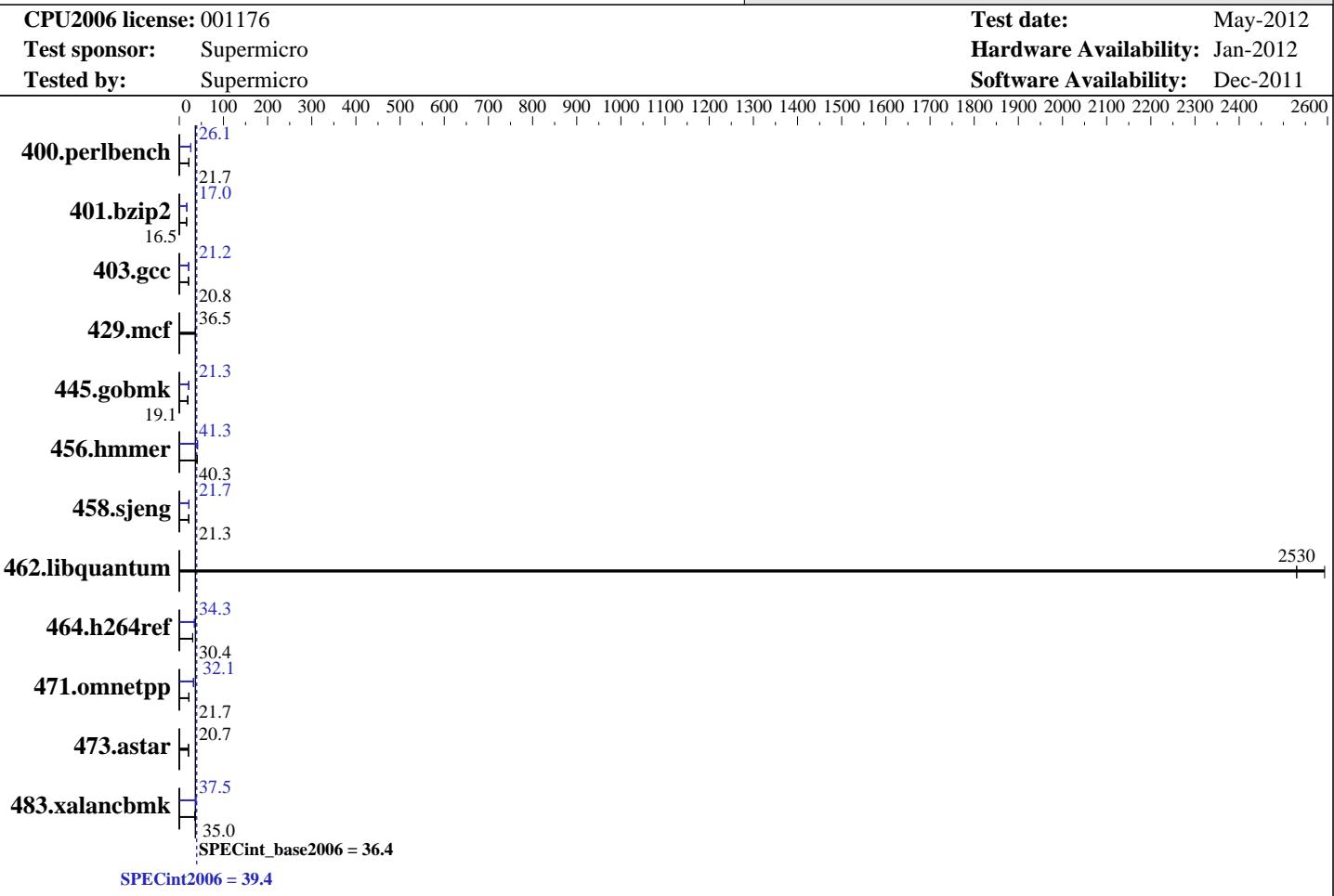# SPEC® CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 5086B-TRF (X8OBN-F, Intel E7-8870)

$SPECint®2006 =$ 39.4

$SPECint\_base2006 =$ 36.4

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

Test date: May-2012
Hardware Availability: Jan-2012
Software Availability: Dec-2011

Benchmark	Result
400.perlbench	26.1 / 21.7
401.bzip2	17.0 / 16.5
403.gcc	21.2 / 20.8
429.mcf	36.5
445.gobmk	21.3 / 19.1
456.hmmer	41.3 / 40.3
458.sjeng	21.7 / 21.3
462.libquantum	2530
464.h264ref	34.3 / 30.4
471.omnetpp	32.1 / 21.7
473.astar	20.7
483.xalancbmk	37.5 / 35.0

SPECint_base2006 = 36.4

SPECint2006 = 39.4

Hardware

CPU Name: Intel Xeon E7-8870
CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz: 2400
FPU: Integrated
CPU(s) enabled: 80 cores, 8 chips, 10 cores/chip, 2 threads/core
CPU(s) orderable: 1-8 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: 30 MB I+D on chip per chip
Other Cache: None
Memory: 1 TB (64 x 16 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x 2 TB SATA II, 7200 RPM
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server Release 6.2, Kernel 2.6.32-220.el6.x86_64
Compiler: C/C++: Version 12.1.0.225 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 V9.01

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Results Table

Benchmark	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
400.perlbench	451	21.7	449	21.8	**451**	**21.7**	**375**	**26.1**	375	26.0	375	26.1
401.bzip2	**585**	**16.5**	585	16.5	585	16.5	569	17.0	570	16.9	**569**	**17.0**
403.gcc	**386**	**20.8**	386	20.8	387	20.8	**380**	**21.2**	380	21.2	381	21.2
429.mcf	**250**	**36.5**	249	36.6	250	36.5	**250**	**36.5**	249	36.6	250	36.5
445.gobmk	**550**	**19.1**	551	19.0	549	19.1	492	21.3	**492**	**21.3**	492	21.3
456.hmmer	232	40.3	**232**	**40.3**	232	40.3	**226**	**41.3**	226	41.3	226	41.3
458.sjeng	**567**	**21.3**	567	21.3	567	21.4	**557**	**21.7**	557	21.7	557	21.7
462.libquantum	7.99	2590	**8.19**	**2530**	8.19	2530	7.99	2590	**8.19**	**2530**	8.19	2530
464.h264ref	**728**	**30.4**	728	30.4	731	30.3	**645**	**34.3**	645	34.3	645	34.3
471.omnetpp	**288**	**21.7**	287	21.8	288	21.7	194	32.2	195	32.1	**195**	**32.1**
473.astar	**339**	**20.7**	339	20.7	338	20.8	**339**	**20.7**	339	20.7	338	20.8
483.xalancbmk	197	35.1	197	35.0	**197**	**35.0**	184	37.6	**184**	**37.5**	184	37.5

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"
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"
OMP_NUM_THREADS = "80"

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
```

Base Compiler Invocation

C benchmarks:
```
icc -m64
```

C++ benchmarks:
```
icpc -m64
```

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CPU2006 license: 001176		**Test date:**	May-2012
Test sponsor:	Supermicro	**Hardware Availability:**	Jan-2012
Tested by:	Supermicro	**Software Availability:**	Dec-2011

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:

```
    -xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
```

C++ benchmarks:

```
    -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
    -Wl,-z,muldefs -L/smartheap -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
```

```
      464.h264ref: icc -m32
```

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

```
        473.astar: icpc -m64
```

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

Test date: May-2012
Hardware Availability: Jan-2012
Software Availability: Dec-2011

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
   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) -prof-use(pass 2)
            -opt-prefetch -ansi-alias

   401.bzip2: -xSSE4.2(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: -xSSE4.2 -ipo -O3 -no-prec-div -inline-calloc
            -opt-malloc-options=3 -auto-ilp32

     429.mcf: basepeak = yes

   445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
            -ansi-alias

   456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
            -ansi-alias

    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

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)
            -opt-ra-region-strategy=block             -ansi-alias
            -Wl,-z,muldefs -L/smartheap -lsmartheap
```

Continued on next page

Supermicro

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Test sponsor:	Supermicro	**Hardware Availability:**	Jan-2012
Tested by:	Supermicro	**Software Availability:**	Dec-2011

Peak Optimization Flags (Continued)

473.astar: basepeak = yes

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
-Wl,-z,muldefs -L/smartheap -lsmartheap

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-ic12.1-official-linux64.20111122.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml

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For other inquiries, please contact webmaster@spec.org.

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