# SPEC® CINT2006 Result



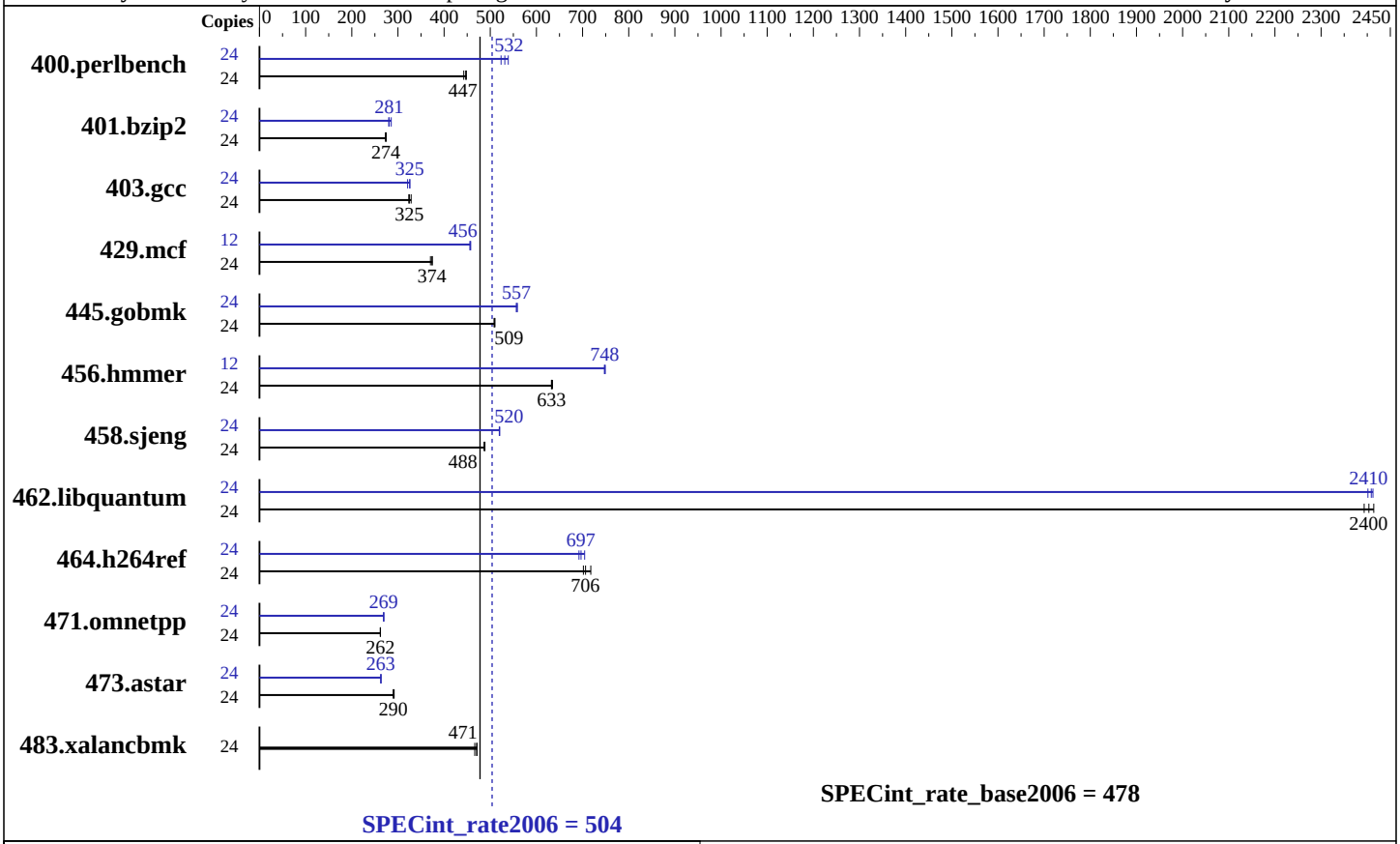
## Cryo Performance Computing Ltd
## Cryo Octane EDP-WS

**SPECint®_rate2006 = 504**

**SPECint_rate_base2006 = 478**

**CPU2006 license:** 3979
**Test sponsor:** Cryo Performance Computing Ltd
**Tested by:** Cryo Performance Computing Ltd

**Test date:** Mar-2011
**Hardware Availability:** Dec-2010
**Software Availability:** Dec-2010




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon X5680 |
| CPU Characteristics: | Intel Turbo Boost Technology disabled |
| CPU MHz: | 4500 |
| FPU: | Integrated |
| CPU(s) enabled: | 12 cores, 2 chips, 6 cores/chip, 2 threads/core |
| CPU(s) orderable: | 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 PC3-12800U-9, running at 1440 MHz and CL8) |
| Disk Subsystem: | 1 x 120 GB Corsair Force Series SSD |
| 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++ Professional Compiler for IA32 and Intel 64, Version 12 Build 12.0.2.137 Package ID: l_ccompxe_2011.2.137, l_fcompxe_2011.2.137 |
| 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 | 24 | 523 | 448 | 530 | 443 | **525** | **447** | 24 | **441** | **532** | 435 | 539 | 448 | 523 |
| 401.bzip2 | 24 | **846** | **274** | 843 | 275 | 849 | 273 | 24 | **824** | **281** | 827 | 280 | 811 | 285 |
| 403.gcc | 24 | 588 | 329 | **595** | **325** | 597 | 324 | 24 | 602 | 321 | **594** | **325** | 593 | 326 |
| 429.mcf | 24 | 591 | 370 | 584 | 375 | **586** | **374** | 12 | 240 | 456 | **240** | **456** | 239 | 458 |
| 445.gobmk | 24 | 495 | 509 | **495** | **509** | 493 | 510 | 24 | **452** | **557** | 452 | 557 | 451 | 559 |
| 456.hmmer | 24 | **354** | **633** | 354 | 633 | 353 | 635 | 12 | 150 | 747 | **150** | **748** | 149 | 749 |
| 458.sjeng | 24 | **595** | **488** | 597 | 487 | 594 | 488 | 24 | 559 | 520 | 558 | 520 | **559** | **520** |
| 462.libquantum | 24 | 208 | 2390 | **207** | **2400** | 206 | 2410 | 24 | **206** | **2410** | 206 | 2410 | 207 | 2400 |
| 464.h264ref | 24 | 757 | 702 | **752** | **706** | 740 | 718 | 24 | 754 | 704 | 767 | 692 | **762** | **697** |
| 471.omnetpp | 24 | 572 | 262 | **573** | **262** | 573 | 262 | 24 | 557 | 269 | **557** | **269** | 557 | 269 |
| 473.astar | 24 | 577 | 292 | 581 | 290 | **581** | **290** | 24 | 641 | 263 | 640 | 263 | **640** | **263** |
| 483.xalancbmk | 24 | 355 | 466 | 351 | 471 | **352** | **471** | 24 | 355 | 466 | 351 | 471 | **352** | **471** |

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
```

## General Notes

```
 OMP_NUM_THREADS set to number of cores
 Hyper-Threading Technology Enabled
 KMP_AFFINITY set to granularity=fine,scatter
 KMP_STACKSIZE set to 200M
```

## 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`

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## Base Portability Flags (Continued)

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/cryo/cpu2006/lib -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
458.sjeng: -DSPEC_CPU_LP64

Continued on next page

## Peak Portability Flags (Continued)

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/cryo/cpu2006/lib -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/cryo/cpu2006/lib -lsmartheap64

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## Peak Optimization Flags (Continued)

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/Cryo-platform-linux64-revA.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/Cryo-platform-linux64-revA.xml`



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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 17:24:20 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 April 2011.