



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 767

H3C UniServer R4700 G7 (Intel Xeon 6520P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

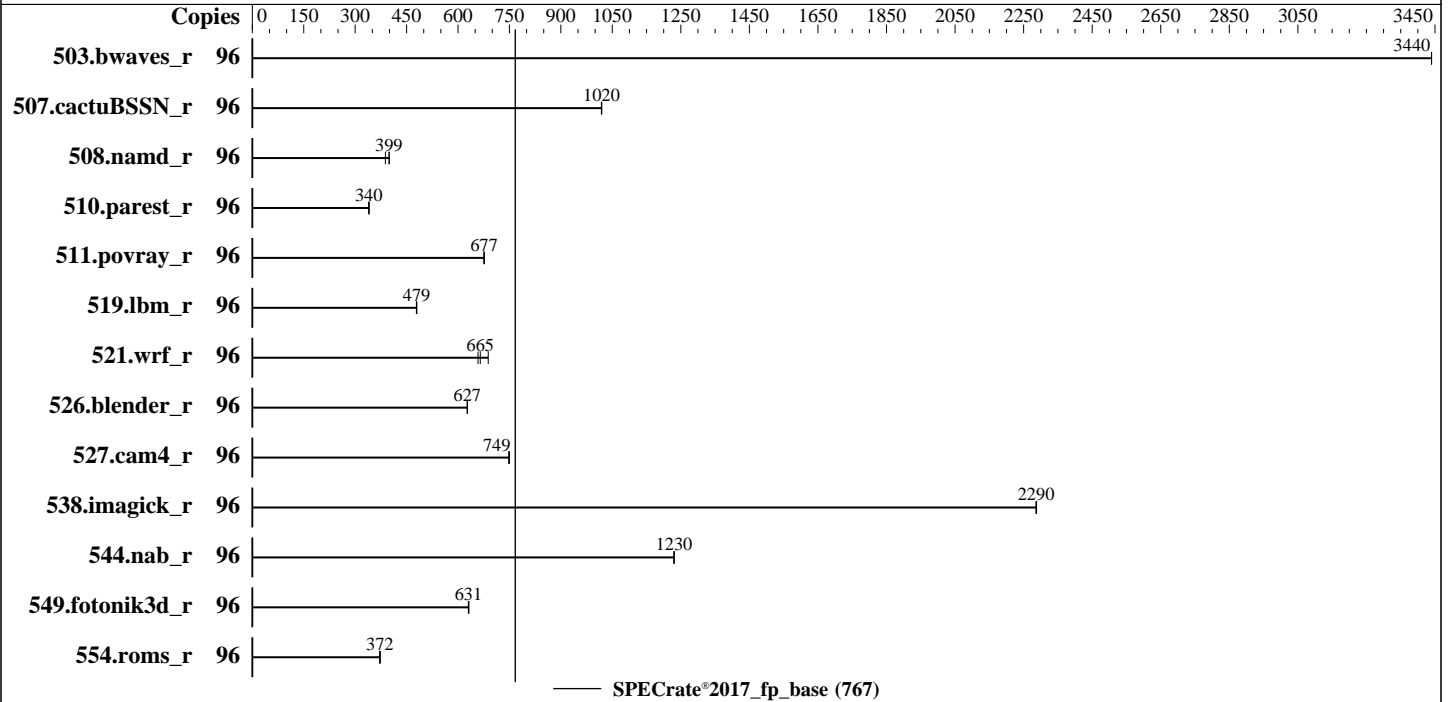
Test Date: Apr-2026

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Mar-2025

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Jun-2024



Hardware

CPU Name: Intel Xeon 6520P
 Max MHz: 4000
 Nominal: 2400
 Enabled: 48 cores, 2 chips, 2 threads/core
 Orderable: 1,2 chips
 Cache L1: 64 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 144 MB I+D on chip per chip
 Other: None
 Memory: 512 GB (16 x 32 GB 2Rx8 PC5-6400B-R)
 Storage: 1 x 960 GB SATA SSD
 Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP6
 6.4.0-150600.21-default
 Compiler: C/C++: Version 2024.1 of Intel oneAPI DPC++/C++
 Compiler for Linux;
 Fortran: Version 2024.1 of Intel Fortran Compiler
 for Linux;
 Parallel: No
 Firmware: Version 7.00.15 released Jun-2025 BIOS
 File System: xfs
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other: jemalloc memory allocator V5.0.1
 Power Management: BIOS and OS set to prefer performance at the cost
 of additional power usage.



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 767

H3C UniServer R4700 G7 (Intel Xeon 6520P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Apr-2026

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|-----------------|--------|------------|-------------|------------|-------------|------------|-------------|--------|---------|-------|---------|-------|---------|-------|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 503.bwaves_r | 96 | 280 | 3440 | 280 | 3440 | <u>280</u> | <u>3440</u> | | | | | | | |
| 507.cactuBSSN_r | 96 | 119 | 1020 | <u>119</u> | <u>1020</u> | 119 | 1020 | | | | | | | |
| 508.namd_r | 96 | 235 | 388 | 228 | 399 | <u>229</u> | <u>399</u> | | | | | | | |
| 510.parest_r | 96 | 739 | 340 | 738 | 340 | <u>738</u> | <u>340</u> | | | | | | | |
| 511.povray_r | 96 | 331 | 677 | 332 | 676 | <u>331</u> | <u>677</u> | | | | | | | |
| 519.lbm_r | 96 | 211 | 480 | <u>211</u> | <u>479</u> | 211 | 479 | | | | | | | |
| 521.wrf_r | 96 | 312 | 688 | 327 | 658 | <u>323</u> | <u>665</u> | | | | | | | |
| 526.blender_r | 96 | 233 | 628 | 233 | 627 | <u>233</u> | <u>627</u> | | | | | | | |
| 527.cam4_r | 96 | 224 | 750 | 224 | 748 | <u>224</u> | <u>749</u> | | | | | | | |
| 538.imagick_r | 96 | 104 | 2290 | <u>104</u> | <u>2290</u> | 104 | 2290 | | | | | | | |
| 544.nab_r | 96 | <u>131</u> | <u>1230</u> | 131 | 1230 | 131 | 1230 | | | | | | | |
| 549.fotonik3d_r | 96 | 592 | 632 | <u>593</u> | <u>631</u> | 594 | 630 | | | | | | | |
| 554.roms_r | 96 | 409 | 373 | 411 | 371 | <u>410</u> | <u>372</u> | | | | | | | |

SPECrate®2017_fp_base = 767

SPECrate®2017_fp_peak = Not Run

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

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/speccpu/lib/intel64:/home/speccpu/je5.0.1-64"
MALLOC_CONF = "retain:true"

General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4
Transparent Huge Pages enabled by default
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.

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 767

H3C UniServer R4700 G7 (Intel Xeon 6520P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Apr-2026

Hardware Availability: Mar-2025

Software Availability: Jun-2024

General Notes (Continued)

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.

jemalloc, a general purpose malloc implementation

built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

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

Platform Notes

BIOS Settings:

SNC = Enable

ACPI C6x Enumeration = C6 as ACPI C2

Latency Optimized Mode = Enabled

BMC Settings:

Fan mode = powerful mode

Sysinfo program /home/speccpu/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost Thu Apr 30 07:52:29 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 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
07:52:29 up 6:51, 1 user, load average: 52.42, 84.34, 90.76

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 767

H3C UniServer R4700 G7 (Intel Xeon 6520P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Apr-2026

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Platform Notes (Continued)

| USER | TTY | FROM | LOGIN@ | IDLE | JCPU | PCPU | WHAT |
|------|------|------|--------|-------|-------|-------|-------|
| root | tty1 | - | 01:01 | 6:46m | 1.29s | 0.01s | -bash |

3. Username

From environment variable \$USER: root

4. ulimit -a

```

core file size          (blocks, -c) unlimited
data seg size          (kbytes, -d) unlimited
scheduling priority    (-e) 0
file size              (blocks, -f) unlimited
pending signals        (-i) 2062046
max locked memory      (kbytes, -l) 8192
max memory size        (kbytes, -m) unlimited
open files             (-n) 1024
pipe size              (512 bytes, -p) 8
POSIX message queues   (bytes, -q) 819200
real-time priority     (-r) 0
stack size             (kbytes, -s) unlimited
cpu time               (seconds, -t) unlimited
max user processes     (-u) 2062046
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
-bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=96 -c
  ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=48 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base -o all fprate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=96 --configfile
  ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=48 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base --output_format all --nopower --runmode
  rate --tune base --size refrate fprate --nopreenv --note-preenv --logfile
  $SPEC/tmp/CPU2017.458/tempplogs/preenv.fprate.458.0.log --lognum 458.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/speccpu

```

6. /proc/cpuinfo

```

model name      : Intel(R) Xeon(R) 6520P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173
stepping      : 1
microcode     : 0x1000380
bugs          : spectre_v1 spectre_v2 spec_store_bypass swaps bhi
cpu cores     : 24
siblings      : 48
2 physical ids (chips)
96 processors (hardware threads)
physical id 0: core ids 0-23
physical id 1: core ids 0-23
physical id 0: apicids 0-47
physical id 1: apicids 128-175

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 767

H3C UniServer R4700 G7 (Intel Xeon 6520P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Date: Apr-2026

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Mar-2025

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Jun-2024

Platform Notes (Continued)

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

7. lscpu

From lscpu from util-linux 2.39.3:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:          52 bits physical, 57 bits virtual
Byte Order:             Little Endian
CPU(s):                 96
On-line CPU(s) list:   0-95
Vendor ID:              GenuineIntel
BIOS Vendor ID:        Intel(R) Corporation
Model name:             Intel(R) Xeon(R) 6520P
BIOS Model name:       Intel(R) Xeon(R) 6520P UNKNOWN CPU @ 2.4GHz
BIOS CPU family:       179
CPU family:             6
Model:                  173
Thread(s) per core:    2
Core(s) per socket:    24
Socket(s):              2
Stepping:               1
CPU(s) scaling MHz:    33%
CPU max MHz:            4000.0000
CPU min MHz:            800.0000
BogoMIPS:               4800.00
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 vmx smx est tm2 ssse3 sdbg fma cx16
xtpr pdcm 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 tpr_shadow flexpriority ept
vpid ept_ad fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid
rtm cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma clflushopt
clwb intel_pt avx512cd sha_ni 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 hwp hwp_act_window hwp_epp hwp_pkg_req hfi vmni
avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni vaes vpclmulqdq
avx512_vnni avx512_bitalg tme 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_lld arch_capabilities
Virtualization:        VT-x
L1d cache:             2.3 MiB (48 instances)
L1i cache:             3 MiB (48 instances)
L2 cache:              96 MiB (48 instances)
L3 cache:              288 MiB (2 instances)
NUMA node(s):         2
NUMA node0 CPU(s):    0-23,48-71
NUMA node1 CPU(s):    24-47,72-95
Vulnerability Gather data sampling: Not affected
Vulnerability Itlb multihit:      Not affected
Vulnerability L1tf:              Not affected
Vulnerability Mds:              Not affected

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 767

H3C UniServer R4700 G7 (Intel Xeon 6520P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Date: Apr-2026

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Mar-2025

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Jun-2024

Platform Notes (Continued)

| | |
|---------------------------------------|--|
| 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; RSB filling; PBRBSB-eIBRS Not affected; BHI BHI_DIS_S |
| 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 | 2.3M | 12 | Data | 1 | 64 | 1 | 64 |
| L1i | 64K | 3M | 16 | Instruction | 1 | 64 | 1 | 64 |
| L2 | 2M | 96M | 16 | Unified | 2 | 2048 | 1 | 64 |
| L3 | 144M | 288M | 16 | Unified | 3 | 147456 | 1 | 64 |

8. numactl --hardware

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

```

available: 2 nodes (0-1)
node 0 cpus: 0-23,48-71
node 0 size: 257564 MB
node 0 free: 252139 MB
node 1 cpus: 24-47,72-95
node 1 size: 257972 MB
node 1 free: 252960 MB
node distances:
node 0 1
0: 10 21
1: 21 10

```

9. /proc/meminfo

MemTotal: 527909508 kB

10. who -r

run-level 3 Apr 30 01:01

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 chronyd cron getty@ irqbalance issue-generator kbdsettings postfix
purge-kernels rollback smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4
wickedd-dhcp6 wickedd-nanny
enabled-runtime systemd-remount-fs
disabled boot-sysctl ca-certificates chrony-wait console-getty debug-shell ebttables fancontrol
firewalld grub2-once haveged issue-add-ssh-keys kexec-load lm_sensors lunmask
rpmconfigcheck serial-getty@ smartd_generate_opts sysstat systemd-boot-check-no-failures
systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync
systemd-timesyncd tuned
indirect systemd-userdbd wickedd

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 767

H3C UniServer R4700 G7 (Intel Xeon 6520P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Apr-2026

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Platform Notes (Continued)

```

-----
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
root=UUID=287cccce-a705-4048-89d9-10107c0283b3
splash=silent
resume=/dev/disk/by-uuid/48e58092-2d5c-481f-adc6-5553a102ed9a
mitigations=auto
quiet
security=apparmor

```

```

-----
14. cpupower frequency-info
analyzing CPU 55:
  current policy: frequency should be within 800 MHz and 4.00 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     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

```

```

-----
18. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs  60000
defrag                  1
max_ptes_none          511

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 767

H3C UniServer R4700 G7 (Intel Xeon 6520P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Apr-2026

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Platform Notes (Continued)

```

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 SUSE Linux Enterprise Server 15 SP6

```

```

-----
20. Disk information
SPEC is set to: /home/speccpu
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 xfs 854G 493G 362G 58% /home

```

```

-----
21. /sys/devices/virtual/dmi/id
Vendor:      New H3C Technologies Co., Ltd.
Product:     H3C UniServer R4700 G7
Product Family: Rack
Serial:      210235A51FH247000009

```

```

-----
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:
10x Hynix HMC88AHBRA290N 32 GB 2 rank 6400
1x Hynix HMC88AHBRA472N 32 GB 2 rank 6400
5x Hynix HMC88AHBRA478N 32 GB 2 rank 6400

```

```

-----
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor:      American Megatrends International, LLC.
BIOS Version:     7.00.15
BIOS Date:        06/03/2025
BIOS Revision:    5.35
Firmware Revision: 2.14

```

Compiler Version Notes

```

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

```

```

-----
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

```

```

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

```

```

-----
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 767

H3C UniServer R4700 G7 (Intel Xeon 6520P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Apr-2026

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Compiler Version Notes (Continued)

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

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
=====

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

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
=====

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

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
=====

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

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
=====

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

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 767

H3C UniServer R4700 G7 (Intel Xeon 6520P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Apr-2026

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Base Compiler Invocation (Continued)

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

```

Base Optimization Flags

C benchmarks:

```

-w -std=c11 -m64 -Wl,-z,muldefs -xsaphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

```

C++ benchmarks:

```

-w -std=c++14 -m64 -Wl,-z,muldefs -xsaphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

```

Fortran benchmarks:

```

-w -m64 -Wl,-z,muldefs -xsaphirerapids -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

```

Benchmarks using both Fortran and C:

```

-w -m64 -std=c11 -Wl,-z,muldefs -xsaphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 767

H3C UniServer R4700 G7 (Intel Xeon 6520P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Apr-2026

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C (continued):

```
-Wno-implicit-int -mprefer-vector-width=512 -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both C and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xsaphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
-ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using Fortran, C, and C++:

```
-w -m64 -std=c++14 -std=c11 -Wl,-z,muldefs -xsaphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

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

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.html>

http://www.spec.org/cpu2017/flags/New_H3C-Platform-Settings-Intel-GNR-RevC.html

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

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml>

http://www.spec.org/cpu2017/flags/New_H3C-Platform-Settings-Intel-GNR-RevC.xml

SPEC CPU and SPECrate 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 2026-04-29 19:52:29-0400.

Report generated on 2026-05-19 17:28:03 by CPU2017 PDF formatter v6716.

Originally published on 2026-05-19.