**Fujitsu Siemens Computers**

**PRIMERGY TX300 S3, Intel Xeon processor E5310, 1.60 GHz**

| SPECint<sup>®</sup>_rate<sub>2006</sub> | = | 62.9 |
| SPECint<sup>®</sup>_rate_base<sub>2006</sub> | = | 59.8 |

**CPU2006 license:** 22  
**Test sponsor:** Fujitsu Siemens Computers  
**Tested by:** Fujitsu Siemens Computers  
**Test date:** Apr-2007  
**Hardware Availability:** Nov-2006  
**Software Availability:** Feb-2007

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**Hardware**

<table>
<thead>
<tr>
<th><strong>CPU Name:</strong></th>
<th>Intel Xeon E5310</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU Characteristics:</strong></td>
<td>1067 MHz system bus</td>
</tr>
<tr>
<td><strong>CPU MHz:</strong></td>
<td>1600</td>
</tr>
<tr>
<td><strong>FPU:</strong></td>
<td>Integrated</td>
</tr>
<tr>
<td><strong>CPU(s) enabled:</strong></td>
<td>8 cores, 2 chips, 4 cores/chip</td>
</tr>
<tr>
<td><strong>CPU(s) orderable:</strong></td>
<td>1.2 chips</td>
</tr>
<tr>
<td><strong>Primary Cache:</strong></td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td><strong>Secondary Cache:</strong></td>
<td>8 MB I+D on chip per chip, 4 MB shared / 2 cores</td>
</tr>
<tr>
<td><strong>L3 Cache:</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Other Cache:</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Memory:</strong></td>
<td>16 GB (8x2 GB DDR2 PC2-5300F, 2 rank, CAS 5-5-5, with ECC)</td>
</tr>
<tr>
<td><strong>Disk Subsystem:</strong></td>
<td>SAS (73GB 15400 rpm)</td>
</tr>
<tr>
<td><strong>Other Hardware:</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

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**Software**

| **Operating System:** | 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86_64 |
| **Compiler:** | Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070215, Package-ID: l_cc_p_9.1.047 |
| **Auto Parallel:** | No |
| **File System:** | ext2 |
| **System State:** | Multiuser, Runlevel 3 |
| **Base Pointers:** | 32-bit |
| **Peak Pointers:** | 32/64-bit |
| **Other Software:** | Smart Heap Library, Version 8.1 |

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Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</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>
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<tbody>
<tr>
<td>400.perlbench</td>
<td>8</td>
<td>926</td>
<td>84.4</td>
<td>929</td>
<td>84.2</td>
<td>923</td>
<td>84.7</td>
<td>850</td>
<td>92.0</td>
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<tr>
<td>401.bzip2</td>
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<td>1513</td>
<td>51.0</td>
<td>1507</td>
<td>51.2</td>
<td>1517</td>
<td>50.9</td>
<td>1439</td>
<td>53.7</td>
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<tr>
<td>403.mcf</td>
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<td>1064</td>
<td>60.5</td>
<td>1059</td>
<td>60.8</td>
<td>1078</td>
<td>59.8</td>
<td>1064</td>
<td>60.5</td>
</tr>
<tr>
<td>429.gobmk</td>
<td>8</td>
<td>1483</td>
<td>49.2</td>
<td>1486</td>
<td>49.1</td>
<td>1482</td>
<td>49.2</td>
<td>1394</td>
<td>52.3</td>
</tr>
<tr>
<td>445.gcc</td>
<td>8</td>
<td>1016</td>
<td>82.6</td>
<td>1018</td>
<td>82.4</td>
<td>1016</td>
<td>82.6</td>
<td>944</td>
<td>88.9</td>
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<tr>
<td>456.hmmer</td>
<td>8</td>
<td>1435</td>
<td>52.0</td>
<td>1433</td>
<td>52.1</td>
<td>1439</td>
<td>51.9</td>
<td>1209</td>
<td>61.7</td>
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<tr>
<td>458.sjeng</td>
<td>8</td>
<td>1226</td>
<td>78.9</td>
<td>1225</td>
<td>79.0</td>
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<td>78.8</td>
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<td>462.libquantum</td>
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<td>7157</td>
<td>23.2</td>
<td>7154</td>
<td>23.2</td>
<td>7145</td>
<td>23.2</td>
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<tr>
<td>464.h264ref</td>
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<td>129</td>
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<td>129</td>
<td>1371</td>
<td>129</td>
<td>1354</td>
<td>131</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>8</td>
<td>1096</td>
<td>45.6</td>
<td>1097</td>
<td>45.6</td>
<td>1095</td>
<td>45.7</td>
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<td>473.astar</td>
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<td>46.2</td>
<td>1215</td>
<td>46.2</td>
<td>1202</td>
<td>46.7</td>
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<tr>
<td>483.xalancbmk</td>
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<td>75.6</td>
<td>731</td>
<td>75.5</td>
<td>730</td>
<td>75.6</td>
<td>730</td>
<td>75.6</td>
</tr>
</tbody>
</table>

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

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'/usr/bin/taskset' used to bind processes to CPUs

General Notes

The system bus runs at 1067 MHz

All binaries were built with 32-bit Intel compiler except:
401.bzip2, 456.hmmer and 462.libquantum in peak were built with
64-bit Intel compiler by changing the path for include and library files.

BIOS configuration:
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable

This result was measured on the PRIMERGY RX300 S3. The PRIMERGY RX300 S3 and
the PRIMERGY TX300 S3 are electronically equivalent.

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http://www.fujitsu-siemens.com/countries

Base Compiler Invocation

C benchmarks:
icc

Continued on next page
SPEC CINT2006 Result

Fujitsu Siemens Computers
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 SPECint_rate_base2006 = 59.8

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Base Compiler Invocation (Continued)

C++ benchmarks:
  icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_X64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
  -fast

C++ benchmarks:
  -xP -O3 -ipo -no-prec-div -L/opt/SmartHeap_8_1/lib -lsmartheap

Peak Compiler Invocation

C benchmarks (except as noted below):
  icc

  401.bzip2: /opt/intel/cce/9.1.047/bin/icc
              -I/opt/intel/cce/9.1.047/include
              -L/opt/intel/cce/9.1.047/lib

  456.hmmer: /opt/intel/cce/9.1.047/bin/icc
              -I/opt/intel/cce/9.1.047/include
              -L/opt/intel/cce/9.1.047/lib

  462.libquantum: /opt/intel/cce/9.1.047/bin/icc
                 -I/opt/intel/cce/9.1.047/include
                 -L/opt/intel/cce/9.1.047/lib

C++ benchmarks:
  icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64

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Peak Portability Flags (Continued)

456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:
400.perlbench: -prof_gen(pass 1) -prof_use(pass 2) -fast
401.bzip2: -fast
403.gcc: basepeak = yes
429.mcf: -prof_gen(pass 1) -prof_use(pass 2) -fast
-L/opt/SmartHeap_8_1/lib -lsmartheap
445.gobmk: Same as 429.mcf
456.hmmer: Same as 400.perlbench
458.sjeng: Same as 429.mcf
462.libquantum: Same as 400.perlbench
464.h264ref: Same as 429.mcf

C++ benchmarks:
471.omnetpp: -prof_gen(pass 1) -prof_use(pass 2) -xP -O3 -ipo
-no-prec-div -L/opt/SmartHeap_8_1/lib -lsmartheap
473.astar: -prof_gen(pass 1) -prof_use(pass 2) -fast
-L/opt/SmartHeap_8_1/lib -lsmartheap
483.xalancbmk: basepeak = yes

The flags file that was used to format this result can be browsed at
You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.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 v1.0.
