



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

CPU2017 License: 9019

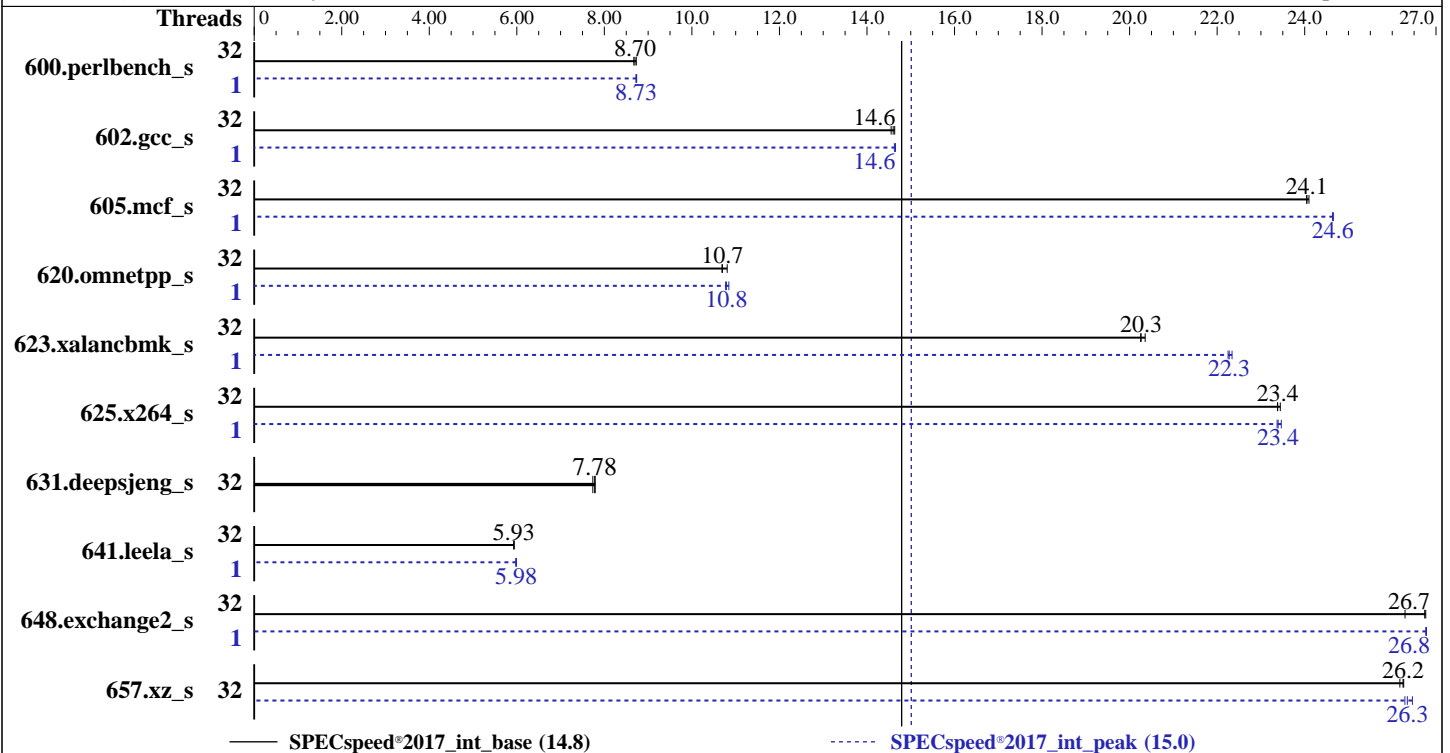
Test Sponsor: Cisco Systems

Tested by: Cisco Systems

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Sep-2024



### Hardware

CPU Name: AMD EPYC 9354P  
 Max MHz: 3800  
 Nominal: 3250  
 Enabled: 32 cores, 1 chip  
 Orderable: 1 chips  
 Cache L1: 32 KB I + 32 KB D on chip per core  
 L2: 1 MB I+D on chip per core  
 L3: 256 MB I+D on chip per chip, 32 MB shared / 4 cores  
 Other: None  
 Memory: 768 GB (12 x 64 GB 2Rx4 PC5-5600B-R, running at 4800)  
 Storage: 1 x 960 GB NVMe SSD  
 Other: CPU Cooling: Air

### Software

OS: SUSE Linux Enterprise Server 15 SP6  
 kernel version 6.4.0-150600.21-default  
 C/C++/Fortran: Version 5.0.0 of AOCC  
 Compiler: Yes  
 Parallel: Yes  
 Firmware: Version 4.3.5a released Sep-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

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019  
**Test Sponsor:** Cisco Systems  
**Tested by:** Cisco Systems

**Test Date:** Feb-2025  
**Hardware Availability:** Oct-2024  
**Software Availability:** Sep-2024

## Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	32	<b>204</b>	<b>8.70</b>	203	8.73	205	8.67	1	<b>203</b>	<b>8.73</b>	203	8.73	203	8.74
602.gcc_s	32	<b>273</b>	<b>14.6</b>	272	14.6	274	14.6	1	272	14.7	<b>272</b>	<b>14.6</b>	272	14.6
605.mcf_s	32	196	24.1	<b>196</b>	<b>24.1</b>	196	24.0	1	191	24.7	<b>192</b>	<b>24.6</b>	192	24.6
620.omnetpp_s	32	153	10.7	<b>152</b>	<b>10.7</b>	151	10.8	1	151	10.8	150	10.8	<b>151</b>	<b>10.8</b>
623.xalancbmk_s	32	<b>69.9</b>	<b>20.3</b>	69.6	20.4	70.0	20.3	1	63.7	22.3	<b>63.6</b>	<b>22.3</b>	63.4	22.3
625.x264_s	32	75.2	23.4	75.5	23.4	<b>75.4</b>	<b>23.4</b>	1	75.5	23.4	75.2	23.5	<b>75.4</b>	<b>23.4</b>
631.deepsjeng_s	32	<b>184</b>	<b>7.78</b>	185	7.74	184	7.79	32	<b>184</b>	<b>7.78</b>	185	7.74	184	7.79
641.leela_s	32	287	5.93	287	5.94	<b>287</b>	<b>5.93</b>	1	285	5.98	<b>285</b>	<b>5.98</b>	285	5.99
648.exchange2_s	32	112	26.3	<b>110</b>	<b>26.7</b>	110	26.8	1	<b>110</b>	<b>26.8</b>	110	26.8	110	26.8
657.xz_s	32	236	26.2	<b>236</b>	<b>26.2</b>	235	26.3	32	235	26.3	<b>235</b>	<b>26.3</b>	234	26.5

SPECspeed®2017\_int\_base = **14.8**

SPECspeed®2017\_int\_peak = **15.0**

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

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Feb-2025

**Hardware Availability:** Oct-2024

**Software Availability:** Sep-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 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 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 settings:

SMT Mode set to Disabled

NUMA nodes per socket set to NPS1

Determinism Slider set to Power

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Feb-2025

**Hardware Availability:** Oct-2024

**Software Availability:** Sep-2024

## Platform Notes (Continued)

DF C-States set to Disabled  
Enhanced CPU performance set to Auto

Sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on localhost Sun Feb 16 17:44:10 2025

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

### Table of contents

1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. sysctl
16. /sys/kernel/mm/transparent\_hugepage
17. /sys/kernel/mm/transparent\_hugepage/khugepaged
18. OS release
19. Disk information
20. /sys/devices/virtual/dmi/id
21. dmidecode
22. BIOS

```
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
17:44:10 up 0 min,  2 users,  load average: 1.12, 0.41, 0.15
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
root      tty1     -              17:43    18.00s  1.15s  0.09s  /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) 3093335
max locked memory       (kbytes, -l) 2097152
max memory size         (kbytes, -m) unlimited
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Feb-2025

**Hardware Availability:** Oct-2024

**Software Availability:** Sep-2024

### Platform Notes (Continued)

```

open files                (-n) 1024
pipe size                 (512 bytes, -p) 8
POSIX message queues     (bytes, -q) 819200
real-time priority       (-r) 0
stack size               (kbytes, -s) unlimited
cpu time                 (seconds, -t) unlimited
max user processes       (-u) 3093335
virtual memory           (kbytes, -v) unlimited
file locks                (-x) unlimited

```

#### 5. sysinfo process ancestry

```

/usr/lib/systemd/systemd --switched-root --system --deserialize=42
login -- root
-bash
python3 ./run_amd_speed_aocc500_znver5_A1.py -b intspeed
/bin/bash ./amd_speed_aocc500_znver5_A1.sh
runcpu --config amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 3 intspeed
runcpu --configfile amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 3 --nopower
--runmode speed --tune base:peak --size test:train:refspeed intspeed --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.001/templogs/preenv.intspeed.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017

```

#### 6. /proc/cpuinfo

```

model name      : AMD EPYC 9354P 32-Core Processor
vendor_id      : AuthenticAMD
cpu family     : 25
model          : 17
stepping       : 1
microcode      : 0xa101148
bugs           : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass rsro
TLB size      : 3584 4K pages
cpu cores     : 32
siblings       : 32
1 physical ids (chips)
32 processors (hardware threads)
physical id 0: core ids 0-3,16-19,32-35,48-51,64-67,80-83,96-99,112-115
physical id 0: apicids 0-3,16-19,32-35,48-51,64-67,80-83,96-99,112-115
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 9354P 32-Core Processor
BIOS Model name:      AMD EPYC 9354P 32-Core Processor
BIOS CPU family:      107
CPU family:            25
Model:                 17

```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

CPU2017 License: 9019

Test Sponsor: Cisco Systems

Tested by: Cisco Systems

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Sep-2024

### Platform Notes (Continued)

```

Thread(s) per core:      1
Core(s) per socket:    32
Socket(s):              1
Stepping:              1
Frequency boost:       enabled
CPU(s) scaling MHz:    92%
CPU max MHz:           3799.0720
CPU min MHz:           1500.0000
BogoMIPS:              6490.11
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 bmi1 avx2 smep bmi2
erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
clflushopt clwb avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec
xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
user_shstk avx512_bf16 clzero irperf xsaveerptr rdpru wbnoinvd
amd_ppin cppc arat npt lbrv svm_lock nrip_save tsc_scale vmcb_clean
flushbyasid decodeassists pausefilter pthreshold avic
v_vmsave_vmload vgif x2avic v_spec_ctrl vnmi avx512vbmi umip pku
ospke avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg
avx512_vpopcntdq la57 rdpid overflow_recov succor smca fsrm flush_l1d
debug_swap

Virtualization:        AMD-V
L1d cache:            1 MiB (32 instances)
L1i cache:            1 MiB (32 instances)
L2 cache:             32 MiB (32 instances)
L3 cache:             256 MiB (8 instances)
NUMA node(s):         1
NUMA node0 CPU(s):   0-31
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: Mitigation; Safe RET
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
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	32K	1M	8	Data	1	64	1	64
L1i	32K	1M	8	Instruction	1	64	1	64
L2	1M	32M	8	Unified	2	2048	1	64
L3	32M	256M	16	Unified	3	32768	1	64

8. numactl --hardware

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019  
**Test Sponsor:** Cisco Systems  
**Tested by:** Cisco Systems

**Test Date:** Feb-2025  
**Hardware Availability:** Oct-2024  
**Software Availability:** Sep-2024

### Platform Notes (Continued)

NOTE: a numactl 'node' might or might not correspond to a physical chip.

```
available: 1 nodes (0)
node 0 cpus: 0-31
node 0 size: 773361 MB
node 0 free: 771885 MB
node distances:
node 0
0: 10
```

9. /proc/meminfo  
MemTotal: 791921700 kB

10. who -r  
run-level 3 Feb 16 17:43

11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)  
Default Target Status  
multi-user running

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron getty@ irqbalance iscsi issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections nvmmf-autoconnect postfix purge-kernels rollback rsyslog smartd sshd systemd-pstore virtqemud wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime	systemd-remount-fs
disabled	autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait chronyd console-getty cups cups-browsed debug-shell dnsmasq ebttables exchange-bmc-os-info firewallld fsidd gpm grub2-once haveged hv_fcopy_daemon hv_kvq_daemon hv_vss_daemon hwloc-dump-hwdata ipmi ipmievd iscsi-init iscsid issue-add-ssh-keys kexec-load ksm kvm_stat libvirt-guests lunmask man-db-create multipathd munge nfs nfs-blkmap nfs-server nfsserver rpcbind rpmconfigcheck rsyncd rtkit-daemon salt-minion serial-getty@ slurmd smartd_generate_opts snmpd snmptrapd strongswan strongswan-starter svnserve systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-nspawn@ systemd-sysexec systemd-time-wait-sync systemd-timesyncd tcsd udisks2 virtinterfaced virtlockd virtlogd virtnetworkd virtnodevdev virtnwfilterd virtsecretd virtstoraged ypbind
indirect	pcscd systemd-userdbd tftpd wickedd

13. Linux kernel boot-time arguments, from /proc/cmdline  
BOOT\_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default  
root=UUID=83fde4e5-9ebb-45df-bdc4-d6d12ff34604  
splash=silent  
mitigations=auto  
quiet  
security=apparmor

14. cpupower frequency-info  
analyzing CPU 12:  
current policy: frequency should be within 1.50 GHz and 3.25 GHz.  
The governor "performance" may decide which speed to use within this range.  
boost state support:  
Supported: yes  
Active: yes

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Feb-2025

**Hardware Availability:** Oct-2024

**Software Availability:** Sep-2024

## Platform Notes (Continued)

```

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

```

```

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

```

```

-----
17. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs 60000
defrag                 1
max_ptes_none         511
max_ptes_shared       256
max_ptes_swap         64
pages_to_scan         4096
scan_sleep_millisecs  10000

```

```

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

```

```

-----
19. Disk information
SPEC is set to: /home/cpu2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/nvme0n1p3 btrfs 477G 14G 460G 3% /home

```

```

-----
20. /sys/devices/virtual/dmi/id
Vendor:      Cisco Systems Inc
Product:     UCSX-215C-M8
Serial:      FCH282172EL

```

```

-----
21. dmidecode
Additional information from dmidecode 3.4 follows.  WARNING: Use caution when you interpret this section.

```

(Continued on next page)





# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019  
**Test Sponsor:** Cisco Systems  
**Tested by:** Cisco Systems

**Test Date:** Feb-2025  
**Hardware Availability:** Oct-2024  
**Software Availability:** Sep-2024

### Platform Notes (Continued)

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:

2x 0xCE00 M321R8GA0PB0-CWMCH 64 GB 2 rank 5600, configured at 4800  
2x 0xCE00 M321R8GA0PB0-CWMJH 64 GB 2 rank 5600, configured at 4800  
8x 0xCE00 M321R8GA0PB0-CWMKJ 64 GB 2 rank 5600, configured at 4800

#### 22. BIOS

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

BIOS Vendor: Cisco Systems, Inc.  
BIOS Version: X215M8.4.3.5a.0.0904241153  
BIOS Date: 09/04/2024  
BIOS Revision: 5.27

### 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

### Base Compiler Invocation

C benchmarks:  
clang

C++ benchmarks:  
clang++

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Feb-2025

**Hardware Availability:** Oct-2024

**Software Availability:** Sep-2024

## Base Compiler Invocation (Continued)

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
```

Fortran benchmarks:

```
-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Feb-2025

**Hardware Availability:** Oct-2024

**Software Availability:** Sep-2024

## Base Optimization Flags (Continued)

Fortran benchmarks (continued):

```
-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

## Peak Optimization Flags

C benchmarks:

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Feb-2025

**Hardware Availability:** Oct-2024

**Software Availability:** Sep-2024

## Peak Optimization Flags (Continued)

```
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: -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
-mllvm -unroll-threshold=100 -zopt
-fvirtual-function-elimination -fvisibility=hidden
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Feb-2025

**Hardware Availability:** Oct-2024

**Software Availability:** Sep-2024

## Peak Optimization Flags (Continued)

623.xalancbmk\_s (continued):

```
-mllvm -do-block-reorder=advanced -fopenmp=libomp -lomp  
-lamdlibm -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 -lamdlibm -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 -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/Cisco-Platform-Settings-AMD-v3-revB.html>

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/Cisco-Platform-Settings-AMD-v3-revB.xml>



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS X215C M8 (AMD EPYC 9354P  
3.25 GHz Processor)

SPECspeed®2017\_int\_base = 14.8

SPECspeed®2017\_int\_peak = 15.0

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Feb-2025

**Hardware Availability:** Oct-2024

**Software Availability:** Sep-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](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.9 on 2025-02-16 17:44:10-0500.  
Report generated on 2025-04-09 14:55:32 by CPU2017 PDF formatter v6716.  
Originally published on 2025-04-09.