



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

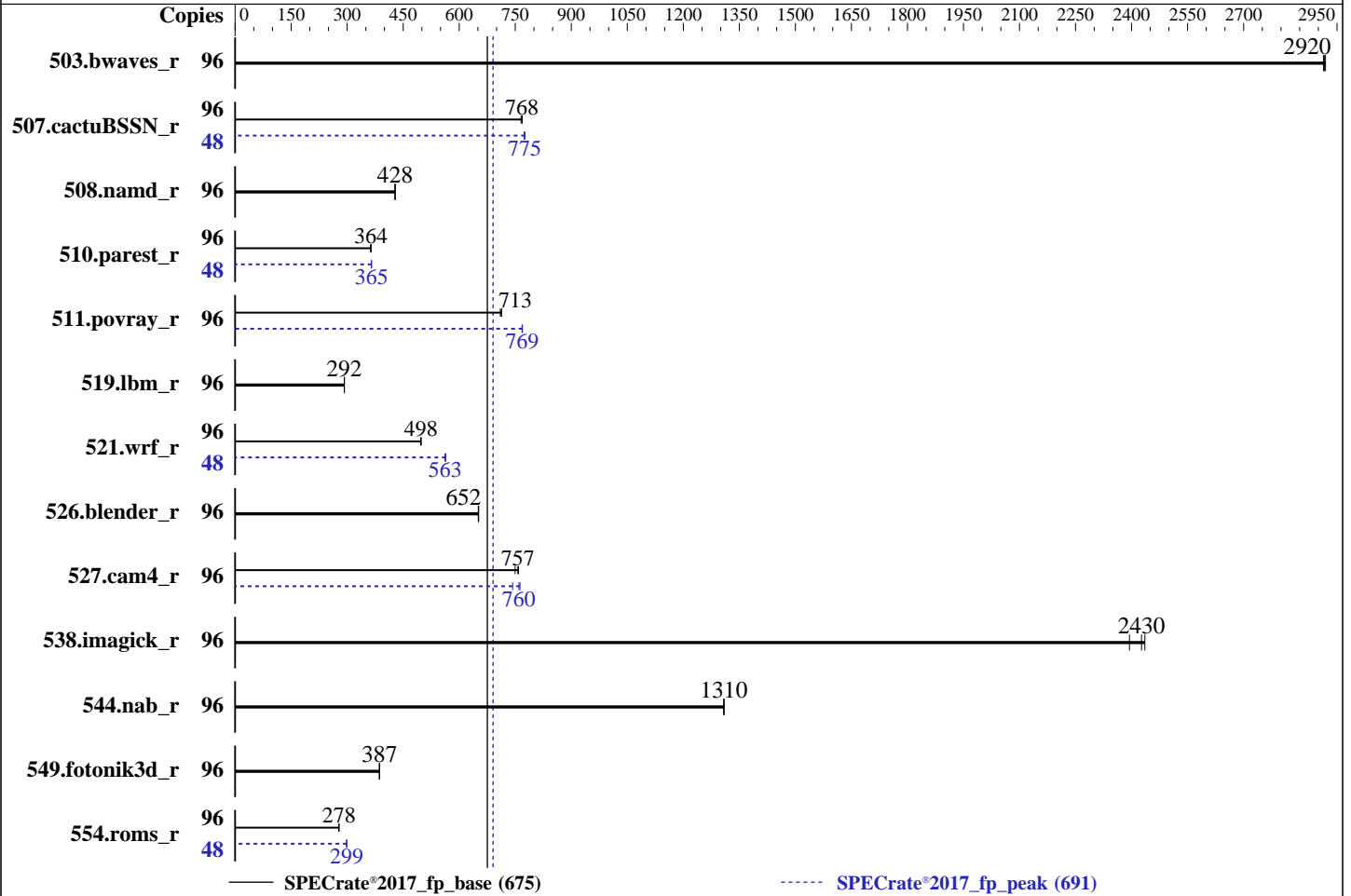
Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-2025

Software Availability: Jun-2024



Hardware

CPU Name: Intel Xeon 6741P
 Max MHz: 3800
 Nominal: 2500
 Enabled: 48 cores, 1 chip, 2 threads/core
 Orderable: 1 chip
 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: 256 GB (8 x 32 GB 2Rx8 PC5-6400B-R)
 Storage: 1 x 1.6 TB PCIe 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: No
 Firmware: Version 0701 released Oct-2025
 File System: xfs
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 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

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-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	330	2910	330	2920	330	2920	96	330	2910	330	2920	330	2920
507.cactuBSSN_r	96	159	766	158	768	158	769	48	78.5	774	78.4	775	78.3	776
508.namd_r	96	213	428	213	428	213	428	96	213	428	213	428	213	428
510.parest_r	96	691	364	691	364	692	363	48	344	365	344	365	344	365
511.povray_r	96	314	713	314	713	316	710	96	292	768	292	769	291	769
519.lbm_r	96	346	293	346	292	346	292	96	346	293	346	292	346	292
521.wrf_r	96	432	498	433	497	432	498	48	191	563	191	564	191	562
526.blender_r	96	225	651	224	652	224	652	96	225	651	224	652	224	652
527.cam4_r	96	224	750	222	757	221	759	96	221	760	226	743	220	763
538.imagick_r	96	99.7	2390	98.4	2430	98.0	2440	96	99.7	2390	98.4	2430	98.0	2440
544.nab_r	96	123	1310	123	1310	123	1310	96	123	1310	123	1310	123	1310
549.fotonik3d_r	96	969	386	968	387	967	387	96	969	386	968	387	967	387
554.roms_r	96	549	278	549	278	548	278	48	255	299	255	299	255	299

SPECrate®2017_fp_base = **675**

SPECrate®2017_fp_peak = **691**

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"
OS set to performance mode via cpupower frequency-set -g performance

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/ic24u1/lib/intel64:/ic24u1/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>

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-2025

Software Availability: Jun-2024

General Notes (Continued)

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:
 ENERGY_PERF_BIAS_CFG mode = Performance
 Latency Optimized Mode = Enabled
 Engine Boost = Aggressive
 SR-IOV Support = Disabled
 Page Policy = Adaptive
 DCU Streamer Prefetcher = Disable
 LLC dead line alloc = Disable

Sysinfo program /ic24ul/bin/sysinfo
 Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
 running on localhost Sun Mar 8 13:50:32 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

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-2025

Software Availability: Jun-2024

Platform Notes (Continued)

```
-----
2. w
 13:50:32 up 2 days, 4:39, 2 users, load average: 58.44, 86.79, 92.33
USER      TTY      FROM          LOGIN@  IDLE   JCPU   PCPU   WHAT
root      tty1     -             Fri09   2days 0.85s  0.00s  /bin/bash ./rate.sh
root      tty2     -             Fri13   47:49m 0.03s  0.03s  -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) 1029942
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) 1029942
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited
```

```
-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=42
login -- root
-bash
/bin/bash ./rate.sh
/bin/bash ./rate.sh
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,peak -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,peak --output_format all --nopower
--runmode rate --tune base:peak --size refrate fprate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.803/templogs/preenv.fprate.803.0.log --lognum 803.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /ic24ul
```

```
-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6741P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173
stepping       : 1
microcode      : 0xa000100
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores     : 48
siblings      : 96
```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026
Hardware Availability: Jul-2025
Software Availability: Jun-2024

Platform Notes (Continued)

1 physical ids (chips)
96 processors (hardware threads)
physical id 0: core ids 0-23,64-87
physical id 0: apicids 0-47,128-175

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) 6741P
BIOS Model name:             Intel(R) Xeon(R) 6741P  CPU @ 2.5GHz
BIOS CPU family:             179
CPU family:                   6
Model:                        173
Thread(s) per core:          2
Core(s) per socket:          48
Socket(s):                    1
Stepping:                     1
CPU(s) scaling MHz:          38%
CPU max MHz:                  3800.0000
CPU min MHz:                  800.0000
BogoMIPS:                     5000.00
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 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 (1 instance)
NUMA node(s):                2
NUMA node0 CPU(s):           0-23,48-71
NUMA node1 CPU(s):           24-47,72-95

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-2025

Software Availability: Jun-2024

Platform Notes (Continued)

Vulnerability Gather data sampling: Not affected
 Vulnerability Itlb multihit: Not affected
 Vulnerability L1tf: Not affected
 Vulnerability Mds: Not affected
 Vulnerability Meltdown: Not affected
 Vulnerability Mmio stale data: Not affected
 Vulnerability Reg file data sampling: Not affected
 Vulnerability Retbleed: Not affected
 Vulnerability Spec rstack overflow: 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	288M	288M	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: 0-23,48-71
node 0 size: 128562 MB
node 0 free: 104657 MB
node 1 cpus: 24-47,72-95
node 1 size: 128949 MB
node 1 free: 109449 MB
node distances:
node 0 1
0: 10 12
1: 12 10
```

9. /proc/meminfo

MemTotal: 263692304 kB

10. who -r

run-level 3 Mar 6 09:11

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 display-manager getty@ irqbalance
issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections
nvmmf-autoconnect postfix purge-kernels rollback rsyslog sep5 smartd sshd systemd-pstore
wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime systemd-remount-fs
disabled autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-2025

Software Availability: Jun-2024

Platform Notes (Continued)

```

chronyd console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info
firewalld fsidd gpm grub2-once haveged hwloc-dump-hwdata 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 svnserv systemd-boot-check-no-failures
systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync
systemd-timesyncd tuned udisks2 vncserver@
systemd-userdbd wickedd

```

indirect

```

-----
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
root=UUID=9bcf0374-b29f-4a4c-932e-9c0e90fb0803
splash=silent
mitigations=auto
quiet
video=1024x768

```

```

-----
14. cpupower frequency-info
analyzing CPU 36:
  current policy: frequency should be within 800 MHz and 3.80 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+madvise [madvise] never
enabled     [always] madvise never
hpage_pmd_size 2097152
shmem_enabled always within_size advise [never] deny force

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-2025

Software Availability: Jun-2024

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 SUSE Linux Enterprise Server 15 SP6
-----
```

```
-----
20. Disk information
SPEC is set to: /ic24u1
Filesystem Type Size Used Avail Use% Mounted on
/dev/nvme0n1p8 xfs 500G 122G 378G 25% /
-----
```

```
-----
21. /sys/devices/virtual/dmi/id
Vendor: ASUSTeK COMPUTER INC.
Product: RS720-E12-RS8G
Product Family: Server
Serial: /psn/
-----
```

```
-----
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:
8x Samsung M321R4GA3PB2-CCPKC 32 GB 2 rank 6400
-----
```

```
-----
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: American Megatrends Inc.
BIOS Version: 0701
BIOS Date: 10/13/2025
BIOS Revision: 7.1
-----
```

Compiler Version Notes

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

```
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, peak) 510.parest_r(base, peak)
-----
```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-2025

Software Availability: Jun-2024

Compiler Version Notes (Continued)

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 | 511.povray_r(base, peak) 526.blender_r(base, peak)
=====

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, peak)
=====

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, peak) 549.fotonik3d_r(base, peak) 554.roms_r(base, peak)
=====

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, peak) 527.cam4_r(base, peak)
=====

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

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-2025

Software Availability: Jun-2024

Base Compiler Invocation (Continued)

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

```

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

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-2025

Software Availability: Jun-2024

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
```

Peak 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



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-2025

Software Availability: Jun-2024

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

519.lbm_r: basepeak = yes

538.imagick_r: basepeak = yes

544.nab_r: basepeak = yes

C++ benchmarks:

508.namd_r: basepeak = yes

510.parest_r: -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:

503.bwaves_r: basepeak = yes

549.fotonik3d_r: basepeak = yes

554.roms_r: -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

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++:

511.povray_r: -w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -fprofile-generate(pass 1) -fprofile-use=default.profddata(pass 2) -xCORE-AVX2(pass 1)

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G
(2.50 GHz, Intel Xeon 6741P)

SPECrate®2017_fp_base = 675

SPECrate®2017_fp_peak = 691

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2026

Hardware Availability: Jul-2025

Software Availability: Jun-2024

Peak Optimization Flags (Continued)

511.povray_r (continued):

```
-flto -Ofast -xCORE-AVX512 -ffast-math -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
```

526.blender_r: basepeak = yes

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/ASUSTekPlatform-Settings-z14-V1.1.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/ASUSTekPlatform-Settings-z14-V1.1.xml>

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.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 2026-03-08 00:50:31-0500.

Report generated on 2026-05-19 17:27:44 by CPU2017 PDF formatter v6716.

Originally published on 2026-05-19.