Supermicro
SuperServer 5017C-LF (X9SCL-F, Intel Xeon E3-1220L)

| SPECint_rate2006 | 66.2 |
| SPECint_rate_base2006 | 62.8 |

**CPU2006 license:** 001176  
**Test date:** Mar-2011  
**Test sponsor:** Supermicro  
**Hardware Availability:** Apr-2011  
**Tested by:** Supermicro  
**Software Availability:** Jan-2011

### Hardware

<table>
<thead>
<tr>
<th>CPU Name:</th>
<th>Intel Xeon E3-1220L</th>
</tr>
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<tbody>
<tr>
<td>CPU MHz:</td>
<td>2200</td>
</tr>
<tr>
<td>FPU:</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled:</td>
<td>2 cores, 1 chip, 2 cores/chip, 2 threads/core</td>
</tr>
<tr>
<td>CPU(s) orderable:</td>
<td>1 chip</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>256 KB I+D on chip per core</td>
</tr>
<tr>
<td>L3 Cache:</td>
<td>3 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other Cache:</td>
<td>None</td>
</tr>
<tr>
<td>Memory:</td>
<td>16 GB (4 x 4 GB 2Rx8 PC3-10600R-9, ECC)</td>
</tr>
<tr>
<td>Disk Subsystem:</td>
<td>1 x 2000 GB SATA II, 7200 RPM</td>
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<tr>
<td>Other Hardware:</td>
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### Software

<table>
<thead>
<tr>
<th>Operating System:</th>
<th>SUSE Linux Enterprise Server 11 (x86_64) SP1</th>
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</thead>
<tbody>
<tr>
<td>Compiler:</td>
<td>Intel C++ Compiler XE for applications running on IA-32</td>
</tr>
<tr>
<td>Auto Parallel:</td>
<td>No</td>
</tr>
<tr>
<td>File System:</td>
<td>ext3</td>
</tr>
<tr>
<td>System State:</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers:</td>
<td>32-bit</td>
</tr>
<tr>
<td>Peak Pointers:</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Other Software:</td>
<td>Microquill SmartHeap V9.01</td>
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</tbody>
</table>

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The SPECint_rate2006 and SPECint_rate_base2006 results are shown in the table above. The Hardware section lists the CPU, memory, cache, and other hardware specifications. The Software section lists the operating system, compiler, and other software details.
### SPEC CINT2006 Result

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SuperServer 5017C-LF (X9SCL-F, Intel Xeon E3-1220L)

**SPECint_rate2006 = 66.2**

**SPECint_rate_base2006 = 62.8**

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<th>001176</th>
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<td>Tested by:</td>
<td>Supermicro</td>
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**Test date:** Mar-2011

**Hardware Availability:** Apr-2011

**Software Availability:** Jan-2011

### Results Table

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<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>
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<td>36.2</td>
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<td>445.gobmk</td>
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<td>48.3</td>
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**Peak**

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<td>422</td>
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<td>421</td>
<td>65.5</td>
</tr>
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</table>

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

### Submit Notes

The config file option 'submit' was used. numactl was used to bind copies to the cores.

### Operating System Notes

'ulimit -s unlimited' was used to set the stack size to unlimited prior to run. Large pages were not enabled for this run.

### Platform Notes

Fan speed set to Full Speed in BIOS Setup.

### Base Compiler Invocation

- **C benchmarks:**
  - icc -m32

- **C++ benchmarks:**
  - icpc -m32
## SPEC CINT2006 Result

**Supermicro**
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### Base Portability Flags

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

### Base Optimization Flags

**C benchmarks:**
- `xAVX` `-ipo` `-O3` `-no-prec-div` `-opt-prefetch`
- `-B /usr/share/libhugetlbfs/` `-Wl,-hugetlbfs-link=BDT`

**C++ benchmarks:**
- `xAVX` `-ipo` `-O3` `-no-prec-div` `-opt-prefetch` `-Wl,-z,muldefs`
- `-L/smartheap` `-lsmartheap`
- `-B /usr/share/libhugetlbfs/` `-Wl,-hugetlbfs-link=BDT`

### Base Other Flags

**C benchmarks:**
- `403.gcc`: `-Dalloca=_alloca`

### Peak Compiler Invocation

**C benchmarks (except as noted below):**
- `icc` `-m32`
- `400.perlbench`: `icc` `-m64`
- `401.bzip2`: `icc` `-m64`
- `456.hmmer`: `icc` `-m64`
- `458.sjeng`: `icc` `-m64`

**C++ benchmarks:**
- `icpc` `-m32`

### Peak Portability Flags

- `400.perlbench`: `-DSPEC_CPU_LP64` `-DSPEC_CPU_LINUX_X64`
- `401.bzip2`: `-DSPEC_CPU_LP64`
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</tbody>
</table>

### Peak Portability Flags (Continued)

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

### Peak Optimization Flags

#### C benchmarks:

- 400.perlbench: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
  -no-prec-div(pass 2) -prof-use(pass 2)  
  -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT  
- 401.bzip2: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
  -no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch  
  -auto-ilp32 -ansi-alias  
  -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT  
- 403.gcc: -xAVX -ipo -O3 -no-prec-div  
  -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT  
- 429.mcf: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
  -no-prec-div(pass 2) -prof-use(pass 2) -ansi-alias  
  -auto-ilp32  
- 445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
  -ansi-alias -auto-ilp32  
- 456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
  -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT  
- 458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
  -no-prec-div(pass 2) -prof-use(pass 2) -unroll14  
  -auto-ilp32  
  -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT  
- 462.libquantum: basepeak = yes  
- 464.h264ref: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
  -no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
  -ansi-alias  

#### C++ benchmarks:

- 471.omnetpp: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
  -no-prec-div(pass 2) -prof-use(pass 2) -ansi-alias  
  -opt-ra-region-strategy=block -Wl,-z,muldefs  
  -L/smartheap -lsmartheap

Continued on next page
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</table>

## Peak Optimization Flags (Continued)

473.astar: basepeak = yes
483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at:

You can also download the XML flags sources by saving the following links:

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For other inquiries, please contact webmaster@spec.org.

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