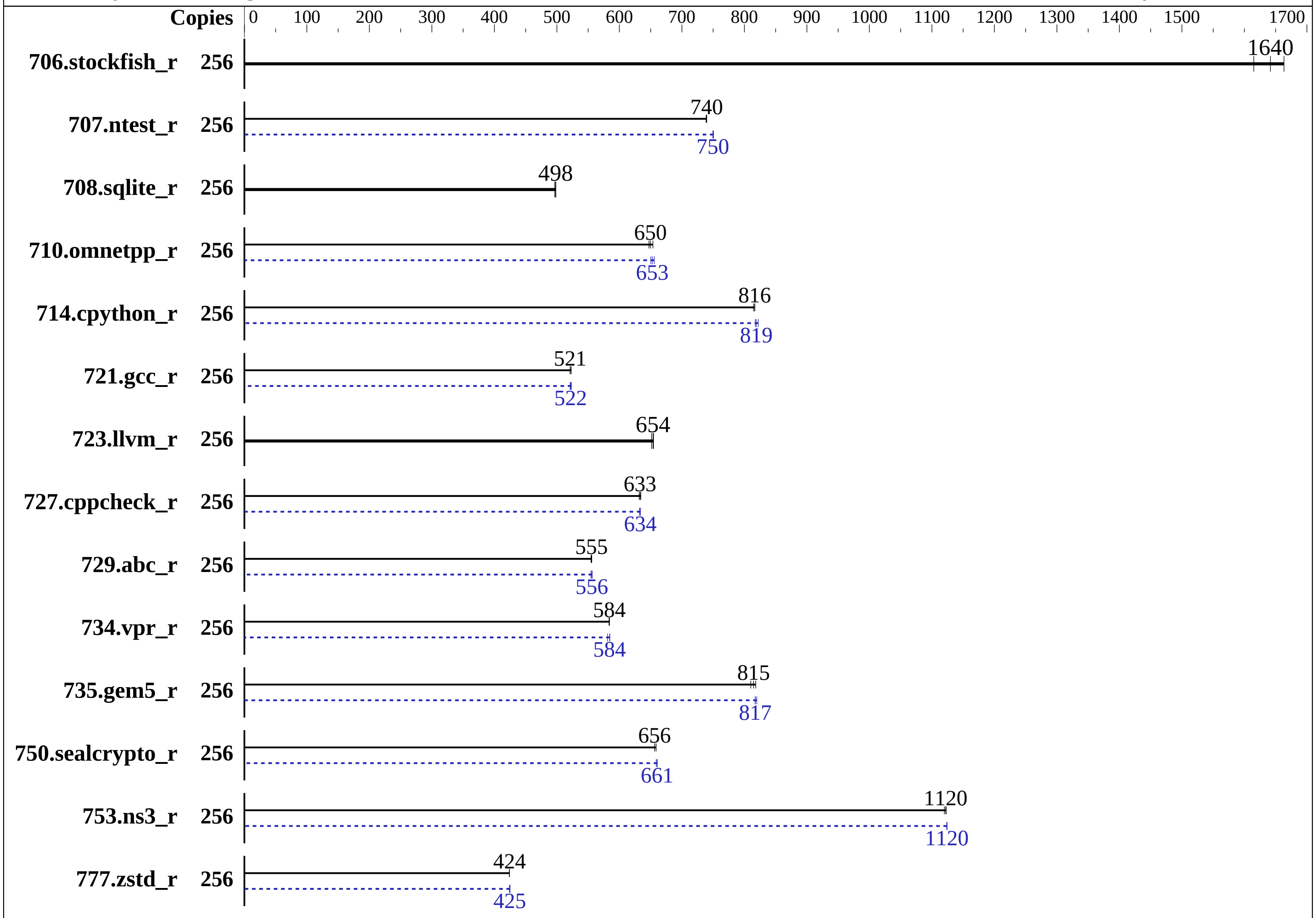
SPEC CPU®2026 Integer Rate Result

Maginfra Co., Ltd.
QR8218-D3 (AMD EPYC 9555)

SPECrate®2026_int_base = 691

SPECrate®2026_int_peak = 693

CPU2026 License:	9087	**Test Date:**	Jul-2026
Test Sponsor:	Maginfra Co., Ltd.	**Hardware Availability:**	Dec-2025
Tested by:	Maginfra Co., Ltd.	**Software Availability:**	Jan-2026



Hardware

CPU Name:	AMD EPYC 9555
Max MHz:	4400
Nominal:	3200
Enabled:	128 cores, 2 chips, 2 threads/core
Orderable:	1,2 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 4 TB NVME SSD
Cooling:	Air
Other:	None

Software

OS:	SUSE Linux Enterprise Server 15 SP7 6.4.0-150700.51-default
Compiler:	C/C++/Fortran: Version 5.1.0 of AOCC
Compiler Category:	Vendor
Firmware:	Version 01.14.00 released Dec-2025
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.

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
706.stockfish_r	256	200	1610	**196**	**1640**	194	1660	256	200	1610	**196**	**1640**	194	1660
707.ntest_r	256	205	740	205	739	**205**	**740**	256	**202**	**750**	202	751	202	750
708.sqlite_r	256	271	498	**271**	**498**	272	497	256	271	498	**271**	**498**	272	497
710.omnetpp_r	256	**192**	**650**	190	654	192	647	256	190	656	191	650	**191**	**653**
714.cpython_r	256	**150**	**816**	151	815	150	817	256	**150**	**819**	150	818	149	822
721.gcc_r	256	**337**	**521**	336	523	337	521	256	**336**	**522**	337	521	336	523
723.llvm_r	256	199	651	198	655	**199**	**654**	256	199	651	198	655	**199**	**654**
727.cppcheck_r	256	145	634	145	632	**145**	**633**	256	**145**	**634**	145	632	145	634
729.abc_r	256	**212**	**555**	211	556	212	555	256	212	555	211	556	**211**	**556**
734.vpr_r	256	202	584	**202**	**584**	202	583	256	202	585	203	581	**202**	**584**
735.gem5_r	256	152	818	**153**	**815**	154	810	256	**153**	**817**	153	817	152	820
750.sealcrypto_r	256	208	659	**209**	**656**	209	656	256	**208**	**661**	208	659	208	661
753.ns3_r	256	140	1120	**140**	**1120**	140	1120	256	**140**	**1120**	140	1120	140	1120
777.zstd_r	256	389	424	389	424	**389**	**424**	256	**388**	**425**	389	424	388	425
SPECrate®2026_int_base =		691												
SPECrate®2026_int_peak =		693												

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.
```

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Operating System Notes (Continued)

```
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.
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/amd_rate_aocc510_znver5_B_lib/lib:/home/CPU2026/amd_rate_
     aocc510_znver5_B_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:
 NUMA nodes per socket = NPS4
 Determinism Slider = Power
 cTDP Control = Manual
 cTDP = 500
 Package Power Limit Control = Manual
 Package Power Limit  = 500

 Sysinfo program /home/CPU2026/bin/sysinfo
 Rev: 779ab21020787073335a329f3a45e2cd
 running on localhost Thu Jul  9 20:21:06 2026

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

 ------------------------------------------------------------
 Table of contents
 ------------------------------------------------------------
  1. uname -srvm
  2. w
  3. Username
```

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Platform Notes (Continued)

```
  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 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
   20:21:06 up 1 min,  1 user,  load average: 0.46, 0.21, 0.08
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
  root     tty1     -                20:19   18.00s  3.47s  2.49s python3 ./run_amd_rate_aocc510_znver5_B1.py

------------------------------------------------------------
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) 6190147
  max locked memory       (kbytes, -l) 2048
  max memory size         (kbytes, -m) unlimited
  open files                      (-n) 1024
  pipe size            (512 bytes, -p) 8
```

(Continued on next page)

Platform Notes (Continued)

```
  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) 6190147
  virtual memory          (kbytes, -v) unlimited
  file locks                      (-x) unlimited

------------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd --switched-root --system --deserialize=42
 login -- root
 -bash
 python3 ./run_amd_rate_aocc510_znver5_B1.py
 runcpu --config amd_rate_aocc510_znver5_B1.cfg --tune all --reportable --iterations 3 intrate
 runcpu --configfile amd_rate_aocc510_znver5_B1.cfg --tune all --reportable --iterations 3 --nopower
   --runmode rate --tune base:peak --size test:train:refrate intrate --nopreenv --note-preenv --logfile
   $SPEC/tmp/CPU2026.013/templogs/preenv.intrate.013.0.log --lognum 013.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /home/CPU2026

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : AMD EPYC 9555 64-Core Processor
    vendor_id       : AuthenticAMD
    cpu family      : 26
    model           : 2
    stepping        : 1
    microcode       : 0xb00215a
    bugs            : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass srso
    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

From lscpu from util-linux 2.40.4:
  Architecture:                         x86_64
```

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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):                               256
On-line CPU(s) list:                  0-255
Vendor ID:                            AuthenticAMD
Model name:                           AMD EPYC 9555 64-Core Processor
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:                          3200.0000
CPU min MHz:                          1500.0000
BogoMIPS:                             6389.92
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 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
                                      avx512_vnni avx512_bitalg avx512_vpopcntdq la57 rdpid bus_lock_detect
                                      movdiri movdir64b overflow_recov succor smca fsrm avx512_vp2intersect
                                      flush_l1d debug_swap hv_inuse_wr_allowed srso_user_kernel_no
                                      amd_lbr_pmc_freeze
Virtualization:                       AMD-V
L1d cache:                            6 MiB (128 instances)
L1i cache:                            4 MiB (128 instances)
L2 cache:                             128 MiB (128 instances)
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
```

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Platform Notes (Continued)

```
    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 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; IBPB on VMEXIT only
    Vulnerability Spec store bypass:      Mitigation; Speculative Store Bypass disabled via prctl
    Vulnerability Spectre v1:             Mitigation; usercopy/swapgs barriers and __user pointer sanitization
    Vulnerability Spectre v2:             Mitigation; Enhanced / Automatic IBRS; IBPB conditional; STIBP
                                          always-on; RSB filling; 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       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: 193049 MB
    node 0 free: 192433 MB
    node 1 cpus: 16-31,144-159
    node 1 size: 193527 MB
    node 1 free: 193122 MB
    node 2 cpus: 32-47,160-175
    node 2 size: 193527 MB
    node 2 free: 193040 MB
    node 3 cpus: 48-63,176-191
    node 3 size: 193527 MB
    node 3 free: 193042 MB
    node 4 cpus: 64-79,192-207
    node 4 size: 193527 MB
```

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Platform Notes (Continued)

```
    node 4 free: 193054 MB
    node 5 cpus: 80-95,208-223
    node 5 size: 193488 MB
    node 5 free: 193055 MB
    node 6 cpus: 96-111,224-239
    node 6 size: 193527 MB
    node 6 free: 193095 MB
    node 7 cpus: 112-127,240-255
    node 7 size: 193389 MB
    node 7 free: 192946 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:       1584705416 kB

  ------------------------------------------------------------
  10. who -r
    run-level 3 Jul 9 20:19

  ------------------------------------------------------------
  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 display-manager getty@ irqbalance
                     issue-generator kbdsettings klog lvm2-monitor nscd nvmefc-boot-connections
                     nvmf-autoconnect postfix purge-kernels rollback rsyslog smartd systemd-pstore
    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 sshd systemd-boot-check-no-failures
                     systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync
```

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Platform Notes (Continued)

```
                 systemd-timesyncd tuned udisks2 vncserver@ wicked wickedd-auto4 wickedd-dhcp4
                   wickedd-dhcp6 wickedd-nanny
  indirect         systemd-userdbd wickedd

------------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.4.0-150700.51-default
  root=UUID=b599d87c-474e-4c72-b781-36d0bcedf18d
  splash=silent
  mitigations=auto
  quiet
  security=apparmor

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 99:
    current policy: frequency should be within 1.50 GHz and 3.20 GHz.
                    The governor "performance" may decide which speed to use
                    within this range.
    boost state support:
      Supported: yes
      Active: yes

------------------------------------------------------------
15. tuned-adm active
  It seems that tuned daemon is not running, preset profile is not activated.
  Preset profile: throughput-performance

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

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Platform Notes (Continued)

```
  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
  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
  Filesystem     Type  Size  Used Avail Use% Mounted on
  /dev/nvme0n1p2 xfs   929G   73G  856G   8% /

------------------------------------------------------------
21. /sys/devices/virtual/dmi/id
    Vendor:         Maginfra
    Product:        QR8218-D3
    Product Family: Not specified
    Serial:         00000000

------------------------------------------------------------
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:
    12x Samsung M321R8GA0PB2-CCPEC 64 GB 2 rank 6400
    11x Samsung M321R8GA0PB2-CCPPC 64 GB 2 rank 6400
```

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Platform Notes (Continued)

```
    1x Samsung M321R8GA0PB2-CCPWC 64 GB 2 rank 6400


------------------------------------------------------------
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:       American Megatrends International, LLC.
   BIOS Version:      01.14.00
   BIOS Date:         12/25/2025
```

Compiler Version Notes

```
==============================================================================
C      | 708.sqlite_r(base, peak) 714.cpython_r(base, peak) 777.zstd_r(base,
       | peak)
------------------------------------------------------------------------------
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++    | 706.stockfish_r(base, peak) 707.ntest_r(base, peak)
       | 727.cppcheck_r(base, peak) 753.ns3_r(base, peak)
------------------------------------------------------------------------------
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 | 710.omnetpp_r(base, peak) 721.gcc_r(base, peak) 723.llvm_r(base,
       | peak) 729.abc_r(base, peak) 734.vpr_r(base, peak) 735.gem5_r(base,
       | peak) 750.sealcrypto_r(base, peak)
------------------------------------------------------------------------------
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++

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

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
-Wl,-mllvm -Wl,-extra-inliner -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 -lflang
-lamdalloc

C++ benchmarks:
-m64 -std=c++17 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver5
-fveclib=AMDLIBM -flto -mllvm -unroll-threshold=100
-mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -zopt -fno-PIE -no-pie
-fvirtual-function-elimination -fvisibility=hidden -lamdlibm -lflang
-lamdalloc

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 -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 -fvirtual-function-elimination
-fvisibility=hidden -lamdlibm -lflang -lamdalloc

Peak Compiler Invocation

C benchmarks:
`clang`

C++ benchmarks:
`clang++`

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

Peak Optimization Flags

C benchmarks:

708.sqlite_r: `basepeak = yes`

714.cpython_r: `-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 -Wl,-mllvm -Wl,-extra-inliner`
`-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`

777.zstd_r: `Same as 714.cpython_r`

C++ benchmarks:

706.stockfish_r: `basepeak = yes`

707.ntest_r: `-m64 -std=c++17`
`-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6`
`-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast`
`-march=znver5 -fveclib=AMDLIBM -flto`
`-mllvm -unroll-threshold=100`
`-mllvm -reduce-array-computations=3 -zopt -fno-PIE`
`-no-pie -fvirtual-function-elimination`
`-fvisibility=hidden -lamdlibm -lflang -lamdalloc`

727.cppcheck_r: `-m64 -std=c++17`
`-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6`
`-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3`

(Continued on next page)

Peak Optimization Flags (Continued)

727.cppcheck_r (continued):
-march=znver5 -fveclib=AMDLIBM -flto
-mllvm -unroll-threshold=100
-mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -zopt -fno-PIE
-no-pie -fvirtual-function-elimination
-fvisibility=hidden -lamdlibm -lamdalloc -lflang

753.ns3_r: Same as 727.cppcheck_r

Benchmarks using both C and C++:

710.omnetpp_r: -m64 -std=c++17 -std=c18
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -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
-fvirtual-function-elimination -fvisibility=hidden
-lamdlibm -lamdalloc -lflang

721.gcc_r: -m64 -std=c++17 -std=c18
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast
-march=znver5 -fveclib=AMDLIBM -flto -fstruct-layout=7
-mllvm -unroll-threshold=50 -fremap-arrays -fstrip-mining
-mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3 -zopt
-mllvm -unroll-threshold=100 -fno-PIE -no-pie
-fvirtual-function-elimination -fvisibility=hidden
-lamdlibm -lflang -lamdalloc

723.llvm_r: basepeak = yes

729.abc_r: Same as 721.gcc_r

734.vpr_r: Same as 710.omnetpp_r

735.gem5_r: Same as 710.omnetpp_r

750.sealcrypto_r: Same as 721.gcc_r

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.00.html
http://www.spec.org/cpu2026/results/flags/Maginfra-Platform-Settings-amd-V1.1.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.00.xml
http://www.spec.org/cpu2026/results/flags/Maginfra-Platform-Settings-amd-V1.1.xml

Tested with SPEC CPU®2026 v1.0.1 on 2026-07-09 20:21:05-0400.
Report generated on 2026-09-08 18:11:57 by CPU2026 PS formatter (86729d3b).
Originally published on 2026-09-08.