



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

SPECspeed®2017\_int\_peak = 18.0

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

CPU2017 License: 6573

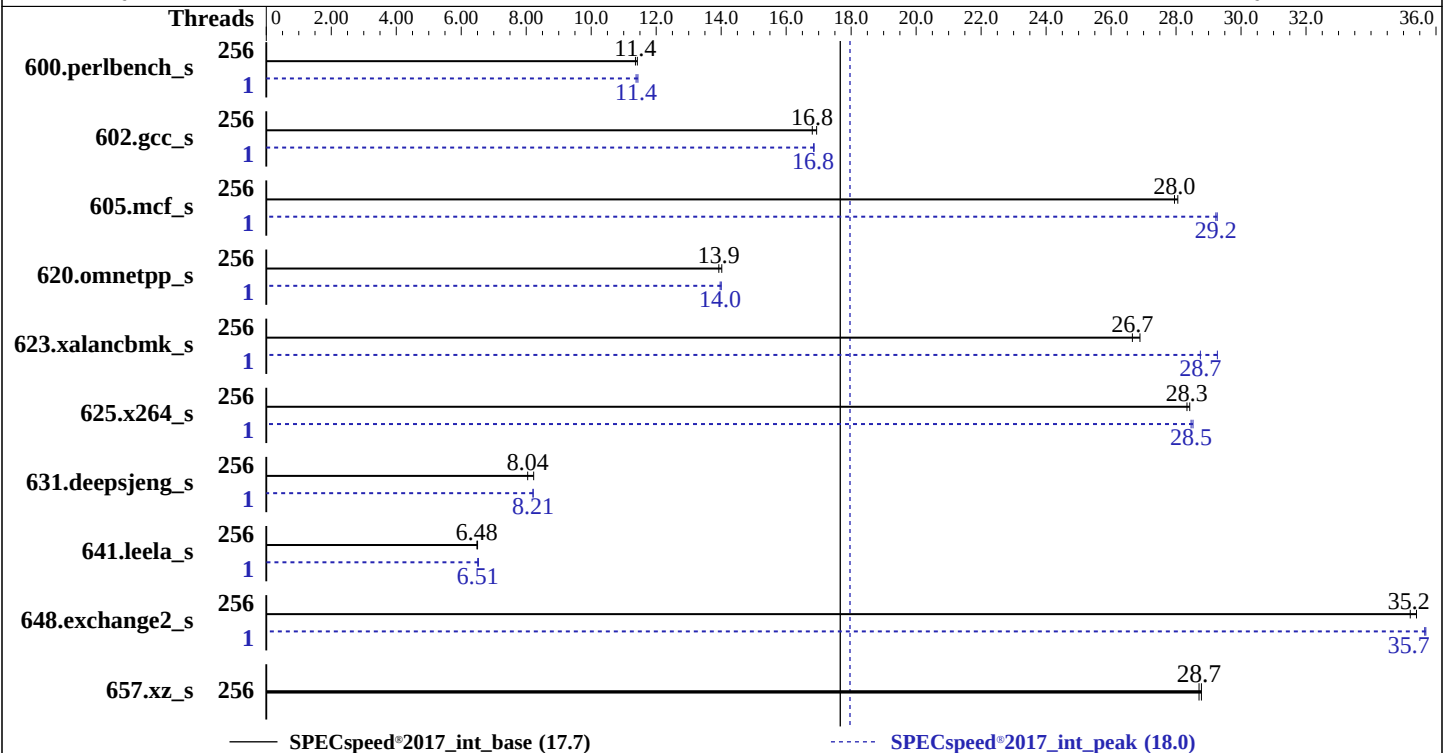
Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025



## Hardware

CPU Name: AMD EPYC 9755  
Max MHz: 4100  
Nominal: 2700  
Enabled: 256 cores, 2 chips  
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: 512 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: 130 GB on tmpfs  
Other: CPU Cooling: DLC

## Software

OS: Ubuntu 24.04.2 LTS  
6.8.0-54-generic  
Compiler: C/C++/Fortran: Version 5.0.0 of AOCC  
Parallel: Yes  
Firmware: Version 1.0.0 released Jan-2025  
File System: tmpfs  
System State: Run level 5 (graphical 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®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

SPECspeed®2017\_int\_peak = 18.0

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Results Table

| Benchmark       | Base    |                    |                    |                    |                    |         |       | Peak    |                    |                    |                    |                    |         |       |
|-----------------|---------|--------------------|--------------------|--------------------|--------------------|---------|-------|---------|--------------------|--------------------|--------------------|--------------------|---------|-------|
|                 | Threads | Seconds            | Ratio              | Seconds            | Ratio              | Seconds | Ratio | Threads | Seconds            | Ratio              | Seconds            | Ratio              | Seconds | Ratio |
| 600.perlbench_s | 256     | <b><u>156</u></b>  | <b><u>11.4</u></b> | 155                | 11.4               |         |       | 1       | 155                | 11.4               | <b><u>156</u></b>  | <b><u>11.4</u></b> |         |       |
| 602.gcc_s       | 256     | <b><u>237</u></b>  | <b><u>16.8</u></b> | 235                | 16.9               |         |       | 1       | <b><u>236</u></b>  | <b><u>16.8</u></b> | 236                | 16.9               |         |       |
| 605.mcf_s       | 256     | <b><u>169</u></b>  | <b><u>28.0</u></b> | 168                | 28.1               |         |       | 1       | <b><u>162</u></b>  | <b><u>29.2</u></b> | 161                | 29.3               |         |       |
| 620.omnetpp_s   | 256     | <b><u>117</u></b>  | <b><u>13.9</u></b> | 116                | 14.0               |         |       | 1       | <b><u>117</u></b>  | <b><u>14.0</u></b> | 116                | 14.0               |         |       |
| 623.xalancbmk_s | 256     | <b><u>53.2</u></b> | <b><u>26.7</u></b> | 52.7               | 26.9               |         |       | 1       | 48.4               | 29.3               | <b><u>49.3</u></b> | <b><u>28.7</u></b> |         |       |
| 625.x264_s      | 256     | <b><u>62.3</u></b> | <b><u>28.3</u></b> | 62.1               | 28.4               |         |       | 1       | 61.8               | 28.5               | <b><u>62.0</u></b> | <b><u>28.5</u></b> |         |       |
| 631.deepsjeng_s | 256     | 174                | 8.23               | <b><u>178</u></b>  | <b><u>8.04</u></b> |         |       | 1       | 174                | 8.21               | <b><u>175</u></b>  | <b><u>8.21</u></b> |         |       |
| 641.leela_s     | 256     | <b><u>263</u></b>  | <b><u>6.48</u></b> | 262                | 6.50               |         |       | 1       | 261                | 6.53               | <b><u>262</u></b>  | <b><u>6.51</u></b> |         |       |
| 648.exchange2_s | 256     | 83.1               | 35.4               | <b><u>83.5</u></b> | <b><u>35.2</u></b> |         |       | 1       | <b><u>82.5</u></b> | <b><u>35.7</u></b> | 82.4               | 35.7               |         |       |
| 657.xz_s        | 256     | 215                | 28.8               | <b><u>215</u></b>  | <b><u>28.7</u></b> |         |       | 256     | 215                | 28.8               | <b><u>215</u></b>  | <b><u>28.7</u></b> |         |       |

SPECspeed®2017\_int\_base = 17.7

SPECspeed®2017\_int\_peak = 18.0

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.



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

SPECspeed®2017\_int\_peak = 18.0

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Environment Variables Notes

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

GOMP\_CPU\_AFFINITY = "0-255"

LD\_LIBRARY\_PATH =

"/mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5\_A1/amd\_speed\_aocc500\_znver5\_A\_lib/lib:/mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5\_A1/amd\_speed\_aocc500\_znver5\_A\_lib/lib32:"

LIBOMP\_NUM\_HIDDEN\_HELPER\_THREADS = "0"

MALLOC\_CONF = "retain:true"

OMP\_DYNAMIC = "false"

OMP\_SCHEDULE = "static"

OMP\_STACKSIZE = "128M"

OMP\_THREAD\_LIMIT = "256"

Environment variables set by runcpu during the 600.perlbench\_s peak run:

GOMP\_CPU\_AFFINITY = "0"

Environment variables set by runcpu during the 602.gcc\_s peak run:

GOMP\_CPU\_AFFINITY = "0"

Environment variables set by runcpu during the 605.mcf\_s peak run:

GOMP\_CPU\_AFFINITY = "0"

Environment variables set by runcpu during the 620.omnetpp\_s peak run:

GOMP\_CPU\_AFFINITY = "0"

Environment variables set by runcpu during the 623.xalancbmk\_s peak run:

GOMP\_CPU\_AFFINITY = "0"

Environment variables set by runcpu during the 625.x264\_s peak run:

GOMP\_CPU\_AFFINITY = "0"

Environment variables set by runcpu during the 631.deepsjeng\_s peak run:

GOMP\_CPU\_AFFINITY = "0"

Environment variables set by runcpu during the 641.leela\_s peak run:

GOMP\_CPU\_AFFINITY = "0"

Environment variables set by runcpu during the 648.exchange2\_s peak run:

GOMP\_CPU\_AFFINITY = "0"

## General Notes

Binaries were compiled on a system with 2x AMD EPYC 9D64 CPU + 500GiB Memory using Ubuntu 22.04

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.

Benchmark run from a 130 GB ramdisk created with the cmd: "mount -t tmpfs -o size=130G tmpfs /mnt/ramdisk"

## Platform Notes

BIOS Settings:

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

SPECspeed®2017\_int\_peak = 18.0

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Platform Notes (Continued)

Logical Processor : Disabled  
Virtualization Technology : Disabled  
NUMA Nodes Per Socket : 4  
ACPI CST C2 Latency : 18

System Profile : Custom  
C-States : Disabled  
Memory Patrol Scrub : Disabled  
PCI ASPM L1 Link Power Management : Disabled  
Periodic Directory Rinse Tuning : Blended  
Determinism Control : Manual  
Determinism Slider : Power Determinism  
Optimizer Mode : Enabled  
DF CState : Disabled  
Algorithm Performance Boost Disable : Enabled  
CPPC : Disabled  
Adaptive Allocation : Enabled  
Dram Refresh Delay : Performance  
Correctable Memory ECC SMI : Disabled  
DIMM Self Healing -  
on Uncorrectable Memory Error : Disabled

Sysinfo program /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5\_A1/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on L302624-M7725 Thu Mar 6 19:32:06 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 255 (255.4-1ubuntu8.5)
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 -a  
Linux L302624-M7725 6.8.0-54-generic #56-Ubuntu SMP PREEMPT\_DYNAMIC Sat Feb 8 00:37:57 UTC 2025 x86\_64  
x86\_64 x86\_64 GNU/Linux

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

SPECspeed®2017\_int\_peak = 18.0

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Platform Notes (Continued)

```
-----
2. w
  19:32:06 up 3 min,  1 user,  load average: 0.26, 0.08, 0.02
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
root      tty1      -             19:29    54.00s 1.24s  0.40s /bin/bash ./amd_speed_aocc500_znver5_A1.sh
-----
```

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

```
-----
4. ulimit -a
time(seconds)      unlimited
file(blocks)       unlimited
data(kbytes)       unlimited
stack(kbytes)      unlimited
coredump(blocks)   0
memory(kbytes)     unlimited
locked memory(kbytes) 2097152
process            6189023
nofiles            1024
vmemory(kbytes)    unlimited
locks              unlimited
rtprio             0
-----
```

```
-----
5. sysinfo process ancestry
/sbin/init
/bin/login -p --
-bash
/bin/bash /home/DellFiles/bin/DELL_speed.sh
/bin/bash /home/DellFiles/bin/dell-run-main.sh speed
/bin/bash /home/DellFiles/bin/dell-run-main.sh speed
/bin/bash /home/DellFiles/bin/AMD/dell-run-speccpu.sh speed --define DL-VERS=6.1a --output_format
html,pdf,txt
python3 ./run_amd_speed_aocc500_znver5_A1.py
/bin/bash ./amd_speed_aocc500_znver5_A1.sh
runcpu --config amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 2 --define
DL-BIOS-NPS=4 --define DL-VERS=6.1a --output_format html,pdf,txt intspeak
runcpu --configfile amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 2 --define
DL-BIOS-NPS=4 --define DL-VERS=6.1a --output_format html,pdf,txt --nopower --runmode speed --tune
base:peak --size test:train:refspeed intspeak --note-preenv --logfile
$SPEC/tmp/CPU2017.001/temlogs/preenv.intspeak.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5_A1
-----
```

```
-----
6. /proc/cpuinfo
model name      : AMD EPYC 9755 128-Core Processor
vendor_id      : AuthenticAMD
cpu family     : 26
model          : 2
stepping       : 1
microcode      : 0xb00211e
bugs           : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
TLB size      : 192 4K pages
cpu cores      : 128
siblings       : 128
2 physical ids (chips)
-----
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

SPECspeed®2017\_int\_peak = 18.0

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Platform Notes (Continued)

256 processors (hardware threads)

physical id 0: core ids

0-7,16-23,32-39,48-55,64-71,80-87,96-103,112-119,128-135,144-151,160-167,176-183,192-199,208-215,224-231,240-247

physical id 1: core ids

0-7,16-23,32-39,48-55,64-71,80-87,96-103,112-119,128-135,144-151,160-167,176-183,192-199,208-215,224-231,240-247

physical id 0: apicids

0-7,16-23,32-39,48-55,64-71,80-87,96-103,112-119,128-135,144-151,160-167,176-183,192-199,208-215,224-231,240-247

physical id 1: apicids

256-263,272-279,288-295,304-311,320-327,336-343,352-359,368-375,384-391,400-407,416-423,432-439,448-455,464-471,480-487,496-503

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):              | 256                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| On-line CPU(s) list: | 0-255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Vendor ID:           | AuthenticAMD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| BIOS Vendor ID:      | AMD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Model name:          | AMD EPYC 9755 128-Core Processor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| BIOS Model name:     | AMD EPYC 9755 128-Core Processor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| BIOS CPU family:     | 107                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| CPU family:          | 26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Model:               | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Thread(s) per core:  | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Core(s) per socket:  | 128                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Socket(s):           | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Stepping:            | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Frequency boost:     | enabled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| CPU(s) scaling MHz:  | 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| CPU max MHz:         | 2700.0000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| CPU min MHz:         | 1500.0000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| BogoMIPS:            | 5392.13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Flags:               | fpu_vme_de_pse_tsc_msr_pae_mce_cx8_apic_sep_mtrr_pge_mca_cmov_pat_pse36_clflush_mmx_fxsr_sse_sse2_ht_syscall_nx_mmxext_fxsr_opt_pdpe1gb_rdtscp_lm_constant_tsc_rep_good_amd_lbr_v2_nopl_nonstop_tsc_cpuid_extd_apicid_aperfmpperf_rapl_pni_pclmulqdq_monitor_ssse3_fma_cx16_pcid_sse4_1_sse4_2_x2apic_movbe_popcnt_aes_xsave_avx_f16c_rdrand_lahf_lm_cmp_legacy_extapic_cr8_legacy_abm_sse4a_misalignsse_3dnowprefetch_osvw_ibs_skinit_wdt_tce_topoext_perfctr_core_perfctr_nb_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_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_rdprr_wbnoinvd_amd_ppin_cppc_arat_npt_lbrv_svm_lock_nrip_save_tsc_scale_vmc_b_clean_flushbyasid_decodeassists_pausefilter_pfthreshold_avic_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 |

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

SPECspeed®2017\_int\_peak = 18.0

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Platform Notes (Continued)

```
movdiri movdir64b overflow_recov succor smca avx512_vp2intersect
flush_l1d debug_swap
12 MiB (256 instances)
8 MiB (256 instances)
256 MiB (256 instances)
1 GiB (32 instances)
8
NUMA node(s):
NUMA node0 CPU(s): 0-31
NUMA node1 CPU(s): 32-63
NUMA node2 CPU(s): 64-95
NUMA node3 CPU(s): 96-127
NUMA node4 CPU(s): 128-159
NUMA node5 CPU(s): 160-191
NUMA node6 CPU(s): 192-223
NUMA node7 CPU(s): 224-255
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: Not affected
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; PBRSE-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      | 12M      | 12   | Data        | 1     | 64    | 1        | 64             |
| L1i  | 32K      | 8M       | 8    | Instruction | 1     | 64    | 1        | 64             |
| L2   | 1M       | 256M     | 16   | Unified     | 2     | 1024  | 1        | 64             |
| L3   | 32M      | 1G       | 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: 0-31
node 0 size: 192782 MB
node 0 free: 191622 MB
node 1 cpus: 32-63
node 1 size: 193477 MB
node 1 free: 193006 MB
node 2 cpus: 64-95
node 2 size: 193520 MB
node 2 free: 193079 MB
node 3 cpus: 96-127
node 3 size: 193504 MB
node 3 free: 193091 MB
node 4 cpus: 128-159
node 4 size: 193520 MB
node 4 free: 193188 MB
node 5 cpus: 160-191
node 5 size: 193520 MB
node 5 free: 188966 MB
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

SPECspeed®2017\_int\_peak = 18.0

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Platform Notes (Continued)

```
node 6 cpus: 192-223
node 6 size: 193520 MB
node 6 free: 193016 MB
node 7 cpus: 224-255
node 7 size: 193481 MB
node 7 free: 193086 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:      1584466184 kB
```

```
-----
10. who -r
run-level 5 Mar 6 19:28
```

```
-----
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.5)
Default Target Status
graphical          running
```

```
-----
12. Services, from systemctl list-unit-files
STATE UNIT FILES
enabled ModemManager apparmor appport blk-availability cloud-config cloud-final cloud-init
cloud-init-local console-setup cron dmesg e2scrub_reap finalrd getty@ gpu-manager
grub-common grub-initrd-fallback keyboard-setup lm-sensors lvm2-monitor multipathd
networkd-dispatcher open-iscsi open-vm-tools pollinate rsyslog secureboot-db setvtrgb
sysstat systemd-networkd systemd-networkd-wait-online systemd-pstore systemd-resolved
systemd-timesyncd thermald tuned ua-reboot-cmds ubuntu-advantage udisks2 ufw vgauth
enabled-runtime netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
disabled console-getty debug-shell iscsid nftables rsync serial-getty@ ssh
systemd-boot-check-no-failures systemd-confext systemd-network-generator
systemd-networkd-wait-online@ systemd-pcrlock-file-system systemd-pcrlock-firmware-code
systemd-pcrlock-firmware-config systemd-pcrlock-machine-id systemd-pcrlock-make-policy
systemd-pcrlock-secureboot-authority systemd-pcrlock-secureboot-policy systemd-sysex
systemd-time-wait-sync upower
indirect systemd-sysupdate systemd-sysupdate-reboot uuid
masked cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common
```

```
-----
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/vmlinuz-6.8.0-54-generic
root=/dev/mapper/ubuntu--vg-ubuntu--lv
ro
```

```
-----
14. cpupower frequency-info
analyzing CPU 95:
current policy: frequency should be within 1.50 GHz and 2.70 GHz.
The governor "performance" may decide which speed to use
```

(Continued on next page)





# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

SPECspeed®2017\_int\_peak = 18.0

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Platform Notes (Continued)

within this range.

boost state support:

Supported: yes

Active: yes

Boost States: 0

Total States: 3

Pstate-P0: 2700MHz

-----  
15. tuned-adm active

Current active profile: latency-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    | 3     |
| 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  |             |               |         |            |
| 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 Ubuntu 24.04.2 LTS

-----  
20. Disk information

SPEC is set to: /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5\_A1  
Filesystem Type Size Used Avail Use% Mounted on

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

SPECspeed®2017\_int\_peak = 18.0

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Platform Notes (Continued)

tmpfs tmpfs 130G 3.3G 127G 3% /mnt/ramdisk

### 21. /sys/devices/virtual/dmi/id

Vendor: Dell Inc.  
Product: PowerEdge M7725  
Product Family: PowerEdge  
Serial: L302624

### 22. dmidecode

Additional information from dmidecode 3.5 follows. WARNING: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

#### Memory:

4x 80AD000080AD HMC94AHBRA277N 64 GB 2 rank 6400  
20x 80AD000080AD HMC94AHBRA480N 64 GB 2 rank 6400

### 23. BIOS

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

BIOS Vendor: Dell Inc.  
BIOS Version: 1.0.0  
BIOS Date: 01/23/2025  
BIOS Revision: 1.0

## Compiler Version Notes

C | 600.perlbench\_s(base, peak) 602.gcc\_s(base, peak) 605.mcf\_s(base, peak) 625.x264\_s(base, peak)  
| 657.xz\_s(base, peak)

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++ | 620.omnetpp\_s(base, peak) 623.xalancbmk\_s(base, peak) 631.deepsjeng\_s(base, peak)  
| 641.leela\_s(base, peak)

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 | 648.exchange2\_s(base, peak)

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



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

SPECspeed®2017\_int\_peak = 18.0

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Base Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang

## Base Portability Flags

```
600.perlbench_s: -DSPEC_LINUX_X64 -DSPEC_LP64
602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LINUX -DSPEC_LP64
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64
648.exchange2_s: -DSPEC_LP64
657.xz_s: -DSPEC_LP64
```

## Base Optimization Flags

C benchmarks:

```
-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-allow-multiple-definition -Wl,-mllvm -Wl,-extra-inliner -O3
-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp -DSPEC_OPENMP
-flto -fremap-arrays -fstrip-mining -fstruct-layout=7
-mllvm -inline-threshold=1000 -mllvm -reduce-array-computations=3
-mllvm -unroll-threshold=50 -zopt -fopenmp=libomp -lomp -lamdlibm
-lflang -lamdalloc
```

C++ benchmarks:

```
-m64 -std=c++14 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver5
-fveclib=AMDLIBM -ffast-math -fopenmp -DSPEC_OPENMP -flto
-mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -mllvm -unroll-threshold=100 -zopt
-fvirtual-function-elimination -fvisibility=hidden -fopenmp=libomp
-lomp -lamdlibm -lflang -lamdalloc-ext
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

SPECspeed®2017\_int\_peak = 18.0

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Base Optimization Flags (Continued)

Fortran benchmarks:

-m64 -Wl, -mllvm -Wl, -align-all-nofallthru-blocks=6  
-Wl, -mllvm -Wl, -reduce-array-computations=3  
-Wl, -mllvm -Wl, -enable-iv-split -Wl, -mllvm -Wl, -inline-recursion=4  
-Wl, -mllvm -Wl, -lsr-in-nested-loop -O3 -march=znver5 -fveclib=AMDLIBM  
-ffast-math -fopenmp -flto -mllvm -optimize-strided-mem-cost  
-mllvm -unroll-aggressive -mllvm -unroll-threshold=150 -fopenmp=libomp  
-lomp -lamdlibm -lflang -lamdalloc

## Base Other Flags

C benchmarks:

-Wno-return-type -Wno-unused-command-line-argument

C++ benchmarks:

-Wno-unused-command-line-argument

Fortran benchmarks:

-Wno-unused-command-line-argument

## Peak Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang

## Peak Portability Flags

Same as Base Portability Flags



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

SPECspeed®2017\_int\_peak = 18.0

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Peak Optimization Flags

C benchmarks:

```
600.perlbench_s: -m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-allow-multiple-definition
-Wl,-mllvm -Wl,-extra-inliner -Ofast -march=znver5
-fveclib=AMDLIBM -ffast-math -fopenmp -flto
-DSPEC_OPENMP -fremap-arrays -fstrip-mining
-fstruct-layout=9 -mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3
-mllvm -unroll-threshold=50 -zopt -fopenmp=libomp -lomp
-lamdlibm -lamdalloc -lflang
```

602.gcc\_s: Same as 600.perlbench\_s

```
605.mcf_s: -m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-extra-inliner -Ofast -march=znver5
-fveclib=AMDLIBM -ffast-math -fopenmp -flto
-DSPEC_OPENMP -fremap-arrays -fstrip-mining
-fstruct-layout=9 -mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3
-mllvm -unroll-threshold=50 -zopt -fopenmp=libomp -lomp
-lamdlibm -lamdalloc -lflang
```

625.x264\_s: Same as 600.perlbench\_s

657.xz\_s: basepeak = yes

C++ benchmarks:

```
620.omnetpp_s: -m64 -std=c++14
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast
-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp
-flto -DSPEC_OPENMP -mllvm -reduce-array-computations=3
-mllvm -unroll-threshold=100 -zopt
-fvirtual-function-elimination -fvisibility=hidden
-fopenmp=libomp -lomp -lamdlibm -lamdalloc-ext -lflang
```

```
623.xalancbmk_s: -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 -Ofast
-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp
-flto -DSPEC_OPENMP -mllvm -reduce-array-computations=3
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECSpeed®2017\_int\_base = 17.7

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

SPECSpeed®2017\_int\_peak = 18.0

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Peak Optimization Flags (Continued)

623.xalancbmk\_s (continued):

-mllvm -unroll-threshold=100 -zopt  
-fvirtual-function-elimination -fvisibility=hidden  
-mllvm -do-block-reorder=advanced -fopenmp=libomp -lomp  
-lamdlibm -lamdalloc-ext -lflang

631.deepsjeng\_s: -m64 -std=c++14

-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast  
-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp  
-flto -DSPEC\_OPENMP -mllvm -reduce-array-computations=3  
-mllvm -unroll-threshold=100 -zopt  
-fvirtual-function-elimination -fvisibility=hidden  
-fopenmp=libomp -lomp -lamdlibm -lamdalloc -lflang

641.leela\_s: Same as 631.deepsjeng\_s

Fortran benchmarks:

-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3  
-Wl,-mllvm -Wl,-enable-iv-split -Wl,-mllvm -Wl,-inline-recursion=4  
-Wl,-mllvm -Wl,-lsr-in-nested-loop -O3 -march=znver5 -fveclib=AMDLIBM  
-ffast-math -fopenmp -flto -mllvm -optimize-strided-mem-cost  
-mllvm -unroll-aggressive -mllvm -unroll-threshold=150 -fopenmp=libomp  
-lomp -lamdlibm -lamdalloc -lflang

## Peak Other Flags

C benchmarks:

-Wno-return-type -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.html>

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-AMD-EPYC-v1.8.html>



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 17.7

SPECspeed®2017\_int\_peak = 18.0

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

**CPU2017 License:** 6573

**Test Sponsor:** Dell Inc.

**Tested by:** Dell Inc.

**Test Date:** Mar-2025

**Hardware Availability:** Mar-2025

**Software Availability:** Feb-2025

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

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

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-AMD-EPYC-v1.8.xml>

SPEC CPU and SPECspeed 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](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.9 on 2025-03-06 14:32:05-0500.

Report generated on 2025-03-26 10:35:46 by CPU2017 PDF formatter v6716.

Originally published on 2025-03-25.