Fujitsu

PRIMERGY TX1330 M2, Intel Xeon E3-1225 v5, 3.30 GHz

<table>
<thead>
<tr>
<th>SPECfp®2006</th>
<th>94.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECfp_base2006</td>
<td>92.6</td>
</tr>
</tbody>
</table>

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 Xeon E3-1225 v5
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.70 GHz
- **CPU MHz:** 3300
- **FPU:** Integrated
- **CPU(s) enabled:** 4 cores, 1 chip, 4 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

<table>
<thead>
<tr>
<th>Test</th>
<th>SPECf2006</th>
<th>SPECfp_base2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECfp2006 =</td>
<td>94.9</td>
<td></td>
</tr>
<tr>
<td>SPECfp_base2006 =</td>
<td>92.6</td>
<td></td>
</tr>
</tbody>
</table>

**Software**
- **Operating System:** SUSE Linux Enterprise Server 12 (x86_64)
- **Kernel:** 3.12.28-4-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
### SPEC CFP2006 Result

**Fujitsu**

PRIMERGY TX1330 M2, Intel Xeon E3-1225 v5, 3.30 GHz

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td>98.5</td>
<td>138</td>
<td>98.6</td>
<td>138</td>
<td>98.4</td>
<td>138</td>
<td>98.5</td>
<td>138</td>
<td>98.6</td>
<td>138</td>
</tr>
<tr>
<td>416.gamess</td>
<td>420</td>
<td>46.6</td>
<td>421</td>
<td>46.5</td>
<td>421</td>
<td>46.5</td>
<td>372</td>
<td>52.6</td>
<td>372</td>
<td>52.6</td>
</tr>
<tr>
<td>433.milc</td>
<td>84.6</td>
<td>109</td>
<td>84.6</td>
<td>109</td>
<td>84.9</td>
<td>108</td>
<td>84.6</td>
<td>109</td>
<td>84.9</td>
<td>108</td>
</tr>
<tr>
<td>434.zeusmp</td>
<td>45.5</td>
<td>200</td>
<td>45.5</td>
<td>200</td>
<td>45.5</td>
<td>200</td>
<td>45.5</td>
<td>200</td>
<td>45.5</td>
<td>200</td>
</tr>
<tr>
<td>435.gromacs</td>
<td>113</td>
<td>62.9</td>
<td>114</td>
<td>62.8</td>
<td>114</td>
<td>62.6</td>
<td>113</td>
<td>62.9</td>
<td>114</td>
<td>62.8</td>
</tr>
<tr>
<td>436.cactusADM</td>
<td>34.2</td>
<td>349</td>
<td>33.8</td>
<td>353</td>
<td>34.3</td>
<td>349</td>
<td>34.2</td>
<td>349</td>
<td>33.8</td>
<td>353</td>
</tr>
<tr>
<td>437.leslie3d</td>
<td>87.6</td>
<td>107</td>
<td>87.7</td>
<td>107</td>
<td>87.6</td>
<td>107</td>
<td>87.6</td>
<td>107</td>
<td>87.6</td>
<td>107</td>
</tr>
<tr>
<td>444.namd</td>
<td>226</td>
<td>35.5</td>
<td>225</td>
<td>35.6</td>
<td>225</td>
<td>35.6</td>
<td>222</td>
<td>36.3</td>
<td>222</td>
<td>36.3</td>
</tr>
<tr>
<td>447.dealII</td>
<td>148</td>
<td>77.5</td>
<td>148</td>
<td>77.6</td>
<td>148</td>
<td>77.5</td>
<td>148</td>
<td>77.5</td>
<td>148</td>
<td>77.5</td>
</tr>
<tr>
<td>450.soplex</td>
<td>157</td>
<td>53.1</td>
<td>157</td>
<td>53.2</td>
<td>158</td>
<td>52.9</td>
<td>157</td>
<td>53.1</td>
<td>157</td>
<td>53.1</td>
</tr>
<tr>
<td>453.povray</td>
<td>76.9</td>
<td>69.2</td>
<td>77.3</td>
<td>68.8</td>
<td>77.6</td>
<td>68.6</td>
<td>68.0</td>
<td>78.2</td>
<td>68.2</td>
<td>78.1</td>
</tr>
<tr>
<td>454.calculix</td>
<td>112</td>
<td>73.7</td>
<td>112</td>
<td>73.7</td>
<td>112</td>
<td>73.7</td>
<td>110</td>
<td>75.3</td>
<td>110</td>
<td>75.3</td>
</tr>
<tr>
<td>459.GemsFDTD</td>
<td>129</td>
<td>82.5</td>
<td>129</td>
<td>82.4</td>
<td>128</td>
<td>82.6</td>
<td>127</td>
<td>83.7</td>
<td>127</td>
<td>83.6</td>
</tr>
<tr>
<td>465.tonto</td>
<td>160</td>
<td>61.5</td>
<td>160</td>
<td>61.6</td>
<td>160</td>
<td>61.6</td>
<td>142</td>
<td>69.5</td>
<td>142</td>
<td>69.5</td>
</tr>
<tr>
<td>470.lbm</td>
<td>73.2</td>
<td>188</td>
<td>73.2</td>
<td>188</td>
<td>73.2</td>
<td>188</td>
<td>73.2</td>
<td>188</td>
<td>73.2</td>
<td>188</td>
</tr>
<tr>
<td>481.wrf</td>
<td>90.5</td>
<td>123</td>
<td>90.7</td>
<td>123</td>
<td>90.8</td>
<td>123</td>
<td>90.5</td>
<td>123</td>
<td>90.7</td>
<td>123</td>
</tr>
<tr>
<td>482.sphinx3</td>
<td>207</td>
<td>94.3</td>
<td>208</td>
<td>93.7</td>
<td>208</td>
<td>93.9</td>
<td>207</td>
<td>94.3</td>
<td>208</td>
<td>93.7</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

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
PRIMERGY TX1330 M2, Intel Xeon E3-1225 v5, 3.30 GHz

SPECfp2006 = 94.9
SPECfp_base2006 = 92.6

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

Platform Notes (Continued)

model name : Intel(R) Xeon(R) CPU E3-1225 v5 @ 3.30GHz
  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
caution.)
cpu cores : 4
siblings : 4
physical 0: cores 0 1 2 3
cache size : 8192 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:
  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 Jan 13 18:06

SPEC is set to: /home/SPECcpu2006
Filesystem   Type  Size  Used Av ail 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.

Continued on next page
Fujitsu
PRIMERGY TX1330 M2, Intel Xeon E3-1225 v5, 3.30 GHz

SPECfp2006 = 94.9
SPECfp_base2006 = 92.6

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

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 = "4"

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 CompilerInvocation
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

Continued on next page
Fujitsu
PRIMERGY TX1330 M2, Intel Xeon E3-1225 v5, 3.30 GHz

<table>
<thead>
<tr>
<th>SPECfp2006 = 94.9</th>
<th>SPECfp_base2006 = 92.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU2006 license: 19</td>
<td>Test date: Jan-2016</td>
</tr>
<tr>
<td>Test sponsor: Fujitsu</td>
<td>Hardware Availability: Feb-2016</td>
</tr>
<tr>
<td>Tested by: Fujitsu</td>
<td>Software Availability: Sep-2015</td>
</tr>
</tbody>
</table>

**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:
-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 Xeon E3-1225 v5, 3.30 GHz

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

SPECfp2006 = 94.9
SPECfp_base2006 = 92.6

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-ilp32

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-rep-

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:
Fujitsu
PRIMERGY TX1330 M2, Intel Xeon E3-1225 v5, 3.30 GHz

SPECfp2006 = 94.9
SPECfp_base2006 = 92.6

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

Peak Optimization Flags (Continued)

435.gromacs: basepeak = yes
436.cactusADM: basepeak = yes
454.calculix: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilkp32 -ansi-alias
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

SPEC and SPECfp 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.
Originally published on 9 February 2016.