SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

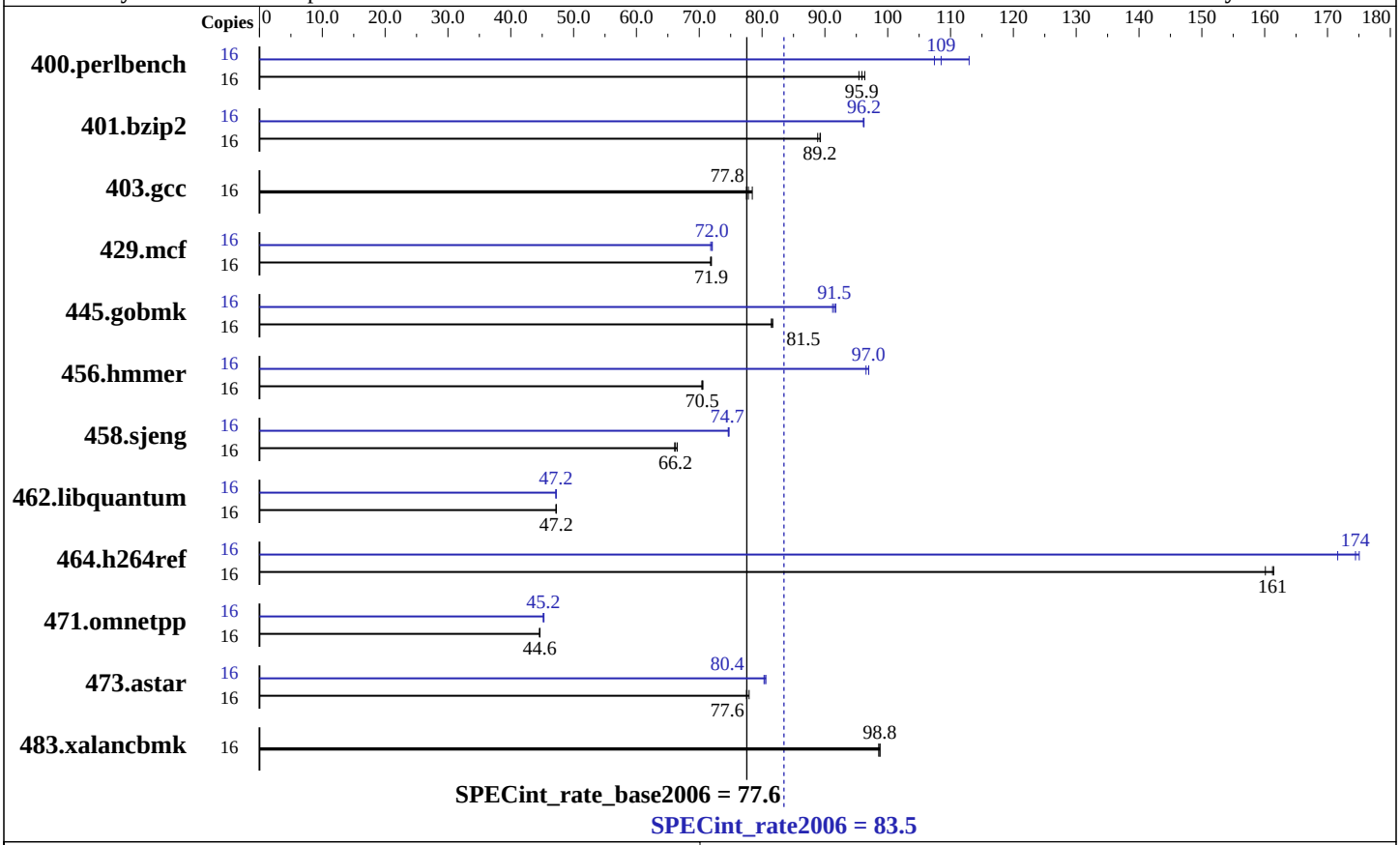
Express5800/140Hf
(Intel Xeon processor 7140M)

SPECint®_rate2006 = 83.5

SPECint_rate_base2006 = 77.6

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

Test date: Sep-2007
Hardware Availability: Oct-2006
Software Availability: Jun-2007



Hardware

CPU Name:	Intel Xeon 7140M
CPU Characteristics:	3.40 GHz, 800MHz bus
CPU MHz:	3400
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip, 2 threads/core
CPU(s) orderable:	1,2,4 chips
Primary Cache:	12 K micro-ops I + 16 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core
L3 Cache:	16 MB I+D on chip per chip
Other Cache:	None
Memory:	32 GB (16x2 GB PC2-3200R, 2 rank, CL3-3-3, ECC)
Disk Subsystem:	1x146.5 GB SAS, 15000RPM
Other Hardware:	None

Software

Operating System:	64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp for x86_64
Compiler:	Intel C++ Compiler for IA32/EM64T application, Version 10.0 - Build 20070426 Package ID: l_cc_p_10.0.023
Auto Parallel:	No
File System:	ext2
System State:	Multiuser, Runlevel 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap library 8.1

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/140Hf
(Intel Xeon processor 7140M)

SPECint_rate2006 = 83.5

SPECint_rate_base2006 = 77.6

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

Test date: Sep-2007
Hardware Availability: Oct-2006
Software Availability: Jun-2007

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	16	1638	95.4	**1630**	**95.9**	1623	96.3	16	**1441**	**109**	1455	107	1384	113
401.bzip2	16	**1731**	**89.2**	1738	88.9	1729	89.3	16	**1605**	**96.2**	1606	96.1	1605	96.2
403.gcc	16	1642	78.4	1662	77.5	**1655**	**77.8**	16	1642	78.4	1662	77.5	**1655**	**77.8**
429.mcf	16	**2029**	**71.9**	2029	71.9	2032	71.8	16	**2027**	**72.0**	2024	72.1	2032	71.8
445.gobmk	16	2054	81.7	2060	81.5	**2059**	**81.5**	16	1840	91.2	**1834**	**91.5**	1830	91.7
456.hmmer	16	2120	70.4	2115	70.6	**2118**	**70.5**	16	1546	96.5	**1540**	**97.0**	1539	97.0
458.sjeng	16	2911	66.5	**2923**	**66.2**	2930	66.1	16	2595	74.6	**2593**	**74.7**	2590	74.7
462.libquantum	16	7016	47.3	**7018**	**47.2**	7024	47.2	16	**7023**	**47.2**	7021	47.2	7024	47.2
464.h264ref	16	2193	161	2211	160	**2196**	**161**	16	2063	172	2023	175	**2030**	**174**
471.omnetpp	16	2241	44.6	2243	44.6	**2241**	**44.6**	16	**2213**	**45.2**	2208	45.3	2213	45.2
473.astar	16	1449	77.5	**1447**	**77.6**	1441	77.9	16	1399	80.3	**1396**	**80.4**	1393	80.6
483.xalancbmk	16	**1118**	**98.8**	1118	98.8	1120	98.6	16	**1118**	**98.8**	1118	98.8	1120	98.6

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'/usr/bin/taskset' used to bind processes to CPUs
```

General Notes

```
All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer,
for peak, are compiled in 64-bit mode

 The Express5800/140Hf and the Express5800/140Re-4 models are
 electronically equivalent.
 The results have been measured on a Express5800/140Re-4 model.
```

Base Compiler Invocation

C benchmarks:

```
icc -static(*)
```

C++ benchmarks:

```
icpc
```

(*) Indicates a compiler flag that was found in a non-compiler variable.

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
`-xP -ipo -O3 -no-prec-div`

C++ benchmarks:
`-xP -ipo -O3 -no-prec-div -Wl,-z,muldefs`
`-L/opt/SmartHeap_8.1/lib -lsmartheap`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
`icc -static`(*)

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`

445.gobmk: `icc`

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 -static`(*)

C++ benchmarks:
`icpc`

(*) Indicates a compiler flag that was found in a non-compiler variable.

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) -xP -ipo -O3
-no-prec-div -ansi-alias -prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xP -ipo -O3
-no-prec-div

403.gcc: basepeak = yes

429.mcf: -xP -ipo -O3 -no-prec-div -prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xP -O2 -ipo
-no-prec_div -ansi-alias

456.hmmer: -prof-gen(pass 1) -prof-use(pass 2) -xP -ipo -O3
-no-prec-div -unroll2 -ansi-alias

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xP -ipo -O3
-no-prec-div -unroll4

462.libquantum: Same as 458.sjeng

464.h264ref: Same as 456.hmmer

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xP -O3 -ipo
-no-prec_div -ansi-alias -Wl,-z,muldefs
-L/opt/SmartHeap_8.1/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/NEC-ic10-ia32-intel64-linux-flags.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/NEC-ic10-ia32-intel64-linux-flags.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.
Report generated on Tue Jul 22 15:11:25 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 7 November 2007.