



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## xFusion

FusionServer 2258 V7  
AMD EPYC 9254

SPECrate®2017\_int\_base = 634

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 6488

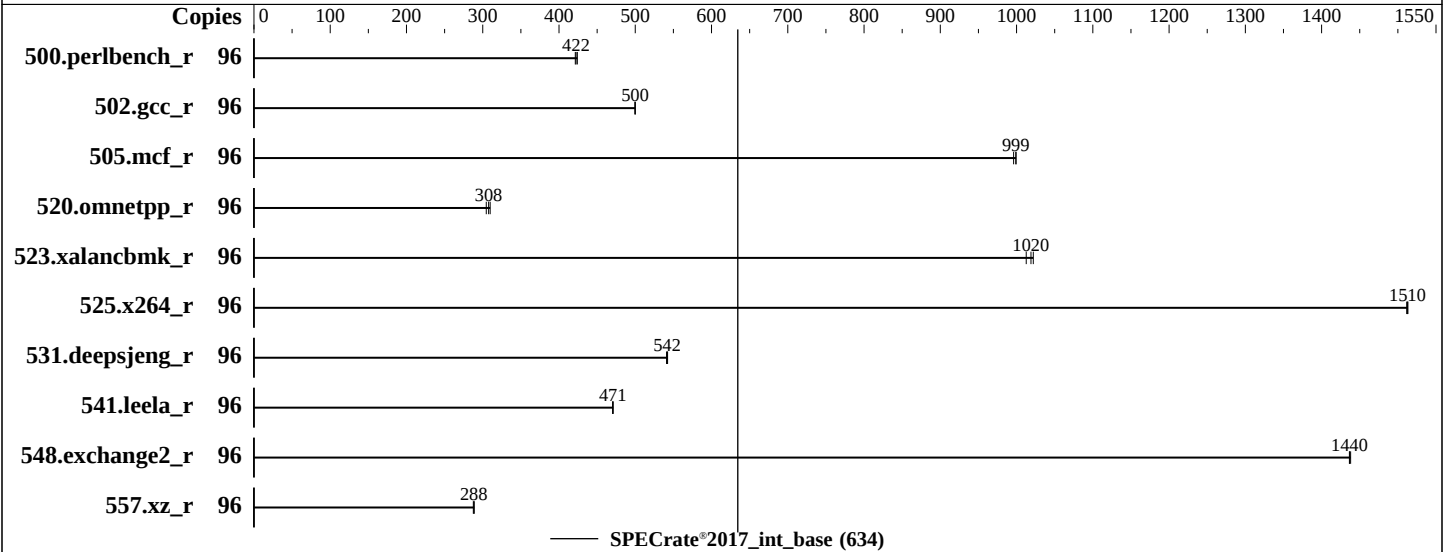
Test Sponsor: xFusion

Tested by: xFusion

Test Date: Oct-2025

Hardware Availability: Nov-2023

Software Availability: Oct-2024



### Hardware

CPU Name: AMD EPYC 9254  
Max MHz: 4150  
Nominal: 2900  
Enabled: 48 cores, 2 chips, 2 threads/core  
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: 128 MB I+D on chip per chip, 32 MB shared / 6 cores  
Other: None  
Memory: 1536 GB (24 x 64 GB 2Rx4 PC5-5600B-R, running at 4800)  
Storage: 1 x 240 GB SATA SSD  
Other: CPU Cooling: Air

### Software

OS: SUSE Linux Enterprise Server 15 SP6  
kernel version 6.4.0-150600.21-default  
Compiler: C/C++/Fortran: Version 5.0.0 of AOCC  
Parallel: No  
Firmware: Version 2.11.17 released Aug-2025  
File System: btrfs  
System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: Not Applicable  
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 |
| 500.perlbench_r | 96     | 363               | 421                | <b><u>362</u></b> | <b><u>422</u></b> | 360                | 424                |        |         |       |         |       |         |       |
| 502.gcc_r       | 96     | 272               | 500                | <b><u>272</u></b> | <b><u>500</u></b> | 272                | 500                |        |         |       |         |       |         |       |
| 505.mcf_r       | 96     | 156               | 996                | 155               | 999               | <b><u>155</u></b>  | <b><u>999</u></b>  |        |         |       |         |       |         |       |
| 520.omnetpp_r   | 96     | 407               | 310                | 413               | 305               | <b><u>409</u></b>  | <b><u>308</u></b>  |        |         |       |         |       |         |       |
| 523.xalancbmk_r | 96     | 99.2              | 1020               | 100               | 1010              | <b><u>99.5</u></b> | <b><u>1020</u></b> |        |         |       |         |       |         |       |
| 525.x264_r      | 96     | <b><u>111</u></b> | <b><u>1510</u></b> | 111               | 1510              | 111                | 1510               |        |         |       |         |       |         |       |
| 531.deepsjeng_r | 96     | 203               | 541                | <b><u>203</u></b> | <b><u>542</u></b> | 203                | 542                |        |         |       |         |       |         |       |
| 541.leela_r     | 96     | 338               | 470                | <b><u>338</u></b> | <b><u>471</u></b> | 338                | 471                |        |         |       |         |       |         |       |
| 548.exchange2_r | 96     | 175               | 1440               | 175               | 1440              | <b><u>175</u></b>  | <b><u>1440</u></b> |        |         |       |         |       |         |       |
| 557.xz_r        | 96     | <b><u>360</u></b> | <b><u>288</u></b>  | 360               | 288               | 359                | 289                |        |         |       |         |       |         |       |

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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.  
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) only on request for base runs,  
'echo madvise > /sys/kernel/mm/transparent\_hugepage/enabled' run as root.  
To enable THP for all allocations for peak runs,  
'echo always > /sys/kernel/mm/transparent\_hugepage/enabled' and  
'echo always > /sys/kernel/mm/transparent\_hugepage/defrag' run as root.



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## Environment Variables Notes

Environment variables set by runcpu before the start of the run:

LD\_LIBRARY\_PATH =

"/home/cpu2017/amd\_rate\_aocc500\_znver5\_A\_lib/lib:/home/cpu2017/amd\_rate\_aocc500\_znver5\_A\_lib/lib32:"

MALLOC\_CONF = "retain:true"

## General Notes

Binaries were compiled on a system with 2x AMD EPYC 9174F CPU + 1.5TiB Memory using RHEL 8.6

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.

## Platform Notes

BIOS settings:

TDP: 400

Determinism Enable set to Power

PPT: 400

NPS: 4

Sysinfo program /home/cpu2017/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost Wed Oct 29 12:17:00 2025

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

-----  
Table of contents  
-----

1. uname -a
  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 254 (254.10+suse.84.ge8d77af424)
  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
- 

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## Platform Notes (Continued)

1. `uname -a`  
Linux localhost 6.4.0-150600.21-default #1 SMP PREEMPT\_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09)  
x86\_64 x86\_64 x86\_64 GNU/Linux

2. `w`  
12:17:00 up 7 min, 3 users, load average: 1.94, 0.61, 0.24  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
root tty1 - 12:09 12.00s 1.22s 0.04s tail -f nohup.out  
root pts/0 192.168.108.44 12:14 1:13 0.08s 0.08s -bash

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) 6189265  
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) 6189265  
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\_aocc500\_znver5\_A1.py  
/bin/bash ./amd\_rate\_aocc500\_znver5\_A1.sh  
runcpu --config amd\_rate\_aocc500\_znver5\_A1.cfg --tune base --reportable --iterations 3 intrate  
runcpu --configfile amd\_rate\_aocc500\_znver5\_A1.cfg --tune base --reportable --iterations 3 --nopower  
--runmode rate --tune base --size test:train:refrate intrate --nopreenv --note-preenv --logfile  
\$SPEC/tmp/CPU2017.023/templots/preenv.intrate.023.0.log --lognum 023.0 --from\_runcpu 2  
specperl \$SPEC/bin/sysinfo  
\$SPEC = /home/cpu2017

6. `/proc/cpuinfo`  
model name : AMD EPYC 9254 24-Core Processor  
vendor\_id : AuthenticAMD  
cpu family : 25  
model : 17  
stepping : 1  
microcode : 0xa101154  
bugs : sysret\_ss\_attrs spectre\_v1 spectre\_v2 spec\_store\_bypass srsso  
TLB size : 3584 4K pages

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## Platform Notes (Continued)

cpu cores : 24  
siblings : 48  
2 physical ids (chips)  
96 processors (hardware threads)  
physical id 0: core ids 0-5,8-13,16-21,24-29  
physical id 1: core ids 0-5,8-13,16-21,24-29  
physical id 0: apicids 0-11,16-27,32-43,48-59  
physical id 1: apicids 64-75,80-91,96-107,112-123

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 2.39.3:

```
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): 96
On-line CPU(s) list: 0-95
Vendor ID: AuthenticAMD
BIOS Vendor ID: Advanced Micro Devices, Inc.
Model name: AMD EPYC 9254 24-Core Processor
BIOS Model name: AMD EPYC 9254 24-Core Processor Unknown CPU @ 2.9GHz
BIOS CPU family: 107
CPU family: 25
Model: 17
Thread(s) per core: 2
Core(s) per socket: 24
Socket(s): 2
Stepping: 1
Frequency boost: enabled
CPU(s) scaling MHz: 72%
CPU max MHz: 4151.7568
CPU min MHz: 1500.0000
BogoMIPS: 5791.46
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 bpxt
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 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: 1.5 MiB (48 instances)
L1i cache: 1.5 MiB (48 instances)
L2 cache: 48 MiB (48 instances)
```

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## Platform Notes (Continued)

L3 cache: 256 MiB (8 instances)  
NUMA node(s): 8  
NUMA node0 CPU(s): 0-5,48-53  
NUMA node1 CPU(s): 6-11,54-59  
NUMA node2 CPU(s): 12-17,60-65  
NUMA node3 CPU(s): 18-23,66-71  
NUMA node4 CPU(s): 24-29,72-77  
NUMA node5 CPU(s): 30-35,78-83  
NUMA node6 CPU(s): 36-41,84-89  
NUMA node7 CPU(s): 42-47,90-95  
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  
always-on; RSB filling; PBRBS-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      | 1.5M     | 8    | Data        | 1     | 64    | 1        | 64             |
| L1i  | 32K      | 1.5M     | 8    | Instruction | 1     | 64    | 1        | 64             |
| L2   | 1M       | 48M      | 8    | Unified     | 2     | 2048  | 1        | 64             |
| L3   | 32M      | 256M     | 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: 0-5,48-53  
node 0 size: 193077 MB  
node 0 free: 192691 MB  
node 1 cpus: 6-11,54-59  
node 1 size: 193532 MB  
node 1 free: 193187 MB  
node 2 cpus: 12-17,60-65  
node 2 size: 193532 MB  
node 2 free: 193161 MB  
node 3 cpus: 18-23,66-71  
node 3 size: 193532 MB  
node 3 free: 193144 MB  
node 4 cpus: 24-29,72-77  
node 4 size: 193494 MB  
node 4 free: 192967 MB  
node 5 cpus: 30-35,78-83  
node 5 size: 193532 MB  
node 5 free: 193135 MB  
node 6 cpus: 36-41,84-89  
node 6 size: 193532 MB  
node 6 free: 193141 MB  
node 7 cpus: 42-47,90-95  
node 7 size: 193107 MB

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### Platform Notes (Continued)

node 7 free: 192804 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: 1584478352 kB

10. who -r  
run-level 3 Oct 29 12:09

11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)  
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 firewalld getty@<br>irqbalance issue-generator kbdsettings kdump kdump-early kdump-notify klog lvm2-monitor<br>nscd postfix purge-kernels rollback rsyslog smartd sshd systemd-pstore wicked<br>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<br>chronyd console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info fsidd<br>gpm grub2-once haveged ipmi ipmievd issue-add-ssh-keys kexec-load lunmask man-db-create<br>multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd serial-getty@ smartd_generate_opts<br>snmpd snmptrapd systemd-boot-check-no-failures systemd-confext systemd-network-generator<br>systemd-sysext systemd-time-wait-sync systemd-timesyncd vncserver@ |
| indirect        | systemd-userdbd wickedd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

13. Linux kernel boot-time arguments, from /proc/cmdline  
BOOT\_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default  
root=UUID=6a0e1725-852e-4de4-b169-0d120ff68381  
splash=silent  
mitigations=auto  
quiet  
security=apparmor  
crashkernel=364M,high  
crashkernel=72M,low  
nohz\_full=1-63

14. cpupower frequency-info  
analyzing CPU 69:  
current policy: frequency should be within 1.50 GHz and 2.90 GHz.  
The governor "performance" may decide which speed to use  
within this range.  
boost state support:

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## Platform Notes (Continued)

Supported: yes  
Active: yes

```
-----
15. sysctl
kernel.numa_balancing      1
kernel.randomize_va_space  0
vm.compaction_proactiveness 20
vm.dirty_background_bytes   0
vm.dirty_background_ratio   10
vm.dirty_bytes              0
vm.dirty_expire_centisecs   3000
vm.dirty_ratio              8
vm.dirty_writeback_centisecs 500
vm.dirtytime_expire_seconds 43200
vm.extfrag_threshold        500
vm.min_unmapped_ratio       1
vm.nr_hugepages              0
vm.nr_hugepages_mempolicy    0
vm.nr_overcommit_hugepages   0
vm.swappiness                1
vm.watermark_boost_factor    15000
vm.watermark_scale_factor    10
vm.zone_reclaim_mode         1

-----
16. /sys/kernel/mm/transparent_hugepage
defrag      [always] defer defer+madvise madvise never
enabled     [always] madvise never
hpage_pmd_size 2097152
shmem_enabled always within_size advise [never] deny force

-----
17. /sys/kernel/mm/transparent_hugepage/khugepaged
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 SUSE Linux Enterprise Server 15 SP6

-----
19. Disk information
SPEC is set to: /home/cpu2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       btrfs 219G  34G  182G  16% /home

-----
20. /sys/devices/virtual/dmi/id
Vendor:      XFUSION
Product:     2258 V7
Product Family: Genoa
-----
```

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## Platform Notes (Continued)

### 21. dmidecode

Additional information from dmidecode 3.4 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:

16x Micron Technology MTC40F2046S1RC56BD1 64 GB 2 rank 5600, configured at 4800  
8x Samsung M321R8GA0PB0-CWMXH 64 GB 2 rank 5600, configured at 4800

### 22. BIOS

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

BIOS Vendor: XFUSION  
BIOS Version: 2.11.17  
BIOS Date: 08/07/2025  
BIOS Revision: 2.11

## Compiler Version Notes

=====  
C | 500.perlbench\_r(base) 502.gcc\_r(base) 505.mcf\_r(base) 525.x264\_r(base) 557.xz\_r(base)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin  
=====

=====  
C++ | 520.omnetpp\_r(base) 523.xalancbmk\_r(base) 531.deepsjeng\_r(base) 541.leela\_r(base)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin  
=====

=====  
Fortran | 548.exchange2\_r(base)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin  
=====

## Base Compiler Invocation

C benchmarks:  
clang

C++ benchmarks:  
clang++

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

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**xFusion**

FusionServer 2258 V7  
AMD EPYC 9254

SPECrate®2017\_int\_base = 634

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 6488  
Test Sponsor: xFusion  
Tested by: xFusion

Test Date: Oct-2025  
Hardware Availability: Nov-2023  
Software Availability: Oct-2024

## Base Compiler Invocation (Continued)

Fortran benchmarks:  
flang

## Base Portability Flags

500.perlbench\_r: -DSPEC\_LINUX\_X64 -DSPEC\_LP64  
502.gcc\_r: -DSPEC\_LP64  
505.mcf\_r: -DSPEC\_LP64  
520.omnetpp\_r: -DSPEC\_LP64  
523.xalancbmk\_r: -DSPEC\_LINUX -DSPEC\_LP64  
525.x264\_r: -DSPEC\_LP64  
531.deepsjeng\_r: -DSPEC\_LP64  
541.leela\_r: -DSPEC\_LP64  
548.exchange2\_r: -DSPEC\_LP64  
557.xz\_r: -DSPEC\_LP64

## Base Optimization Flags

C benchmarks:

-m64 -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 -z muldefs -O3 -march=znver5  
-fveclib=AMDLIBM -ffast-math -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-ext -ldl

C++ benchmarks:

-m64 -std=c++14 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3  
-Wl,-mllvm -Wl,-do-block-reorder=advanced -z muldefs -O3 -march=znver5  
-fveclib=AMDLIBM -ffast-math -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  
-mllvm -do-block-reorder=advanced -lamdlibm -lflang -lamdalloc-ext  
-ldl

Fortran benchmarks:

-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

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## xFusion

FusionServer 2258 V7  
AMD EPYC 9254

SPECrate®2017\_int\_base = 634

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 6488  
Test Sponsor: xFusion  
Tested by: xFusion

Test Date: Oct-2025  
Hardware Availability: Nov-2023  
Software Availability: Oct-2024

## Base Optimization Flags (Continued)

Fortran benchmarks (continued):

```
-Wl, -mllvm -Wl, -reduce-array-computations=3  
-Wl, -mllvm -Wl, -inline-recursion=4 -Wl, -mllvm -Wl, -lsr-in-nested-loop  
-Wl, -mllvm -Wl, -enable-iv-split -z muldefs -O3 -march=znver5  
-fvecLib=AMDLIBM -ffast-math -fltO  
-fepilog-vectorization-of-inductions -mllvm -optimize-strided-mem-cost  
-floop-transform -mllvm -unroll-aggressive -mllvm -unroll-threshold=500  
-lamdlibm -lflang -lamdalloc -ldl
```

## Base Other Flags

C benchmarks:

-Wno-unused-command-line-argument

C++ benchmarks:

-Wno-unused-command-line-argument

Fortran benchmarks:

-Wno-unused-command-line-argument

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/aocc500-flags.2024-10-10.html>

<http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-AMD-V2.0.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/aocc500-flags.2024-10-10.xml>

<http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-AMD-V2.0.xml>

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