# SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Inspur Corporation

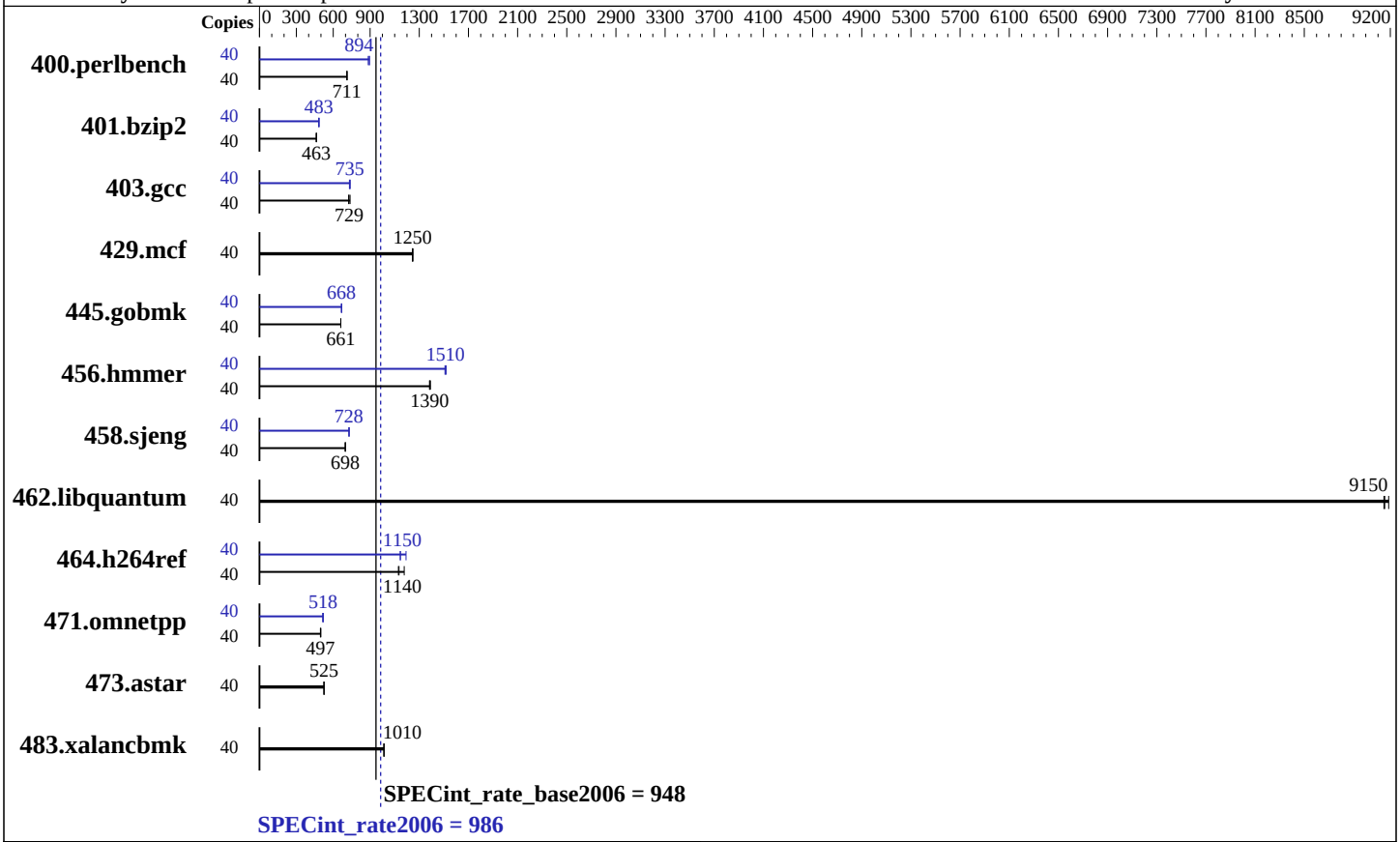
## Inspur NF5280M4 (Intel Xeon E5-2687W v3)

**SPECint®_rate2006 = 986**

**SPECint_rate_base2006 = 948**

**CPU2006 license:** 3358
**Test sponsor:** Inspur Corporation
**Tested by:** Inspur Corporation

**Test date:** Sep-2015
**Hardware Availability:** Oct-2014
**Software Availability:** Nov-2014




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5-2687W v3 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.50 GHz |
| CPU MHz: | 3100 |
| FPU: | Integrated |
| CPU(s) enabled: | 20 cores, 2 chips, 10 cores/chip, 2 threads/core |
| CPU(s) orderable: | 1,2 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: | 25 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R) |
| Disk Subsystem: | 1 x 450 GB SATA SSD |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Red Hat Enterprise Linux Server release 7.1 (Maipo)<br>3.10.0-229.el7.x86_64 |
| Compiler: | C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux |
| Auto Parallel: | No |
| File System: | xfs |
| System State: | Run level 5 |
| Base Pointers: | 32-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | Microquill SmartHeap V10.0 |

# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Inspur Corporation

## Inspur NF5280M4 (Intel Xeon E5-2687W v3)

SPECint_rate2006 = 986

SPECint_rate_base2006 = 948

**CPU2006 license:** 3358
**Test sponsor:** Inspur Corporation
**Tested by:** Inspur Corporation

**Test date:** Sep-2015
**Hardware Availability:** Oct-2014
**Software Availability:** Nov-2014

## Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 40 | **550** | **711** | 548 | 713 | 550 | 710 | 40 | 442 | 885 | **437** | **894** | 437 | 894 |
| 401.bzip2 | 40 | 832 | 464 | 836 | 461 | **834** | **463** | 40 | 800 | 482 | **800** | **483** | 795 | 485 |
| 403.gcc | 40 | 437 | 737 | **442** | **729** | 444 | 725 | 40 | 437 | 738 | 440 | 732 | **438** | **735** |
| 429.mcf | 40 | **293** | **1250** | 292 | 1250 | 293 | 1240 | 40 | **293** | **1250** | 292 | 1250 | 293 | 1240 |
| 445.gobmk | 40 | 634 | 662 | 634 | 661 | **634** | **661** | 40 | 627 | 669 | **628** | **668** | 630 | 666 |
| 456.hmmer | 40 | **269** | **1390** | 270 | 1380 | 268 | 1390 | 40 | 247 | 1510 | 246 | 1520 | **247** | **1510** |
| 458.sjeng | 40 | 693 | 699 | **693** | **698** | 693 | 698 | 40 | 664 | 729 | **665** | **728** | 665 | 728 |
| 462.libquantum | 40 | **90.5** | **9150** | 90.2 | 9190 | 90.6 | 9150 | 40 | **90.5** | **9150** | 90.2 | 9190 | 90.6 | 9150 |
| 464.h264ref | 40 | **780** | **1140** | 783 | 1130 | 752 | 1180 | 40 | 742 | 1190 | **772** | **1150** | 773 | 1150 |
| 471.omnetpp | 40 | **503** | **497** | 504 | 496 | 501 | 499 | 40 | 486 | 514 | **483** | **518** | 482 | 519 |
| 473.astar | 40 | 536 | 524 | 534 | 526 | **534** | **525** | 40 | 536 | 524 | 534 | 526 | **534** | **525** |
| 483.xalancbmk | 40 | 272 | 1010 | **272** | **1010** | 273 | 1010 | 40 | 272 | 1010 | **272** | **1010** | 273 | 1010 |

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

## Submit Notes

```
The numactl mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate numactl commands to bind each copy to a specific processor.
For details, please see the config file.
```

## Operating System Notes

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

## Platform Notes

```
BIOS and OS configuration:
SCALING_GOVERNOR set to Performance
Hardware Prefetch set to Disable
Memory Frequency set to 2133 MHz
VT Support set to Disable
C1E Support set to Disable
Sysinfo program /home/CPU2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Fri Sep 11 07:43:57 2015

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 E5-2687W v3 @ 3.10GHz
      2 "physical id"s (chips)
```

Continued on next page

## Platform Notes (Continued)

```
      40 "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 : 10
      siblings  : 20
      physical 0: cores 0 1 2 3 4 8 9 10 11 12
      physical 1: cores 0 1 2 3 4 8 9 10 11 12
   cache size : 12800 KB

From /proc/meminfo
   MemTotal:       264037908 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

From /etc/*release* /etc/*version*
   os-release:
      NAME="Red Hat Enterprise Linux Server"
      VERSION="7.1 (Maipo)"
      ID="rhel"
      ID_LIKE="fedora"
      VERSION_ID="7.1"
      PRETTY_NAME="Red Hat Enterprise Linux Server 7.1 (Maipo)"
      ANSI_COLOR="0;31"
      CPE_NAME="cpe:/o:redhat:enterprise_linux:7.1:GA:server"
   redhat-release: Red Hat Enterprise Linux Server release 7.1 (Maipo)
   system-release: Red Hat Enterprise Linux Server release 7.1 (Maipo)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:7.1:ga:server

uname -a:
   Linux localhost.localdomain 3.10.0-229.el7.x86_64 #1 SMP Thu Jan 29 18:37:38
   EST 2015 x86_64 x86_64 x86_64 GNU/Linux

run-level 5 Sep 11 07:42

SPEC is set to: /home/CPU2006
   Filesystem            Type  Size  Used Avail Use% Mounted on
   /dev/mapper/rhel-home xfs   393G  120G  273G  31% /home
Additional information from dmidecode:

   Warning: Use caution when you interpret this section. The 'dmidecode' program
   reads system data which is "intended to allow hardware to be accurately
   determined", but the intent may not be met, as there are frequent changes to
   hardware, firmware, and the "DMTF SMBIOS" standard.

  BIOS American Megatrends Inc. 4.0.1 10/30/2014
  Memory:
   8x NO DIMM NO DIMM
   16x Samsung M393A2G40DB0-CPB 16 GB 2 rank 2133 MHz

(End of data from sysinfo program)
```

## General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/home/CPU2006/libs/32:/home/CPU2006/libs/64:/home/CPU2006/sh"

 Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB
 memory using RedHat EL 7.0
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/transparent_hugepage/enabled
 Filesystem page cache cleared with:
 echo 1>       /proc/sys/vm/drop_caches
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>
```

## Base Compiler Invocation

C benchmarks:

```
icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

C++ benchmarks:

```
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

## Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

## Base Optimization Flags

C benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmartheap
```

## Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

## Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

## Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
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)
-auto-ilp32

401.bzip2: -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 -auto-ilp32 -ansi-alias

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3

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

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 -auto-ilp32

Continued on next page

# Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: -xCORE-AVX2(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: -xCORE-AVX2(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/sh -lsmartheap

473.astar: basepeak = yes

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-ic15.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Inspur-Platform-Settings-V1.0-HSW.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Inspur-Platform-Settings-V1.0-HSW.xml


SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.


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

Tested with SPEC CPU2006 v1.2.
Report generated on Tue Nov 3 11:55:52 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 3 November 2015.