NEC Corporation
Express5800/i120Rg-1
(Intel Xeon processor 5110)

SPECfp®2006 =  11.0
SPECfp_base2006 =  10.6

CPU2006 license: 9006
Test date: Oct-2007
Test sponsor: NEC Corporation
Hardware Availability: May-2007
Tested by: NEC Corporation
Software Availability: Apr-2007

Hardware

CPU Name: Intel Xeon 5110
CPU Characteristics: 1.60 GHz, 4MB L2, 1066MHz bus
CPU MHz: 1600
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
CPU(s) orderable: 1,2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 4 MB I+D on chip per chip

Software

Operating System: Windows Server 2003, Standard x64 Edition Service Pack1
Compiler: Intel C++ Compiler for EM64T version 9.1 Build 20070322, Package-ID W_CC_C_9.1.037
Intel Fortran Compiler for EM64T version 9.1 Build 20070322, Package-ID W_FC_C_9.1.037
Microsoft Visual Studio 2005 (libr. & linker)
Auto Parallel: Yes
File System: NTFS
NEC Corporation

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L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x80 GB SATAII, 7200RPM
Other Hardware: None

System State: Default
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: None

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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</table>

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

**Base Compiler Invocation**

C benchmarks:

```
icl -Qvc8 -Qc99
```

C++ benchmarks:

```
icl -Qvc8
```

Fortran benchmarks:

```
ifort
```

Benchmarks using both Fortran and C:

```
icl -Qvc8 -Qc99 ifort
```
SPEC CFP2006 Result

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Base Portability Flags

410.bwaves: -DSPEC_CPU_P64
416.gamess: -DSPEC_CPU_P64
433.milc: -D_Complex = -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -D_Complex = -DSPEC_CPU_P64
436.cactusADM: -D_Complex = -DSPEC_CPU_P64 -Qlowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -D_Complex = -DSPEC_CPU_P64 -DBOOST_NO_INTRINSIC_WCHAR_T

Base Optimization Flags

C benchmarks:
-fast -Qparallel -F950000000 -link -FORCE:MULTIPLE

C++ benchmarks:
-fast -Qparallel -Qcxx-features -F950000000
-link -FORCE:MULTIPLE

Fortran benchmarks:
-fast -Qparallel -F950000000 -link -FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-fast -Qparallel -F950000000 -link -FORCE:MULTIPLE

Peak Compiler Invocation

C benchmarks:
  icl -Qvc8 -Qc99

C++ benchmarks:
  icl -Qvc8

Fortran benchmarks:
  ifort

Continued on next page
Peak Compiler Invocation (Continued)

Benchmarks using both Fortran and C:
icl -Qvc8 -Qc99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
- Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -F9500000000
  -link -FORCE:MULTIPLE

C++ benchmarks:
444.namd: basepeak = yes
447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx-features
  -F9500000000
  -link -FORCE:MULTIPLE
450.soplex: Same as 447.dealII
453.povray: Same as 447.dealII

Fortran benchmarks:
410.bwaves: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qparallel
  -F9500000000
  -link -FORCE:MULTIPLE
416.gamess: -fast -F9500000000
  -link -FORCE:MULTIPLE
434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: basepeak = yes
465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:
435.gromacs: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -F9500000000
  -link -FORCE:MULTIPLE
436.cactusADM: basepeak = yes

Continued on next page
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Peak Optimization Flags (Continued)

454.calculix: Same as 435.gromacs
481.wrf: 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:

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

Tested with SPEC CPU2006 v1.0.
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