# SPEC® CINT2006 Result



## Supermicro

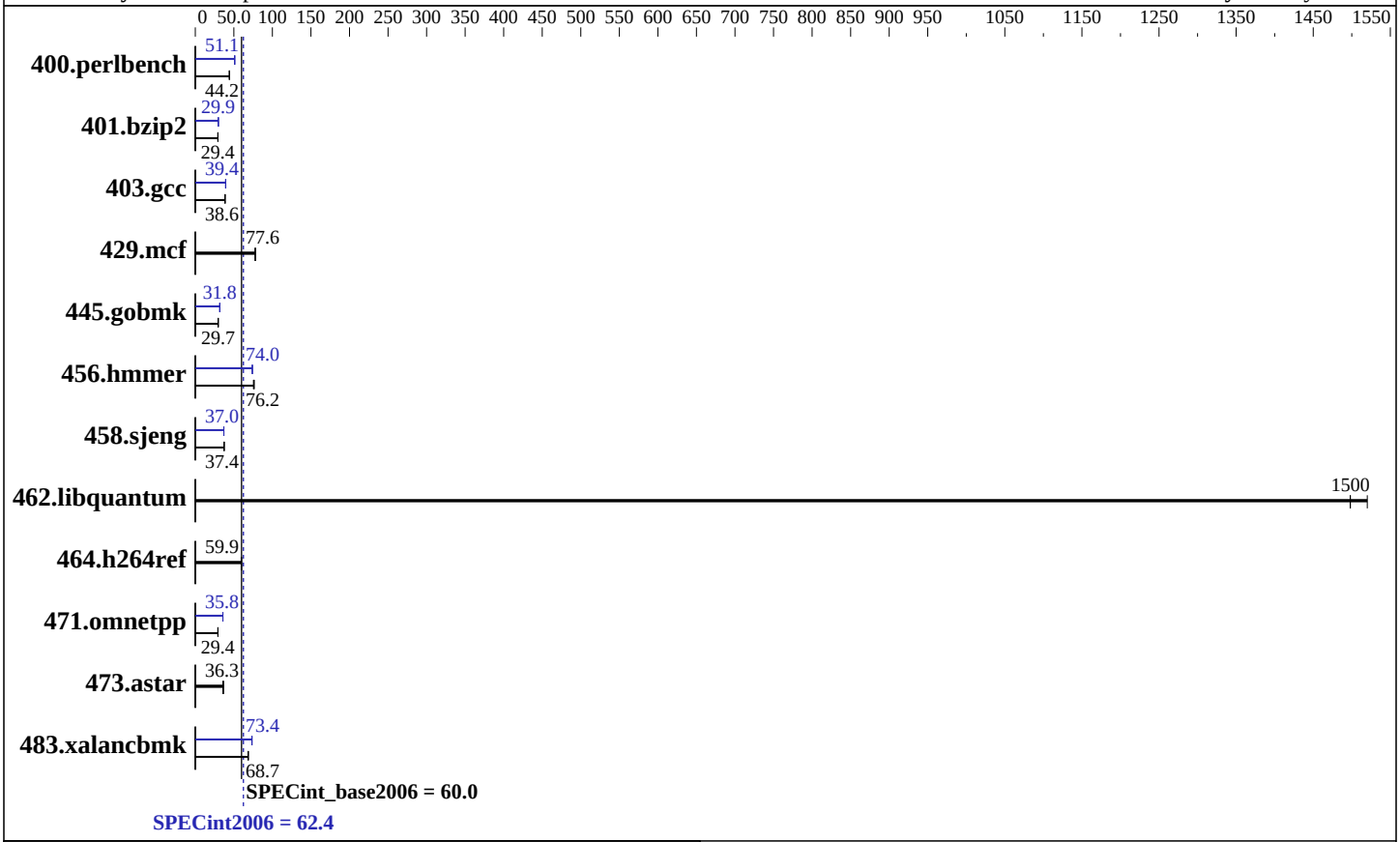
SuperServer 1018D-73MTF
(X10SL7-F , Intel Xeon E3-1270 v3)

SPECint®2006 = 62.4

SPECint_base2006 = 60.0

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

**Test date:** Jun-2013
**Hardware Availability:** Jun-2013
**Software Availability:** May-2013




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E3-1270 v3 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.90 GHz |
| CPU MHz: | 3500 |
| FPU: | Integrated |
| CPU(s) enabled: | 4 cores, 1 chip, 4 cores/chip, 2 threads/core |
| CPU(s) orderable: | 1 chip |
| 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: | 16 GB (2 x 8 GB 2Rx8 PC3-12800E-11, ECC) |
| Disk Subsystem: | 2 x 600 GB SAS 6Gbps, RAID 1, 10000 RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Red Hat Enterprise Linux Server release 6.4 (Santiago)<br>Kernel 2.6.32-358.el6.x86_64 |
| Compiler: | C/C++: Version 13.1.1.163 of Intel C++ Studio XE for Linux |
| Auto Parallel: | Yes |
| File System: | ext4 |
| System State: | Run level 3 (multi-user) |
| Base Pointers: | 32/64-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | Microquill SmartHeap V10.0 |

## Results Table

| Benchmark | Base | | | | | | Peak | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 221 | 44.2 | 221 | 44.3 | **221** | **44.2** | **191** | **51.1** | 192 | 51.0 | 191 | 51.2 |
| 401.bzip2 | **329** | **29.4** | 330 | 29.3 | 328 | 29.4 | **323** | **29.9** | 323 | 29.9 | 322 | 29.9 |
| 403.gcc | **209** | **38.6** | 208 | 38.7 | 209 | 38.5 | 204 | 39.5 | 205 | 39.3 | **204** | **39.4** |
| 429.mcf | 117 | 78.2 | **118** | **77.6** | 118 | 77.6 | 117 | 78.2 | **118** | **77.6** | 118 | 77.6 |
| 445.gobmk | **353** | **29.7** | 354 | 29.6 | 352 | 29.8 | 330 | 31.8 | 331 | 31.7 | **330** | **31.8** |
| 456.hmmer | 124 | 75.4 | 122 | 76.3 | **122** | **76.2** | **126** | **74.0** | 126 | 74.1 | 126 | 73.9 |
| 458.sjeng | **323** | **37.4** | 324 | 37.4 | 323 | 37.4 | **327** | **37.0** | 327 | 37.0 | 327 | 37.0 |
| 462.libquantum | 13.6 | 1520 | 13.8 | 1500 | **13.8** | **1500** | 13.6 | 1520 | 13.8 | 1500 | **13.8** | **1500** |
| 464.h264ref | 372 | 59.5 | **370** | **59.9** | 369 | 60.0 | 372 | 59.5 | **370** | **59.9** | 369 | 60.0 |
| 471.omnetpp | **213** | **29.4** | 213 | 29.3 | 212 | 29.4 | **175** | **35.8** | 175 | 35.8 | 174 | 35.8 |
| 473.astar | 192 | 36.6 | **193** | **36.3** | 196 | 35.8 | 192 | 36.6 | **193** | **36.3** | 196 | 35.8 |
| 483.xalancbmk | 101 | 68.5 | **100** | **68.7** | 100 | 68.7 | **94.0** | **73.4** | 94.1 | 73.3 | 93.6 | 73.7 |

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

## Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
```

## Platform Notes

```
Sysinfo program /home/cpu2006_IC13.1/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Thu Jun  6 10:29:22 2013

This section contains SUT (System Under Test) info as seen by
some common utilities.  To remove or add to this section, see:
  http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
   model name : Intel(R) Xeon(R) CPU E3-1270 v3 @ 3.50GHz
      1 "physical id"s (chips)
      8 "processors"
   cores, siblings (Caution: counting these is hw and system dependent.  The
   following excerpts from /proc/cpuinfo might not be reliable.  Use with
   caution.)
      cpu cores : 4
      siblings  : 8
      physical 0: cores 0 1 2 3
   cache size : 8192 KB

From /proc/meminfo
   MemTotal:       16266532 kB
   HugePages_Total:       0
```

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## Platform Notes (Continued)

```
      Hugepagesize:       2048 kB

   /usr/bin/lsb_release -d
      Red Hat Enterprise Linux Server release 6.4 (Santiago)

   From /etc/*release* /etc/*version*
      redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
      system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
      system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

   uname -a:
      Linux localhost.localdomain 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41
      EST 2013 x86_64 x86_64 x86_64 GNU/Linux

   run-level 3 Jun 6 07:54

   SPEC is set to: /home/cpu2006_IC13.1
      Filesystem     Type    Size  Used Avail Use% Mounted on
      /dev/mapper/VolGroup-lv_home
                     ext4    492G   23G  445G   5% /home

   Additional information from dmidecode:
     BIOS American Megatrends Inc. 1.0a 05/09/2013
     Memory:
      2x   8 GB
      2x Hynix/Hyundai HMT41GU7MFR8C-PB 8 GB 1600 MHz 2 rank
      1x Micron/Numonyx 25Q Series 16 MB
      2x [Empty] [Empty]

   (End of data from sysinfo program)
```

## General Notes

```
 Environment variables set by runspec before the start of the run:
 LD_LIBRARY_PATH = "/home/cpu2006_IC13.1/libs/32:/home/cpu2006_IC13.1/libs/64:/home/cpu2006_IC13.1/sh"
 OMP_NUM_THREADS = "4"

  Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
  memory using RHEL5.5
  Transparent Huge Pages enabled with:
  echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
  runspec command invoked through numactl i.e.:
  numactl --interleave=all runspec <etc>
```

## Base Compiler Invocation

C benchmarks:

```
     icc  -m64
```

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## Base Compiler Invocation (Continued)

C++ benchmarks:
icpc -m64

## Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

## Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmartheap64

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m64

400.perlbench: icc -m32

445.gobmk: icc -m32

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## Peak Compiler Invocation (Continued)

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
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -ansi-alias

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32
-opt-prefetch -ansi-alias

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias

456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
-ansi-alias

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4

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## Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-ra-region-strategy=block -ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

## 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-ic13-official-linux64.20130702.html
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revB.20130719.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130702.xml
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revB.20130719.xml



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

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