## SPEC® CFP2006 Result

### Fujitsu

PRIMERGY TX1330 M3, Intel Xeon E3-1280 v6, 3.9GHz

| SPECfp®2006 = | 106 |
| SPECfp_base2006 = | 105 |

**CPU2006 license:** 19  
**Test date:** Mar-2017  
**Test sponsor:** Fujitsu  
**Hardware Availability:** May-2017  
**Tested by:** Fujitsu  
**Software Availability:** Nov-2016

### Software

<table>
<thead>
<tr>
<th>Operating System:</th>
<th>SUSE Linux Enterprise Server 12 SP2 (x86_64) 4.4.21-68-default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compiler:</td>
<td>C/C++: Version 17.0.0.098 of Intel C/C++ Compiler for Linux; Fortran: Version 17.0.0.098 of Intel Fortran Compiler for Linux</td>
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<tr>
<td>Auto Parallel:</td>
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<tr>
<td>File System:</td>
<td>xfs</td>
</tr>
<tr>
<td>System State:</td>
<td>Run level 3 ((multi-user))</td>
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### Hardware

<table>
<thead>
<tr>
<th>CPU Name:</th>
<th>Intel Xeon E3-1280 v6</th>
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<tbody>
<tr>
<td>CPU Characteristics:</td>
<td>Intel Turbo Boost Technology up to 4.20 GHz</td>
</tr>
<tr>
<td>CPU MHz:</td>
<td>3900</td>
</tr>
<tr>
<td>FPU:</td>
<td>Integrated</td>
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<tr>
<td>CPU(s) enabled:</td>
<td>4 cores, 1 chip, 4 cores/chip</td>
</tr>
<tr>
<td>CPU(s) orderable:</td>
<td>1 chip</td>
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<tr>
<td>Primary Cache:</td>
<td>32 KB I + 32 KB D on chip per core</td>
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<tr>
<td>Secondary Cache:</td>
<td>256 KB I+D on chip per core</td>
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### SPEC® CFP2006 Results

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECfp®2006</th>
<th>SPECfp_base2006</th>
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<tbody>
<tr>
<td>410.bwaves</td>
<td>57.0</td>
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<tr>
<td>416.gamess</td>
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<tr>
<td>433.milc</td>
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<td>434.zeusmp</td>
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<tr>
<td>435.gromacs</td>
<td>75.2</td>
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<tr>
<td>436.cactusADM</td>
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<td>482.sphinx3</td>
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**CONTINUED ON NEXT PAGE**
**SPEC CFP2006 Result**

**Fujitsu**

PRIMERGY TX1330 M3, Intel Xeon E3-1280 v6, 3.9GHz

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

Test date: Mar-2017
Hardware Availability: May-2017
Software Availability: Nov-2016

<table>
<thead>
<tr>
<th>L3 Cache: 8 MB I+D on chip per chip</th>
<th>Other Cache: None</th>
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</thead>
<tbody>
<tr>
<td>Memory: 64 GB (4 x 16 GB 2Rx8 PC4-2400T-E)</td>
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<tr>
<td>Other Hardware: None</td>
<td>Base Pointers: 64-bit</td>
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<tr>
<td>Peak Pointers: 32/64-bit</td>
<td>Other Software: None</td>
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**Base Pointers:** 64-bit
**Peak Pointers:** 32/64-bit

---

### Results Table

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<th>Base Seconds</th>
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<td><strong>111</strong></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"
Turbo mode set with:
cupower -c all frequency-set -g performance
cupower idle-set -d 2
cupower idle-set -d 3
cupower idle-set -d 4
echo always > /sys/kernel/mm/transparent_hugepage/enabled
KMP_AFFINITY = "granularity=fine,scatter"
OMP_NUM_THREADS = "4"
Fujitsu

PRIMERGY TX1330 M3, Intel Xeon E3-1280 v6, 3.9GHz

SPECfp2006 = 106
SPECfp_base2006 = 105

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

Test date: Mar-2017
Hardware Availability: May-2017
Software Availability: Nov-2016

Platform Notes

BIOS Settings:
Hyper-threading = Disabled
Sysinfo program /home/benchmark/speccpu-20160922-updated/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f986696ebe290c1)
runtime on linux-1rfj Sat Mar 4 18:56:15 2017

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 E3-1280 v6 @ 3.90GHz
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 : 4
siblings : 4
physical 0: cores 0 1 2 3
cache size : 8192 KB

From /proc/meminfo
MemTotal: 65834924 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 2
# 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-SP2"
VERSION_ID="12.2"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:
Linux linux-1rfj 4.4.21-68-default #1 SMP Tue Oct 18 18:19:37 UTC 2016
(63cf368) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Mar 4 18:54

SPEC is set to: /home/benchmark/speccpu-20160922-updated
Filesystem Type Size Used Avail Use% Mounted on
Continued on next page
SPEC CFP2006 Result

Fujitsu

PRIMERGY TX1330 M3, Intel Xeon E3-1280 v6, 3.9GHz

SPECf2006 = 106
SPECfp_base2006 = 105

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu
Test date: Mar-2017
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Platform Notes (Continued)
/dev/sda3      xfs   890G  6.6G  883G   1% /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 FUJITSU // American Megatrends Inc. V5.0.0.11 R1.0.0 for D3373-B1x
02/20/2017
Memory:
  4x Samsung M391A2K43BB1-CRC 16 GB 2 rank 2400 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/home/benchmark/speccpu-20160922-updated/libs/32:/home/benchmark/speccpu-20160922-updated/libs/64:/home/benchmark/speccpu-20160922-updated/sh10.2"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.2
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
This result was measured on the PRIMERGY TX1320 M3. The PRIMERGY TX1320 M3
and the PRIMERGY TX1330 M3 are electronically equivalent.

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

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Fujitsu
PRIMERGY TX1330 M3, Intel Xeon E3-1280 v6, 3.9GHz

**SPEC CFP2006 Result**

<table>
<thead>
<tr>
<th>CPU2006 license:</th>
<th>19</th>
</tr>
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<tbody>
<tr>
<td>Test sponsor:</td>
<td>Fujitsu</td>
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<td>Tested by:</td>
<td>Fujitsu</td>
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<td>Nov-2016</td>
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</table>

**SPECfp2006 =** 106  
**SPECfp_base2006 =** 105

---

### Base Portability Flags (Continued)

- 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.dealII: -DSPEC_CPU_LP64
- 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
- 481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
- 482.sphinx3: -DSPEC_CPU_LP64

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### Base Optimization Flags

- **C benchmarks:**  
  -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

- **C++ benchmarks:**  
  -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch

- **Fortran benchmarks:**  
  -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

- **Benchmarks using both Fortran and C:**  
  -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

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### 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
Fujitsu

PRIMERGY TX1330 M3, Intel Xeon E3-1280 v6, 3.9GHz

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

SPECfp2006 = 106
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Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes
470.lbm: basepeak = yes
482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
        -par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -fno-alias -auto-iipt32

447.dealII: basepeak = yes
450.soplex: basepeak = yes
453.povray: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
        -par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes
416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
        -par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -unroll2 -inline-level=0 -scalar-rep-

434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
        -par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -unroll2 -inline-level=0
        -qopt-prefetch -parallel

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
        -par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -inline-calloc -qopt-malloc-options=3
        -auto -unroll4

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Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

- 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-ic17.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-BDW-RevE.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-BDW-RevE.xml

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

Tested with SPEC CPU2006 v1.2.
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