SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Lenovo Global Technology

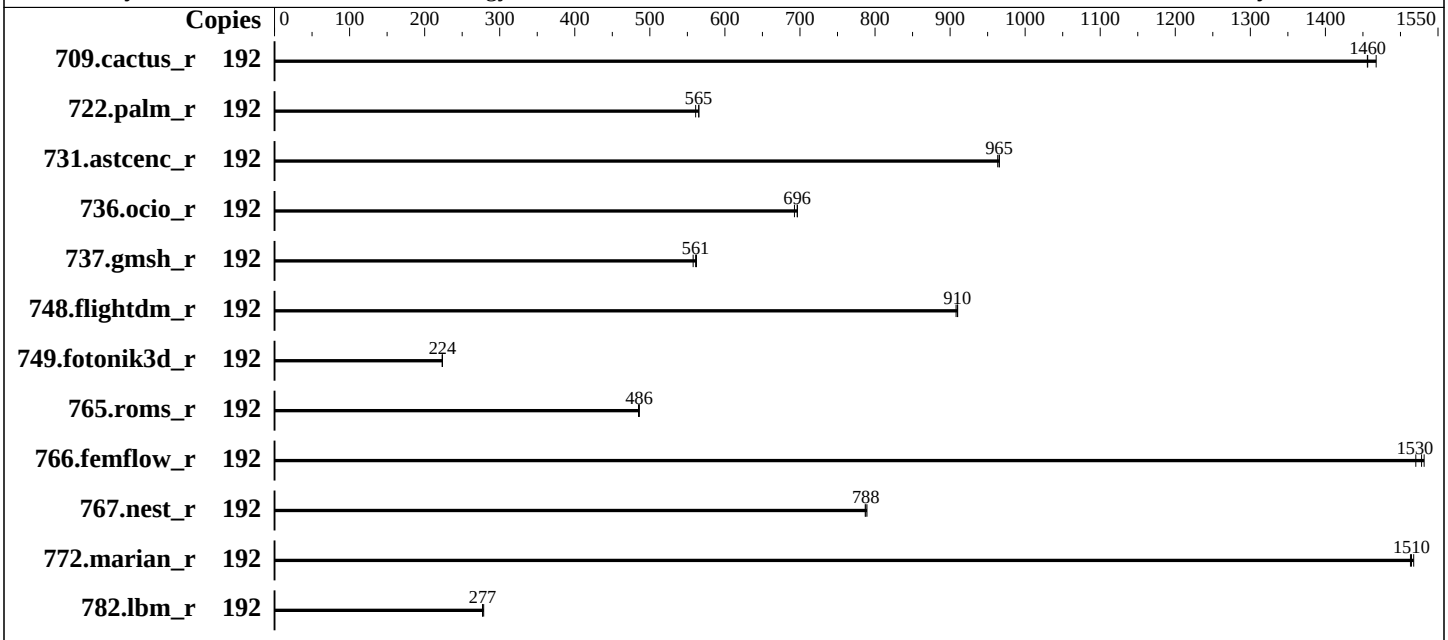
ThinkSystem SR665 V3
(2.55 GHz, AMD EPYC 9684X)

SPECrate®2026_fp_base = 707

SPECrate®2026_fp_peak = 707

CPU2026 License: 9017
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test Date: Feb-2026
Hardware Availability: Dec-2023
Software Availability: Jan-2026



Hardware

CPU Name:	AMD EPYC 9684X
Max MHz:	3700
Nominal:	2550
Enabled:	192 cores, 2 chips
Orderable:	1,2 chips
Cache L1:	32 KB I + 32 KB D on chip per core
L2:	1 MB I+D on chip per core
L3:	1152 MB I+D on chip per chip, 96 MB shared / 8cores
Other:	None
Memory:	768 GB (24 x 32 GB 2Rx8 PC5-4800B-R)
Storage:	1 x 960GB M.2 NVMe SSD
Cooling:	Air
Other:	None

Software

OS:	SUSE Linux Enterprise Server 15 SP7 Kernel 6.4.0-150700.51-default
Compiler:	C/C++/Fortran: Version 5.1.0 of AOCC
Compiler Category:	Vendor
Firmware:	Lenovo BIOS Version KAE141G 5.81 released Jan-2026
File System:	xfs
System State:	Run level 3 (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

SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Lenovo Global Technology

ThinkSystem SR665 V3
(2.55 GHz, AMD EPYC 9684X)

SPECrate®2026_fp_base = 707

SPECrate®2026_fp_peak = 707

CPU2026 License: 9017
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test Date: Feb-2026
Hardware Availability: Dec-2023
Software Availability: Jan-2026

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
709.cactus_r	192	112	1470	**113**	**1460**	113	1460	192	112	1470	**113**	**1460**	113	1460
722.palm_r	192	**448**	**565**	452	561	448	565	192	**448**	**565**	452	561	448	565
731.astcenc_r	192	167	966	**167**	**965**	167	963	192	167	966	**167**	**965**	167	963
736.ocio_r	192	**241**	**696**	243	693	241	696	192	**241**	**696**	243	693	241	696
737.gmsh_r	192	157	562	158	558	**157**	**561**	192	157	562	158	558	**157**	**561**
748.flightdm_r	192	151	910	**151**	**910**	151	908	192	151	910	**151**	**910**	151	908
749.fotonik3d_r	192	992	224	**992**	**224**	994	223	192	992	224	**992**	**224**	994	223
765.roms_r	192	**623**	**486**	622	486	624	485	192	**623**	**486**	622	486	624	485
766.femflow_r	192	**184**	**1530**	185	1520	184	1530	192	**184**	**1530**	185	1520	184	1530
767.nest_r	192	**193**	**788**	193	787	193	789	192	**193**	**788**	193	787	193	789
772.marian_r	192	200	1520	**200**	**1510**	200	1510	192	200	1520	**200**	**1510**	200	1510
782.lbm_r	192	**397**	**277**	397	277	395	279	192	**397**	**277**	397	277	395	279

SPECrate®2026_fp_base = 707

SPECrate®2026_fp_peak = 707

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.
```

(Continued on next page)

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 =
     "/home/cpu2026-0.902.0-amd_aocc510_znver5_A1/amd_rate_aocc510_znver5_A_l
     ib/lib:/home/cpu2026-0.902.0-amd_aocc510_znver5_A1/amd_rate_aocc510_znve
     r5_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 configuration:
Choose Operating Mode set to Maximum Performance and then set it to Custom Mode
NUMA Nodes per Socket set to NPS4
L2 Stream HW Prefetcher set to Disabled
SMT Mode set to Disabled

 Sysinfo program /home/cpu2026-0.902.0-amd_aocc510_znver5_A1/bin/sysinfo
 Rev: 069f95da7e7f5d81b2ce48a82150e54f
 running on localhost Wed Feb  4 17:18:27 2026

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

 ------------------------------------------------------------
 Table of contents
 ------------------------------------------------------------
  1. uname -srvm
  2. w
  3. Username
  4. ulimit -a
  5. sysinfo process ancestry
  6. /proc/cpuinfo
  7. lscpu
```

(Continued on next page)

Platform Notes (Continued)

```
 8. numactl --hardware
 9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 254 (254.24+suse.148.g83b9060b6e)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. tuned-adm active
16. sysctl
17. /sys/kernel/mm/transparent_hugepage
18. /sys/kernel/mm/transparent_hugepage/khugepaged
19. OS release
20. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. BIOS
------------------------------------------------------------

------------------------------------------------------------
1. uname -srvm
  Linux 6.4.0-150700.51-default #1 SMP PREEMPT_DYNAMIC Wed Apr 30 21:35:43 UTC 2025 (6930611) x86_64

------------------------------------------------------------
2. w
   17:18:27 up 4 min,  1 user,  load average: 0.50, 0.52, 0.26
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT

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

------------------------------------------------------------
4. ulimit -a
  core file size          (blocks, -c) unlimited
  data seg size           (kbytes, -d) unlimited
  scheduling priority             (-e) 0
  file size               (blocks, -f) unlimited
  pending signals                 (-i) 3094535
  max locked memory       (kbytes, -l) 2097152
  max memory size         (kbytes, -m) unlimited
  open files                      (-n) 1024
  pipe size            (512 bytes, -p) 8
  POSIX message queues     (bytes, -q) 819200
  real-time priority              (-r) 0
  stack size              (kbytes, -s) unlimited
  cpu time               (seconds, -t) unlimited
  max user processes              (-u) 3094535
```

(Continued on next page)

Platform Notes (Continued)

```
  virtual memory          (kbytes, -v) unlimited
  file locks                      (-x) unlimited

------------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd --switched-root --system --deserialize=42
 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
 sshd: root [priv]
 sshd: root@notty
 /bin/bash ./02.remote_local_SPECcpu_1.02.sh
 /bin/bash ./Run023-compliant-amd-ratefp_base.sh
 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/CPU2026.032/templogs/preenv.fprate.032.0.log --lognum 032.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2026-0.902.0-amd_aocc510_znver5_A1

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : AMD EPYC 9684X 96-Core Processor
    vendor_id       : AuthenticAMD
    cpu family      : 25
    model           : 17
    stepping        : 2
    microcode       : 0xa101253
    bugs            : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass srso
    TLB size        : 3584 4K pages
    cpu cores       : 96
    siblings        : 96
    2 physical ids (chips)
    192 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
   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
   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
    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
 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 2.40.4:
  Architecture:                         x86_64
```


(Continued on next page)

Platform Notes (Continued)

```
CPU op-mode(s):                  32-bit, 64-bit
Address sizes:                   52 bits physical, 57 bits virtual
Byte Order:                      Little Endian
CPU(s):                          192
On-line CPU(s) list:             0-191
Vendor ID:                       AuthenticAMD
Model name:                      AMD EPYC 9684X 96-Core Processor
CPU family:                      25
Model:                           17
Thread(s) per core:              1
Core(s) per socket:              96
Socket(s):                       2
Stepping:                        2
BogoMIPS:                        5091.96
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 svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch
                                 osvw ibs skinit wdt tce topoext perfctr_core perfctr_nb bpext
                                 perfctr_llc mwaitx cpb cat_l3 cdp_l3 hw_pstate ssbd mba perfmon_v2
                                 ibrs ibpb stibp ibrs_enhanced vmmcall fsgsbase 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 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 avx512_vnni avx512_bitalg
                                 avx512_vpopcntdq la57 rdpid overflow_recov succor smca fsrm flush_l1d
                                 debug_swap
Virtualization:                  AMD-V
L1d cache:                       6 MiB (192 instances)
L1i cache:                       6 MiB (192 instances)
L2 cache:                        192 MiB (192 instances)
L3 cache:                        2.3 GiB (24 instances)
NUMA node(s):                    8
NUMA node0 CPU(s):               0-23
NUMA node1 CPU(s):               24-47
NUMA node2 CPU(s):               48-71
NUMA node3 CPU(s):               72-95
NUMA node4 CPU(s):               96-119
NUMA node5 CPU(s):               120-143
NUMA node6 CPU(s):               144-167
NUMA node7 CPU(s):               168-191
```

(Continued on next page)

Platform Notes (Continued)

```
  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:   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
                                        disabled; RSB filling; PBRSB-eIBRS Not affected; BHI Not affected
  Vulnerability Srbds:                  Not affected
  Vulnerability Tsx async abort:        Not affected

From lscpu --cache:
     NAME ONE-SIZE ALL-SIZE WAYS TYPE        LEVEL  SETS PHY-LINE COHERENCY-SIZE
     L1d       32K       6M    8 Data            1    64        1             64
     L1i       32K       6M    8 Instruction     1    64        1             64
     L2         1M     192M    8 Unified         2  2048        1             64
     L3        96M     2.3G   16 Unified         3 98304        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: 0-23
  node 0 size: 96418 MB
  node 0 free: 95975 MB
  node 1 cpus: 24-47
  node 1 size: 96761 MB
  node 1 free: 96444 MB
  node 2 cpus: 48-71
  node 2 size: 96761 MB
  node 2 free: 96427 MB
  node 3 cpus: 72-95
  node 3 size: 96761 MB
  node 3 free: 96390 MB
  node 4 cpus: 96-119
  node 4 size: 96761 MB
  node 4 free: 96387 MB
  node 5 cpus: 120-143
  node 5 size: 96761 MB
  node 5 free: 96426 MB
  node 6 cpus: 144-167
  node 6 size: 96761 MB
```

(Continued on next page)

Platform Notes (Continued)

```
  node 6 free: 96420 MB
  node 7 cpus: 168-191
  node 7 size: 96674 MB
  node 7 free: 96307 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:       792229016 kB

------------------------------------------------------------
10. who -r
  run-level 3 Feb 4 17:15

------------------------------------------------------------
11. Systemd service manager version: systemd 254 (254.24+suse.148.g83b9060b6e)
  Default Target  Status
  multi-user      running

------------------------------------------------------------
12. Services, from systemctl list-unit-files
  STATE            UNIT FILES
  enabled          YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron getty@ irqbalance issue-generator
                   kbdsettings klog lvm2-monitor nscd nvmefc-boot-connections nvmf-autoconnect postfix
                   purge-kernels rollback rsyslog smartd sshd systemd-pstore tuned wicked wickedd-auto4
                   wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
  enabled-runtime  systemd-remount-fs
  disabled         autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
                   chronyd console-getty cups cups-browsed debug-shell ebtables exchange-bmc-os-info
                   firewalld fsidd gpm grub2-once haveged hwloc-dump-hwdata ipmi ipmievd issue-add-ssh-keys
                   kexec-load lunmask man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd
                   serial-getty@ smartd_generate_opts snmpd snmptrapd systemd-boot-check-no-failures
                   systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync
                   systemd-timesyncd
  generated        ntp_sync
  indirect         systemd-userdbd wickedd

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

(Continued on next page)

Platform Notes (Continued)

```
 13. Linux kernel boot-time arguments, from /proc/cmdline
   BOOT_IMAGE=/boot/vmlinuz-6.4.0-150700.51-default
   root=UUID=548b98ec-c242-4959-8c74-ed91816d4845
   splash=silent
   mitigations=auto
   quiet
   security=apparmor

 ------------------------------------------------------------
 14. cpupower frequency-info
   analyzing CPU 114:
     Unable to determine current policy
     boost state support:
       Supported: yes
       Active: yes

 ------------------------------------------------------------
 15. tuned-adm active
   Current active profile: balanced

 ------------------------------------------------------------
 16. 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

 ------------------------------------------------------------
 17. /sys/kernel/mm/transparent_hugepage
   defrag          [always] defer defer+madvise madvise never
   enabled         [always] madvise never
   hpage_pmd_size  2097152
```

(Continued on next page)

Platform Notes (Continued)

```
  shmem_enabled   always within_size advise [never] deny force

------------------------------------------------------------
18. /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

------------------------------------------------------------
19. OS release
  From /etc/*-release /etc/*-version
  os-release SUSE Linux Enterprise Server 15 SP7

------------------------------------------------------------
20. Disk information
SPEC is set to: /home/cpu2026-0.902.0-amd_aocc510_znver5_A1
  Filesystem     Type  Size  Used Avail Use% Mounted on
  /dev/nvme0n1p3 xfs   893G  117G  777G  14% /

------------------------------------------------------------
21. /sys/devices/virtual/dmi/id
    Vendor:          Lenovo
    Product:         ThinkSystem SR665 V3 MB,Genoa,Kauai,DDR5,Kauai,2U
    Product Family: ThinkSystem
    Serial:          1234567890

------------------------------------------------------------
22. dmidecode
  Additional information from dmidecode 3.6 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:
    6x Samsung M321R4GA3BB0-CQKDG 32 GB 2 rank 4800
    8x Samsung M321R4GA3BB0-CQKEG 32 GB 2 rank 4800
    2x Samsung M321R4GA3BB0-CQKMG 32 GB 2 rank 4800
    8x Samsung M321R4GA3BB0-CQKVG 32 GB 2 rank 4800


------------------------------------------------------------
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:       Lenovo
```

(Continued on next page)

Platform Notes (Continued)

```
    BIOS Version:      KAE141G-5.81
    BIOS Date:         01/21/2026
    BIOS Revision:     5.81
    Firmware Revision: 56.20
```

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++

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
-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

(Continued on next page)

Base Optimization Flags (Continued)

C++ benchmarks (continued):
-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

C++ benchmarks:

731.astcenc_r: basepeak = yes

736.ocio_r: basepeak = yes

748.flightdm_r: basepeak = yes

766.femflow_r: basepeak = yes

(Continued on next page)

Peak Optimization Flags (Continued)

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/Lenovo-Platform-SPECcpu-Flags-V1.2-Turin-M.html`
`http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2026/results/flags/Lenovo-Platform-SPECcpu-Flags-V1.2-Turin-M.xml`
`http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.xml`

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

Tested with SPEC CPU®2026 v0.902.0 on 2026-02-04 04:18:27-0500.
Report generated on 2026-08-11 15:17:33 by CPU2026 PDF formatter (unknown).
Originally published on 2026-05-05.