



# SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

## Supermicro

Hyper A+ Server AS -2126HS-TN  
(H14DSH , AMD EPYC 9755)

SPECrate®2026\_fp\_base = 947

SPECrate®2026\_fp\_peak = 947

CPU2026 License: 001176

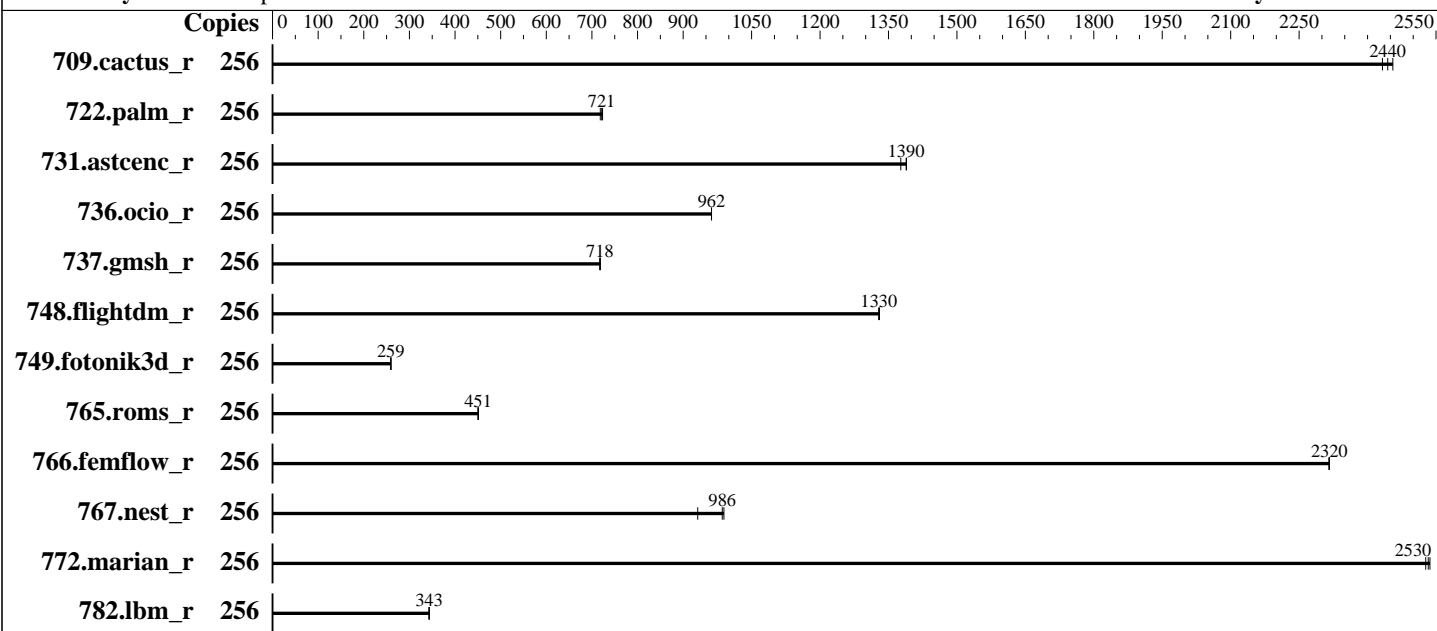
Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Feb-2026

Hardware Availability: Oct-2024

Software Availability: Jan-2026



### Hardware

CPU Name: AMD EPYC 9755  
 Max MHz: 4100  
 Nominal: 2700  
 Enabled: 256 cores, 2 chips  
 Orderable: 2 chips  
 Cache L1: 32 KB I + 48 KB D on chip per core  
 L2: 1 MB I+D on chip per core  
 L3: 512 MB I+D on chip per chip, 32 MB shared / 8 cores  
 Other: None  
 Memory: 2304 GB (24 x 96 GB 2Rx4 PC5-6400B-R)  
 Storage: 1 x 3.84 TB NVMe SSD  
 Cooling: Air  
 Other: None

### Software

OS: Ubuntu 24.04.3 LTS  
 6.8.0-90-generic  
 Compiler: C/C++/Fortran: Version 5.1.0 of AOCC  
 Compiler Category: Vendor  
 Firmware: Version 1.5 released May-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	256	89.5	2460	90.3	2430	<b>89.9</b>	<b>2440</b>	256	89.5	2460	90.3	2430	<b>89.9</b>	<b>2440</b>
722.palm_r	256	<b>468</b>	<b>721</b>	470	718	467	723	256	<b>468</b>	<b>721</b>	470	718	467	723
731.ascenc_r	256	156	1380	155	1390	<b>155</b>	<b>1390</b>	256	156	1380	155	1390	<b>155</b>	<b>1390</b>
736.ocio_r	256	233	962	233	962	<b>233</b>	<b>962</b>	256	233	962	233	962	<b>233</b>	<b>962</b>
737.gmsh_r	256	<b>164</b>	<b>718</b>	164	718	164	717	256	<b>164</b>	<b>718</b>	164	718	164	717
748.flightdm_r	256	138	1330	138	1330	<b>138</b>	<b>1330</b>	256	138	1330	138	1330	<b>138</b>	<b>1330</b>
749.fotonik3d_r	256	<b>1141</b>	<b>259</b>	1141	259	1142	259	256	<b>1141</b>	<b>259</b>	1141	259	1142	259
765.roms_r	256	894	451	<b>894</b>	<b>451</b>	895	450	256	894	451	<b>894</b>	<b>451</b>	895	450
766.femflow_r	256	162	2320	162	2320	<b>162</b>	<b>2320</b>	256	162	2320	162	2320	<b>162</b>	<b>2320</b>
767.nest_r	256	<b>206</b>	<b>986</b>	205	989	218	932	256	<b>206</b>	<b>986</b>	205	989	218	932
772.marian_r	256	160	2530	<b>160</b>	<b>2530</b>	159	2540	256	160	2530	<b>160</b>	<b>2530</b>	159	2540
782.lbm_r	256	<b>427</b>	<b>343</b>	428	343	427	343	256	<b>427</b>	<b>343</b>	428	343	427	343

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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  
Memory Target Speed = DDR6400  
Determinism Control = Manual  
Determinism Enable = Power  
TDP control = Manual  
TDP = 500  
Package Power Limit Control = Manual  
Package Power Limit = 500  
TSME = Disabled  
NUMA nodes per socket = NPS4  
SMT Control = Disabled

Sysinfo program /spec/speccpu2026rc2bsub/bin/sysinfo  
Rev: 069f95da7e7f5d81b2ce48a82150e54f  
running on smc9694turin-u24-os Mon Feb 2 03:33:28 2026

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

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### Platform Notes (Continued)

1. `uname -srvm`
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 (255.4-1ubuntu8.10)`
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
03:33:28 up 20 min, 3 users, load average: 0.07, 0.02, 0.00
USER      TTY      FROM          LOGIN@      IDLE        JCPU      PCPU      WHAT
root      tty1     10.23.196.148 03:29      20:23      0.00s     0.06s     sshd: root@notty
root      tty1     10.23.196.148 03:29      20:23      0.00s     0.10s     sshd: root@pts/0
root      tty1     -              03:28      4:48      0.07s     ?         -bash
-----
```

```
-----
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
-----
```

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### Platform Notes (Continued)

```
memory(kbytes)          unlimited
locked memory(kbytes)   2097152
process                  9286752
nofiles                  1024
vmemory(kbytes)         unlimited
locks                    unlimited
rtprio                   0
```

-----  
5. sysinfo process ancestry

```
/sbin/init
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/CPU2026.001/templogs/preenv.fprate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /spec/speccpu2026rc2bsub
```

-----  
6. /proc/cpuinfo

```
model name      : AMD EPYC 9755 128-Core Processor
vendor_id      : AuthenticAMD
cpu family     : 26
model         : 2
stepping      : 1
microcode     : 0xb002147
bugs          : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
TLB size     : 192 4K pages
cpu cores    : 128
siblings     : 128
2 physical ids (chips)
256 processors (hardware threads)
physical id 0: core ids
0-7,16-23,32-39,48-55,64-71,80-87,96-103,112-119,128-135,144-151,160-167,176-183,192-199,208-215,224-231,
240-247
physical id 1: core ids
0-7,16-23,32-39,48-55,64-71,80-87,96-103,112-119,128-135,144-151,160-167,176-183,192-199,208-215,224-231,
240-247
physical id 0: apicids
0-7,16-23,32-39,48-55,64-71,80-87,96-103,112-119,128-135,144-151,160-167,176-183,192-199,208-215,224-231,
240-247
physical id 1: apicids
256-263,272-279,288-295,304-311,320-327,336-343,352-359,368-375,384-391,400-407,416-423,432-439,448-455,4
```

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### Platform Notes (Continued)

64-471,480-487,496-503

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):                      256
On-line CPU(s) list:        0-255
Vendor ID:                   AuthenticAMD
BIOS Vendor ID:              Advanced Micro Devices, Inc.
Model name:                  AMD EPYC 9755 128-Core Processor
BIOS Model name:             AMD EPYC 9755 128-Core Processor          Unknown CPU @ 2.7GHz
BIOS CPU family:             107
CPU family:                  26
Model:                       2
Thread(s) per core:         1
Core(s) per socket:         128
Socket(s):                   2
Stepping:                    1
Frequency boost:             enabled
CPU(s) scaling MHz:         96%
CPU max MHz:                 2700.0000
CPU min MHz:                 1500.0000
BogoMIPS:                    5399.81
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
                             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_mbm_total
                             cqm_mbm_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 v_spec_ctrl
                             vnmi avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes vpclmulqdq

```

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### Platform Notes (Continued)

avx512\_vnni avx512\_bitalg avx512\_vpopcntdq la57 rdpid bus\_lock\_detect  
movdiri movdir64b overflow\_recov succor smca fsrm avx512\_vp2intersect

flush\_llc debug\_swap

L1d cache: 12 MiB (256 instances)  
L1i cache: 8 MiB (256 instances)  
L2 cache: 256 MiB (256 instances)  
L3 cache: 1 GiB (32 instances)  
NUMA node(s): 8

NUMA node0 CPU(s): 0-31  
NUMA node1 CPU(s): 32-63  
NUMA node2 CPU(s): 64-95  
NUMA node3 CPU(s): 96-127  
NUMA node4 CPU(s): 128-159  
NUMA node5 CPU(s): 160-191  
NUMA node6 CPU(s): 192-223  
NUMA node7 CPU(s): 224-255

Vulnerability Gather data sampling: Not affected  
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: Not affected  
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl  
Vulnerability Spectre v1: Mitigation; usercopy/swaps barriers and \_\_user pointer sanitization  
Vulnerability Spectre v2: Mitigation; Enhanced / Automatic IBRS; IBPB conditional; STIBP disabled; RSB filling; PBRSE-eIBRS Not affected; BHI Not affected  
Vulnerability Srbds: Not affected  
Vulnerability Tsx async abort: Not affected  
Vulnerability Vmscape: Not affected

From lscpu --cache:

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

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.  
available: 8 nodes (0-7)  
node 0 cpus: 0-31  
node 0 size: 289846 MB  
node 0 free: 289190 MB

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```

node 1 cpus: 32-63
node 1 size: 290292 MB
node 1 free: 289341 MB
node 2 cpus: 64-95
node 2 size: 290249 MB
node 2 free: 289720 MB
node 3 cpus: 96-127
node 3 size: 290292 MB
node 3 free: 289786 MB
node 4 cpus: 128-159
node 4 size: 290292 MB
node 4 free: 289778 MB
node 5 cpus: 160-191
node 5 size: 290292 MB
node 5 free: 289788 MB
node 6 cpus: 192-223
node 6 size: 290292 MB
node 6 free: 289752 MB
node 7 cpus: 224-255
node 7 size: 290205 MB
node 7 free: 289250 MB
node distances:
node   0   1   2   3   4   5   6   7
  0:  10  12  12  12  32  32  32  32
  1:  12  10  12  12  32  32  32  32
  2:  12  12  10  12  32  32  32  32
  3:  12  12  12  10  32  32  32  32
  4:  32  32  32  32  10  12  12  12
  5:  32  32  32  32  12  10  12  12
  6:  32  32  32  32  12  12  10  12
  7:  32  32  32  32  12  12  12  10

```

```

-----
9. /proc/meminfo
   MemTotal:      2377488368 kB

```

```

-----
10. who -r
    run-level 5 Feb 2 03:13

```

```

-----
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.10)
    Default Target    Status
    graphical         running

```

```

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

```

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### Platform Notes (Continued)

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 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
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=/boot/vmlinuz-6.8.0-90-generic  
 root=UUID=365b48f2-b036-433d-970b-b75b18c86cd8  
 ro

-----

14. cpupower frequency-info  
 analyzing CPU 90:  
 current policy: frequency should be within 1.50 GHz and 2.70 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: 2700MHz

-----

15. sysctl

kernel.numa_balancing	1
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

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### Platform Notes (Continued)

```

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 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/speccpu2026rc2bsub
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/nvme6n1p1 ext4  3.5T   14G  3.5T   1% /spec

```

```

-----
20. /sys/devices/virtual/dmi/id
Vendor:          Supermicro
Product:         AS -2126HS-TN
Product Family:  SMC H14
Serial:          S920464X4819694

```

(Continued on next page)



# SPEC CPU®2026 Floating Point Rate Result

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## Supermicro

Hyper A+ Server AS -2126HS-TN  
(H14DSH , AMD EPYC 9755)

SPECrate®2026\_fp\_base = 947

SPECrate®2026\_fp\_peak = 947

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

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

### Platform Notes (Continued)

#### 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:

24x Samsung M321RYGA0PB2-CCPWC 96 GB 2 rank 6400

#### 22. BIOS

(This section combines info from /sys/devices and dmidecode.)

BIOS Vendor: American Megatrends International, LLC.  
BIOS Version: 1.5  
BIOS Date: 05/12/2025  
BIOS Revision: 5.35

### 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

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

(Continued on next page)



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## Compiler Version Notes (Continued)

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



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

## Peak Optimization Flags

C benchmarks:

(Continued on next page)



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

## Peak Optimization Flags (Continued)

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>

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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