**Fujitsu**

PRIMERGY TX1330 M2, Intel Core i3-6100, 3.70 GHz

<table>
<thead>
<tr>
<th>Test sponsor:</th>
<th>Fujitsu</th>
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**SPECfp®2006 = 87.0**

**SPECfp_base2006 = 85.6**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Score</th>
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<tbody>
<tr>
<td>410.bwaves</td>
<td>52.7</td>
</tr>
<tr>
<td>416.games</td>
<td>50.3</td>
</tr>
<tr>
<td>433.milc</td>
<td>109</td>
</tr>
<tr>
<td>434.zeusmp</td>
<td>157</td>
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<tr>
<td>435.gromacs</td>
<td>62.1</td>
</tr>
<tr>
<td>436.cactusADM</td>
<td>208</td>
</tr>
<tr>
<td>437.leslie3d</td>
<td>93.8</td>
</tr>
<tr>
<td>444.namd</td>
<td>35.9</td>
</tr>
<tr>
<td>447.dealII</td>
<td>77.1</td>
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<tr>
<td>450.soplex</td>
<td>46.1</td>
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<tr>
<td>459.GemsFDTD</td>
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<tr>
<td>481.wrf</td>
<td>117</td>
</tr>
<tr>
<td>482.sphinx3</td>
<td>72.2</td>
</tr>
</tbody>
</table>

**SPECfp_base2006 = 85.6**

**SPECfp2006 = 87.0**

**Hardware**

- **CPU Name:** Intel Core i3-6100
- **CPU Characteristics:**
  - CPU MHz: 3700
  - FPU: Integrated
  - CPU(s) enabled: 2 cores, 1 chip, 2 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

**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)

---

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
Fujitsu
PRIMERGY TX1330 M2, Intel Core i3-6100, 3.70 GHz

SPECfp2006 = 87.0
SPECfp_base2006 = 85.6

CPU2006 license: 19
Test sponsor: Fujitsu
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Test date: Nov-2015
Hardware Availability: Feb-2016
Software Availability: Sep-2015

L3 Cache: 3 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

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<td>271</td>
<td>71.9</td>
</tr>
</tbody>
</table>

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 TX1330M2 Mon Nov 23 20:55:28 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

Continued on next page
Fujitsu
PRIMERAESTY TX1330 M2, Intel Core i3-6100, 3.70 GHz

SPECfp2006 = 87.0
SPECfp_base2006 = 85.6

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Platform Notes (Continued)

model name: Intel(R) Core(TM) i3-6100 CPU @ 3.70GHz
1 "physical id"s (chips)
4 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
cautions.)
cpu cores: 2
siblings: 4
physical 0: cores 0 1
cache size: 3072 KB

From /proc/meminfo
MemTotal: 65902560 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 TX1330M2 3.12.28-4-default #1 SMP Thu Sep 25 17:02:34 UTC 2014
(9879bd4) x86_64 x86_64 x86_64 GNU/Linux

run-level 5 Nov 20 16:43

SPEC is set to: /home/SPECcpu2006
(Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 xfs 237G 14G 224G 6% /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.

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SPEC CFP2006 Result

Fujitsu
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Platform Notes (Continued)

BIOS FUJITSU // American Megatrends Inc. V5.0.0.11 R1.1.0 for D3373-A1x
10/30/2015
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 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64 -nofor_main
447.dealII: -DSPEC_CPU_LP64
## SPEC CFP2006 Result

**Fujitsu**

| SPECfp2006 | 87.0 |
| SPECfp_base2006 | 85.6 |

**PRIMERGY TX1330 M2, Intel Core i3-6100, 3.70 GHz**

| CPU2006 license: | 19 |
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| Test date: | Nov-2015 |
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| Software Availability: | Sep-2015 |

### Base Portability Flags (Continued)

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

### Base Optimization Flags

**C benchmarks:**

- -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
- -ansi-alias

**C++ benchmarks:**

- -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

**Fortran benchmarks:**

- -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch

**Benchmarks using both Fortran and C:**

- -xCORE-AVX2 -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
Fujitsu
PRIMERGY TX1330 M2, Intel Core i3-6100, 3.70 GHz

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</table>

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Peak Optimization Flags

C benchmarks:
- 433.milc: basepeak = yes
- 470.lbm: basepeak = yes
- 482.sphinx3: basepeak = yes

C++ benchmarks:
- 444.namd: -xCORE-AVX2(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-llp32
- 447.dealII: basepeak = yes
- 450.soplex: basepeak = yes
- 453.povray: -xCORE-AVX2(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: -xCORE-AVX2(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-repeat
- 434.zeusmp: basepeak = yes
- 437.leslie3d: basepeak = yes
- 459.GemsFDTD: -xCORE-AVX2(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 -opt-prefetch -parallel
- 465.tonto: -xCORE-AVX2(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:

Continued on next page
Fujitsu

PRIMERGY TX1330 M2, Intel Core i3-6100, 3.70 GHz

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Tested by: Fujitsu

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Peak Optimization Flags (Continued)

435.gromacs: basepeak = yes
436.cactusADM: basepeak = yes
454.calculix: basepeak = yes
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

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.

Tested with SPEC CPU2006 v1.2.
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