



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SR650 V4  
(2.10 GHz, Intel Xeon 6740P)

SPECspeed®2017\_fp\_base = 379

SPECspeed®2017\_fp\_peak = Not Run

CPU2017 License: 9017

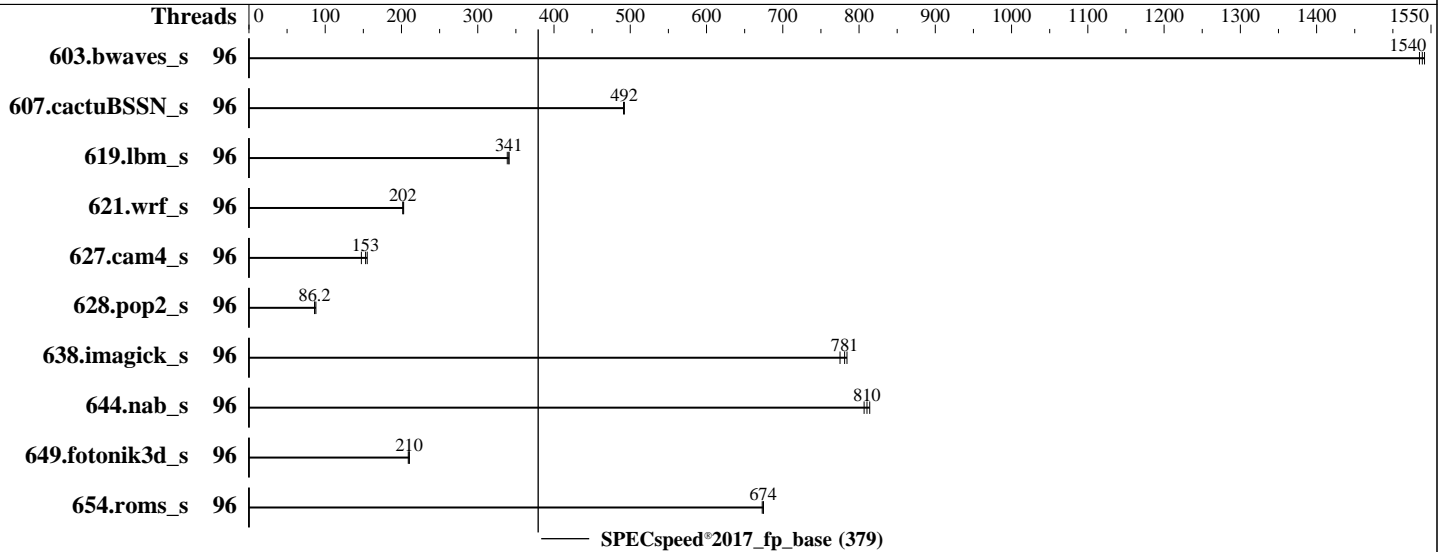
Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Mar-2025

Hardware Availability: May-2025

Software Availability: Jun-2024



### Hardware

CPU Name: Intel Xeon 6740P  
 Max MHz: 3800  
 Nominal: 2100  
 Enabled: 96 cores, 2 chips  
 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: 288 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 NVME SSD  
 Other: CPU Cooling: Air

### Software

OS: SUSE Linux Enterprise Server 15 SP6  
 Kernel 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: Yes  
 Firmware: Lenovo BIOS Version IHE109T 1.20 released Feb-2025  
 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 set to prefer performance at the cost of additional power usage



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SR650 V4  
(2.10 GHz, Intel Xeon 6740P)

SPECspeed®2017\_fp\_base = 379

SPECspeed®2017\_fp\_peak = Not Run

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

**Test Date:** Mar-2025  
**Hardware Availability:** May-2025  
**Software Availability:** Jun-2024

## Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	96	38.3	1540	<b><u>38.3</u></b>	<b><u>1540</u></b>	38.4	1530							
607.cactuBSSN_s	96	33.9	491	<b><u>33.9</u></b>	<b><u>492</u></b>	33.9	492							
619.lbm_s	96	15.5	339	<b><u>15.4</u></b>	<b><u>341</u></b>	15.4	341							
621.wrf_s	96	65.2	203	<b><u>65.5</u></b>	<b><u>202</u></b>	65.5	202							
627.cam4_s	96	57.1	155	60.1	147	<b><u>58.0</u></b>	<b><u>153</u></b>							
628.pop2_s	96	138	86.1	135	87.8	<b><u>138</u></b>	<b><u>86.2</u></b>							
638.imagick_s	96	<b><u>18.5</u></b>	<b><u>781</u></b>	18.6	775	18.4	784							
644.nab_s	96	<b><u>21.6</u></b>	<b><u>810</u></b>	21.7	807	21.5	814							
649.fotonik3d_s	96	<b><u>43.4</u></b>	<b><u>210</u></b>	43.3	210	43.6	209							
654.roms_s	96	23.4	673	23.3	675	<b><u>23.3</u></b>	<b><u>674</u></b>							

SPECspeed®2017\_fp\_base = 379

SPECspeed®2017\_fp\_peak = Not Run

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

## 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:  
KMP\_AFFINITY = "granularity=fine,compact"  
LD\_LIBRARY\_PATH = "/home/cpu2017-1.1.9-ic2024.1/lib/intel64:/home/cpu2017-1.1.9-ic2024.1/je5.0.1-64"  
MALLOC\_CONF = "retain:true"  
OMP\_STACKSIZE = "192M"

## General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Redhat Enterprise Linux 8.0  
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  
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.  
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 configuration:  
Workload Profile set to General Computing - Peak Frequency

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SR650 V4  
(2.10 GHz, Intel Xeon 6740P)

SPECspeed®2017\_fp\_base = 379

SPECspeed®2017\_fp\_peak = Not Run

**CPU2017 License:** 9017

**Test Sponsor:** Lenovo Global Technology

**Tested by:** Lenovo Global Technology

**Test Date:** Mar-2025

**Hardware Availability:** May-2025

**Software Availability:** Jun-2024

## Platform Notes (Continued)

Hyper-Threading set to Disabled  
Page Policy set to Adaptive  
LLC Prefetch set to Enabled

Sysinfo program /home/cpu2017-1.1.9-ic2024.1/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on localhost Wed Mar 19 16:30:35 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
 16:30:35 up 28 min,  1 user,  load average: 60.62, 79.84, 67.04
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
```

```
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) 2062901
max locked memory       (kbytes, -l) 8192
max memory size         (kbytes, -m) unlimited
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SR650 V4  
(2.10 GHz, Intel Xeon 6740P)

SPECspeed®2017\_fp\_base = 379

SPECspeed®2017\_fp\_peak = Not Run

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

**Test Date:** Mar-2025  
**Hardware Availability:** May-2025  
**Software Availability:** Jun-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) 2062901
virtual memory            (kbytes, -v) unlimited
file locks                (-x) unlimited

```

#### 5. sysinfo process ancestry

```

/usr/lib/systemd/systemd --switched-root --system --deserialize=42
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: root [priv]
sshd: root@notty
/bin/bash ./02.remote_local_SPEccpu_1.01.sh
sh Run153-compliant-ic2024.1-lin-core-avx512-speedfp-base-smt-off-20240308.sh
runcpu --nobuild --action validate --define default-platform-flags -c
  ic2024.1-lin-core-avx512-speed-20240308.cfg --define cores=96 --tune base -o all --define drop_caches
  fpspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
  ic2024.1-lin-core-avx512-speed-20240308.cfg --define cores=96 --tune base --output_format all --define
  drop_caches --nopower --runmode speed --tune base --size refspeed fpspeed --nopreenv --note-preenv
  --logfile $SPEC/tmp/CPU2017.103/temlogs/preenv.fpspeed.103.0.log --lognum 103.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017-1.1.9-ic2024.1

```

#### 6. /proc/cpuinfo

```

model name      : Intel(R) Xeon(R) 6740P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173
stepping       : 1
microcode      : 0x1000380
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores      : 48
siblings       : 48
2 physical ids (chips)
96 processors (hardware threads)
physical id 0: core ids 0-23,64-87
physical id 1: core ids 0-23,64-87
physical id 0: apicids
0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,128,130,132,134,136,138,140,142,144,14
6,148,150,152,154,156,158,160,162,164,166,168,170,172,174
physical id 1: apicids
256,258,260,262,264,266,268,270,272,274,276,278,280,282,284,286,288,290,292,294,296,298,300,302,384,386,3
88,390,392,394,396,398,400,402,404,406,408,410,412,414,416,418,420,422,424,426,428,430
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

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

SPECspeed®2017\_fp\_base = 379

ThinkSystem SR650 V4  
(2.10 GHz, Intel Xeon 6740P)

SPECspeed®2017\_fp\_peak = Not Run

CPU2017 License: 9017

Test Date: Mar-2025

Test Sponsor: Lenovo Global Technology

Hardware Availability: May-2025

Tested by: Lenovo Global Technology

Software Availability: Jun-2024

### Platform Notes (Continued)

```

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) 6740P
BIOS Model name: Intel(R) Xeon(R) 6740P UNKNOWN CPU @ 2.1GHz
BIOS CPU family: 179
CPU family: 6
Model: 173
Thread(s) per core: 1
Core(s) per socket: 48
Socket(s): 2
Stepping: 1
BogoMIPS: 4200.00
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 vnni 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: 4.5 MiB (96 instances)
L1i cache: 6 MiB (96 instances)
L2 cache: 192 MiB (96 instances)
L3 cache: 576 MiB (2 instances)
NUMA node(s): 2
NUMA node0 CPU(s): 0-47
NUMA node1 CPU(s): 48-95
Vulnerability Gather data sampling: Not affected
Vulnerability Itlb multihit: Not affected
Vulnerability Lltf: 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; 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 4.5M 12 Data 1 64 1 64

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SR650 V4  
(2.10 GHz, Intel Xeon 6740P)

SPECspeed®2017\_fp\_base = 379

SPECspeed®2017\_fp\_peak = Not Run

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

**Test Date:** Mar-2025  
**Hardware Availability:** May-2025  
**Software Availability:** Jun-2024

### Platform Notes (Continued)

L1i	64K	6M	16	Instruction	1	64	1	64
L2	2M	192M	16	Unified	2	2048	1	64
L3	288M	576M	16	Unified	3	294912	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: 0-47
node 0 size: 257741 MB
node 0 free: 255804 MB
node 1 cpus: 48-95
node 1 size: 258010 MB
node 1 free: 257190 MB
node distances:
node  0  1
  0: 10 21
  1: 21 10

```

```

9. /proc/meminfo
MemTotal:      528129888 kB

```

```

10. who -r
run-level 3 Mar 19 16:03

```

```

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 issue-generator
kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections nvme-autoconnect postfix
purge-kernels rollback rsyslog smartd sshd systemd-pstore wicked wickedd-auto4
wicked-dhcp4 wicked-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 ebttables exchange-bmc-os-info
firewalld fsidd gpm grub2-once haveged ipmi ipmievd issue-add-ssh-keys kexec-load lunmask
man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd serial-getty@
smartd_generate_opts snmpd snmptrapd systemd-boot-check-no-failures systemd-confext
systemd-network-generator systemd-sysexit systemd-time-wait-sync systemd-timesyncd
generated ntp_sync
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=8c76b9eb-7cab-4e58-a0ba-c4f6030335e5
splash=silent
mitigations=auto
quiet
security=apparmor

```

```

14. cpupower frequency-info

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SR650 V4  
(2.10 GHz, Intel Xeon 6740P)

SPECspeed®2017\_fp\_base = 379

SPECspeed®2017\_fp\_peak = Not Run

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

**Test Date:** Mar-2025  
**Hardware Availability:** May-2025  
**Software Availability:** Jun-2024

### Platform Notes (Continued)

```
analyzing CPU 72:
Unable to determine current policy
boost state support:
Supported: yes
Active: yes
```

```
-----
15. 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
```

```
-----
16. /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
```

```
-----
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/cpu2017-1.1.9-ic2024.1
Filesystem Type Size Used Avail Use% Mounted on
/dev/nvme0n1p2 xfs 893G 83G 811G 10% /
```

```
-----
20. /sys/devices/virtual/dmi/id
Vendor:      Lenovo
Product:     ThinkSystem SR650 V4
```

(Continued on next page)





# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SR650 V4  
(2.10 GHz, Intel Xeon 6740P)

SPECspeed®2017\_fp\_base = 379

SPECspeed®2017\_fp\_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Mar-2025

Hardware Availability: May-2025

Software Availability: Jun-2024

## Platform Notes (Continued)

Product Family: ThinkSystem  
Serial: 0987654321

### 21. 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:

14x Samsung M321R4GA3PB2-CCPEC 32 GB 2 rank 6400  
1x Samsung M321R4GA3PB2-CCPKC 32 GB 2 rank 6400  
1x Samsung M321R4GA3PB2-CCPPC 32 GB 2 rank 6400

### 22. BIOS

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

BIOS Vendor: Lenovo  
BIOS Version: IHE109T-1.20  
BIOS Date: 02/28/2025  
BIOS Revision: 1.20  
Firmware Revision: 1.20

## Compiler Version Notes

C | 619.lbm\_s(base) 638.imagick\_s(base) 644.nab\_s(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++, C, Fortran | 607.cactuBSSN\_s(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 | 603.bwaves\_s(base) 649.fotonik3d\_s(base) 654.roms\_s(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 | 621.wrf\_s(base) 627.cam4\_s(base) 628.pop2\_s(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.





# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

SPECspeed®2017\_fp\_base = 379

ThinkSystem SR650 V4  
(2.10 GHz, Intel Xeon 6740P)

SPECspeed®2017\_fp\_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Mar-2025

Hardware Availability: May-2025

Software Availability: Jun-2024

## Base Compiler Invocation

C benchmarks:

icx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Base Portability Flags

```
603.bwaves_s: -DSPEC_LP64
607.cactuBSSN_s: -DSPEC_LP64
619.lbm_s: -DSPEC_LP64
621.wrf_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
627.cam4_s: -DSPEC_LP64 -DSPEC_CASE_FLAG
628.pop2_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
-assume byterecl
638.imagick_s: -DSPEC_LP64
644.nab_s: -DSPEC_LP64
649.fotonik3d_s: -DSPEC_LP64
654.roms_s: -DSPEC_LP64
```

## Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xCORE-AVX512 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

SPECspeed®2017\_fp\_base = 379

ThinkSystem SR650 V4  
(2.10 GHz, Intel Xeon 6740P)

SPECspeed®2017\_fp\_peak = Not Run

CPU2017 License: 9017

Test Date: Mar-2025

Test Sponsor: Lenovo Global Technology

Hardware Availability: May-2025

Tested by: Lenovo Global Technology

Software Availability: Jun-2024

## Base Optimization Flags (Continued)

Benchmarks using both Fortran and C (continued):

```
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using Fortran, C, and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

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

<http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-Birchstream-C.html>  
<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.html>

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

<http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-Birchstream-C.xml>  
<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml>

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 2025-03-19 04:30:35-0400.  
Report generated on 2025-04-09 15:00:17 by CPU2017 PDF formatter v6716.  
Originally published on 2025-04-09.