# SPEC® CINT2006 Result



## Supermicro

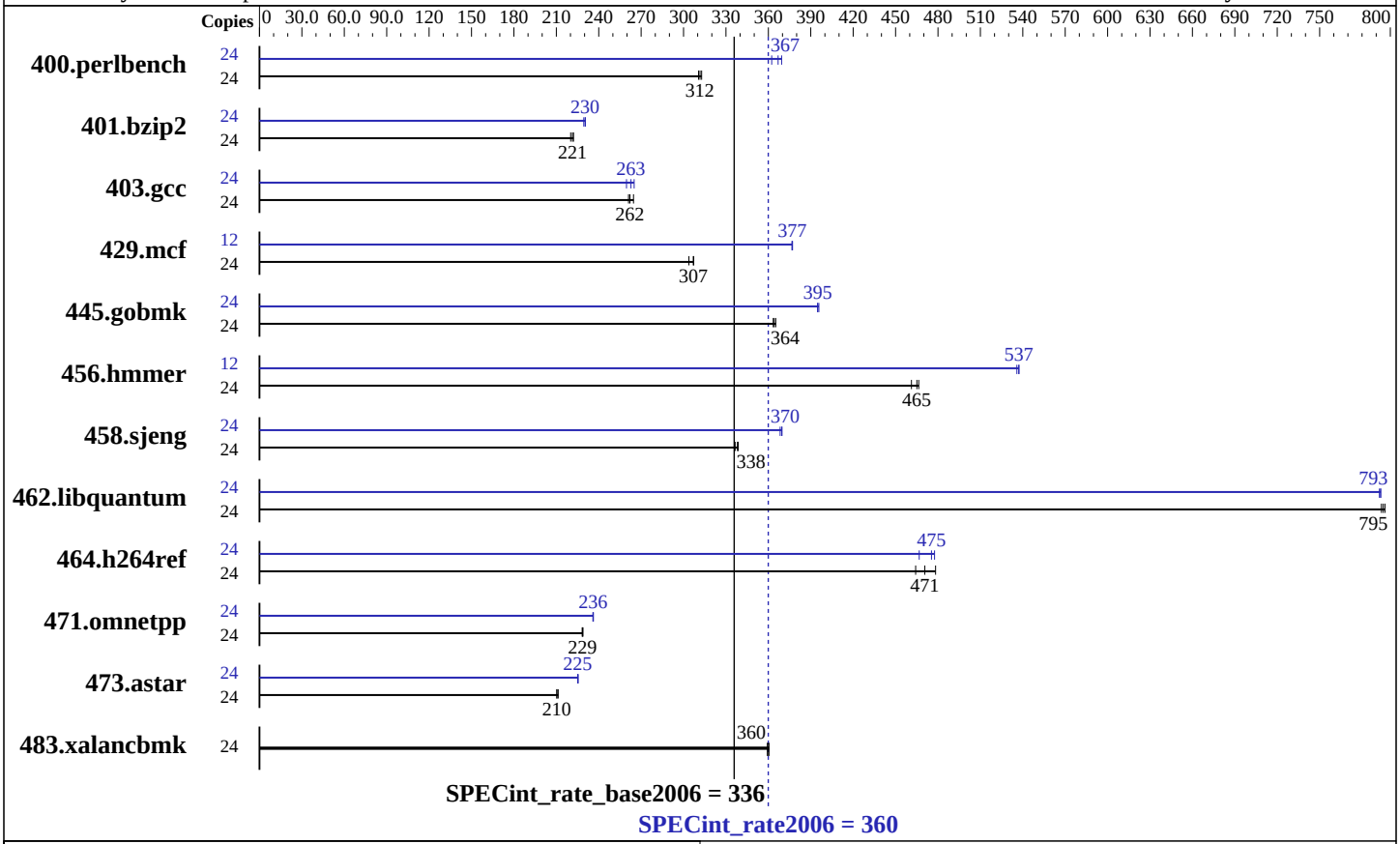
SuperServer 2026TT-H6IBQRF
(Intel Xeon X5670, 2.93 GHz)

**SPECint®_rate2006 = 360**

**SPECint_rate_base2006 = 336**

**CPU2006 license:** 001176
**Test sponsor:** Supermicro
**Tested by:** Supermicro

**Test date:** Dec-2010
**Hardware Availability:** Mar-2010
**Software Availability:** Jan-2010




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon X5670 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.33 GHz |
| CPU MHz: | 2933 |
| FPU: | Integrated |
| CPU(s) enabled: | 12 cores, 2 chips, 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 (12 x 4 GB 2Rx4 PC3-10600R-9, ECC) |
| Disk Subsystem: | 1 x 160 GB SATA II, 7200 RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | SUSE Linux Enterprise Server 11 (x86_64)<br>Kernel 2.6.27.19-5-default |
| Compiler: | Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1<br>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 | 24 | 750 | 313 | 755 | 311 | **752** | **312** | 24 | 647 | 362 | **639** | **367** | 635 | 369 |
| 401.bzip2 | 24 | 1052 | 220 | 1042 | 222 | **1046** | **221** | 24 | 1010 | 229 | 1004 | 231 | **1006** | **230** |
| 403.gcc | 24 | 730 | 265 | 740 | 261 | **737** | **262** | 24 | **735** | **263** | 729 | 265 | 744 | 260 |
| 429.mcf | 24 | 720 | 304 | **713** | **307** | 712 | 307 | 12 | 290 | 377 | **290** | **377** | 291 | 377 |
| 445.gobmk | 24 | 689 | 365 | 693 | 363 | **691** | **364** | 24 | 636 | 396 | 638 | 395 | **638** | **395** |
| 456.hmmer | 24 | **482** | **465** | 485 | 461 | 480 | 466 | 12 | 208 | 537 | 209 | 536 | **208** | **537** |
| 458.sjeng | 24 | 858 | 339 | **859** | **338** | 863 | 336 | 24 | 788 | 368 | 786 | 370 | **786** | **370** |
| 462.libquantum | 24 | 627 | 794 | **626** | **795** | 625 | 796 | 24 | 628 | 792 | 627 | 793 | **627** | **793** |
| 464.h264ref | 24 | 1110 | 478 | **1128** | **471** | 1144 | 464 | 24 | 1112 | 478 | 1138 | 467 | **1117** | **475** |
| 471.omnetpp | 24 | 657 | 228 | **656** | **229** | 655 | 229 | 24 | 636 | 236 | 635 | 236 | **636** | **236** |
| 473.astar | 24 | 797 | 211 | **801** | **210** | 801 | 210 | 24 | 749 | 225 | 747 | 225 | **748** | **225** |
| 483.xalancbmk | 24 | 461 | 359 | **460** | **360** | 459 | 360 | 24 | 461 | 359 | **460** | **360** | 459 | 360 |

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
```

## Platform Notes

```
Fan speed set to Full Speed and Data Reuse Optimization disabled in BIOS Setup.
The system uses a Supermicro X8DTT-HIBQF+ motherboard.
```

## General Notes

```
Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502
```

## 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 -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.ic11.1/libic11.1-32bit -lsmartheap`

## 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`

462.libquantum: `icc -m64`

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

473.astar: `icpc -m64`

## Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`

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## Peak Portability Flags (Continued)

456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -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: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
-opt-prefetch

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

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

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## Peak Optimization Flags (Continued)

473.astar (continued):
`-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-revG.20101123.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revG.20101123.xml`



For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
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