IBM Corporation

IBM System x3550 (Intel Xeon 5160)

IBM Corporation

SPECint®2006 = 20.9
SPECint_base2006 = 19.0

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation
Test date: Jul-2007
Hardware Availability: Jul-2006
Software Availability: Jul-2007

# Hardware

<table>
<thead>
<tr>
<th>CPU Name</th>
<th>Intel Xeon 5160</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Characteristics</td>
<td>1333MHz system bus</td>
</tr>
<tr>
<td>CPU MHZ:</td>
<td>3000</td>
</tr>
<tr>
<td>FPU:</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled:</td>
<td>4 cores, 2 chips, 2 cores/chip</td>
</tr>
<tr>
<td>CPU(s) orderable:</td>
<td>1.2 chips</td>
</tr>
<tr>
<td>Primary Cache:</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache:</td>
<td>4 MB I+D on chip per chip</td>
</tr>
<tr>
<td>L3 Cache:</td>
<td>None</td>
</tr>
<tr>
<td>Memory:</td>
<td>16 GB (8 x 2 GB DDR2-5300F ECC)</td>
</tr>
<tr>
<td>Disk Subsystem:</td>
<td>1 x 36GB SAS, 15000RPM</td>
</tr>
<tr>
<td>Other Hardware:</td>
<td>None</td>
</tr>
</tbody>
</table>

# Software

| Operating System:     | SLES 10 (x86_64), 2.6.16.21-0.8-smp |
| Compiler:             | Intel C++ Compiler for Linux version 10.0 |
| Build:                | Build 20070426 Package ID: l_cc_p_10.0.023 |
| Auto Parallel:        | No |
| File System:          | ReiserFS |
| System State:         | Multi-user, run level 3 |
| Base Pointers:        | 32-bit |
| Peak Pointers:        | 32/64-bit |
| Other Software:       | MicroQuill SmartHeap 8.1 |

---

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
IBM Corporation
IBM System x3550 (Intel Xeon 5160)

**SPEC CINT2006 Result**

**IBM Corporation**

**IBM System x3550 (Intel Xeon 5160)**

**SPECint2006 = 20.9**

**SPECint_base2006 = 19.0**

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

**Results Table**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Peak</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>484</td>
<td>20.2</td>
<td>487</td>
<td>20.0</td>
<td></td>
<td>484</td>
<td>20.2</td>
<td></td>
<td>406</td>
<td>24.1</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>610</td>
<td>15.8</td>
<td>612</td>
<td>15.8</td>
<td>612</td>
<td>15.8</td>
<td>571</td>
<td>16.9</td>
<td>575</td>
<td>16.8</td>
</tr>
<tr>
<td>403.gcc</td>
<td>447</td>
<td>18.0</td>
<td>447</td>
<td>18.0</td>
<td>447</td>
<td>18.0</td>
<td>447</td>
<td>18.0</td>
<td>447</td>
<td>18.0</td>
</tr>
<tr>
<td>429.mcf</td>
<td>484</td>
<td>18.9</td>
<td>476</td>
<td>19.2</td>
<td>475</td>
<td>19.2</td>
<td>454</td>
<td>20.1</td>
<td>449</td>
<td>20.3</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>536</td>
<td>19.6</td>
<td>537</td>
<td>19.5</td>
<td>537</td>
<td>19.5</td>
<td>491</td>
<td>21.4</td>
<td>490</td>
<td>21.4</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>593</td>
<td>15.7</td>
<td>593</td>
<td>15.7</td>
<td>594</td>
<td>15.7</td>
<td>466</td>
<td>20.0</td>
<td>466</td>
<td>20.0</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>689</td>
<td>17.6</td>
<td>690</td>
<td>17.5</td>
<td>695</td>
<td>17.4</td>
<td>613</td>
<td>19.8</td>
<td>614</td>
<td>19.7</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>821</td>
<td>25.2</td>
<td>841</td>
<td>24.7</td>
<td>840</td>
<td>24.7</td>
<td>747</td>
<td>27.7</td>
<td>698</td>
<td>29.7</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>714</td>
<td>31.0</td>
<td>713</td>
<td>31.0</td>
<td>715</td>
<td>31.0</td>
<td>676</td>
<td>32.7</td>
<td>678</td>
<td>32.6</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>462</td>
<td>13.5</td>
<td>463</td>
<td>13.5</td>
<td>460</td>
<td>13.6</td>
<td>426</td>
<td>14.7</td>
<td>426</td>
<td>14.7</td>
</tr>
<tr>
<td>473.astar</td>
<td>498</td>
<td>14.1</td>
<td>493</td>
<td>14.2</td>
<td>490</td>
<td>14.3</td>
<td>449</td>
<td>15.6</td>
<td>454</td>
<td>15.5</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>280</td>
<td>24.6</td>
<td>279</td>
<td>24.7</td>
<td>280</td>
<td>24.6</td>
<td>280</td>
<td>24.6</td>
<td>279</td>
<td>24.7</td>
</tr>
</tbody>
</table>

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

**Base Compiler Invocation**

- C benchmarks: icc
- C++ benchmarks: icpc

**Base Portability Flags**

- 400.perlbench: -DSPEC_CPU_LINUX_IA32
- 462.libquantum: -DSPEC_CPU_LINUX
- 483.xalancbmk: -DSPEC_CPU_LINUX

**Base Optimization Flags**

- C benchmarks: -fast
- C++ benchmarks:
  - -xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
  - -L/spec/cpu2006.1.0/lib -lsmartheap

---

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
IBM Corporation
IBM System x3550 (Intel Xeon 5160)

SPECint2006 = 20.9
SPECint_base2006 = 19.0

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jul-2007
Hardware Availability: Jul-2006
Software Availability: Jul-2007

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

```
icc
```

```
401.bzip2: /opt/intel/cce/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/include
```

```
456.hmmer: /opt/intel/cce/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/include
```

C++ benchmarks:
```
icpc
```

Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX
```

Peak Optimization Flags

```
C benchmarks:
400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias
-prefetch
401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast
403.gcc: basepeak = yes
429.mcf: -fast -prefetch
445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo
-no-prec_div -ansi-alias
```

Continued on next page
IBM Corporation

IBM System x3550 (Intel Xeon 5160)

SPECint2006 = 20.9
SPECint_base2006 = 19.0

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jul-2007
Hardware Availability: Jul-2006
Software Availability: Jul-2007

Peak Optimization Flags (Continued)

456.hmmer: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -Ob0
-prefetch -opt-streaming-stores always

464.h264ref: Same as 456.hmmer

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec_div -ansi-alias -Wl,-z,muldefs
-L/spec/cpu2006.1.0/lib -lsmartheap

473.astar: Same as 471.omnetpp

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.44.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.44.xml

SPEC and SPECint 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 v1.0.
Originally published on 23 August 2007.