



# SPEC CPU®2017 Floating Point Speed Result

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## Supermicro

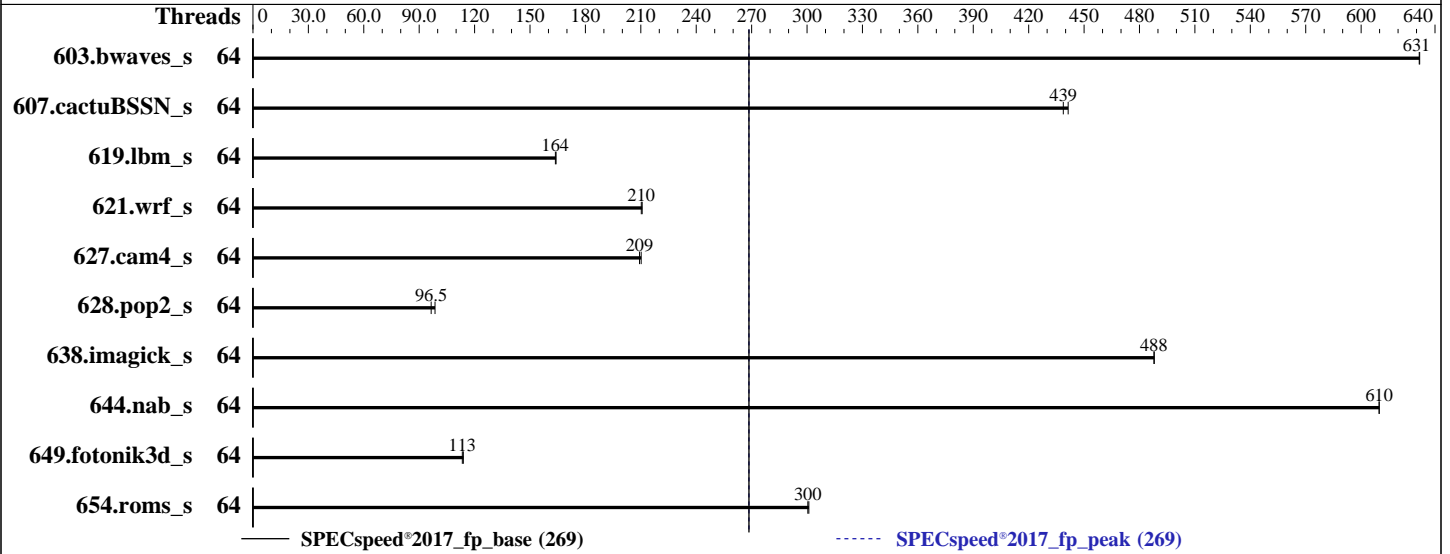
WIO A+ Server AS -1115SV-WTNRT  
(H13SVW-NT , AMD EPYC 8535P)

SPECspeed®2017\_fp\_base = 269

SPECspeed®2017\_fp\_peak = 269

CPU2017 License: 001176  
Test Sponsor: Supermicro  
Tested by: Supermicro

Test Date: May-2026  
Hardware Availability: May-2026  
Software Availability: Mar-2026



### Hardware

CPU Name: AMD EPYC 8535P  
Max MHz: 4500  
Nominal: 2000  
Enabled: 64 cores, 1 chip, 2 threads/core  
Orderable: 1 chip  
Cache L1: 32 KB I + 48 KB D on chip per core  
L2: 1 MB I+D on chip per core  
L3: 256 MB I+D on chip per chip, 32 MB shared / 8 cores  
Other: None  
Memory: 384 GB (6 x 64 GB 2Rx4 PC5-6400B-R)  
Storage: 1 x 480 GB NVMe SSD  
Other: CPU Cooling: Air

### Software

OS: Ubuntu 24.04.3 LTS  
6.8.0-110-generic  
Compiler: C/C++/Fortran: Version 5.0.0 of AOCC  
Parallel: Yes  
Firmware: Version 2.0 released Mar-2026  
File System: ext4  
System State: Run level 5 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 64-bit  
Other: None  
Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.



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## Results Table

Benchmark	Base						Peak							
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	64	<b>93.4</b>	<b>631</b>	93.4	632			64	<b>93.4</b>	<b>631</b>	93.4	632		
607.cactuBSSN_s	64	<b>38.0</b>	<b>439</b>	37.8	441			64	<b>38.0</b>	<b>439</b>	37.8	441		
619.lbm_s	64	<b>32.0</b>	<b>164</b>	31.9	164			64	<b>32.0</b>	<b>164</b>	31.9	164		
621.wrf_s	64	62.8	211	<b>62.9</b>	<b>210</b>			64	62.8	211	<b>62.9</b>	<b>210</b>		
627.cam4_s	64	<b>42.3</b>	<b>209</b>	42.2	210			64	<b>42.3</b>	<b>209</b>	42.2	210		
628.pop2_s	64	120	98.6	<b>123</b>	<b>96.5</b>			64	120	98.6	<b>123</b>	<b>96.5</b>		
638.imagick_s	64	<b>29.6</b>	<b>488</b>	29.6	488			64	<b>29.6</b>	<b>488</b>	29.6	488		
644.nab_s	64	28.7	610	<b>28.7</b>	<b>610</b>			64	28.7	610	<b>28.7</b>	<b>610</b>		
649.fotonik3d_s	64	<b>80.4</b>	<b>113</b>	80.0	114			64	<b>80.4</b>	<b>113</b>	80.0	114		
654.roms_s	64	52.3	301	<b>52.4</b>	<b>300</b>			64	52.3	301	<b>52.4</b>	<b>300</b>		

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

## Compiler Notes

The AMD64 AOCC Compiler Suite is available at  
<http://developer.amd.com/amd-aocc/>

## Submit Notes

The config file option 'submit' was used.  
'numactl' was used to bind copies to the cores.  
See the configuration file for details.

## Operating System Notes

'ulimit -s unlimited' was used to set environment stack size limit  
'ulimit -l 2097152' was used to set environment locked pages in memory limit

runcpu command invoked through numactl i.e.:  
numactl --interleave=all runcpu <etc>

To limit dirty cache to 8% of memory, 'sysctl -w vm.dirty\_ratio=8' run as root.  
To limit swap usage to minimum necessary, 'sysctl -w vm.swappiness=1' run as root.  
To free node-local memory and avoid remote memory usage,  
'sysctl -w vm.zone\_reclaim\_mode=1' run as root.  
To clear filesystem caches, 'sync; sysctl -w vm.drop\_caches=3' run as root.  
To disable address space layout randomization (ASLR) to reduce run-to-run  
variability, 'sysctl -w kernel.randomize\_va\_space=0' run as root.

To enable Transparent Hugepages (THP) for all allocations,  
'echo always > /sys/kernel/mm/transparent\_hugepage/enabled' and  
'echo always > /sys/kernel/mm/transparent\_hugepage/defrag' run as root.



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## Environment Variables Notes

Environment variables set by runcpu before the start of the run:

```
GOMP_CPU_AFFINITY = "0-127"
LD_LIBRARY_PATH =
"/spec/cpu2017aoccal.5speed/amd_speed_aocc500_znver5_A_lib/lib:/spec/cpu2017aoccal.5speed/amd_speed_aoc
cc500_znver5_A_lib/lib32:"
LIBOMP_NUM_HIDDEN_HELPER_THREADS = "0"
MALLOC_CONF = "retain:true"
OMP_DYNAMIC = "false"
OMP_SCHEDULE = "static"
OMP_STACKSIZE = "128M"
OMP_THREAD_LIMIT = "128"
```

## General Notes

Binaries were compiled on a system with 2x AMD EPYC 9D64 CPU + 500GiB Memory using Ubuntu 22.04

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.  
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.  
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.

## Platform Notes

BIOS settings:  
Determinism Control = Manual  
Determinism Enable = Power  
TDP control = Manual  
TDP = 225  
Package Power Limit Control = Manual  
Package Power Limit = 225  
TSME = Disabled  
SMEE = Disabled

Sysinfo program /spec/cpu2017aoccal.5speed/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on smc9027sorano-u24-os Tue May 5 04:56:16 2026

SUT (System Under Test) info as seen by some common utilities.

-----  
Table of contents  
-----

1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.14)
12. Services, from systemctl list-unit-files

(Continued on next page)



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### Platform Notes (Continued)

- 13. Linux kernel boot-time arguments, from /proc/cmdline
- 14. cpupower frequency-info
- 15. sysctl
- 16. /sys/kernel/mm/transparent\_hugepage
- 17. /sys/kernel/mm/transparent\_hugepage/khugepaged
- 18. OS release
- 19. Disk information
- 20. /sys/devices/virtual/dmi/id
- 21. dmidecode
- 22. BIOS

```
-----
1. uname -a
Linux smc9027sorano-u24-os 6.8.0-110-generic #110-Ubuntu SMP PREEMPT_DYNAMIC Thu Mar 19 15:09:20 UTC 2026
x86_64 x86_64 x86_64 GNU/Linux
-----
```

```
-----
2. w
 04:56:16 up 59 min,  2 users,  load average: 7.24, 5.82, 3.43
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
root          10.23.202.142  04:02    59:05   0.00s  0.02s  sshd: root@notty
root          10.23.202.142  04:02    59:05   0.00s  0.05s  sshd: root@pts/0
-----
```

```
-----
3. Username
From environment variable $USER:  root
-----
```

```
-----
4. ulimit -a
time(seconds)          unlimited
file(blocks)           unlimited
data(kbytes)           unlimited
stack(kbytes)          unlimited
coredump(blocks)       0
memory(kbytes)         unlimited
locked memory(kbytes)  2097152
process                1544638
nofiles                1024
vmemory(kbytes)        unlimited
locks                  unlimited
rtprio                 0
-----
```

```
-----
5. sysinfo process ancestry
/sbin/init
SCREEN -S cpu
/bin/bash
python3 ./run_amd_speed_aocc500_znver5_A1.py
/bin/bash ./amd_speed_aocc500_znver5_A1.sh
runcpu --config amd_speed_aocc500_znver5_A1.cfg --tune base --reportable --iterations 2 fpspeed
runcpu --configfile amd_speed_aocc500_znver5_A1.cfg --tune base --reportable --iterations 2 --nopower
--runmode speed --tune base --size test:train:refspeed fpspeed --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.002/temlogs/preenv.fpspeed.002.0.log --lognum 002.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /spec/cpu2017aoccal.5speed
-----
```

```
-----
6. /proc/cpuinfo
model name      : AMD EPYC 8535P 64-Core Processor
-----
```

(Continued on next page)



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### Platform Notes (Continued)

```
vendor_id      : AuthenticAMD
cpu family    : 26
model         : 2
stepping      : 1
microcode     : 0xb002162
bugs          : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
TLB size     : 192 4K pages
cpu cores     : 64
siblings      : 128
1 physical ids (chips)
128 processors (hardware threads)
physical id 0: core ids 0-63
physical id 0: apicids 0-127
```

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for virtualized systems. Use the above data carefully.

-----  
7. lscpu

From lscpu from util-linux 2.39.3:

```
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:         52 bits physical, 57 bits virtual
Byte Order:            Little Endian
CPU(s):                128
On-line CPU(s) list:  0-127
Vendor ID:             AuthenticAMD
BIOS Vendor ID:       Advanced Micro Devices, Inc.
Model name:            AMD EPYC 8535P 64-Core Processor
BIOS Model name:      AMD EPYC 8535P 64-Core Processor
                       Unknown CPU @
                       2.0GHz
BIOS CPU family:      107
CPU family:            26
Model:                 2
Thread(s) per core:   2
Core(s) per socket:   64
Socket(s):             1
Stepping:              1
Frequency boost:       enabled
CPU(s) scaling MHz:   49%
CPU max MHz:           4511.7178
CPU min MHz:           1500.0000
BogoMIPS:              3993.84
Flags:                 fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
                       pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt
                       pdpe1gb rdtscp lm constant_tsc rep_good amd_lbrv2 nopl
                       nonstop_tsc cpuid extd_apicid aperfmperf rapl pni pclmulqdq
                       monitor ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe popcnt aes
                       xsave avx f16c rdrand lahf_lm cmp_legacy svm extapic cr8_legacy
                       abm sse4a misalignsse 3dnowprefetch osvw ibs skinit wdt tce
                       topoext perfctr_core perfctr_nb bpext perfctr_llc mwaitx cpb
                       cat_l3 cdp_l3 hw_pstate ssbd mba perfmon_v2 ibrs ibpb stibp
                       ibrs_enhanced vmmcall fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms
                       invpcid cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
                       clflushopt clwb avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec
                       xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_nbm_total cqm_nbm_local
                       user_shstk avx_vnni avx512_bf16 clzero irperf xsaveerptr rdpru
                       wbnoinvd amd_ppin cppc amd_ibpb_ret arat npt lbrv svm_lock
                       nrip_save tsc_scale vmcb_clean flushbyasid decodeassists
                       pausefilter pfthreshold avic v_vmsave_vmload vgif x2avic
```

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### Platform Notes (Continued)

```

Virtualization:
L1d cache:
L1i cache:
L2 cache:
L3 cache:
NUMA node(s):
NUMA node0 CPU(s):
Vulnerability Gather data sampling:
Vulnerability Indirect target selection:
Vulnerability Itlb multihit:
Vulnerability Lltf:
Vulnerability Mds:
Vulnerability Meltdown:
Vulnerability Mmio stale data:
Vulnerability Reg file data sampling:
Vulnerability Retbleed:
Vulnerability Spec rstack overflow:
Vulnerability Spec store bypass:
Vulnerability Spectre v1:
Vulnerability Spectre v2:
Vulnerability Srbds:
Vulnerability Tsa:
Vulnerability Tsx async abort:
Vulnerability Vmscape:

```

AMD-V  
3 MiB (64 instances)  
2 MiB (64 instances)  
64 MiB (64 instances)  
256 MiB (8 instances)  
1  
0-127  
Not affected  
Not affected  
Not affected  
Not affected  
Not affected  
Not affected  
Not affected  
Not affected  
Not affected  
Not affected  
Mitigation; Speculative Store Bypass disabled via prctl  
Mitigation; usercopy/swaps barriers and \_\_user pointer sanitization  
Mitigation; Enhanced / Automatic IBRS; IBPB conditional; STIBP always-on; PBRSE-eIBRS Not affected; BHI Not affected  
Not affected  
Not affected  
Not affected  
Not affected

```

From lscpu --cache:
NAME ONE-SIZE ALL-SIZE WAYS TYPE          LEVEL SETS PHY-LINE COHERENCY-SIZE
L1d   48K      3M    12 Data             1     64      1             64
L1i   32K      2M     8 Instruction        1     64      1             64
L2    1M      64M   16 Unified           2   1024     1             64
L3   32M     256M   16 Unified           3  32768     1             64

```

```

-----
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
available: 1 nodes (0)
node 0 cpus: 0-127
node 0 size: 386241 MB
node 0 free: 384110 MB
node distances:
node 0
0: 10

```

```

-----
9. /proc/meminfo
MemTotal:      395510864 kB

```

```

-----
10. who -r
run-level 5 May 5 03:57

```

```

-----
11. Systemd service manager version: systemd 255 (255.4-lubuntu8.14)
Default Target Status

```

(Continued on next page)



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### Platform Notes (Continued)

graphical          running

-----  
12. Services, from `systemctl list-unit-files`

STATE	UNIT FILES
enabled	ModemManager apparmor appport blk-availability cloud-config cloud-final cloud-init cloud-init-local console-setup cron dmesg e2scrub_reap finalrd getty@ gpu-manager grub-common grub-initrd-fallback keyboard-setup lvm2-monitor multipathd networkd-dispatcher nvme-fc-boot-connections nvme-autoconnect open-iscsi open-vm-tools pollinate rsyslog secureboot-db setvtrgb snapd sysstat systemd-networkd systemd-networkd-wait-online systemd-pstore systemd-resolved systemd-timesyncd thermald ua-reboot-cmds ubuntu-advantage udisks2 ufw unattended-upgrades vgauth
enabled-runtime	netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
disabled	console-getty debug-shell ipmievd iscsid nftables rsync serial-getty@ ssh systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-networkd-wait-online@ systemd-pcrlock-file-system systemd-pcrlock-firmware-code systemd-pcrlock-firmware-config systemd-pcrlock-machine-id systemd-pcrlock-make-policy systemd-pcrlock-secureboot-authority systemd-pcrlock-secureboot-policy systemd-sysext systemd-time-wait-sync upower
generated	openipmi
indirect	systemd-sysupdate systemd-sysupdate-reboot uuid
masked	cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common

-----  
13. Linux kernel boot-time arguments, from `/proc/cmdline`

```
BOOT_IMAGE=/boot/vmlinuz-6.8.0-110-generic
root=UUID=lbee86d1-7232-471a-ab77-0c9fc9498fa1
ro
```

-----  
14. `cpupower frequency-info`

```
analyzing CPU 55:
  current policy: frequency should be within 1.50 GHz and 2.00 GHz.
                  The governor "performance" may decide which speed to use
                  within this range.

  boost state support:
    Supported: yes
    Active: yes
    Boost States: 0
    Total States: 3
    Pstate-P0: 2000MHz
```

-----  
15. `sysctl`

```
kernel.numa_balancing          0
kernel.randomize_va_space      0
vm.compaction_proactiveness    20
vm.dirty_background_bytes      0
vm.dirty_background_ratio      10
vm.dirty_bytes                  0
vm.dirty_expire_centisecs      3000
vm.dirty_ratio                  8
vm.dirty_writeback_centisecs   500
vm.dirtytime_expire_seconds    43200
vm.extfrag_threshold           500
vm.min_unmapped_ratio          1
vm.nr_hugepages                 0
vm.nr_hugepages_mempolicy      0
vm.nr_overcommit_hugepages     0
vm.swappiness                    1
```

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### Platform Notes (Continued)

```
vm.watermark_boost_factor      15000
vm.watermark_scale_factor      10
vm.zone_reclaim_mode           1
```

```
-----
16. /sys/kernel/mm/transparent_hugepage
defrag          [always] defer defer+madvise madvise never
enabled         [always] madvise never
hpage_pmd_size 2097152
shmem_enabled   always within_size advise [never] deny force
```

```
-----
17. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs  60000
defrag                 1
max_ptes_none          511
max_ptes_shared        256
max_ptes_swap          64
pages_to_scan          4096
scan_sleep_millisecs  10000
```

```
-----
18. OS release
From /etc/*-release /etc/*-version
os-release Ubuntu 24.04.3 LTS
```

```
-----
19. Disk information
SPEC is set to: /spec/cpu2017aoccal.5speed
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/nvme1n1p2  ext4  457G  27G  407G   7% /
```

```
-----
20. /sys/devices/virtual/dmi/id
Vendor:          Supermicro
Product:         Super Server
Product Family:  SMC H13
Serial:          0123456789
```

```
-----
21. dmidecode
Additional information from dmidecode 3.5 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.
Memory:
  5x Micron Technology MTC40F2046S1RC64BD2 MWFF 64 GB 2 rank 6400
  1x Micron Technology MTC40F2046S1RC64BD2 MXCC 64 GB 2 rank 6400
```

```
-----
22. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor:      American Megatrends International, LLC.
BIOS Version:     2.0
BIOS Date:        03/23/2026
BIOS Revision:    5.42
```



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## Compiler Version Notes

=====  
C | 619.lbm\_s(base) 638.imagick\_s(base) 644.nab\_s(base)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1377 2024\_09\_24)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin  
=====

=====  
C++, C, Fortran | 607.cactuBSSN\_s(base)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1377 2024\_09\_24)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin  
AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1377 2024\_09\_24)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin  
AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1377 2024\_09\_24)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin  
=====

=====  
Fortran | 603.bwaves\_s(base) 649.fotonik3d\_s(base) 654.roms\_s(base)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1377 2024\_09\_24)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin  
=====

=====  
Fortran, C | 621.wrf\_s(base) 627.cam4\_s(base) 628.pop2\_s(base)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1377 2024\_09\_24)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin  
AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1377 2024\_09\_24)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin  
=====

## Base Compiler Invocation

C benchmarks:  
clang

Fortran benchmarks:  
flang

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# SPEC CPU®2017 Floating Point Speed Result

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## Supermicro

WIO A+ Server AS -1115SV-WTNRT  
(H13SVW-NT, AMD EPYC 8535P)

SPECspeed®2017\_fp\_base = 269

SPECspeed®2017\_fp\_peak = 269

CPU2017 License: 001176  
Test Sponsor: Supermicro  
Tested by: Supermicro

Test Date: May-2026  
Hardware Availability: May-2026  
Software Availability: Mar-2026

## Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

flang clang

Benchmarks using Fortran, C, and C++:

clang++ clang flang

## Base Portability Flags

603.bwaves\_s: -DSPEC\_LP64  
607.cactuBSSN\_s: -DSPEC\_LP64  
619.lbm\_s: -DSPEC\_LP64  
621.wrf\_s: -DSPEC\_CASE\_FLAG -Mbyteswapio -DSPEC\_LP64  
627.cam4\_s: -DSPEC\_CASE\_FLAG -DSPEC\_LP64  
628.pop2\_s: -DSPEC\_CASE\_FLAG -Mbyteswapio -DSPEC\_LP64  
638.imagick\_s: -DSPEC\_LP64  
644.nab\_s: -DSPEC\_LP64  
649.fotonik3d\_s: -DSPEC\_LP64  
654.roms\_s: -DSPEC\_LP64

## Base Optimization Flags

C benchmarks:

-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver5  
-fveclib=AMDLIBM -ffast-math -fopenmp -DSPEC\_OPENMP -flto  
-fremap-arrays -fstrip-mining -fstruct-layout=7  
-mllvm -inline-threshold=1000 -mllvm -reduce-array-computations=3  
-mllvm -unroll-threshold=50 -zopt -mrecip=none -fopenmp=libomp -lomp  
-lamdlibm -lamdalloc -lflang

Fortran benchmarks:

-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3  
-Wl,-mllvm -Wl,-enable-X86-prefetching -DSPEC\_OPENMP -O3 -march=znver5  
-fveclib=AMDLIBM -ffast-math -fopenmp -flto -funroll-loops  
-mllvm -lsr-in-nested-loop -mllvm -reduce-array-computations=3  
-Mrecursive -zopt -fopenmp=libomp -lomp -lamdlibm -lamdalloc  
-lflang

Benchmarks using both Fortran and C:

-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3

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## Base Optimization Flags (Continued)

Benchmarks using both Fortran and C (continued):

```
-Wl,-mllvm -Wl,-enable-X86-prefetching -O3 -march=znver5
-fveclib=AMDLIBM -ffast-math -fopenmp -DSPEC_OPENMP -flto
-freemap-arrays -fstrip-mining -fstruct-layout=7
-mllvm -inline-threshold=1000 -mllvm -reduce-array-computations=3
-mllvm -unroll-threshold=50 -zopt -funroll-loops
-mllvm -lsr-in-nested-loop -Mrecursive -mrecip=none -fopenmp=libomp
-lomp -lamdlibm -lamdalloc -lflang
```

Benchmarks using Fortran, C, and C++:

```
-m64 -std=c++14 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -O3 -march=znver5
-fveclib=AMDLIBM -ffast-math -fopenmp -DSPEC_OPENMP -flto
-freemap-arrays -fstrip-mining -fstruct-layout=7
-mllvm -inline-threshold=1000 -mllvm -reduce-array-computations=3
-mllvm -unroll-threshold=50 -zopt
-mllvm -loop-unswitch-threshold=200000 -mllvm -unroll-threshold=100
-funroll-loops -mllvm -lsr-in-nested-loop -Mrecursive -mrecip=none
-fopenmp=libomp -lomp -lamdlibm -lamdalloc -lflang
```

## Base Other Flags

C benchmarks:

```
-Wno-return-type -Wno-unused-command-line-argument
```

Fortran benchmarks:

```
-Wno-unused-command-line-argument
```

Benchmarks using both Fortran and C:

```
-Wno-return-type -Wno-unused-command-line-argument
```

Benchmarks using Fortran, C, and C++:

```
-Wno-return-type -Wno-unused-command-line-argument
```

## Peak Optimization Flags

C benchmarks:

```
619.lbm_s: basepeak = yes
```

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## Supermicro

WIO A+ Server AS -1115SV-WTNRT  
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SPECspeed®2017\_fp\_base = 269

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**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** May-2026  
**Hardware Availability:** May-2026  
**Software Availability:** Mar-2026

## Peak Optimization Flags (Continued)

638.imagick\_s: basepeak = yes

644.nab\_s: basepeak = yes

Fortran benchmarks:

603.bwaves\_s: basepeak = yes

649.fotonik3d\_s: basepeak = yes

654.roms\_s: basepeak = yes

Benchmarks using both Fortran and C:

621.wrf\_s: basepeak = yes

627.cam4\_s: basepeak = yes

628.pop2\_s: basepeak = yes

Benchmarks using Fortran, C, and C++:

607.cactuBSSN\_s: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/aocc500-flags.2024-10-10.html>

<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-Sorano-revB.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/aocc500-flags.2024-10-10.xml>

<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-Sorano-revB.xml>

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