

SPEC® CPU2017 Floating Point Rate Result

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sipeed

(Test Sponsor: PLCT)

Licheepi 4a

SPECrate2017_fp_base = 0.00

SPECrate2017_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

Copies

503.bwaves_r

507.cactuBSSN_r

508.namd_r

510.parest_r

511.povray_r

519.lbm_r

521.wrf_r

526.blender_r

527.cam4_r

538.imagick_r

544.nab_r

549.fotonik3d_r

554.roms_r

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: No
Firmware: Nov-2022
File System: ext4
System State: Run level 5 (add definition here)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other: None

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Errors

Complete set of valid runs for peak rate unavailable (544.nab_r missing)

Complete set of valid runs for peak rate unavailable (503.bwaves_r missing)

Complete set of valid runs for peak rate unavailable (538.imagick_r missing)

Complete set of valid runs for peak rate unavailable (519.lbm_r missing)

Complete set of valid runs for peak rate unavailable (508.namd_r missing)

Complete set of valid runs for peak rate unavailable (507.cactuBSSN_r missing)

Complete set of valid runs for peak rate unavailable (549.fotonik3d_r missing)

Complete set of valid runs for peak rate unavailable (527.cam4_r missing)

Complete set of valid runs for peak rate unavailable (511.povray_r missing)

Complete set of valid runs for peak rate unavailable (554.roms_r missing)

Complete set of valid runs for peak rate unavailable (510.parest_r missing)

Complete set of valid runs for peak rate unavailable (526.blender_r missing)

Complete set of valid runs for peak rate unavailable (521.wrf_r missing)

There is no set of valid runs with the same number of copies for base

'reportable' flag not set during run

544.nab_r (base) did not have enough runs!

503.bwaves_r (base) did not have enough runs!

538.imagick_r (base) did not have enough runs!

519.lbm_r (base) did not have enough runs!

508.namd_r (base) did not have enough runs!

507.cactuBSSN_r (base) did not have enough runs!

549.fotonik3d_r (base) did not have enough runs!

527.cam4_r (base) did not have enough runs!

511.povray_r (base) did not have enough runs!

554.roms_r (base) did not have enough runs!

510.parest_r (base) did not have enough runs!

526.blender_r (base) did not have enough runs!

521.wrf_r (base) did not have enough runs!

544.nab_r (peak) did not have enough runs!

503.bwaves_r (peak) did not have enough runs!

538.imagick_r (peak) did not have enough runs!

519.lbm_r (peak) did not have enough runs!

508.namd_r (peak) did not have enough runs!

507.cactuBSSN_r (peak) did not have enough runs!

549.fotonik3d_r (peak) did not have enough runs!

527.cam4_r (peak) did not have enough runs!

511.povray_r (peak) did not have enough runs!

554.roms_r (peak) did not have enough runs!

510.parest_r (peak) did not have enough runs!

526.blender_r (peak) did not have enough runs!

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Errors (Continued)

521.wrf_r (peak) did not have enough runs!

Input set must be 'refrate' for a valid run (set to 'test' for this run)

Unknown flags were used! See

<https://www.spec.org/cpu2017/Docs/runcpu.html#flagsuch>
for information about how to get rid of this error.

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r														
507.cactuBSSN_r	4	39.9	0.00					4	41.1	0.00				
508.namd_r														
510.parest_r														
511.povray_r														
519.lbm_r														
521.wrf_r														
526.blender_r														
527.cam4_r														
538.imagick_r														
544.nab_r														
549.fotonik3d_r														
554.roms_r														

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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"

Platform Notes

Sysinfo program /home/sipeed/spec2017/bin/sysinfo

Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9

running on lpi4a Wed Nov 29 13:26:38 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>

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Platform Notes (Continued)

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

```
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
```

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Platform Notes (Continued)

```
ID=debian
HOME_URL="https://www.debian.org/"
SUPPORT_URL="https://www.debian.org/support"
revynos-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	41%	/

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 507.cactuBSSN_r(base, peak)
=====
```

Debian clang version 17.0.0 (+rc4-1~exp5revyos1)

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 clang-new version 17.0.0 (+rc4-1~exp5revyos1)

Target: riscv64-unknown-linux-gnu

Thread model: posix

InstalledDir: /usr/lib/llvm-17/bin

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Base Unknown Flags

```
507.cactuBSSN_r: "/usr/bin/clang++-17 -std=c++98ARRAY(0x2ab5969298)
"/usr/bin/clang-17 -Wno-implicit-intARRAY(0x2ab5984e18)
"/usr/bin/flang-new-17ARRAY(0x2ab5996c38)
"/usr/bin/clang++-17 -std=c++98ARRAY(0x2ab5986840)
"-g -O3ARRAY(0x2ab5ab9d18)
"-fno-strict-aliasingARRAY(0x2ab5ab9fb8)
```

Peak Unknown Flags

```
507.cactuBSSN_r: "/usr/bin/clang++-17 -std=c++98ARRAY(0x2ab5969298)
"/usr/bin/clang-17 -Wno-implicit-intARRAY(0x2ab5984e18)
"/usr/bin/flang-new-17ARRAY(0x2ab5996c38)
"/usr/bin/clang++-17 -std=c++98ARRAY(0x2ab5986840)
"-g -O3ARRAY(0x2ab5ab9d18)
"-fno-strict-aliasingARRAY(0x2ab5ab9fb8)

507.cactuBSSN_r: "/usr/bin/clang++-17 -std=c++98ARRAY(0x2ab59843b8)
"/usr/bin/clang-17 -Wno-implicit-intARRAY(0x2ab5ae62c0)
"/usr/bin/flang-new-17ARRAY(0x2ab5aef9f8)
"/usr/bin/clang++-17 -std=c++98ARRAY(0x2ab5aedca8)
"-g -OfastARRAY(0x2ab5aeac28)
```

Base Portability Flags

```
507.cactuBSSN_r: -DSPEC_LP64
```

Peak Portability Flags

Same as Base Portability Flags

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

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