# SPEC® CINT2006 Result

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## Cisco Systems

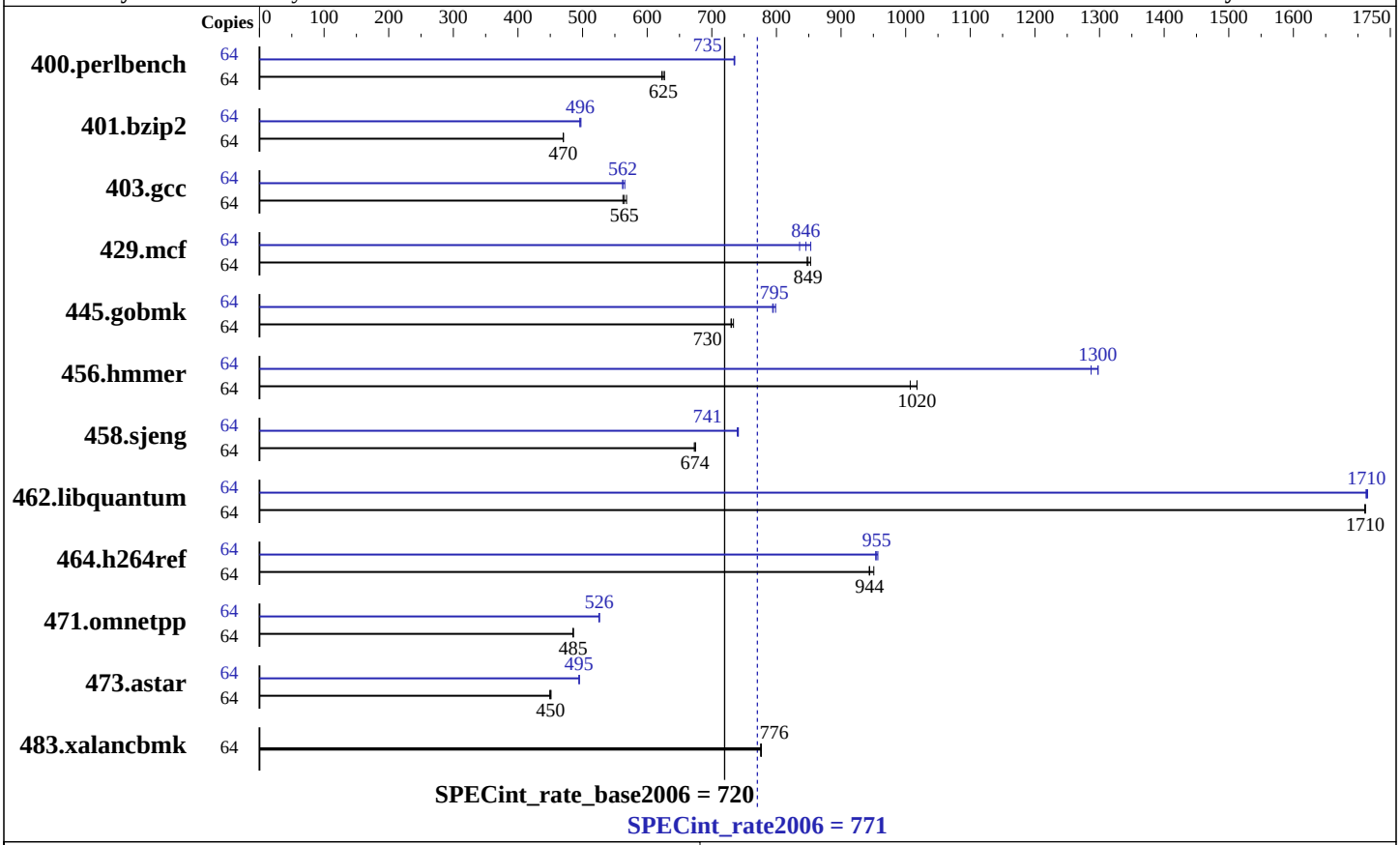
Cisco UCS B440 M1 (Intel Xeon X7560, 2.27 GHz)

SPECint®_rate2006 = 771

SPECint_rate_base2006 = 720

**CPU2006 license:** 9019
**Test sponsor:** Cisco Systems
**Tested by:** Cisco Systems

**Test date:** May-2010
**Hardware Availability:** Jun-2010
**Software Availability:** Jan-2010




## Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon X7560 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 2.67 GHz |
| CPU MHz: | 2266 |
| FPU: | Integrated |
| CPU(s) enabled: | 32 cores, 4 chips, 8 cores/chip, 2 threads/core |
| CPU(s) orderable: | 1,2,3,4 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: | 24 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 256 GB (32x8GB, PC3-8500R, CL9, Quad Rank, ECC) |
| Disk Subsystem: | 146 GB SAS, 15K 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 Library 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 | 64 | 998 | 627 | 1004 | 623 | **1001** | **625** | 64 | 851 | 735 | 850 | 736 | **851** | **735** |
| 401.bzip2 | 64 | 1314 | 470 | 1313 | 470 | **1314** | **470** | 64 | **1244** | **496** | 1246 | 496 | 1241 | 498 |
| 403.gcc | 64 | 916 | 562 | **913** | **565** | 907 | 568 | 64 | **916** | **562** | 911 | 565 | 917 | 562 |
| 429.mcf | 64 | 684 | 853 | 689 | 847 | **688** | **849** | 64 | **690** | **846** | 684 | 853 | 698 | 836 |
| 445.gobmk | 64 | 915 | 734 | **919** | **730** | 920 | 730 | 64 | 845 | 794 | **844** | **795** | 841 | 799 |
| 456.hmmer | 64 | **587** | **1020** | 587 | 1020 | 593 | 1010 | 64 | **460** | **1300** | 464 | 1290 | 460 | 1300 |
| 458.sjeng | 64 | **1149** | **674** | 1148 | 675 | 1151 | 673 | 64 | 1047 | 739 | 1045 | 741 | **1046** | **741** |
| 462.libquantum | 64 | 775 | 1710 | **775** | **1710** | 775 | 1710 | 64 | **774** | **1710** | 773 | 1710 | 774 | 1710 |
| 464.h264ref | 64 | **1500** | **944** | 1490 | 951 | 1501 | 944 | 64 | 1485 | 954 | **1483** | **955** | 1480 | 957 |
| 471.omnetpp | 64 | 823 | 486 | **824** | **485** | 824 | 485 | 64 | 762 | 525 | **761** | **526** | 760 | 526 |
| 473.astar | 64 | **998** | **450** | 1000 | 449 | 996 | 451 | 64 | 908 | 495 | 908 | 495 | **908** | **495** |
| 483.xalancbmk | 64 | 569 | 776 | **569** | **776** | 569 | 777 | 64 | 569 | 776 | **569** | **776** | 569 | 777 |

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Compiler Invocation Notes

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

## 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
```

## Base Compiler Invocation

C benchmarks:

```
icc  -m32
```

C++ benchmarks:

```
icpc -m32
```

## Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`

Continued on next page

## Base Portability Flags (Continued)

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
456.hmmer: -DSPEC_CPU_LP64

Continued on next page

## Peak Portability Flags (Continued)

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 -L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64

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## Peak Optimization Flags (Continued)

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.20100316.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.20100316.xml`


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