



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_fp\_base = 768

H3C UniServer R4900 G7 (Intel Xeon 6520P)

SPECrate®2017\_fp\_peak = Not Run

CPU2017 License: 9066

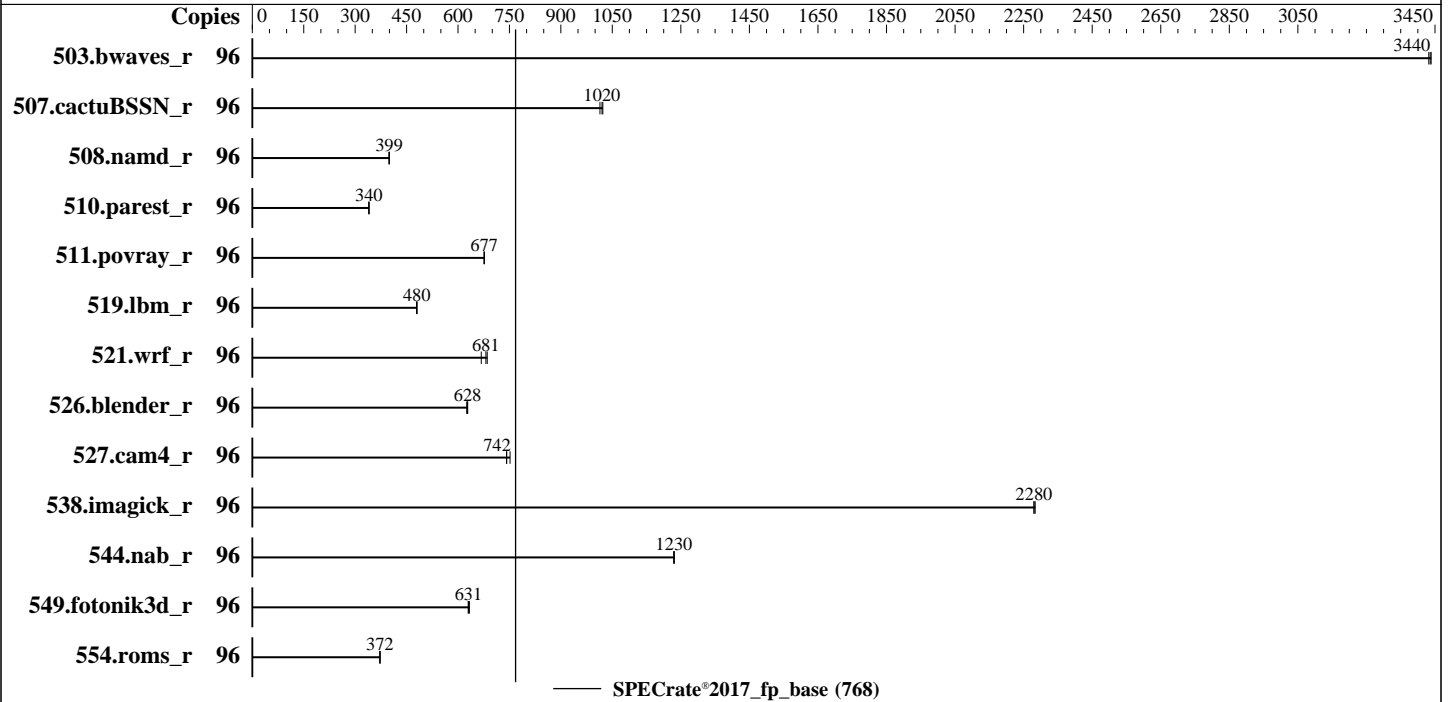
Test Date: Apr-2026

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.



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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	96	280	3440	<b>280</b>	<b>3440</b>	281	3430							
507.cactuBSSN_r	96	119	1020	120	1010	<b>119</b>	<b>1020</b>							
508.namd_r	96	<b>229</b>	<b>399</b>	228	399	229	399							
510.parest_r	96	738	340	<b>738</b>	<b>340</b>	738	340							
511.povray_r	96	331	677	332	676	<b>331</b>	<b>677</b>							
519.lbm_r	96	211	480	211	479	<b>211</b>	<b>480</b>							
521.wrf_r	96	322	668	<b>316</b>	<b>681</b>	314	685							
526.blender_r	96	<b>233</b>	<b>628</b>	234	625	233	628							
527.cam4_r	96	<b>226</b>	<b>742</b>	226	742	223	752							
538.imagick_r	96	<b>105</b>	<b>2280</b>	105	2280	105	2280							
544.nab_r	96	131	1230	<b>131</b>	<b>1230</b>	131	1230							
549.fotonik3d_r	96	594	630	<b>593</b>	<b>631</b>	591	633							
554.roms_r	96	<b>410</b>	<b>372</b>	410	372	409	373							

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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.

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## 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 Tue Apr 28 20:44:10 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  
20:44:10 up 2 days, 5:08, 2 users, load average: 59.52, 86.35, 91.26

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## Platform Notes (Continued)

USER	TTY	FROM	LOGIN@	IDLE	JCPU	PCPU	WHAT
root	tty1	-	Sun15	2days	0.29s	0.29s	-bash
root	tty2	-	Sun21	10:08m	0.89s	0.02s	-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) 2062045
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) 2062045
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/CPU2017.453/templogs/preenv.fprate.453.0.log --lognum 453.0 --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 swapgs 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

```

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## Platform Notes (Continued)

physical id 1: apicids 128-175

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:          31%
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 bmil 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 vnmi
                               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

```

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## Platform Notes (Continued)

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; RSB filling; PBRSE-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: 251998 MB
node 1 cpus: 24-47,72-95
node 1 size: 257972 MB
node 1 free: 252927 MB
node distances:
node  0  1
  0: 10 21
  1: 21 10

```

9. /proc/meminfo

MemTotal: 527909484 kB

10. who -r

run-level 3 Apr 26 15:36

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

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## Platform Notes (Continued)

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=287ccce-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 19:
  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

```

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## Platform Notes (Continued)

```

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 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 R4900 G7
Product Family: Rack
Serial:         210235A51GH249000015

```

### 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 HMC88AHB290N 32 GB 2 rank 6400
1x Hynix HMC88AHB472N 32 GB 2 rank 6400
5x Hynix HMC88AHB478N 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
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```

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## Compiler Version Notes (Continued)

=====  
C++, C | 511.povray\_r(base) 526.blender\_r(base)  
=====

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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 = 768

H3C UniServer R4900 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 -xsapphirerapids -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 -xsapphirerapids -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 -xsapphirerapids -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

```

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## Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -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
```

Benchmarks using both C and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -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 -xsapphirerapids -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](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](http://www.spec.org/cpu2017/flags/New_H3C-Platform-Settings-Intel-GNR-RevC.xml)

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For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

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