SPEC® CFP2006 Result

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NEC Corporation

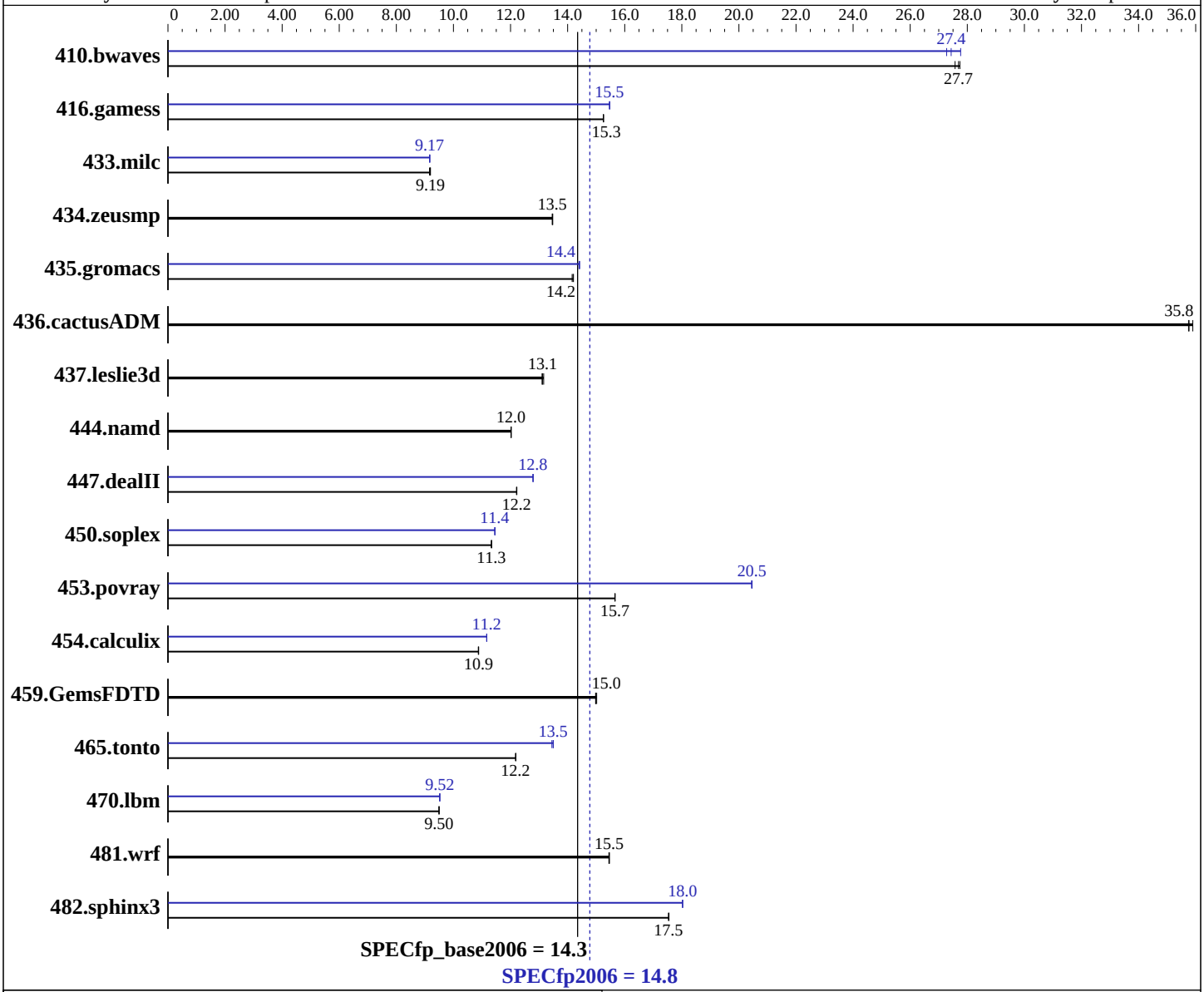
Express5800/120Ri-2
(Intel Xeon processor 5140)

SPECfp®2006 = 14.8

SPECfp_base2006 = 14.3

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Jul-2007
Hardware Availability: May-2007
Software Availability: Apr-2007



Hardware

CPU Name:	Intel Xeon 5140
CPU Characteristics:	2.33 GHz, 4MB L2, 1333MHz bus
CPU MHz:	2333
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

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Software

Operating System:	Windows Server 2003, Standard x64 Edition
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
System State:	Default

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L3 Cache: None
Other Cache: None
Memory: 8 GB (4x2 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x73.2 GB SAS, 15000RPM
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	**491**	**27.7**	490	27.7	493	27.6	489	27.8	498	27.3	**495**	**27.4**
416.gamess	**1283**	**15.3**	1284	15.2	1283	15.3	1265	15.5	**1266**	**15.5**	1266	15.5
433.milc	**999**	**9.19**	999	9.19	1002	9.16	**1001**	**9.17**	1001	9.17	1001	9.17
434.zeusmp	**676**	**13.5**	675	13.5	676	13.5	**676**	**13.5**	675	13.5	676	13.5
435.gromacs	**503**	**14.2**	504	14.2	503	14.2	496	14.4	**495**	**14.4**	495	14.4
436.cactusADM	**334**	**35.8**	333	35.9	334	35.7	**334**	**35.8**	333	35.9	334	35.7
437.leslie3d	714	13.2	**716**	**13.1**	717	13.1	714	13.2	**716**	**13.1**	717	13.1
444.namd	667	12.0	667	12.0	**667**	**12.0**	667	12.0	667	12.0	**667**	**12.0**
447.dealII	936	12.2	937	12.2	**937**	**12.2**	**895**	**12.8**	894	12.8	895	12.8
450.soplex	735	11.3	**736**	**11.3**	736	11.3	**728**	**11.4**	728	11.4	728	11.5
453.povray	340	15.7	340	15.7	**340**	**15.7**	260	20.5	260	20.4	**260**	**20.5**
454.calculix	759	10.9	**758**	**10.9**	758	10.9	**739**	**11.2**	739	11.2	739	11.2
459.GemsFDTD	**708**	**15.0**	706	15.0	708	15.0	**708**	**15.0**	706	15.0	708	15.0
465.tonto	808	12.2	**808**	**12.2**	807	12.2	**729**	**13.5**	732	13.4	729	13.5
470.lbm	**1447**	**9.50**	1447	9.49	1447	9.50	1443	9.52	1443	9.52	**1443**	**9.52**
481.wrf	722	15.5	**723**	**15.5**	723	15.4	722	15.5	**723**	**15.5**	723	15.4
482.sphinx3	1112	17.5	**1111**	**17.5**	1111	17.6	1081	18.0	1081	18.0	**1081**	**18.0**

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
```

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
-DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
454.calculix: -D_Complex= -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER
-Qlowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -D_Complex= -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -D_Complex= -DSPEC_CPU_P64

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

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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 -F950000000
-link -FORCE:MULTIPLE

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx-features
-F950000000 -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
-F950000000 -link -FORCE:MULTIPLE

416.gamess: -fast -F950000000 -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 -F950000000
-link -FORCE:MULTIPLE

436.cactusADM: basepeak = yes

Continued on next page

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
`http://www.spec.org/cpu2006/flags/NEC-cpu2006-ic91-flags.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/NEC-cpu2006-ic91-flags.xml`

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

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