



SPEC CPU®2017 Floating Point Rate Result

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Sichuan Huakun Zhenyu Intelligent Technology Co., Ltd.

Huakun TG225 X5
(3.00GHz, Intel Xeon Gold 6459C)

SPECrate®2017_fp_base = 765

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 6271

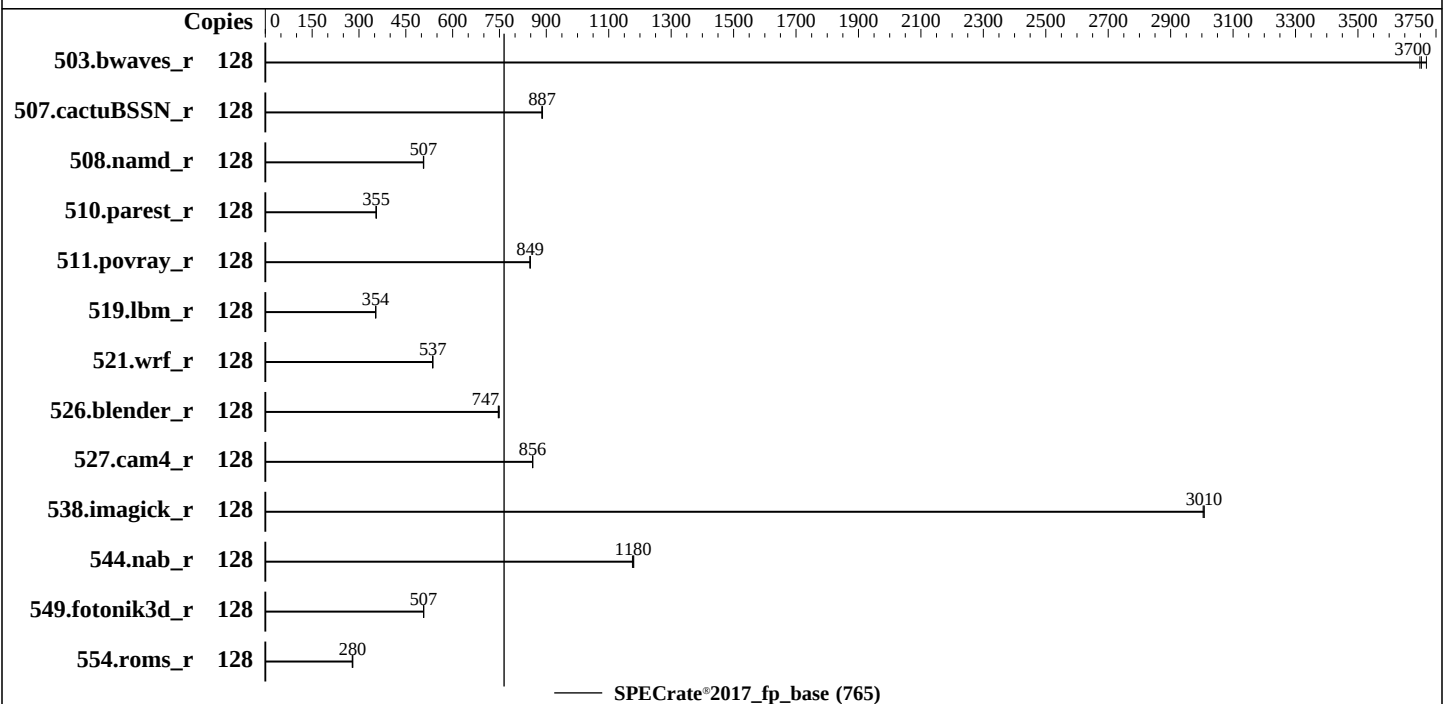
Test Sponsor: Sichuan Huakun Zhenyu Intelligent Technology Co., Ltd.

Tested by: Sichuan Huakun Zhenyu Intelligent Technology Co., Ltd.

Test Date: Jun-2026

Hardware Availability: Mar-2026

Software Availability: May-2026



Hardware

CPU Name: Intel Xeon Gold 6459C
Max MHz: 3900
Nominal: 3000
Enabled: 64 cores, 2 chips, 2 threads/core
Orderable: 1,2 chips
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 2 MB I+D on chip per core
L3: 60 MB I+D on chip per chip
Other: None
Memory: 1 TB (16 x 64 GB 2Rx4 PC5-5600B-R, running at 4800)
Storage: 1 x 480 GB SATA SSD
Other: CPU Cooling: Air

Software

OS: Red Hat Enterprise Linux 10.1 (Coughlan) (x86_64) Kernel 6.12.0-124.8.1
Compiler: C/C++: Version 2026.0 of Intel oneAPI DPC++/C++ Compiler for Linux;
Fortran: Version 2026.0 of Intel Fortran Compiler for Linux;
Parallel: No
Firmware: BIOS Version 00.04.06 released Mar-2026
File System: xfs
System State: Run level 5 (multi-user)
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other: jemalloc memory allocator V5.3.0
Power Management: BIOS and OS set to prefer performance at the cost of additional power usage



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	128	345	3720	<u>347</u>	<u>3700</u>	347	3700							
507.cactuBSSN_r	128	183	886	182	888	<u>183</u>	<u>887</u>							
508.namd_r	128	240	508	<u>240</u>	<u>507</u>	240	506							
510.parest_r	128	<u>942</u>	<u>355</u>	945	355	940	356							
511.povray_r	128	353	848	<u>352</u>	<u>849</u>	352	849							
519.lbm_r	128	381	354	<u>382</u>	<u>354</u>	382	353							
521.wrf_r	128	<u>534</u>	<u>537</u>	535	536	534	537							
526.blender_r	128	260	749	261	746	<u>261</u>	<u>747</u>							
527.cam4_r	128	261	857	261	856	<u>261</u>	<u>856</u>							
538.imagick_r	128	<u>106</u>	<u>3010</u>	106	3000	106	3010							
544.nab_r	128	183	1180	<u>183</u>	<u>1180</u>	183	1180							
549.fotonik3d_r	128	984	507	982	508	<u>984</u>	<u>507</u>							
554.roms_r	128	<u>727</u>	<u>280</u>	727	280	731	278							

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Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Compiler Notes

Binaries were built using Intel oneAPI 2026.0 compilers.

Submit Notes

The numactl mechanism was used to bind copies to processors.
The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor.
For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited".

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/speccpu2017/lib/intel64"
MALLOC_CONF = "retain:true"

General Notes

Binaries compiled on a system with 2x Intel Xeon processors + 1 TB RAM
memory using Red Hat Enterprise Linux 10.1

(Continued on next page)



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General Notes (Continued)

Prior to runcpu invocation

Filesystem page cache synced and cleared with:

sync; echo 3 > /proc/sys/vm/drop_caches

runcpu command invoked through numactl i.e.:

numactl --interleave=all runcpu <etc>

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.

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/transparent_hugepage/enabled

jemalloc, a general purpose malloc implementation

Built with the Red Hat Enterprise Linux 10.1 (Coughlan), and Intel oneAPI 2026.0 icx/icpx compiler.

Sources available from jemalloc.net or <https://github.com/jemalloc/jemalloc/releases>

Platform Notes

BIOS configuration:

Performance Profile set to High Performance Compute

Intel VT for Directed I/O set to Disabled

SNC set to Enable SNC2

KTI Prefetch set to Enabled

L2 RFO Prefetch Disable set to Enabled

Sysinfo program /home/speccpu2017/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost.localdomain Sun Jun 28 17:34:46 2026

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 257 (257-13.el10-g833aa52)
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

(Continued on next page)



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Platform Notes (Continued)

22. dmidecode
23. BIOS

1. uname -a
Linux localhost.localdomain 6.12.0-124.8.1.el10_1.x86_64 #1 SMP PREEMPT_DYNAMIC Fri Oct 17 13:03:58 EDT 2025 x86_64 GNU/Linux

2. w
17:34:46 up 2:52, 5 users, load average: 35.11, 98.36, 116.45
USER TTY LOGIN@ IDLE JCPU PCPU WHAT
gdm tty1 14:43 2:51m 7.72s 0.01s /usr/libexec/gsd-printer
gdm 14:43 1:27m 0.00s 0.16s /usr/lib/systemd/systemd --user
root 14:44 1:27m 0.00s 0.01s sshd-session: root [priv]
root 14:44 1:27m 0.00s 0.18s /usr/lib/systemd/systemd --user
root 16:20 1:27m 0.00s 0.02s sshd-session: root [priv]

3. Username
From environment variable \$USER: root

4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited
core file size (blocks, -c) unlimited
data seg size (kbytes, -d) unlimited
scheduling priority (-e) 0
file size (blocks, -f) unlimited
pending signals (-i) 4123732
max locked memory (kbytes, -l) unlimited
max memory size (kbytes, -m) unlimited
open files (-n) 1048576
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) 1048576
virtual memory (kbytes, -v) unlimited
file locks (-x) unlimited

5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=43 rhgb
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd-session: root [priv]
sshd-session: root@pts/0
-bash
bash test_on_x86.sh
runcpu -c test_062601_fp.cfg -T base -n 3 --reportable --copies=128 -o all fprate
runcpu --configfile test_062601_fp.cfg --tune base --iterations 3 --reportable --copies 128 --output_format all --nopower --runmode rate --tune base --size refrate fprate --nopreenv --note-preenv --logfile \$SPEC/tmp/CPU2017.002/temlogs/preenv.fprate.002.0.log --lognum 002.0 --from_runcpu 2
specperl \$SPEC/bin/sysinfo
\$SPEC = /home/speccpu2017

(Continued on next page)



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Platform Notes (Continued)

```
-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Gold 6459C
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping       : 8
microcode      : 0x2b0005c0
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb bhi spectre_v2_user
cpu cores      : 32
siblings       : 64
2 physical ids (chips)
128 processors (hardware threads)
physical id 0: core ids 0-31
physical id 1: core ids 0-31
physical id 0: apicids 0-63
physical id 1: apicids 128-191
```

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for virtualized systems. Use the above data carefully.

```
-----
7. lscpu
```

From lscpu from util-linux 2.40.2:

```
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):                128
On-line CPU(s) list:   0-127
Vendor ID:             GenuineIntel
BIOS Vendor ID:        Intel(R) Corporation
Model name:            Intel(R) Xeon(R) Gold 6459C
BIOS Model name:       Intel(R) Xeon(R) Gold 6459C  CPU @ 3.0GHz
BIOS CPU family:       179
CPU family:            6
Model:                143
Thread(s) per core:    2
Core(s) per socket:    32
Socket(s):             2
Stepping:              8
CPU(s) scaling MHz:    99%
CPU max MHz:           3900.0000
CPU min MHz:           800.0000
BogoMIPS:              6000.00
Flags:                 fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx
pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good
nopl xtopology nonstop_tsc cpuid aperfmperf tsc_known_freq pni
pclmulqdq dtes64 monitor ds_cpl smx est tm2 ssse3 sdbg fma cx16
xtpr pcdm pcid dca sse4_1 sse4_2 x2apic movbe popcnt
tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm
3dnowprefetch cpuid_fault epb cat_l3 cat_l2 cdp_l3 intel_ppin
cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced fsgsbase tsc_adjust
bmi1 avx2 smep bmi2 erms invpcid cqm rdt_a avx512f avx512dq rdseed
adx smap avx512ifma clflushopt clwb intel_pt avx512cd sha_ni
```

(Continued on next page)



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Platform Notes (Continued)

avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc
cqm_occup_llc cqm_mbm_total cqm_mbm_local split_lock_detect
user_shstk avx_vnni avx512_bf16 wbnoinvd dtherm ida arat pln pts
hfi avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni vaes
vpclmulqdq avx512_vnni avx512_bitalg avx512_vpopcntdq la57 rdpid
bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear
serialize tsxldtrk pconfig arch_lbr ibt amx_bf16 avx512_fp16
amx_tile amx_int8 flush_l1d arch_capabilities

L1d cache: 3 MiB (64 instances)
L1i cache: 2 MiB (64 instances)
L2 cache: 128 MiB (64 instances)
L3 cache: 120 MiB (2 instances)

NUMA node(s): 4
NUMA node0 CPU(s): 0-15,64-79
NUMA node1 CPU(s): 16-31,80-95
NUMA node2 CPU(s): 32-47,96-111
NUMA node3 CPU(s): 48-63,112-127

Vulnerability Gather data sampling: Not affected
Vulnerability Indirect target selection: 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; PBRSE-eIBRS SW sequence; BHI BHI_DIS_S
Vulnerability Srbds: Not affected
Vulnerability Tsa: 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	3M	12	Data	1	64	1	64
L1i	32K	2M	8	Instruction	1	64	1	64
L2	2M	128M	16	Unified	2	2048	1	64
L3	60M	120M	15	Unified	3	65536	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: 0-15,64-79
node 0 size: 257047 MB
node 0 free: 255793 MB
node 1 cpus: 16-31,80-95
node 1 size: 258039 MB
node 1 free: 256724 MB
node 2 cpus: 32-47,96-111
node 2 size: 258039 MB
node 2 free: 256874 MB
node 3 cpus: 48-63,112-127

(Continued on next page)



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Platform Notes (Continued)

node 3 size: 258033 MB

node 3 free: 256792 MB

node distances:

node	0	1	2	3
0:	10	12	21	21
1:	12	10	21	21
2:	21	21	10	12
3:	21	21	12	10

9. /proc/meminfo

MemTotal: 1055909252 kB

10. who -r

run-level 5 Jun 28 14:43

11. Systemd service manager version: systemd 257 (257-13.el10-g833aa52)

Default Target Status
graphical running

12. Services, from systemctl list-unit-files

STATE UNIT FILES

enabled	ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon atd audit-rules auditd avahi-daemon bluetooth chronyd crond cups dbus-broker fips-crypto-policy-overlay gdm getty@ insights-client-boot irqbalance iscsi-onboot iscsi-starter kdump libstoragemgmt lm_sensors lvm2-monitor mcelog mdmonitor multipathd nvme-fc-boot-connections pmcd pmie pmlogger qemu-guest-agent rhsmcertd rsyslog rtkit-daemon selinux-autorelabel-mark smartd sshd sssd switcheroo-control sysstat systemd-confext systemd-network-generator systemd-pstore systemd-sysext tuned tuned-ppd udisks2 upower vgauthd virtqemud vmtoolsd
enabled-runtime	systemd-remount-fs
disabled	arp-ethers autofs blk-availability brltty canberra-system-bootup canberra-system-shutdown canberra-system-shutdown-reboot chrony-wait chronyd-restricted console-getty cups-browsed dbus-daemon debug-shell dhcpcd dhcpcd@ dnf-system-upgrade dnsmasq dovecot fancontrol fcoe firewallld fsidd gnome-headless-session@ gnome-remote-desktop gnome-remote-desktop-configuration grafana-server gssproxy htcacheclean httpd httpd@ hypervfscopyd ibacm ipsec iscsi-init iscsid iscsiuiop kpatch kvm_stat ledmon libvirt-guests libvirtd lldpad low-memory-monitor lvm-devices-import man-db-restart-cache-update microcode named named-chroot netavark-dhcp-proxy netavark-firewalld-reload nfs-blkmap nfs-server nftables nis-domainname nmb numad nvme-autoconnect pesign pmfind pmie_farm pmlogger_farm pmproxy podman podman-auto-update podman-clean-transient podman-kube@ podman-restart postfix powertop psacct ras-mc-ctl rasdaemon rhsm rhsm-facts rpcbind rpmbd-migrate rpmbd-rebuild rrdcached samba-bggd saslauthd selinux-check-proper-disable serial-getty@ smb snmpd snmptrapd speech-dispatcherd srp_daemon srp_daemon_port@ ssh-host-keys-migration sshd-keygen@ systemd-boot-check-no-failures systemd-boot-update systemd-nspawn@ 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-udev-load-credentials target targetclid tmux@ tog-pegasus trace-cmd virtinterfaced virtlockd virtlogd virtnetworkd virtnodedevd virtnwfilterd virtproxid virtsecret virtstoraged vsftpd wpa_supplicant wsd yggdrasil yggdrasil@
indirect	iscsi pcscd spice-vdagentd sshd@ sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo systemd-sysupdate systemd-sysupdate-reboot systemd-userdbd vsftpd@

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Platform Notes (Continued)

```
-----
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=(hd0,gpt2)/vmlinuz-6.12.0-124.8.1.el10_1.x86_64
root=/dev/mapper/rhel-root
ro
crashkernel=2G-64G:256M,64G-:512M
resume=UUID=e0783db6-2c9d-4f28-82de-b7559d8ff5e5
rd.lvm.lv=rhel/root
rd.lvm.lv=rhel/swap
rhgb
quiet
mitigations=auto
-----
```

```
-----
14. cpupower frequency-info
analyzing CPU 118:
  current policy: frequency should be within 800 MHz and 3.90 GHz.
                   The governor "userspace" may decide which speed to use
                   within this range.
  boost state support:
    Supported: yes
    Active: yes
-----
```

```
-----
15. tuned-adm active
Current active profile: balanced
-----
```

```
-----
16. sysctl
kernel.numa_balancing          1
kernel.randomize_va_space      2
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                  20
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                    60
vm.watermark_boost_factor      15000
vm.watermark_scale_factor       10
vm.zone_reclaim_mode            0
-----
```

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

(Continued on next page)



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Platform Notes (Continued)

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 Red Hat Enterprise Linux 10.1 (Coughlan)
redhat-release Red Hat Enterprise Linux release 10.1 (Coughlan)
system-release Red Hat Enterprise Linux release 10.1 (Coughlan)
```

20. Disk information

SPEC is set to: /home/speccpu2017

```
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 343G 71G 272G 21% /home
```

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

```
Vendor: HUAKUN
Product: HuaKun TG225 X5
Product Family: Not specified
Serial: S2063S001
```

22. dmidecode

Additional information from dmidecode 3.6 follows. WARNING: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

Memory:

16x Hynix HMC94AGBRA181N 64 GB 2 rank 5600, configured at 4800

23. BIOS

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

```
BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 00.04.06
BIOS Date: 03/26/2026
```

Compiler Version Notes

```
=====  
C | 519.lbm_r(base) 538.imagick_r(base) 544.nab_r(base)  
=====
```

Intel(R) oneAPI DPC++/C++ Compiler 2026.0.0 (2026.0.0.20260331)

Target: x86_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/intel/oneapi/compiler/2026.0/bin/compiler

Configuration file: /opt/intel/oneapi/compiler/2026.0/bin/compiler/./icx.cfg

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SPEC CPU®2017 Floating Point Rate Result

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Huakun TG225 X5
(3.00GHz, Intel Xeon Gold 6459C)

SPECrate®2017_fp_base = 765

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 6271

Test Sponsor: Sichuan Huakun Zhenyu Intelligent Technology Co.,
Ltd.

Tested by: Sichuan Huakun Zhenyu Intelligent Technology Co.,
Ltd.

Test Date: Jun-2026

Hardware Availability: Mar-2026

Software Availability: May-2026

Compiler Version Notes (Continued)

=====
C++ | 508.namd_r(base) 510.parest_r(base)
=====

Intel(R) oneAPI DPC++/C++ Compiler 2026.0.0 (2026.0.0.20260331)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/intel/oneapi/compiler/2026.0/bin/compiler
Configuration file: /opt/intel/oneapi/compiler/2026.0/bin/compiler/./icpx.cfg
=====

=====
C++, C | 511.povray_r(base) 526.blender_r(base)
=====

Intel(R) oneAPI DPC++/C++ Compiler 2026.0.0 (2026.0.0.20260331)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/intel/oneapi/compiler/2026.0/bin/compiler
Configuration file: /opt/intel/oneapi/compiler/2026.0/bin/compiler/./icpx.cfg
Intel(R) oneAPI DPC++/C++ Compiler 2026.0.0 (2026.0.0.20260331)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/intel/oneapi/compiler/2026.0/bin/compiler
Configuration file: /opt/intel/oneapi/compiler/2026.0/bin/compiler/./icx.cfg
=====

=====
C++, C, Fortran | 507.cactuBSSN_r(base)
=====

Intel(R) oneAPI DPC++/C++ Compiler 2026.0.0 (2026.0.0.20260331)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/intel/oneapi/compiler/2026.0/bin/compiler
Configuration file: /opt/intel/oneapi/compiler/2026.0/bin/compiler/./icpx.cfg
Intel(R) oneAPI DPC++/C++ Compiler 2026.0.0 (2026.0.0.20260331)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/intel/oneapi/compiler/2026.0/bin/compiler
Configuration file: /opt/intel/oneapi/compiler/2026.0/bin/compiler/./icx.cfg
ifx (IFX) 2026.0.0 20260331
Copyright (C) 1985-2026 Intel Corporation. All rights reserved.
=====

=====
Fortran | 503.bwaves_r(base) 549.fotonik3d_r(base) 554.roms_r(base)
=====

ifx (IFX) 2026.0.0 20260331
Copyright (C) 1985-2026 Intel Corporation. All rights reserved.
=====

=====
Fortran, C | 521.wrf_r(base) 527.cam4_r(base)
=====

ifx (IFX) 2026.0.0 20260331
Copyright (C) 1985-2026 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler 2026.0.0 (2026.0.0.20260331)
=====

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Software Availability: May-2026

Compiler Version Notes (Continued)

Target: x86_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/intel/oneapi/compiler/2026.0/bin/compiler

Configuration file: /opt/intel/oneapi/compiler/2026.0/bin/compiler/./icx.cfg

Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using both C and C++:

icpx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

Base Portability Flags

503.bwaves_r: -DSPEC_LP64

507.cactuBSSN_r: -DSPEC_LP64

508.namd_r: -DSPEC_LP64

510.parest_r: -DSPEC_LP64

511.povray_r: -DSPEC_LP64

519.lbm_r: -DSPEC_LP64

521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian

526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char

527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG

538.imagick_r: -DSPEC_LP64

544.nab_r: -DSPEC_LP64

549.fotonik3d_r: -DSPEC_LP64

554.roms_r: -DSPEC_LP64



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Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -wl, -z, muldefs -xCORE-AVX2 -Ofast -ffast-math  
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-Wno-implicit-int -ljemalloc -L/usr/local/jemalloc-5.3.0/lib
```

C++ benchmarks:

```
-w -std=c++14 -m64 -wl, -z, muldefs -xCORE-AVX2 -Ofast -ffast-math  
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -ljemalloc  
-L/usr/local/jemalloc-5.3.0/lib
```

Fortran benchmarks:

```
-w -m64 -wl, -z, muldefs -xCORE-AVX2 -Ofast -ffast-math -flto  
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc  
-L/usr/local/jemalloc-5.3.0/lib
```

Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -wl, -z, muldefs -xCORE-AVX2 -Ofast -ffast-math  
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-Wno-implicit-int -nostandard-realloc-lhs -align array32byte -auto  
-ljemalloc -L/usr/local/jemalloc-5.3.0/lib
```

Benchmarks using both C and C++:

```
-w -std=c++14 -m64 -std=c11 -wl, -z, muldefs -xCORE-AVX2 -Ofast  
-ffast-math -flto -mfpmath=sse -funroll-loops  
-qopt-mem-layout-trans=4 -Wno-implicit-int -ljemalloc  
-L/usr/local/jemalloc-5.3.0/lib
```

Benchmarks using Fortran, C, and C++:

```
-w -std=c++14 -m64 -std=c11 -wl, -z, muldefs -xCORE-AVX2 -Ofast  
-ffast-math -flto -mfpmath=sse -funroll-loops  
-qopt-mem-layout-trans=4 -Wno-implicit-int -nostandard-realloc-lhs  
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc-5.3.0/lib
```

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

<http://www.spec.org/cpu2017/flags/Intel-ic2026-official-linux64.html>

<http://www.spec.org/cpu2017/flags/HuaKun-Platform-Settings-ICX-V1.2.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2026-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/HuaKun-Platform-Settings-ICX-V1.2.xml>



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