



# SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

## Supermicro

CloudDC A+ Server AS -1116CS-TN  
(H14SHM , AMD EPYC 9755)

SPECrate®2026\_fp\_base = 480

SPECrate®2026\_fp\_peak = 480

CPU2026 License: 001176

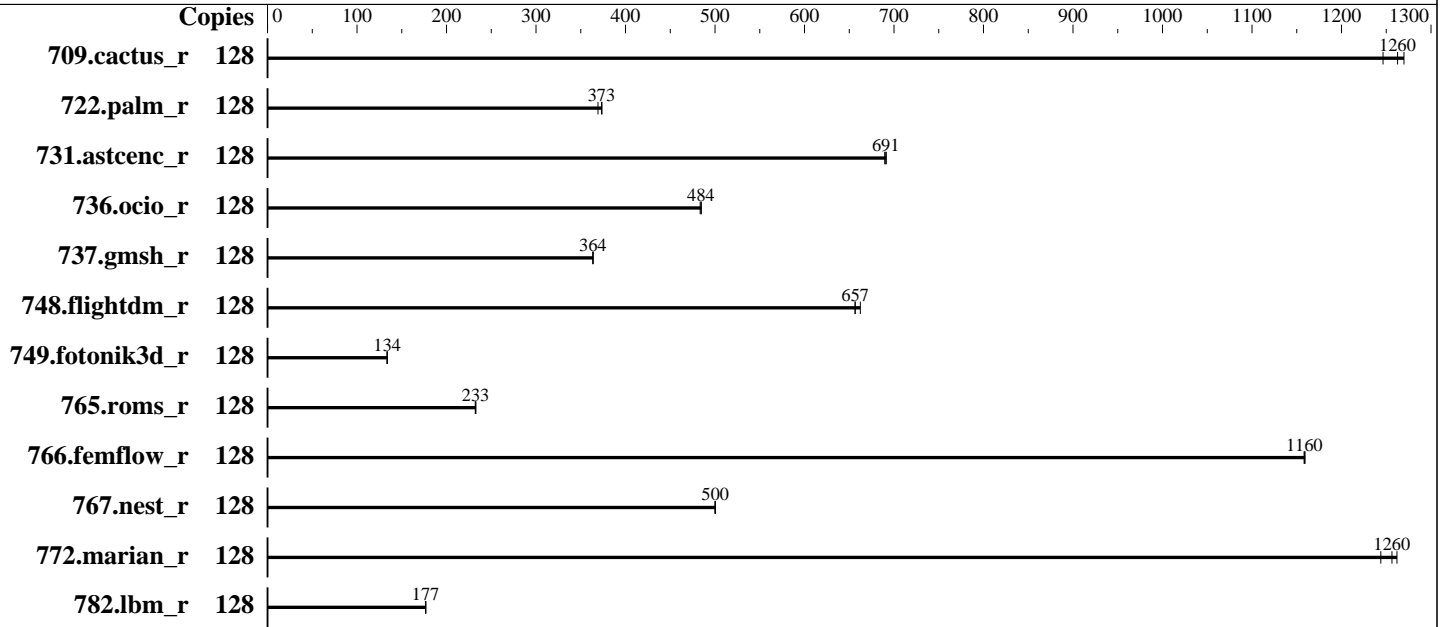
Test Sponsor: Supermicro

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: 128 cores, 1 chip  
 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: 512 MB I+D on chip per chip, 32 MB shared / 8 cores  
 Other: None  
 Memory: 768 GB (12 x 64 GB 2Rx4 PC5-6400B-R)  
 Storage: 1 x 480 GB 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 1.5a released Aug-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	128	88.1	1250	86.5	1270	<b>87.0</b>	<b>1260</b>	128	88.1	1250	86.5	1270	<b>87.0</b>	<b>1260</b>
722.palm_r	128	<b>453</b>	<b>373</b>	458	369	452	374	128	<b>453</b>	<b>373</b>	458	369	452	374
731.ascenc_r	128	<b>156</b>	<b>691</b>	156	690	156	691	128	<b>156</b>	<b>691</b>	156	690	156	691
736.ocio_r	128	231	485	<b>231</b>	<b>484</b>	232	483	128	231	485	<b>231</b>	<b>484</b>	232	483
737.gmsh_r	128	162	364	<b>162</b>	<b>364</b>	162	364	128	162	364	<b>162</b>	<b>364</b>	162	364
748.flightdm_r	128	<b>140</b>	<b>657</b>	138	662	140	656	128	<b>140</b>	<b>657</b>	138	662	140	656
749.fotonik3d_r	128	1108	134	1106	134	<b>1106</b>	<b>134</b>	128	1108	134	1106	134	<b>1106</b>	<b>134</b>
765.roms_r	128	866	233	<b>867</b>	<b>233</b>	869	232	128	866	233	<b>867</b>	<b>233</b>	869	232
766.femflow_r	128	162	1160	<b>162</b>	<b>1160</b>	162	1160	128	162	1160	<b>162</b>	<b>1160</b>	162	1160
767.nest_r	128	<b>203</b>	<b>500</b>	203	500	203	500	128	<b>203</b>	<b>500</b>	203	500	203	500
772.marian_r	128	160	1260	162	1240	<b>161</b>	<b>1260</b>	128	160	1260	162	1240	<b>161</b>	<b>1260</b>
782.lbm_r	128	415	177	<b>415</b>	<b>177</b>	415	177	128	415	177	<b>415</b>	<b>177</b>	415	177

SPECrate®2026\_fp\_base = 480

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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 smc2348turin-os Mon Feb 2 02:57:48 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`  
02:57:48 up 16 min, 3 users, load average: 0.08, 0.03, 0.01

USER	TTY	FROM	LOGIN@	IDLE	JCPU	PCPU	WHAT
root		10.23.196.148	02:53	15:59	0.00s	0.06s	sshd: root@notty
root		10.23.196.148	02:53	15:59	0.00s	0.10s	sshd: root@pts/0
amd	tty1	-	02:50	7:08	0.07s	0.01s	-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	3093886
nofiles	1024
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/CPU2026.001/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
1 physical ids (chips)
128 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 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

```

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for

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### Platform Notes (Continued)

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 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):                     1
Stepping:                     1
Frequency boost:              enabled
CPU(s) scaling MHz:           101%
CPU max MHz:                   2700.0000
CPU min MHz:                   1500.0000
BogoMIPS:                      5399.53

```

```

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 bpeext
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 nrrip_save tsc_scale vmcb_clean flushbyasid decodeassists
pausefilter pfthreshold avic v_vmsave_vmload vgif x2avic v_spec_ctrl
vnm1 avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes vpclmulqdq
avx512_vnni avx512_bitalg avx512_vpopcntdq la57 rdpid bus_lock_detect
movdiri movdir64b overflow_recov succor smca fsmr avx512_vp2intersect

```

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### Platform Notes (Continued)

```

flush_llld debug_swap
Lld cache:          6 MiB (128 instances)
Lli cache:          4 MiB (128 instances)
L2 cache:           128 MiB (128 instances)
L3 cache:           512 MiB (16 instances)
NUMA node(s):       4
NUMA node0 CPU(s): 0-31
NUMA node1 CPU(s): 32-63
NUMA node2 CPU(s): 64-95
NUMA node3 CPU(s): 96-127
Vulnerability Gather data sampling: Not affected
Vulnerability Itlb multihit:       Not affected
Vulnerability Lltf:                 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
Lld	48K	6M	12	Data	1	64	1	64
Lli	32K	4M	8	Instruction	1	64	1	64
L2	1M	128M	16	Unified	2	1024	1	64
L3	32M	512M	16	Unified	3	32768	1	64

8. numactl --hardware

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

```

available: 4 nodes (0-3)
node 0 cpus: 0-31
node 0 size: 193083 MB
node 0 free: 192264 MB
node 1 cpus: 32-63
node 1 size: 193524 MB
node 1 free: 192397 MB
node 2 cpus: 64-95
node 2 size: 193481 MB
node 2 free: 192851 MB

```

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### Platform Notes (Continued)

```
node 3 cpus: 96-127
node 3 size: 193459 MB
node 3 free: 192779 MB
node distances:
node  0  1  2  3
  0:  10 12 12 12
  1:  12 10 12 12
  2:  12 12 10 12
  3:  12 12 12 10
```

---

9. /proc/meminfo  
MemTotal: 792114724 kB

---

10. who -r  
run-level 5 Feb 2 02:41

---

11. Systemd service manager version: systemd 255 (255.4-lubuntu8.10)  
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-fc-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-generic

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### Platform Notes (Continued)

```
root=/dev/mapper/ubuntu--vg-ubuntu--lv
ro
```

-----  
14. cpupower frequency-info

```
analyzing CPU 96:
  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
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

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### Platform Notes (Continued)

```

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/mapper/ubuntu--vg-ubuntu--lv	ext4	437G	25G	394G	6%	/

-----  
20. /sys/devices/virtual/dmi/id

```

Vendor:      Supermicro
Product:     AS -1116CS-TN
Product Family: SMC H14
Serial:      S931316X4B12348

```

-----  
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:  
12x SK Hynix HMC94AHBRA277N 64 GB 2 rank 6400

-----  
22. BIOS

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

```

BIOS Vendor:      American Megatrends International, LLC.
BIOS Version:     1.5a
BIOS Date:        08/11/2025
BIOS Revision:    5.35

```



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**Tested by:** Supermicro

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

## 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  
-----

=====  
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++

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# SPEC CPU®2026 Floating Point Rate Result

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## Supermicro

CloudDC A+ Server AS -1116CS-TN  
(H14SHM , AMD EPYC 9755)

SPECrate®2026\_fp\_base = 480

SPECrate®2026\_fp\_peak = 480

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**Test Sponsor:** Supermicro  
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**Test Date:** Feb-2026  
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## Base Compiler Invocation (Continued)

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

## 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

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## Base Optimization Flags (Continued)

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:

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:

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## Peak Optimization Flags (Continued)

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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