SPEC® CPU2017 Floating Point Speed Result

sipeed
(Test Sponsor: PLCT)

Licheepi 4a

SPECspeed2017_fp_base = 0.00

SPECspeed2017_fp_peak = 0.00

CPU2017 License: 0
Test Sponsor: PLCT
Tested by: PLCT

Test Date: Nov-2023
Hardware Availability: May-2023
Software Availability: Nov-2023

Threads	
603.bwaves_s	
607.cactuBSSN_s	
619.lbm_s	
621.wrf_s	
627.cam4_s	
628.pop2_s	
638.imagick_s	
644.nab_s	
649.fotonik3d_s	
654.roms_s	

Hardware

CPU Name: TH1520
Max MHz.: 2000MHz
Nominal: 2000MHz
Enabled: 4 cores, 1 chip
Orderable: --
Cache L1: 64 KB I + 64 Kb D on chip per core
L2: 1MB L2 Cache for all core
L3: None
Other: None
Memory: 15.370 GB fixme: If using DDR4, the format is: 'N GB (N x N GB nRxn PC4-nnnnX-X)'
Storage: 115 GB add more disk info here
Other: None

Software

OS: Debian GNU/Linux 12 (bookworm) 5.10.113+
Compiler: Debian clang version 17.0.0 (+rc4-1~exp5revyos1)
Parallel: Yes
Firmware: Nov-2022
File System: ext4
System State: Run level 5 (add definition here)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other: None

Errors

'reportable' flag not set during run
627.cam4_s (base) did not have enough runs!
619.lbm_s (base) did not have enough runs!
621.wrf_s (base) did not have enough runs!
628.pop2_s (base) did not have enough runs!

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Errors (Continued)

644.nab_s (base) did not have enough runs!
638.imagick_s (base) did not have enough runs!
649.fotonik3d_s (base) did not have enough runs!
654.roms_s (base) did not have enough runs!
607.cactuBSSN_s (base) did not have enough runs!
603.bwaves_s (base) did not have enough runs!
627.cam4_s (peak) did not have enough runs!
619.lbm_s (peak) did not have enough runs!
621.wrf_s (peak) did not have enough runs!
628.pop2_s (peak) did not have enough runs!
644.nab_s (peak) did not have enough runs!
638.imagick_s (peak) did not have enough runs!
649.fotonik3d_s (peak) did not have enough runs!
654.roms_s (peak) did not have enough runs!
607.cactuBSSN_s (peak) did not have enough runs!
603.bwaves_s (peak) did not have enough runs!
Input set must be 'refspeed' for a valid run (set to 'test' for this run)
Unknown flags were used! See
https://www.spec.org/cpu2017/Docs/runcpu.html#flagsurl
for information about how to get rid of this error.

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s														
607.cactuBSSN_s	4	38.4	0.00					4	39.9	0.00				
619.lbm_s														
621.wrf_s														
627.cam4_s														
628.pop2_s														
638.imagick_s														
644.nab_s														
649.fotonik3d_s														
654.roms_s														

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

General Notes

```
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/usr/lib64/:/usr/lib/:/lib64"
OMP_STACKSIZE = "120M"
```

Platform Notes

```
 Sysinfo program /home/sipeed/spec2017/bin/sysinfo
 Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9
 running on lpi4a Wed Nov 29 13:44:19 2023

 SUT (System Under Test) info as seen by some common utilities.
 For more information on this section, see
    https://www.spec.org/cpu2017/Docs/config.html#sysinfo

 From /proc/cpuinfo
 *
 * Did not identify cpu model.  If you would
 * like to write your own sysinfo program, see
 * www.spec.org/cpu2017/config.html#sysinfo
 *
 *
 * 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.
 *
       4 "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 lscpu:
      Architecture:          riscv64
      Byte Order:            Little Endian
      CPU(s):                4
      On-line CPU(s) list:   0-3

 /proc/cpuinfo cache data
    cpu-cacheline : 64Bytes
    cpu-dcache : 64KB
    cpu-icache : 64KB
    cpu-l2cache : 1MB

 From numactl --hardware  WARNING: a numactl 'node' might or might not correspond to a
 physical chip.

 From /proc/meminfo
```

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Platform Notes (Continued)

```
    MemTotal:       16116952 kB
    HugePages_Total:       0
    Hugepagesize:       2048 kB

  /usr/bin/lsb_release -d
     Debian GNU/Linux 12 (bookworm)

  From /etc/*release* /etc/*version*
     debian_version: 12.0
     os-release:
        PRETTY_NAME="Debian GNU/Linux 12 (bookworm)"
        NAME="Debian GNU/Linux"
        VERSION_ID="12"
        VERSION="12 (bookworm)"
        VERSION_CODENAME=bookworm
        ID=debian
        HOME_URL="https://www.debian.org/"
        SUPPORT_URL="https://www.debian.org/support"
     revyos-release:
        BUILD_ID=20231009_134626
        BUILD_DATE=20231009
        COMMIT_ID=f9867c522485046f1965a3101bd4545520803623
        RUNNER_ID=6457521686

  uname -a:
     Linux lpi4a 5.10.113+ #4 SMP PREEMPT Fri Oct 20 06:59:14 UTC 2023 riscv64 GNU/Linux

  run-level 5 Nov 28 13:15

  SPEC is set to: /home/sipeed/spec2017
     Filesystem     Type  Size  Used Avail Use% Mounted on
     /dev/root      ext4  115G   12G   98G  11% /

  Additional information from dmidecode follows.  WARNING: Use caution when you interpret
  this section. The 'dmidecode' program reads system data which is "intended to allow
  hardware to be accurately determined", but the intent may not be met, as there are
  frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

  (End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
 FC  607.cactuBSSN_s(base, peak)
------------------------------------------------------------------------------
Debian clang version 17.0.0 (+rc4-1~exp5revyos1)
```

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Compiler Version Notes (Continued)

```
Target: riscv64-unknown-linux-gnu
Thread model: posix
InstalledDir: /usr/bin
Debian clang version 17.0.0 (+rc4-1~exp5revyos1)
Target: riscv64-unknown-linux-gnu
Thread model: posix
InstalledDir: /usr/bin
Debian flang-new version 17.0.0 (+rc4-1~exp5revyos1)
Target: riscv64-unknown-linux-gnu
Thread model: posix
InstalledDir: /usr/lib/llvm-17/bin
------------------------------------------------------------------------------
```

Base Unknown Flags

607.cactuBSSN_s: "/usr/bin/clang++-17 -std=c++98ARRAY(0x2acc0ab0b8)
"/usr/bin/clang-17 -Wno-implicit-intARRAY(0x2acc10c8c0)
"/usr/bin/flang-new-17ARRAY(0x2acc11ab08)
"/usr/bin/clang++-17 -std=c++98ARRAY(0x2acc138040)
"-g -O3ARRAY(0x2acc2428c0)
"-fno-strict-aliasingARRAY(0x2acc243ad0)

Peak Unknown Flags

607.cactuBSSN_s: "/usr/bin/clang++-17 -std=c++98ARRAY(0x2acc0ab0b8)
"/usr/bin/clang-17 -Wno-implicit-intARRAY(0x2acc10c8c0)
"/usr/bin/flang-new-17ARRAY(0x2acc11ab08)
"/usr/bin/clang++-17 -std=c++98ARRAY(0x2acc138040)
"-g -O3ARRAY(0x2acc2428c0)
"-fno-strict-aliasingARRAY(0x2acc243ad0)

607.cactuBSSN_s: "/usr/bin/clang++-17 -std=c++98ARRAY(0x2acc10c5f0)
"/usr/bin/clang-17 -Wno-implicit-intARRAY(0x2acc11abe0)
"/usr/bin/flang-new-17ARRAY(0x2acc101360)
"/usr/bin/clang++-17 -std=c++98ARRAY(0x2acc2656c0)
"-g -OfastARRAY(0x2acc248bb8)

Base Portability Flags

607.cactuBSSN_s: -DSPEC_LP64

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Base Optimization Flags

Benchmarks using Fortran, C, and C++:
`-DSPEC_OPENMP -DUSE_OPENMP`

Peak Portability Flags

`Same as Base Portability Flags`

Peak Optimization Flags

Benchmarks using Fortran, C, and C++:
`-DSPEC_OPENMP -DUSE_OPENMP`

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

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