -B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

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) -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

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## Peak Optimization Flags (Continued)

471.omnetpp (continued):  
-L/smartheap -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## 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/Intel-Linux64-Platform.20110308.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/Intel-Linux64-Platform.20110308.xml>

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

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