



# SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

## Supermicro

WIO A+ Server AS -1015SV-WTNRT  
(H13SVW-NT , AMD EPYC 8534P)

SPECrate®2026\_fp\_base = 169

SPECrate®2026\_fp\_peak = 169

CPU2026 License: 001176

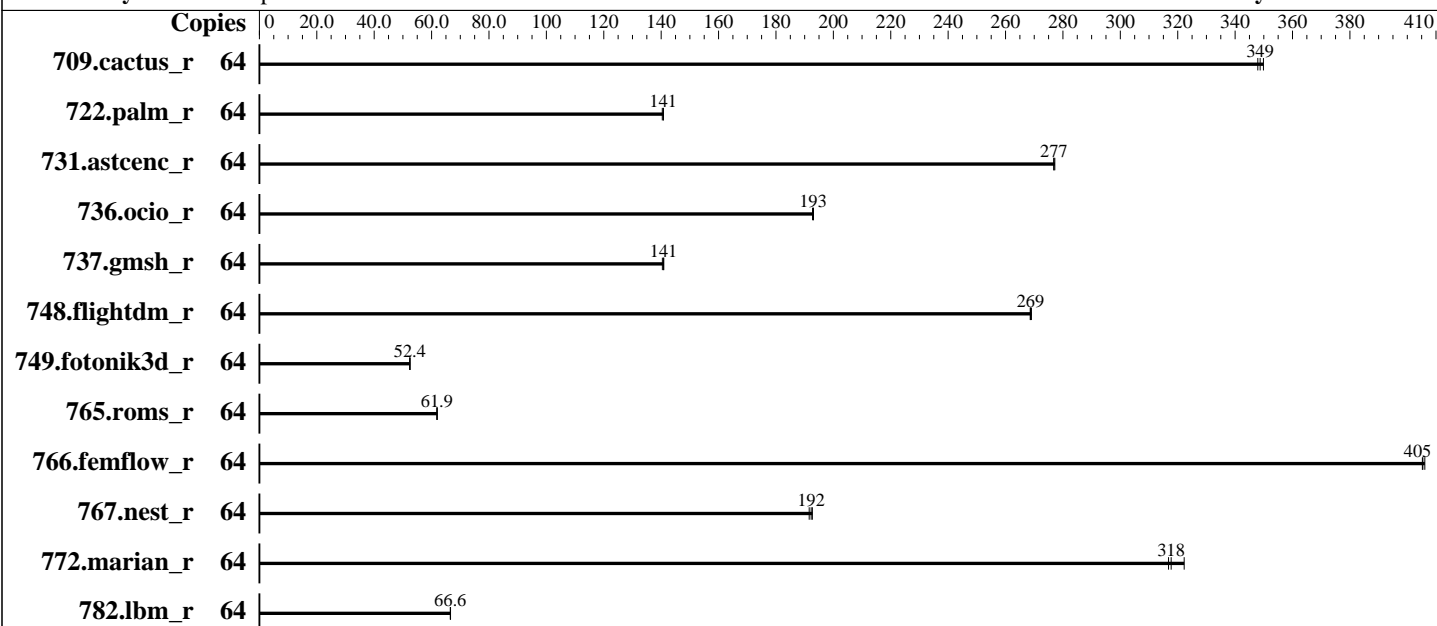
Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Feb-2026

Hardware Availability: Oct-2024

Software Availability: Jan-2026



### Hardware

CPU Name: AMD EPYC 8534P  
 Max MHz: 3100  
 Nominal: 2300  
 Enabled: 64 cores, 1 chip, 2 threads/core  
 Orderable: 1 chip  
 Cache L1: 32 KB I + 32 KB D on chip per core  
 L2: 1 MB I+D on chip per core  
 L3: 128 MB I+D on chip per chip, 16 MB shared / 8 cores  
 Other: None  
 Memory: 384 GB (6 x 64 GB 2Rx4 PC5-4800B-R)  
 Storage: 1 x 980 GB NVMe SSD  
 Cooling: Air  
 Other: None

### Software

OS: Ubuntu 24.04 LTS  
 6.8.0-90-generic  
 Compiler: C/C++/Fortran: Version 5.1.0 of AOCC  
 Compiler Category: Vendor  
 Firmware: Version 1.5 released Nov-2025  
 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							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
709.cactus_r	64	158	348	<b><u>157</u></b>	<b><u>349</u></b>	157	350	64	158	348	<b><u>157</u></b>	<b><u>349</u></b>	157	350
722.palm_r	64	600	141	602	140	<b><u>600</u></b>	<b><u>141</u></b>	64	600	141	602	140	<b><u>600</u></b>	<b><u>141</u></b>
731.ascenc_r	64	<b><u>194</u></b>	<b><u>277</u></b>	194	277	194	277	64	<b><u>194</u></b>	<b><u>277</u></b>	194	277	194	277
736.ocio_r	64	290	193	291	193	<b><u>290</u></b>	<b><u>193</u></b>	64	290	193	291	193	<b><u>290</u></b>	<b><u>193</u></b>
737.gmsh_r	64	209	140	209	141	<b><u>209</u></b>	<b><u>141</u></b>	64	209	140	209	141	<b><u>209</u></b>	<b><u>141</u></b>
748.flightdm_r	64	170	269	<b><u>171</u></b>	<b><u>269</u></b>	171	269	64	170	269	<b><u>171</u></b>	<b><u>269</u></b>	171	269
749.fotonik3d_r	64	1413	52.4	<b><u>1411</u></b>	<b><u>52.4</u></b>	1409	52.5	64	1413	52.4	<b><u>1411</u></b>	<b><u>52.4</u></b>	1409	52.5
765.roms_r	64	1630	61.9	1627	62.0	<b><u>1629</u></b>	<b><u>61.9</u></b>	64	1630	61.9	1627	62.0	<b><u>1629</u></b>	<b><u>61.9</u></b>
766.femflow_r	64	<b><u>232</u></b>	<b><u>405</u></b>	231	406	232	405	64	<b><u>232</u></b>	<b><u>405</u></b>	231	406	232	405
767.nest_r	64	263	193	265	192	<b><u>264</u></b>	<b><u>192</u></b>	64	263	193	265	192	<b><u>264</u></b>	<b><u>192</u></b>
772.marian_r	64	<b><u>318</u></b>	<b><u>318</u></b>	314	322	319	317	64	<b><u>318</u></b>	<b><u>318</u></b>	314	322	319	317
782.lbm_r	64	551	66.6	<b><u>551</u></b>	<b><u>66.6</u></b>	551	66.5	64	551	66.6	<b><u>551</u></b>	<b><u>66.6</u></b>	551	66.5

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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.

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### Operating System Notes (Continued)

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.

### Environment Variables Notes

Environment variables set by runcpu before the start of the run:  
LD\_LIBRARY\_PATH =  
"/spec/speccpu2026rc2bsub/amd\_rate\_aocc510\_znver5\_A\_lib/lib:/spec/speccpu2026rc2bsub/amd\_rate\_aocc510\_znver5\_A\_lib/lib32:"  
MALLOC\_CONF = "retain:true"

### General Notes

Binaries were compiled on a system with 2x AMD EPYC Venice256 CPU + 2TiB Memory using Ubuntu 24.04

### Platform Notes

BIOS settings:  
SEV Control = Disabled  
SMEE = Disabled  
NUMA Nodes Per Socket = NPS2  
Determinism Control = Manual  
Determinism Enable = Power  
TDP control = Manual  
TDP = 225  
Package Power Limit Control = Manual  
Package Power Limit = 225  
TSME = Disabled

Sysinfo program /spec/speccpu2026rc2bsub/bin/sysinfo  
Rev: 069f95da7e7f5d81b2ce48a82150e54f  
running on smcsiena9028-os Wed Feb 4 22:44:58 2026

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

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

1. uname -srvm
2. w

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### Platform Notes (Continued)

- 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-lubuntu8.8)
- 12. Services, from systemctl list-unit-files
- 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 -srvm
Linux 6.8.0-90-generic #91-Ubuntu SMP PREEMPT_DYNAMIC Tue Nov 18 14:14:30 UTC 2025 x86_64
```

```
-----
2. w
 22:44:58 up 4:44, 1 user, load average: 58.10, 107.29, 118.67
USER      TTY      FROM          LOGIN@      IDLE        JCPU      PCPU  WHAT
root                10.252.48.220  18:12       4:44m    0.00s    0.25s  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            1546350
nofiles            1024
```

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### Platform Notes (Continued)

vmemory(kbytes) unlimited  
locks unlimited  
rtprio 0

#### 5. sysinfo process ancestry

```
/sbin/init
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: root@pts/0
-bash
screen -S cpu
SCREEN -S cpu
/bin/bash
python3 ./run_amd_rate_aocc510_znver5_A1.py
/bin/bash ./amd_rate_aocc510_znver5_A1.sh
runcpu --config amd_rate_aocc510_znver5_A1.cfg --tune base --reportable --iterations 3 fprate
runcpu --configfile amd_rate_aocc510_znver5_A1.cfg --tune base --reportable --iterations 3 --nopower
--runmode rate --tune base --size test:train:refrate fprate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2026.002/templogs/preenv.fprate.002.0.log --lognum 002.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /spec/speccpu2026rc2bsub
```

#### 6. /proc/cpuinfo

```
model name      : AMD EPYC 8534P 64-Core Processor
vendor_id       : AuthenticAMD
cpu family      : 25
model           : 160
stepping        : 2
microcode       : 0xaa0021c
bugs             : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass srso vmscape
TLB size        : 3584 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
```

(Continued on next page)



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### Platform Notes (Continued)

```

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 8534P 64-Core Processor
BIOS Model name:              AMD EPYC 8534P 64-Core Processor          Unknown CPU @ 2.3GHz
BIOS CPU family:             107
CPU family:                   25
Model:                        160
Thread(s) per core:          2
Core(s) per socket:          64
Socket(s):                    1
Stepping:                     2
Frequency boost:              enabled
CPU(s) scaling MHz:          101%
CPU max MHz:                  2300.0000
CPU min MHz:                  1500.0000
BogoMIPS:                     4599.99
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_lbr_v2 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 extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch
                               osw_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 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_mbm_total cqm_mbm_local
                               user_shstk avx512_bf16 clzero irperf rsaveerptr 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 v_spec_ctrl vnmi avx512vbmi umip pku
                               ospke avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg
                               avx512_vpopcntdq la57 rdpid overflow_recov succor smca fsrm flush_lld
                               debug_swap ibpb_exit_to_user
L1d cache:                    2 MiB (64 instances)
L1i cache:                    2 MiB (64 instances)
L2 cache:                     64 MiB (64 instances)
L3 cache:                     128 MiB (8 instances)
NUMA node(s):                 2
NUMA node0 CPU(s):           0-31,64-95
NUMA node1 CPU(s):           32-63,96-127
Vulnerability Gather data sampling: Not affected

```

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### Platform Notes (Continued)

Vulnerability Itlb multihit: Not affected  
 Vulnerability L1tf: Not affected  
 Vulnerability Mds: Not affected  
 Vulnerability Meltdown: Not affected  
 Vulnerability Mmio stale data: Not affected  
 Vulnerability Reg file data sampling: Not affected  
 Vulnerability Retbleed: Not affected  
 Vulnerability Spec rstack overflow: Mitigation; Safe RET  
 Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl  
 Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and \_\_user pointer sanitization  
 Vulnerability Spectre v2: Mitigation; Enhanced / Automatic IBRS; IBPB conditional; STIBP  
 always-on; RSB filling; PBRSE-eIBRS Not affected; BHI Not affected  
 Vulnerability Srbds: Not affected  
 Vulnerability Tsx async abort: Not affected  
 Vulnerability Vmscape: Mitigation; IBPB before exit to userspace

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	32K	2M	8	Data	1	64	1	64
L1i	32K	2M	8	Instruction	1	64	1	64
L2	1M	64M	8	Unified	2	2048	1	64
L3	16M	128M	16	Unified	3	16384	1	64

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

```
available: 2 nodes (0-1)
node 0 cpus: 0-31,64-95
node 0 size: 193241 MB
node 0 free: 190924 MB
node 1 cpus: 32-63,96-127
node 1 size: 193424 MB
node 1 free: 190650 MB
node distances:
node  0  1
  0:  10 12
  1:  12 10
```

9. /proc/meminfo

MemTotal: 395945404 kB

10. who -r

run-level 5 Feb 4 18:00

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### Platform Notes (Continued)

11. systemd service manager version: systemd 255 (255.4-lubuntu8.8)  
Default Target Status  
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 uidd
masked	cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common

13. Linux kernel boot-time arguments, from /proc/cmdline  
BOOT\_IMAGE=/vmlinuz-6.8.0-90-generic  
root=/dev/mapper/ubuntu--vg-ubuntu--lv  
ro

14. cpupower frequency-info  
analyzing CPU 3:

current policy: frequency should be within 1.50 GHz and 2.30 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: 2300MHz

15. sysctl

kernel.numa\_balancing 1

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### Platform Notes (Continued)

```

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

```

```

-----
16. /sys/kernel/mm/transparent_hugepage
defrag      [always] 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 LTS

```

```

-----
19. Disk information
SPEC is set to: /spec/speccpu2026rc2bsub
Filesystem                Type      Size  Used Avail Use% Mounted on
/dev/mapper/ubuntu--vg-ubuntu--lv ext4      914G   72G  804G   9% /

```

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### Platform Notes (Continued)

-----  
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:  
1x Samsung M321R8GA0BB0-CQKDG 64 GB 2 rank 4800  
5x Samsung M321R8GA0BB0-CQKEG 64 GB 2 rank 4800  
-----

22. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: American Megatrends International, LLC.  
BIOS Version: 1.5  
BIOS Date: 11/03/2025  
BIOS Revision: 5.30  
-----

### Compiler Version Notes

=====  
C | 782.lbm\_r(base)  
-----

AMD clang version 17.0.6 (CLANG: AOCC\_5.1.0-Build#1994 2025\_12\_23)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/bin  
-----

=====  
C++ | 731.astcenc\_r(base) 736.ocio\_r(base) 748.flightdm\_r(base)  
766.femflow\_r(base) 767.nest\_r(base) 772.marian\_r(base)

AMD clang version 17.0.6 (CLANG: AOCC\_5.1.0-Build#1994 2025\_12\_23)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/bin  
-----

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# SPEC CPU®2026 Floating Point Rate Result

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## Supermicro

WIO A+ Server AS -1015SV-WTNRT  
(H13SVW-NT, AMD EPYC 8534P)

SPECrate®2026\_fp\_base = 169

SPECrate®2026\_fp\_peak = 169

**CPU2026 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Feb-2026  
**Hardware Availability:** Oct-2024  
**Software Availability:** Jan-2026

### Compiler Version Notes (Continued)

=====  
C++, C | 709.cactus\_r(base) 737.gmsh\_r(base)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.1.0-Build#1994 2025\_12\_23)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/bin  
=====

=====  
Fortran | 722.palm\_r(base) 749.fotonik3d\_r(base) 765.roms\_r(base)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.1.0-Build#1994 2025\_12\_23)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/bin  
=====

### Base Compiler Invocation

C benchmarks:  
clang

C++ benchmarks:  
clang++

Fortran benchmarks:  
flang

Benchmarks using both C and C++:  
clang++ clang

### Base Portability Flags

709.cactus\_r: -DSPEC\_LP64  
722.palm\_r: -DSPEC\_LP64  
731.ascenc\_r: -DSPEC\_LP64  
736.ocio\_r: -fno-finite-math-only -DSPEC\_LP64  
737.gmsh\_r: -fno-fast-math -DSPEC\_LP64  
748.flightdm\_r: -fno-reciprocal-math -DSPEC\_LP64  
749.fotonik3d\_r: -DSPEC\_LP64  
765.roms\_r: -DSPEC\_LP64

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## Base Portability Flags (Continued)

766.femflow\_r: -DSPEC\_LP64  
767.nest\_r: -fno-finite-math-only -DSPEC\_LP64  
772.marian\_r: -DSPEC\_LP64  
782.lbm\_r: -DSPEC\_LP64

## Base Optimization Flags

### C benchmarks:

```
-m64 -std=c18 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-ldist-scalar-expand -fenable-aggressive-gather
-ffast-math -O3 -march=znver5 -fveclib=AMDLIBM -fno-PIE -no-pie
-flto -fstruct-layout=7 -mllvm -unroll-threshold=50
-mllvm -inline-threshold=1000 -fremap-arrays -fstrip-mining
-mllvm -reduce-array-computations=3 -zopt -lamdlibm -lamdalloc
-lflang
```

### C++ benchmarks:

```
-m64 -std=c++17 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -Wl,-mllvm -Wl,-extra-inliner
-ffast-math -O3 -march=znver5 -fveclib=AMDLIBM -flto
-mllvm -unroll-threshold=100 -mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -zopt -lamdlibm -lamdalloc
-lflang
```

### Fortran benchmarks:

```
-m64 -Mstandard -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-enable-X86-prefetching
-Wl,-mllvm -Wl,-enable-aggressive-gather=true
-Wl,-mllvm -Wl,-enable-masked-gather-sequence=false -ffast-math -O3
-march=znver5 -fveclib=AMDLIBM -flto -Mrecursive -funroll-loops
-mllvm -lsr-in-nested-loop -mllvm -reduce-array-computations=3
-fepilog-vectorization-of-inductions -zopt -lamdlibm -lamdalloc
-lflang
```

### Benchmarks using both C and C++:

```
-m64 -std=c++17 -std=c18 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -Wl,-mllvm -Wl,-extra-inliner
-ffast-math -O3 -march=znver5 -fveclib=AMDLIBM -fno-PIE -no-pie
-flto -fstruct-layout=7 -mllvm -unroll-threshold=50
-mllvm -inline-threshold=1000 -fremap-arrays -fstrip-mining
```

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## Base Optimization Flags (Continued)

Benchmarks using both C and C++ (continued):

-mllvm -reduce-array-computations=3 -zopt -mllvm -unroll-threshold=100  
-mllvm -loop-unswitch-threshold=200000 -lamdlibm -lamdalloc -lflang

## Peak Optimization Flags

C benchmarks:

782.lbm\_r: basepeak = yes

C++ benchmarks:

731.astcenc\_r: basepeak = yes

736.ocio\_r: basepeak = yes

748.flightdm\_r: basepeak = yes

766.femflow\_r: basepeak = yes

767.nest\_r: basepeak = yes

772.marian\_r: basepeak = yes

Fortran benchmarks:

722.palm\_r: basepeak = yes

749.fotonik3d\_r: basepeak = yes

765.roms\_r: basepeak = yes

Benchmarks using both C and C++:

709.cactus\_r: basepeak = yes

737.gmsh\_r: basepeak = yes

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

<http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.html>

<http://www.spec.org/cpu2026/results/flags/Supermicro-Platform-Settings-V1.2-Turin-revG.html>



# SPEC CPU<sup>®</sup>2026 Floating Point Rate Result

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

<http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.xml>

<http://www.spec.org/cpu2026/results/flags/Supermicro-Platform-Settings-V1.2-Turin-revG.xml>

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