



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]2006 = **61.8**

PRIMERGY RX1330 M2, Intel Celeron G3900, 2.80 GHz

SPECfp_base2006 = **61.1**

CPU2006 license: 19

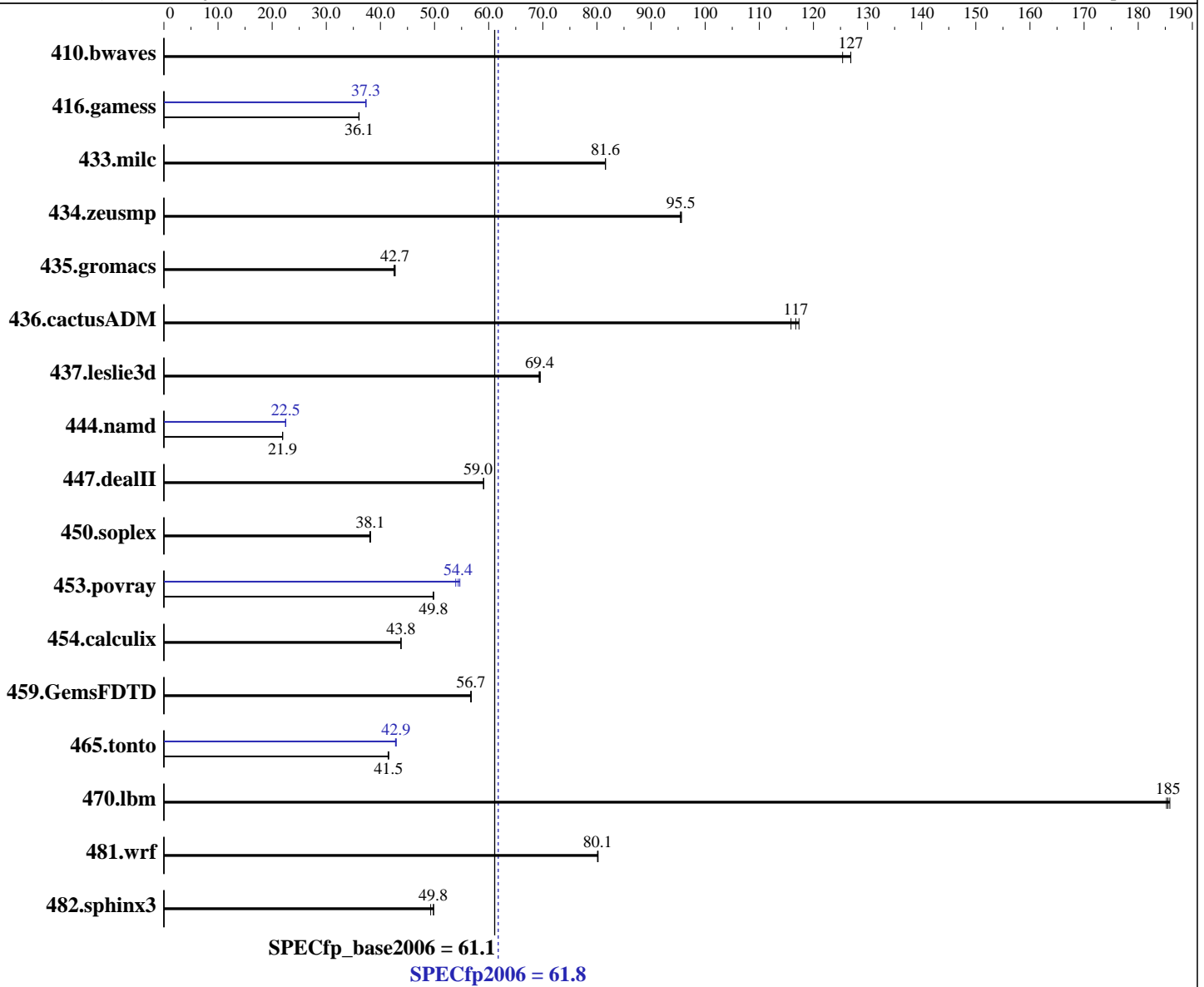
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jan-2016

Hardware Availability: Feb-2016

Software Availability: Sep-2015



Hardware

CPU Name: Intel Celeron G3900
 CPU Characteristics:
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 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

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 12 (x86_64)
 Kernel 3.12.48-52.27-default
 Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux;
 Fortran: Version 16.0.0.101 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4
 System State: Run level 3 (multi-user)

Continued on next page



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L3 Cache: 2 MB I+D on chip per chip
 Other Cache: None
 Memory: 64 GB (4 x 16 GB 2Rx8 PC4-2133P-E)
 Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM
 Other Hardware: None

Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: None

Results Table

| Benchmark | Base | | | | | | Peak | | | | | |
|---------------|------------|-------------|-------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 108 | 125 | 107 | 127 | 107 | 127 | 108 | 125 | 107 | 127 | 107 | 127 |
| 416.gamess | 544 | 36.0 | 543 | 36.1 | 543 | 36.1 | 525 | 37.3 | 524 | 37.3 | 525 | 37.3 |
| 433.milc | 113 | 81.6 | 113 | 81.6 | 113 | 81.6 | 113 | 81.6 | 113 | 81.6 | 113 | 81.6 |
| 434.zeusmp | 95.4 | 95.4 | 95.2 | 95.6 | 95.3 | 95.5 | 95.4 | 95.4 | 95.2 | 95.6 | 95.3 | 95.5 |
| 435.gromacs | 168 | 42.5 | 167 | 42.7 | 167 | 42.7 | 168 | 42.5 | 167 | 42.7 | 167 | 42.7 |
| 436.cactusADM | 102 | 117 | 103 | 116 | 102 | 117 | 102 | 117 | 103 | 116 | 102 | 117 |
| 437.leslie3d | 135 | 69.5 | 135 | 69.4 | 136 | 69.3 | 135 | 69.5 | 135 | 69.4 | 136 | 69.3 |
| 444.namd | 366 | 21.9 | 366 | 21.9 | 366 | 21.9 | 356 | 22.5 | 357 | 22.5 | 357 | 22.5 |
| 447.dealII | 194 | 59.0 | 194 | 59.1 | 194 | 59.0 | 194 | 59.0 | 194 | 59.1 | 194 | 59.0 |
| 450.soplex | 219 | 38.0 | 218 | 38.2 | 219 | 38.1 | 219 | 38.0 | 218 | 38.2 | 219 | 38.1 |
| 453.povray | 107 | 49.7 | 107 | 49.9 | 107 | 49.8 | 98.7 | 53.9 | 97.8 | 54.4 | 97.3 | 54.7 |
| 454.calculix | 188 | 43.8 | 188 | 43.8 | 188 | 43.8 | 188 | 43.8 | 188 | 43.8 | 188 | 43.8 |
| 459.GemsFDTD | 187 | 56.7 | 187 | 56.7 | 187 | 56.8 | 187 | 56.7 | 187 | 56.7 | 187 | 56.8 |
| 465.tonto | 237 | 41.5 | 238 | 41.4 | 237 | 41.5 | 229 | 42.9 | 229 | 42.9 | 230 | 42.8 |
| 470.lbm | 73.9 | 186 | 74.1 | 185 | 74.2 | 185 | 73.9 | 186 | 74.1 | 185 | 74.2 | 185 |
| 481.wrf | 139 | 80.1 | 139 | 80.2 | 139 | 80.1 | 139 | 80.1 | 139 | 80.2 | 139 | 80.1 |
| 482.sphinx3 | 392 | 49.8 | 395 | 49.3 | 391 | 49.8 | 392 | 49.8 | 395 | 49.3 | 391 | 49.8 |

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

BIOS configuration:
 Sysinfo program /home/SPECcpu2006/config/sysinfo.rev6914
 \$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
 running on RX1330M2 Thu Jan 7 17:37:08 2016

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

Continued on next page



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Platform Notes (Continued)

model name : Intel(R) Celeron(R) CPU G3900 @ 2.80GHz

1 "physical id"s (chips)

2 "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 : 2

siblings : 2

physical 0: cores 0 1

cache size : 2048 KB

From /proc/meminfo

MemTotal: 65905868 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsb_release -d

SUSE Linux Enterprise Server 12

From /etc/*release* /etc/*version*

SuSE-release:

SUSE Linux Enterprise Server 12 (x86_64)

VERSION = 12

PATCHLEVEL = 0

This file is deprecated and will be removed in a future service pack or release.

Please check /etc/os-release for details about this release.

os-release:

NAME="SLES"

VERSION="12"

VERSION_ID="12"

PRETTY_NAME="SUSE Linux Enterprise Server 12"

ID="sles"

ANSI_COLOR="0;32"

CPE_NAME="cpe:/o:suse:sles:12"

uname -a:

Linux RX1330M2 3.12.48-52.27-default #1 SMP Mon Oct 5 10:08:10 UTC 2015 (314f0e3) x86_64 x86_64 x86_64 GNU/Linux

run-level 5 Jan 7 17:17

SPEC is set to: /home/SPECcpu2006

Filesystem Type Size Used Avail Use% Mounted on

/dev/sda4 xfs 889G 25G 865G 3% /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.

Continued on next page



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Platform Notes (Continued)

BIOS FUJITSU // American Megatrends Inc. V5.0.0.11 R1.0.0 for D3375-A1x
10/27/2015

Memory:

4x SK Hynix HMA82GU7MFR8N-TF 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:

KMP_AFFINITY = "granularity=fine,compact,1,0"

LD_LIBRARY_PATH = "/home/SPECcpu2006/libs/32:/home/SPECcpu2006/libs/64:/home/SPECcpu2006/sh"

OMP_NUM_THREADS = "2"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB
memory using RedHat EL 7.1

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/transparent_hugepage/enabled

For information about Fujitsu please visit: <http://www.fujitsu.com>

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64

416.gamess: -DSPEC_CPU_LP64

433.milc: -DSPEC_CPU_LP64

434.zeusmp: -DSPEC_CPU_LP64

435.gromacs: -DSPEC_CPU_LP64 -nofor_main

436.cactusADM: -DSPEC_CPU_LP64 -nofor_main

437.leslie3d: -DSPEC_CPU_LP64

444.namd: -DSPEC_CPU_LP64

447.deallI: -DSPEC_CPU_LP64

Continued on next page

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Page 4



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Base Portability Flags (Continued)

```

450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

```

Base Optimization Flags

C benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

Fortran benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias

Peak Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

Peak Portability Flags

Same as Base Portability Flags



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Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1)
-prof-use(pass 2) -fno-alias -auto-ilp32

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xSSE4.2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1)
-prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xSSE4.2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1)
-prof-use(pass 2) -unroll2 -inline-level=0 -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -xSSE4.2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1)
-prof-use(pass 2) -inline-calloc -opt-malloc-options=3
-auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

Continued on next page



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Peak Optimization Flags (Continued)

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.xml>

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

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