



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Hyper A+ Server AS -2126HS-TN
(H14DSH , AMD EPYC 9575F)

SPECrate®2026_fp_base = 714

SPECrate®2026_fp_peak = 714

CPU2026 License: 001176

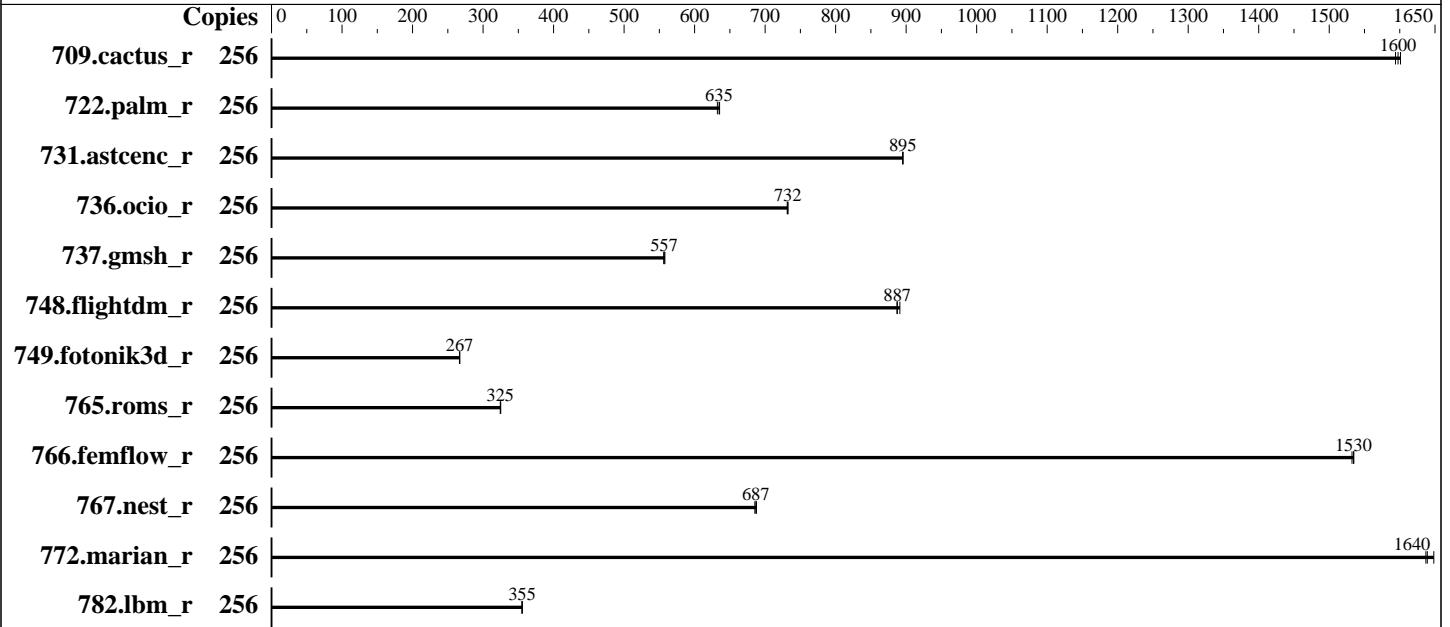
Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Feb-2026

Hardware Availability: Oct-2024

Software Availability: Jan-2026



Hardware

CPU Name: AMD EPYC 9575F
 Max MHz: 5000
 Nominal: 3300
 Enabled: 128 cores, 2 chips, 2 threads/core
 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: 256 MB I+D on chip per chip, 32 MB shared / 8 cores
 Other: None
 Memory: 1536 GB (24 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 1.5 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	138	1590	<u>137</u>	<u>1600</u>	137	1600	256	138	1590	<u>137</u>	<u>1600</u>	137	1600
722.palm_r	256	534	632	532	635	<u>532</u>	<u>635</u>	256	534	632	532	635	<u>532</u>	<u>635</u>
731.ascenc_r	256	240	895	<u>240</u>	<u>895</u>	240	896	256	240	895	<u>240</u>	<u>895</u>	240	896
736.ocio_r	256	306	732	306	731	<u>306</u>	<u>732</u>	256	306	732	306	731	<u>306</u>	<u>732</u>
737.gmsh_r	256	211	556	211	558	<u>211</u>	<u>557</u>	256	211	556	211	558	<u>211</u>	<u>557</u>
748.flightdm_r	256	206	891	207	887	<u>207</u>	<u>887</u>	256	206	891	207	887	<u>207</u>	<u>887</u>
749.fotonik3d_r	256	<u>1109</u>	<u>267</u>	1110	267	1109	267	256	<u>1109</u>	<u>267</u>	1110	267	1109	267
765.roms_r	256	<u>1242</u>	<u>325</u>	1240	325	1242	325	256	<u>1242</u>	<u>325</u>	1240	325	1242	325
766.femflow_r	256	245	1530	245	1530	<u>245</u>	<u>1530</u>	256	245	1530	245	1530	<u>245</u>	<u>1530</u>
767.nest_r	256	295	688	296	685	<u>296</u>	<u>687</u>	256	295	688	296	685	<u>296</u>	<u>687</u>
772.marian_r	256	<u>247</u>	<u>1640</u>	247	1640	245	1650	256	<u>247</u>	<u>1640</u>	247	1640	245	1650
782.lbm_r	256	413	356	413	355	<u>413</u>	<u>355</u>	256	413	356	413	355	<u>413</u>	<u>355</u>

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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 = 400
Package Power Limit Control = Manual
Package Power Limit = 400
TSME = Disabled
NUMA nodes per socket = NPS4

Sysinfo program /spec/speccpu2026rc2bsub/bin/sysinfo
Rev: 069f95da7e7f5d81b2ce48a82150e54f
running on smc4708-u24-os Mon Feb 2 16:46:05 2026

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

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1. uname -srvm

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Platform Notes (Continued)

- 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
16:46:05 up 1:20, 2 users, load average: 0.13, 0.03, 0.01
USER      TTY      FROM          LOGIN@      IDLE        JCPU      PCPU      WHAT
root      10.23.196.148 15:45        1:20m      0.00s      0.06s     sshd: root@notty
root      10.23.196.148 15:45        1:20m      0.00s      0.11s     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
-----
```

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Platform Notes (Continued)

```
process          6190329
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/CPU2026.002/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 9575F 64-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       : 64
siblings        : 128
2 physical ids (chips)
256 processors (hardware threads)
physical id 0:  core ids 0-63
physical id 1:  core ids 0-63
physical id 0:  apicids 0-127
physical id 1:  apicids 128-255
```

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

7. lscpu

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Platform Notes (Continued)

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 9575F 64-Core Processor
BIOS Model name:             AMD EPYC 9575F 64-Core Processor           Unknown CPU @ 3.3GHz
BIOS CPU family:             107
CPU family:                   26
Model:                        2
Thread(s) per core:          2
Core(s) per socket:          64
Socket(s):                    2
Stepping:                     1
Frequency boost:              enabled
CPU(s) scaling MHz:          101%
CPU max MHz:                  3300.0000
CPU min MHz:                  1500.0000
BogoMIPS:                     6599.63
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 aperfmpperf 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 bpxext
                                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
                                vnni 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 fsrm avx512_vp2intersect
                                flush_lld debug_swap
L1d cache:                    6 MiB (128 instances)
L1i cache:                    4 MiB (128 instances)
L2 cache:                     128 MiB (128 instances)

```

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Platform Notes (Continued)

```

L3 cache:                               512 MiB (16 instances)
NUMA node(s):                             8
NUMA node0 CPU(s):                        0-15,128-143
NUMA node1 CPU(s):                        16-31,144-159
NUMA node2 CPU(s):                        32-47,160-175
NUMA node3 CPU(s):                        48-63,176-191
NUMA node4 CPU(s):                        64-79,192-207
NUMA node5 CPU(s):                        80-95,208-223
NUMA node6 CPU(s):                        96-111,224-239
NUMA node7 CPU(s):                        112-127,240-255
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
                                           always-on; 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	6M	12	Data	1	64	1	64
L1i	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: 8 nodes (0-7)
node 0 cpus: 0-15,128-143
node 0 size: 193100 MB
node 0 free: 192641 MB
node 1 cpus: 16-31,144-159
node 1 size: 193524 MB
node 1 free: 193145 MB
node 2 cpus: 32-47,160-175
node 2 size: 193481 MB
node 2 free: 193068 MB

```

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Platform Notes (Continued)

```

node 3 cpus: 48-63,176-191
node 3 size: 193524 MB
node 3 free: 192670 MB
node 4 cpus: 64-79,192-207
node 4 size: 193524 MB
node 4 free: 193193 MB
node 5 cpus: 80-95,208-223
node 5 size: 193524 MB
node 5 free: 193139 MB
node 6 cpus: 96-111,224-239
node 6 size: 193524 MB
node 6 free: 193067 MB
node 7 cpus: 112-127,240-255
node 7 size: 193453 MB
node 7 free: 192779 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:          1584803992 kB

```

```

-----
10. who -r
    run-level 5 Feb 2 15:26

```

```

-----
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.10)
    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 nvmmf-autoconnect open-iscsi open-vm-tools
                   pollinate rsyslog secureboot-db setvtrgb snapd sysstat systemd-networkd

```

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Platform Notes (Continued)

```

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-6.8.0-90-generic
root=UUID=37460a2f-d72f-4128-8c72-fa141f99c424
ro

```

```

-----
14. cpupower frequency-info
analyzing CPU 208:
  current policy: frequency should be within 1.50 GHz and 3.30 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: 3300MHz

```

```

-----
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

```

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Platform Notes (Continued)

```

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 24.04.3 LTS

```

```

-----
19. Disk information
SPEC is set to: /spec/speccpu2026rc2bsub
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/nvme0n1p2  ext4  457G  213G  222G  49% /

```

```

-----
20. /sys/devices/virtual/dmi/id
Vendor:          Supermicro
Product:         AS -2126HS-TN
Product Family:  SMC H14
Serial:          S920464X4524708

```

```

-----
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

```

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(H14DSH , AMD EPYC 9575F)

SPECrate®2026_fp_base = 714

SPECrate®2026_fp_peak = 714

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

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

Platform Notes (Continued)

"DMTF SMBIOS" standard.

Memory:

24x Samsung M321R8GA0PB1-CCPWC 64 GB 2 rank 6400

22. BIOS

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

BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 1.5
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

=====
Fortran | 722.palm_r(base) 749.fotonik3d_r(base) 765.roms_r(base)

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Compiler Version Notes (Continued)

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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.astcenc_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

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Base Optimization Flags (Continued)

C benchmarks (continued):

```
-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:

```
782.lbm_r: basepeak = yes
```

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Peak Optimization Flags (Continued)

C++ benchmarks:

731.ascenc_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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