## Intel Corporation

Supermicro SuperServer 6026T-NTR+ (Intel Xeon L5520, 2.26 GHz)

<table>
<thead>
<tr>
<th>SPECint_rate2006 = 198</th>
<th>SPECint_rate_base2006 = 183</th>
</tr>
</thead>
</table>

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

**Hardware**

- **CPU Name:** Intel Xeon L5520
- **CPU Characteristics:** Intel Turbo Boost Technology up to 2.53 GHz
- **CPU MHz:** 2267
- **FPU:** Integrated
- **CPU(s) enabled:** 8 cores, 2 chips, 4 cores/chip, 2 threads/core
- **CPU(s) orderable:** 1, 2 chips
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 256 KB I+D on chip per core
- **L3 Cache:** 8 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 24 GB (12 x 2GB DDR3-1067, CL7)
- **Disk Subsystem:** 1 x 150 GB SATA, 10000RPM
- **Other Hardware:** None

**Software**

- **Operating System:** SuSe Linux SLES10 SP2, Kernel 2.6.16.60-0.34-smp for x86_64
- **Compiler:** Intel C++ Compiler 11.0 for Linux Build 20090131 Package ID: 1_cproc_p_11.0.080
- **Auto Parallel:** No
- **File System:** ReiserFS
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V8.1, Binutils 2.18.50.0.7.20080502

**Test date:** Mar-2009
**Hardware Availability:** Mar-2009
**Software Availability:** Feb-2009

### SPECint Benchmarks

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>16</td>
<td>160</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>16</td>
<td>127</td>
</tr>
<tr>
<td>403.gcc</td>
<td>16</td>
<td>159</td>
</tr>
<tr>
<td>429.mcf</td>
<td>16</td>
<td>186</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>16</td>
<td>178</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>8</td>
<td>130</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>16</td>
<td>185</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>16</td>
<td>168</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>16</td>
<td>244</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>16</td>
<td>221</td>
</tr>
<tr>
<td>473.astar</td>
<td>16</td>
<td>135</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>16</td>
<td>209</td>
</tr>
</tbody>
</table>

**COPYRIGHT**

Copyright 2006-2014 Standard Performance Evaluation Corporation
## 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>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base</td>
<td></td>
<td></td>
<td>Peak</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400.perlbench</td>
<td>16</td>
<td>975</td>
<td>160</td>
<td>979</td>
<td>160</td>
<td>829</td>
<td>189</td>
<td>843</td>
<td>186</td>
<td>835</td>
<td>187</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>16</td>
<td>1286</td>
<td>120</td>
<td>1283</td>
<td>120</td>
<td>1220</td>
<td>127</td>
<td>1211</td>
<td>127</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>403.gcc</td>
<td>16</td>
<td>802</td>
<td>161</td>
<td>826</td>
<td>156</td>
<td>827</td>
<td>156</td>
<td>808</td>
<td>159</td>
<td>800</td>
<td>161</td>
</tr>
<tr>
<td>429.mcf</td>
<td>16</td>
<td>641</td>
<td>228</td>
<td>646</td>
<td>226</td>
<td>644</td>
<td>227</td>
<td>641</td>
<td>228</td>
<td>642</td>
<td>226</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>16</td>
<td>937</td>
<td>179</td>
<td>946</td>
<td>178</td>
<td>945</td>
<td>178</td>
<td>850</td>
<td>197</td>
<td>857</td>
<td>196</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>16</td>
<td>1137</td>
<td>131</td>
<td>1146</td>
<td>130</td>
<td>1146</td>
<td>130</td>
<td>417</td>
<td>179</td>
<td>416</td>
<td>179</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>16</td>
<td>1156</td>
<td>167</td>
<td>1152</td>
<td>168</td>
<td>1150</td>
<td>168</td>
<td>1043</td>
<td>186</td>
<td>1050</td>
<td>184</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>16</td>
<td>520</td>
<td>637</td>
<td>520</td>
<td>637</td>
<td>520</td>
<td>637</td>
<td>520</td>
<td>637</td>
<td>520</td>
<td>637</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>16</td>
<td>527</td>
<td>232</td>
<td>1602</td>
<td>221</td>
<td>1604</td>
<td>221</td>
<td>1446</td>
<td>245</td>
<td>1453</td>
<td>244</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>16</td>
<td>662</td>
<td>151</td>
<td>663</td>
<td>151</td>
<td>662</td>
<td>151</td>
<td>663</td>
<td>151</td>
<td>662</td>
<td>151</td>
</tr>
<tr>
<td>473.astar</td>
<td>16</td>
<td>936</td>
<td>120</td>
<td>935</td>
<td>120</td>
<td>937</td>
<td>120</td>
<td>835</td>
<td>135</td>
<td>834</td>
<td>135</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>16</td>
<td>524</td>
<td>211</td>
<td>528</td>
<td>209</td>
<td>530</td>
<td>208</td>
<td>524</td>
<td>211</td>
<td>528</td>
<td>209</td>
</tr>
</tbody>
</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

## 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:
- -xSSE4.2
- -ipo
- -O3
- -no-prec-div
- -static
- -inline-calloc
- -opt-malloc-options=3
- -opt-prefetch

Continued on next page
Intel Corporation

Supermicro SuperServer 6026T-NTR+ (Intel Xeon L5520, 2.26 GHz)

SPECint_rate2006 = 198
SPECint_rate_base2006 = 183

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Base Optimization Flags (Continued)

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/spec/cpu2006.1.1/lib -lsmartheap

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /opt/intel/Compiler/11.0/080/bin/intel64/icc
456.hmmer: /opt/intel/Compiler/11.0/080/bin/intel64/icc
458.sjeng: /opt/intel/Compiler/11.0/080/bin/intel64/icc

C++ benchmarks (except as noted below):
icpc

473.astar: /opt/intel/Compiler/11.0/080/bin/intel64/icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:
400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -ansi-alias -opt-prefetch

Continued on next page
Peak Optimization Flags (Continued)

401.bzip2: -xSSE4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2)
-03 (pass 2) -no-prec-div (pass 2) -static (pass 2)
-prof-use (pass 2) -opt-prefetch -ansi-alias -auto-ilp32

403.gcc: -xSSE4.2 -ipo -03 -no-prec-div -static -inline-calloc
-opt-malloc-options=3

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2 (pass 2) -prof-gen (pass 1) -prof-use (pass 2) -O2
-ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.2 -ipo -03 -no-prec-div -static -unroll2
-ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2)
-03 (pass 2) -no-prec-div (pass 2) -static (pass 2)
-prof-use (pass 2) -unroll14 -auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2)
-03 (pass 2) -no-prec-div (pass 2) -static (pass 2)
-prof-use (pass 2) -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: basepeak = yes

473.astar: -xSSE4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2)
-03 (pass 2) -no-prec-div (pass 2) -prof-use (pass 2)
-ansi-alias -opt-ra-region-strategy=routine -auto-ilp32
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap64

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
Intel Corporation
Supermicro SuperServer 6026T-NTR+ (Intel Xeon L5520, 2.26 GHz)

SPECint_rate2006 = 198
SPECint_rate_base2006 = 183

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Mar-2009
Hardware Availability: Mar-2009
Software Availability: Feb-2009

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.02.xml