



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

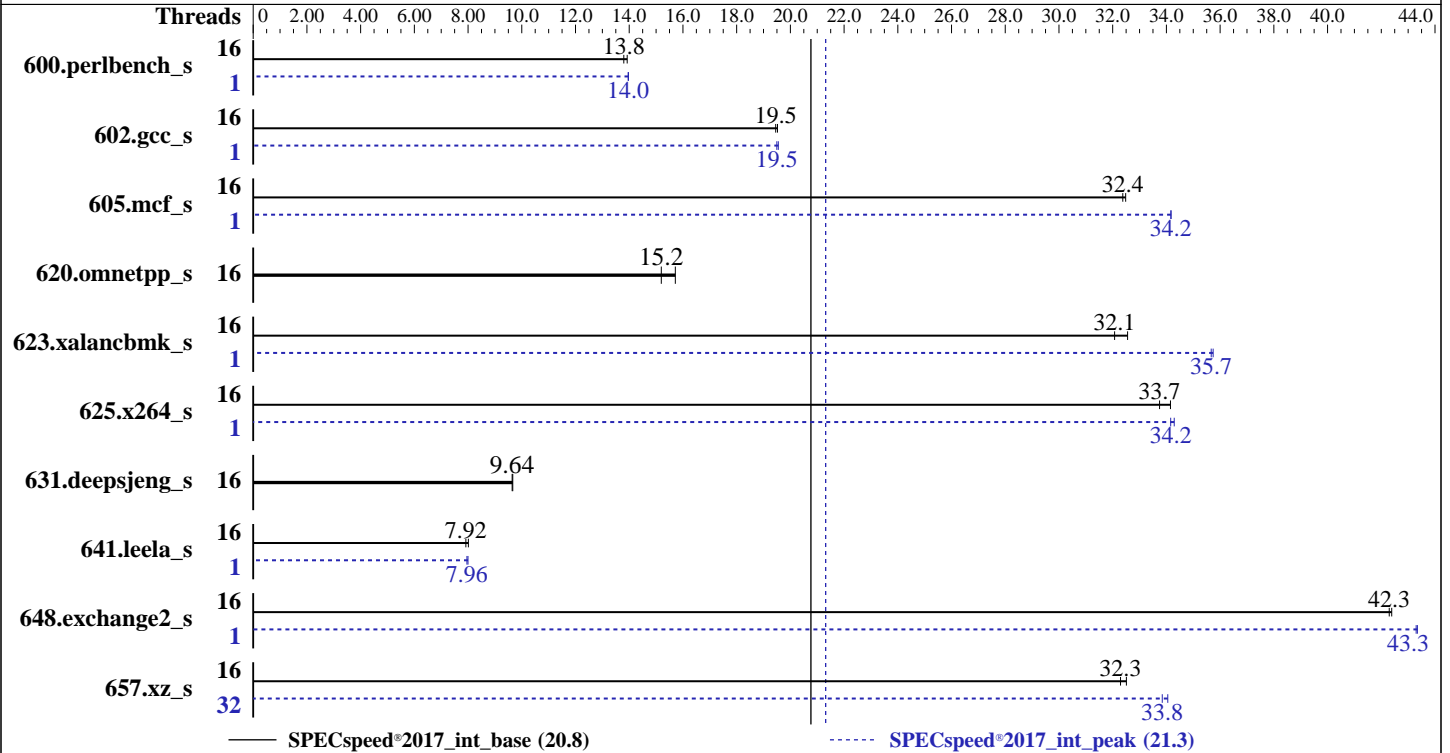
Test Date: Feb-2025

Test Sponsor: Kaytus Systems Pte. Ltd.

Hardware Availability: Feb-2025

Tested by: Kaytus Systems Pte. Ltd.

Software Availability: Oct-2024



Hardware

CPU Name: AMD EPYC 9175F
 Max MHz: 5000
 Nominal: 4200
 Enabled: 16 cores, 1 chip, 2 threads/core
 Orderable: 1 chip
 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 / 1 cores
 Other: None
 Memory: 768 GB (12 x 64 GB 2Rx4 PC5-6400B-R, running at 5200)
 Storage: 1 x 960 GB NVME SSD
 Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP6
 6.4.0-150600.21-default
 Compiler: C/C++/Fortran: Version 5.0.0 of AOCC
 Parallel: Yes
 Firmware: Version 01.04.00 released Dec-2024
 File System: btrfs
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 Other: None
 Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECSpeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECSpeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Feb-2025

Hardware Availability: Feb-2025

Software Availability: Oct-2024

Results Table

Benchmark	Base						Peak							
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	16	127	13.9	<u>129</u>	<u>13.8</u>			1	<u>127</u>	<u>14.0</u>	127	14.0		
602.gcc_s	16	<u>205</u>	<u>19.5</u>	204	19.5			1	<u>204</u>	<u>19.5</u>	204	19.6		
605.mcf_s	16	<u>146</u>	<u>32.4</u>	145	32.5			1	138	34.2	<u>138</u>	<u>34.2</u>		
620.omnetpp_s	16	104	15.7	<u>107</u>	<u>15.2</u>			16	104	15.7	<u>107</u>	<u>15.2</u>		
623.xalancbmk_s	16	<u>44.2</u>	<u>32.1</u>	43.5	32.6			1	39.6	35.7	<u>39.7</u>	<u>35.7</u>		
625.x264_s	16	51.7	34.2	<u>52.3</u>	<u>33.7</u>			1	<u>51.6</u>	<u>34.2</u>	51.4	34.3		
631.deepsjeng_s	16	<u>149</u>	<u>9.64</u>	148	9.66			16	<u>149</u>	<u>9.64</u>	148	9.66		
641.leela_s	16	<u>215</u>	<u>7.92</u>	213	8.01			1	<u>214</u>	<u>7.96</u>	213	8.00		
648.exchange2_s	16	<u>69.5</u>	<u>42.3</u>	69.4	42.4			1	<u>67.9</u>	<u>43.3</u>	67.8	43.3		
657.xz_s	16	190	32.5	<u>191</u>	<u>32.3</u>			32	<u>183</u>	<u>33.8</u>	182	34.1		

SPECSpeed®2017_int_base = **20.8**

SPECSpeed®2017_int_peak = **21.3**

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) for all allocations,
'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

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Feb-2025

Hardware Availability: Feb-2025

Software Availability: Oct-2024

Environment Variables Notes

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

GOMP_CPU_AFFINITY = "0-31"

LD_LIBRARY_PATH =

"/home/CPU2017/amd_speed_aocc500_znver5_A_lib/lib:/home/CPU2017/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 = "32"

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 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 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"

Environment variables set by runcpu during the 657.xz_s peak run:

GOMP_CPU_AFFINITY = "0-31"

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.

Platform Notes

BIOS configuration:

SVM Mode = disable

DRAM Scrub time = disable

NUMA nodes per socket = NPS4

Determinism Slider = Power

cTDP = 500

Package Power Limit = 500

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Feb-2025

Hardware Availability: Feb-2025

Software Availability: Oct-2024

Platform Notes (Continued)

Sysinfo program /home/CPU2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Thu Feb 27 08:46:43 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. 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 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
08:46:43 up 21:26, 1 user, load average: 0.03, 0.02, 0.00
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
root ttyl - Wed11 11.00s 0.72s 0.05s /bin/bash ./amd_speed_aocc500_znver5_A1.sh
```

```
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) 3092270
max locked memory (kbytes, -l) 2097152
max memory size (kbytes, -m) unlimited
open files (-n) 1024
pipe size (512 bytes, -p) 8
```

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Feb-2025

Hardware Availability: Feb-2025

Software Availability: Oct-2024

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) 3092270
virtual memory            (kbytes, -v) unlimited
file locks                 (-x) unlimited

```

```

-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=31
login -- root
-bash
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 1 intspeak
runcpu --configfile amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 1 --nopower
--runmode speed --tune base:peak --size test:train:refspeed intspeak --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.004/templogs/preenv.intspeak.004.0.log --lognum 004.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/CPU2017

```

```

-----
6. /proc/cpuinfo
model name      : AMD EPYC 9175F 16-Core Processor
vendor_id      : AuthenticAMD
cpu family     : 26
model          : 2
stepping       : 1
microcode      : 0xb00211a
bugs           : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
TLB size       : 192 4K pages
cpu cores      : 16
siblings       : 32
1 physical ids (chips)
32 processors (hardware threads)
physical id 0: core ids 0,8,16,24,32,40,48,56,64,72,80,88,96,104,112,120
physical id 0: apicids
0-1,16-17,32-33,48-49,64-65,80-81,96-97,112-113,128-129,144-145,160-161,176-177,192-193,208-209,224-225,2
40-241
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):                32
On-line CPU(s) list:  0-31
Vendor ID:             AuthenticAMD
BIOS Vendor ID:       Advanced Micro Devices, Inc.
Model name:            AMD EPYC 9175F 16-Core Processor
BIOS Model name:      AMD EPYC 9175F 16-Core Processor
BIOS CPU family:      107
CPU family:            26
Model:                 2

```

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Date: Feb-2025

Test Sponsor: Kaytus Systems Pte. Ltd.

Hardware Availability: Feb-2025

Tested by: Kaytus Systems Pte. Ltd.

Software Availability: Oct-2024

Platform Notes (Continued)

```

Thread(s) per core:          2
Core(s) per socket:        16
Socket(s):                  1
Stepping:                   1
Frequency boost:            enabled
CPU(s) scaling MHz:        82%
CPU max MHz:                5003.9058
CPU min MHz:                1500.0000
BogoMIPS:                   8387.45
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 wbinv 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 vmni
                             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_llld debug_swap

Virtualization:             AMD-V
L1d cache:                  768 KiB (16 instances)
L1i cache:                  512 KiB (16 instances)
L2 cache:                   16 MiB (16 instances)
L3 cache:                   512 MiB (16 instances)
NUMA node(s):              4
NUMA node0 CPU(s):         0-3,16-19
NUMA node1 CPU(s):         4-7,20-23
NUMA node2 CPU(s):         8-11,24-27
NUMA node3 CPU(s):         12-15,28-31
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/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2:      Mitigation; Enhanced / Automatic IBRS; IBPB conditional; STIBP
                                always-on; RSB filling; PBR SB-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	768K	12	Data	1	64	1	64
L1i	32K	512K	8	Instruction	1	64	1	64
L2	1M	16M	16	Unified	2	1024	1	64

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Feb-2025

Hardware Availability: Feb-2025

Software Availability: Oct-2024

Platform Notes (Continued)

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: 4 nodes (0-3)

node 0 cpus: 0-3,16-19

node 0 size: 192986 MB

node 0 free: 192457 MB

node 1 cpus: 4-7,20-23

node 1 size: 193533 MB

node 1 free: 193224 MB

node 2 cpus: 8-11,24-27

node 2 size: 193495 MB

node 2 free: 193027 MB

node 3 cpus: 12-15,28-31

node 3 size: 193077 MB

node 3 free: 192772 MB

node distances:

node 0 1 2 3

0: 10 12 12 12

1: 12 10 12 12

2: 12 12 10 12

3: 12 12 12 10

9. /proc/meminfo

MemTotal: 791646672 kB

10. who -r

run-level 3 Feb 26 11:20

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

apparmor auditd cron firewalld getty@ irqbalance issue-generator kbdsettings kdump
kdump-early kdump-notify nvme-fc-boot-connections nvme-autoconnect postfix purge-kernels
rollback sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6
wickedd-nanny

enabled-runtime systemd-remount-fs

disabled

boot-sysctl ca-certificates chrony-wait chronyd console-getty debug-shell ebttables
exchange-bmc-os-info fsidd grub2-once haveged hwloc-dump-hwdata ipmievd issue-add-ssh-keys
kexec-load nfs nfs-blkmap rpcbind rpmconfigcheck serial-getty@
systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-sysext
systemd-time-wait-sync systemd-timesyncd tuned

generated

jexec

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=daf71402-9a22-417d-a498-881cf3539e73

splash=silent

mitigations=auto

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Feb-2025

Hardware Availability: Feb-2025

Software Availability: Oct-2024

Platform Notes (Continued)

```
quiet
security=apparmor
crashkernel=384M,high
crashkernel=72M,low
```

```
-----
14. cpupower frequency-info
analyzing CPU 22:
  current policy: frequency should be within 1.50 GHz and 4.20 GHz.
                  The governor "performance" may decide which speed to use
                  within this range.

  boost state support:
    Supported: yes
    Active: yes
```

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

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

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Feb-2025

Hardware Availability: Feb-2025

Software Availability: Oct-2024

Platform Notes (Continued)

19. OS release

From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP6

20. Disk information

SPEC is set to: /home/CPU2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/nvme0n1p2 btrfs 892G 37G 852G 5% /home

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

Vendor: KAYTUS
Product: KR1180-E3-A0-R0-00
Product Family: Not specified
Serial: 012345678

22. 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:

12x Samsung M321R8GA0PB2-CCPEC 64 GB 2 rank 6400, configured at 5200

23. BIOS

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

BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 01.04.00
BIOS Date: 12/09/2024

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)

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Date: Feb-2025

Test Sponsor: Kaytus Systems Pte. Ltd.

Hardware Availability: Feb-2025

Tested by: Kaytus Systems Pte. Ltd.

Software Availability: Oct-2024

Compiler Version Notes (Continued)

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++

Fortran benchmarks:

flang

Base Portability Flags

600.perlbench_s: -DSPEC_LINUX_X64 -DSPEC_LP64
602.gc_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

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Date: Feb-2025

Test Sponsor: Kaytus Systems Pte. Ltd.

Hardware Availability: Feb-2025

Tested by: Kaytus Systems Pte. Ltd.

Software Availability: Oct-2024

Base Optimization Flags (Continued)

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
```

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
```



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Feb-2025

Hardware Availability: Feb-2025

Software Availability: Oct-2024

Peak Portability Flags

Same as Base Portability Flags

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: Same as 600.perlbench_s

C++ benchmarks:

620.omnetpp_s: basepeak = yes

```
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
-mllvm -unroll-threshold=100 -zopt
```

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Date: Feb-2025

Test Sponsor: Kaytus Systems Pte. Ltd.

Hardware Availability: Feb-2025

Tested by: Kaytus Systems Pte. Ltd.

Software Availability: Oct-2024

Peak Optimization Flags (Continued)

623.xalancbmk_s (continued):

```
-fvirtual-function-elimination -fvisibility=hidden
-mllvm -do-block-reorder=advanced -fopenmp=libomp -lomp
-lamplibm -lamdalloc-ext -lflang
```

631.deepsjeng_s: basepeak = yes

```
641.leela_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 -lamplibm -lamdalloc -lflang
```

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 -lamplibm -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.2024-10-10.00.html>

<http://www.spec.org/cpu2017/flags/Kaytus-Platform-Settings-amd-V1.0.html>

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

<http://www.spec.org/cpu2017/flags/aocc500-flags.2024-10-10.00.xml>

<http://www.spec.org/cpu2017/flags/Kaytus-Platform-Settings-amd-V1.0.xml>



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECspeed®2017_int_base = 20.8

KR1180V3 (AMD EPYC 9175F)

SPECspeed®2017_int_peak = 21.3

CPU2017 License: 6865

Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Feb-2025

Hardware Availability: Feb-2025

Software Availability: Oct-2024

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.

Tested with SPEC CPU®2017 v1.1.9 on 2025-02-27 08:46:43-0500.
Report generated on 2025-03-26 10:32:58 by CPU2017 PDF formatter v6716.
Originally published on 2025-03-25.