SPEC CPU®2026 Integer Rate Result

Maginfra Co., Ltd.

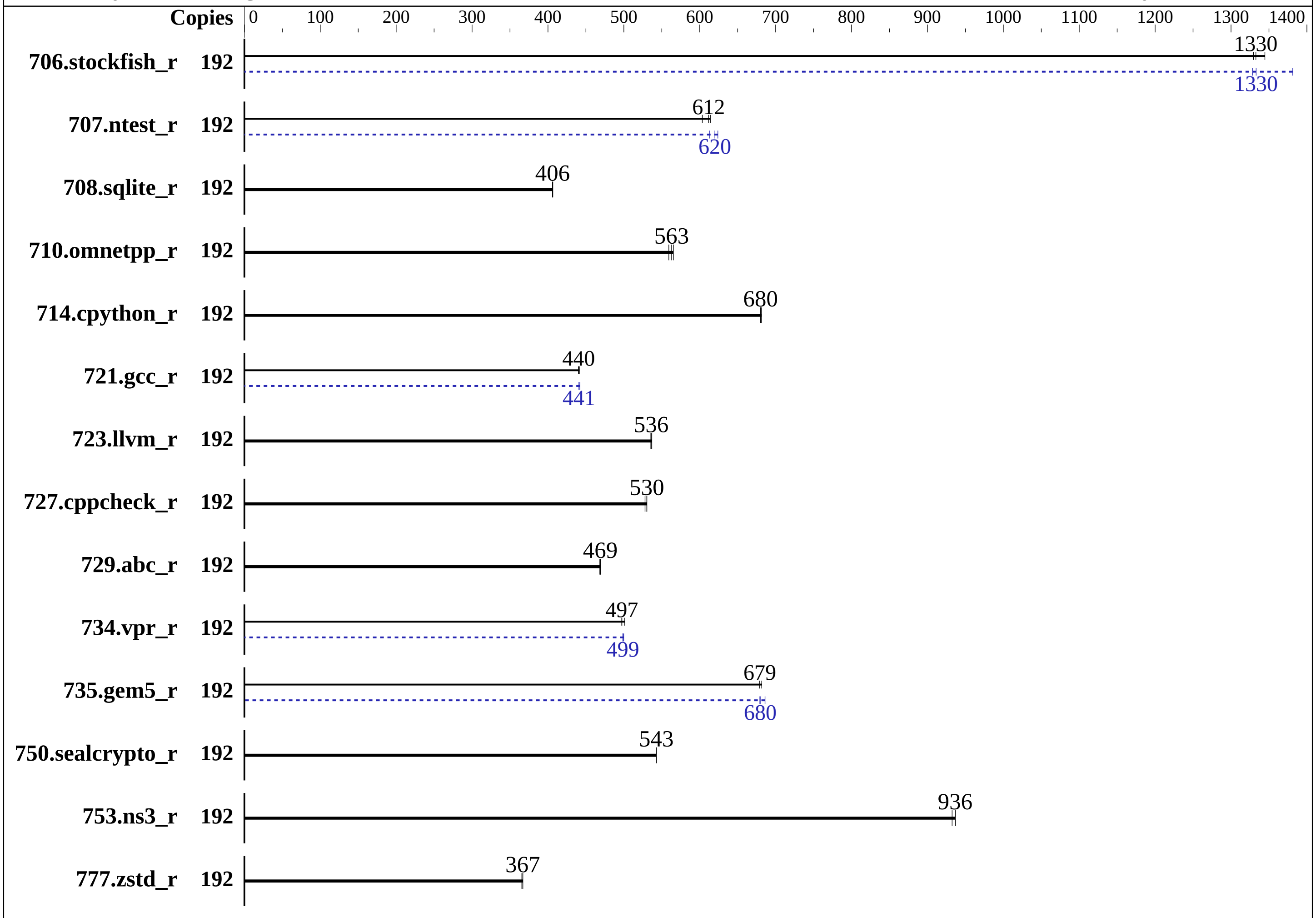
QR8218-D3 (AMD EPYC 9475F)

SPECrate®2026_int_base = 578

SPECrate®2026_int_peak = 579

CPU2026 License: 9087
Test Sponsor: Maginfra Co., Ltd.
Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026
Hardware Availability: Dec-2025
Software Availability: Jan-2026



Hardware

CPU Name:	AMD EPYC 9475F
Max MHz:	4800
Nominal:	3650
Enabled:	96 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 / 6 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 set to prefer performance at the cost of additional power usage.

Maginfra Co., Ltd.

QR8218-D3 (AMD EPYC 9475F)

SPECrate®2026_int_base = 578

SPECrate®2026_int_peak = 579

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

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
706.stockfish_r	192	180	1340	182	1330	**182**	**1330**	192	175	1380	182	1330	**181**	**1330**
707.ntest_r	192	188	603	185	614	**186**	**612**	192	186	613	182	624	**183**	**620**
708.sqlite_r	192	**250**	**406**	250	406	249	406	192	**250**	**406**	250	406	249	406
710.omnetpp_r	192	167	559	165	565	**166**	**563**	192	167	559	165	565	**166**	**563**
714.cpython_r	192	135	680	135	681	**135**	**680**	192	135	680	135	681	**135**	**680**
721.gcc_r	192	299	440	298	441	**299**	**440**	192	298	442	**299**	**441**	299	441
723.llvm_r	192	181	537	**182**	**536**	182	536	192	181	537	**182**	**536**	182	536
727.cppcheck_r	192	131	528	**130**	**530**	130	530	192	131	528	**130**	**530**	130	530
729.abc_r	192	188	468	188	469	**188**	**469**	192	188	468	188	469	**188**	**469**
734.vpr_r	192	177	501	178	496	**178**	**497**	192	178	499	**177**	**499**	177	500
735.gem5_r	192	137	682	**138**	**679**	138	679	192	136	686	138	679	**138**	**680**
750.sealcrypto_r	192	**190**	**543**	190	543	190	542	192	**190**	**543**	190	543	190	542
753.ns3_r	192	126	933	126	937	**126**	**936**	192	126	933	126	937	**126**	**936**
777.zstd_r	192	337	367	338	366	**337**	**367**	192	337	367	338	366	**337**	**367**

SPECrate®2026_int_base = 578

SPECrate®2026_int_peak = 579

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.
```

(Continued on next page)

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 Sat Sep  5 23:35:36 2026

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

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


(Continued on next page)

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
   23:35:36 up 0 min,  1 user,  load average: 0.55, 0.17, 0.06
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
  root     tty1     -                23:35   16.00s  2.16s  1.30s 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) 6190362
  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) 6190362
  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/CPU2026.070/templogs/preenv.intrate.070.0.log --lognum 070.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /home/CPU2026

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : AMD EPYC 9475F 48-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       : 48
    siblings        : 96
    2 physical ids (chips)
    192 processors (hardware threads)
    physical id 0: core ids 0-5,8-13,16-21,24-29,32-37,40-45,48-53,56-61
    physical id 1: core ids 0-5,8-13,16-21,24-29,32-37,40-45,48-53,56-61
    physical id 0: apicids 0-11,16-27,32-43,48-59,64-75,80-91,96-107,112-123
    physical id 1: apicids 128-139,144-155,160-171,176-187,192-203,208-219,224-235,240-251
  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 9475F 48-Core Processor
CPU family:                      26
Model:                           2
Thread(s) per core:              2
Core(s) per socket:              48
Socket(s):                       2
Stepping:                        1
Frequency boost:                 enabled
CPU(s) scaling MHz:              45%
CPU max MHz:                     3650.0000
CPU min MHz:                     1500.0000
BogoMIPS:                        7288.83
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:                       4.5 MiB (96 instances)
L1i cache:                       3 MiB (96 instances)
L2 cache:                        96 MiB (96 instances)
L3 cache:                        512 MiB (16 instances)
NUMA node(s):                    8
NUMA node0 CPU(s):               0-11,96-107
NUMA node1 CPU(s):               12-23,108-119
```

(Continued on next page)

Platform Notes (Continued)

```
  NUMA node2 CPU(s):                     24-35,120-131
  NUMA node3 CPU(s):                     36-47,132-143
  NUMA node4 CPU(s):                     48-59,144-155
  NUMA node5 CPU(s):                     60-71,156-167
  NUMA node6 CPU(s):                     72-83,168-179
  NUMA node7 CPU(s):                     84-95,180-191
  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     4.5M   12 Data            1    64        1             64
     L1i       32K       3M    8 Instruction     1    64        1             64
     L2         1M      96M   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: 0-11,96-107
  node 0 size: 193051 MB
  node 0 free: 192575 MB
  node 1 cpus: 12-23,108-119
  node 1 size: 193529 MB
  node 1 free: 193094 MB
  node 2 cpus: 24-35,120-131
  node 2 size: 193490 MB
  node 2 free: 193140 MB
  node 3 cpus: 36-47,132-143
  node 3 size: 193529 MB
  node 3 free: 193105 MB
  node 4 cpus: 48-59,144-155
  node 4 size: 193529 MB
```

(Continued on next page)

Platform Notes (Continued)

```
    node 4 free: 193114 MB
    node 5 cpus: 60-71,156-167
    node 5 size: 193529 MB
    node 5 free: 193113 MB
    node 6 cpus: 72-83,168-179
    node 6 size: 193529 MB
    node 6 free: 193043 MB
    node 7 cpus: 84-95,180-191
    node 7 size: 193427 MB
    node 7 free: 192970 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:       1584760556 kB

  ------------------------------------------------------------
  10. who -r
    run-level 3 Sep 5 23:34

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

(Continued on next page)

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 168:
    current policy: frequency should be within 1.50 GHz and 3.65 GHz.
                    The governor "ondemand" 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
```

(Continued on next page)

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   75G  855G   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
```

(Continued on next page)

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: `basepeak = yes`

777.zstd_r: `basepeak = yes`

C++ benchmarks:

706.stockfish_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`

707.ntest_r: `Same as 706.stockfish_r`

727.cppcheck_r: `basepeak = yes`

753.ns3_r: `basepeak = yes`

Benchmarks using both C and C++:

710.omnetpp_r: `basepeak = yes`

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`

(Continued on next page)

Peak Optimization Flags (Continued)

721.gcc_r (continued):
-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: basepeak = yes

734.vpr_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

735.gem5_r: Same as 734.vpr_r

750.sealcrypto_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.2026-05-04.00.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 2026-09-05 23:35:36-0400.
Report generated on 2026-10-07 10:44:24 by CPU2026 PS formatter (86729d3b).
Originally published on 2026-10-06.