SPEC® CINT2006 Result

Phytium
(Test Sponsor: guee)

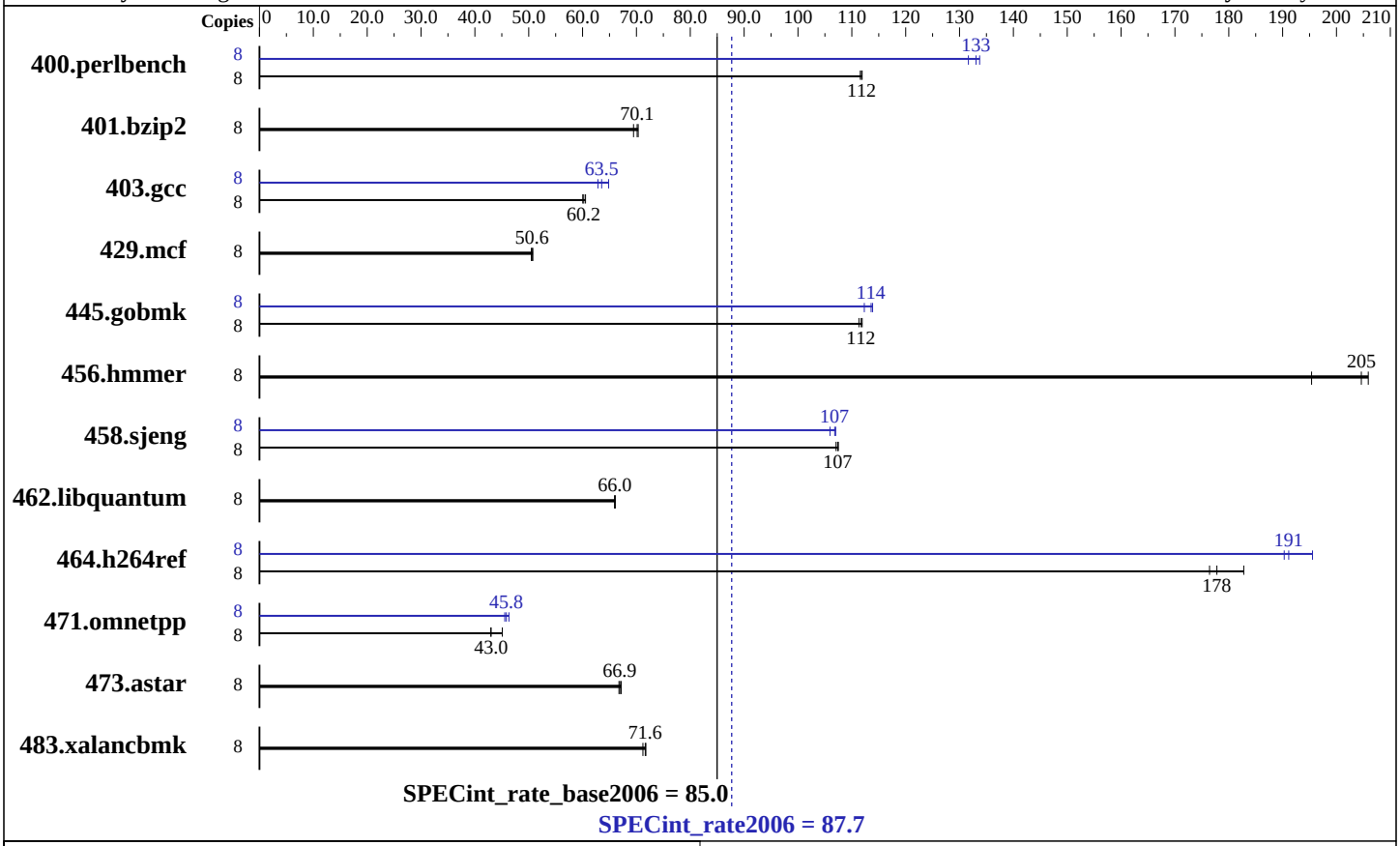
D2000 @ 2.3GHz

SPECint®_rate2006 = 87.7

SPECint_rate_base2006 = 85.0

CPU2006 license:
Test sponsor: guee
Tested by: guee

Test date: Aug-2021
Hardware Availability: Mar-2021
Software Availability: July-2021



Hardware

CPU Name:	Phytium,D2000/8
CPU Characteristics:	D2000 @ 2.3GHz
CPU MHz:	2300
FPU:	Integrated
CPU(s) enabled:	8 cores, could not determine chips, 8 cores/chip
CPU(s) orderable:	1
Primary Cache:	Unknow
Secondary Cache:	4 MB I+D on 8 cores per chip
L3 Cache:	4 MB I+D on chip per chip
Other Cache:	None
Memory:	16 GB (2 x 8 GB DDR4-2666) 15.571 GB fixme: If using DDR3, format is: 'N GB (M x N GB nRxn PCn-nnnnnR-n, ECC)'
Disk Subsystem:	251 GB add more disk info here
Other Hardware:	None

Software

Operating System:	Kylin V10 SP1 5.4.18-35-generic
Compiler:	gcc/g++ (Uos 8.3.0.7-1+dde) 8.3
Auto Parallel:	No
File System:	ext4
System State:	Run level 5 (add definition here)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other Software:	--

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	698	112	701	112	**699**	**112**	8	584	134	594	132	**587**	**133**
401.bzip2	8	1098	70.3	1111	69.5	**1101**	**70.1**	8	1098	70.3	1111	69.5	**1101**	**70.1**
403.gcc	8	1064	60.5	1073	60.0	**1069**	**60.2**	8	993	64.8	**1013**	**63.5**	1025	62.9
429.mcf	8	**1441**	**50.6**	1437	50.8	1445	50.5	8	**1441**	**50.6**	1437	50.8	1445	50.5
445.gobmk	8	750	112	**751**	**112**	754	111	8	737	114	747	112	**739**	**114**
456.hmmer	8	362	206	382	195	**365**	**205**	8	362	206	382	195	**365**	**205**
458.sjeng	8	**902**	**107**	900	108	904	107	8	914	106	905	107	**906**	**107**
462.libquantum	8	2509	66.1	**2512**	**66.0**	2513	66.0	8	2509	66.1	**2512**	**66.0**	2513	66.0
464.h264ref	8	969	183	1003	176	**996**	**178**	8	905	196	930	190	**926**	**191**
471.omnetpp	8	1163	43.0	1109	45.1	**1163**	**43.0**	8	**1091**	**45.8**	1079	46.3	1098	45.5
473.astar	8	836	67.2	841	66.8	**839**	**66.9**	8	836	67.2	841	66.8	**839**	**66.9**
483.xalancbmk	8	**771**	**71.6**	775	71.2	769	71.8	8	**771**	**71.6**	775	71.2	769	71.8

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

Platform Notes

```
Sysinfo program /home/guee/cpu2006/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ 8787f7622badcf24e01c368b1db4377c
running on d2000 Tue Aug 24 18:09:24 2021

This section contains SUT (System Under Test) info as seen by
some common utilities.  To remove or add to this section, see:
  http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
   model name : Phytium,D2000/8
*
* 0 "physical id" tags found.  Perhaps this is an older system,
* or a virtualized system.  Not attempting to guess how to
* count chips/cores for this system.
*
      8 "processors"
   cores, siblings (Caution: counting these is hw and system dependent.  The
   following excerpts from /proc/cpuinfo might not be reliable.  Use with
   caution.)

From /proc/meminfo
   MemTotal:       16327564 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
   Kylin V10 SP1
```

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Platform Notes (Continued)

```
From /etc/*release* /etc/*version*
   debian_version: bullseye/sid
   os-release:
      NAME="Kylin"
      VERSION="é“¶æ²³éº'éºŸæ¡Œé•¢æ“•ä½œç³»ç»ŸV10 (SP1)"
      VERSION_US="Kylin Linux Desktop V10 (SP1)"
      ID=kylin
      ID_LIKE=debian
      PRETTY_NAME="Kylin V10 SP1"
      VERSION_ID="v10"
      HOME_URL="http://www.kylinos.cn/"

uname -a:
   Linux d2000 5.4.18-35-generic #21-KYLINOS SMP Tue Jul 20 13:31:32 UTC 2021
   aarch64 aarch64 aarch64 GNU/Linux

run-level 5 Aug 24 02:41

SPEC is set to: /home/guee/cpu2006
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/nvme0n1p2 ext4  251G   23G  216G  10% /

(End of data from sysinfo program)
```

Base Compiler Invocation

C benchmarks:
gcc

C++ benchmarks:
g++

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64 -std=gnu89 -fno-strict-aliasing(*)
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64 -fsigned-char
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX -include cstdlib -include cstring -include ctime

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Base Portability Flags (Continued)

483.xalancbmk (continued):
(*) Indicates a portability flag that was found in a non-portability variable.

Base Optimization Flags

C benchmarks:
```
-O3 -ffast-math -fomit-frame-pointer -finline-functions
-ftree-vectorize -flto -march=armv8.1-a+crc+fp+crypto -funroll-loops
-fprefetch-loop-arrays -faggressive-loop-optimizations -static
```

C++ benchmarks:
```
-O3 -ffast-math -fomit-frame-pointer -finline-functions
-ftree-vectorize -flto -march=armv8.1-a+crc+fp+crypto -funroll-loops
-fprefetch-loop-arrays -faggressive-loop-optimizations -static
```

Peak Compiler Invocation

C benchmarks:
```
gcc
```

C++ benchmarks:
```
g++
```

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64 -std=gnu89 -fno-strict-aliasing`(*)
401.bzip2: `-DSPEC_CPU_LP64`
403.gcc: `-DSPEC_CPU_LP64`
429.mcf: `-DSPEC_CPU_LP64`
445.gobmk: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`
464.h264ref: `-DSPEC_CPU_LP64 -fsigned-char`
471.omnetpp: `-fno-aggressive-loop-optimizations`(*) `-DSPEC_CPU_LP64`
473.astar: `-DSPEC_CPU_LP64`
483.xalancbmk: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX -include cstdlib -include cstring -include ctime`

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

Peak Optimization Flags

C benchmarks:

400.perlbench: -fprofile-generate(pass 1) -fprofile-use(pass 2) -static
-O3 -march=armv8.1-a+crc+fp+crypto -fno-fast-math
-fno-unroll-loops -fomit-frame-pointer -flto
-fno-tree-slp-vectorize -fno-prefetch-loop-arrays
-finline-functions -fno-loop-parallelize-all

401.bzip2: basepeak = yes

403.gcc: -fprofile-generate(pass 1) -fprofile-use(pass 2) -static
-O3 -march=armv8.1-a+crc+fp+crypto -fno-fast-math
-funroll-loops -fomit-frame-pointer -flto
-fno-tree-vectorize -ftree-slp-vectorize -finline-functions
-fno-loop-parallelize-all --param
max-inline-recursive-depth=0

429.mcf: basepeak = yes

445.gobmk: -fprofile-generate(pass 1) -fprofile-use(pass 2) -O3
-march=armv8.1-a+crc+fp+crypto -fno-fast-math
-fno-unroll-loops -fomit-frame-pointer -flto
-ftree-vectorize -ftree-slp-vectorize -finline-functions
-fno-loop-parallelize-all -faggressive-loop-optimizations

456.hmmer: basepeak = yes

458.sjeng: -fprofile-generate(pass 1) -fprofile-use(pass 2) -static
-O3 -march=armv8.1-a+crc+fp+crypto -ffast-math
-fomit-frame-pointer -flto -ftree-vectorize
-fno-tree-slp-vectorize -fprefetch-loop-arrays
-faggressive-loop-optimizations

462.libquantum: basepeak = yes

464.h264ref: -fprofile-generate(pass 1) -fprofile-use(pass 2) -static
-O3 -march=armv8.1-a+crc+fp+crypto -funroll-loops
-fno-omit-frame-pointer -flto -fno-tree-slp-vectorize
-fprefetch-loop-arrays -fno-loop-parallelize-all
-faggressive-loop-optimizations

C++ benchmarks:

471.omnetpp: -fprofile-generate(pass 1) -fprofile-use(pass 2) -static
-O3 -march=armv8.1-a+crc+fp+crypto -ffast-math
-funroll-loops -fomit-frame-pointer -flto
-fno-tree-vectorize -fno-tree-slp-vectorize
-fno-prefetch-loop-arrays -fno-loop-nest-optimize --param
max-inline-recursive-depth=55

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Peak Optimization Flags (Continued)

473.astar: `basepeak = yes`

483.xalancbmk: `basepeak = yes`

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
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