



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G  
(2.00 GHz, Intel Xeon 6746E)

SPECspeed®2017\_int\_base = 8.97

SPECspeed®2017\_int\_peak = 9.15

CPU2017 License: 9016

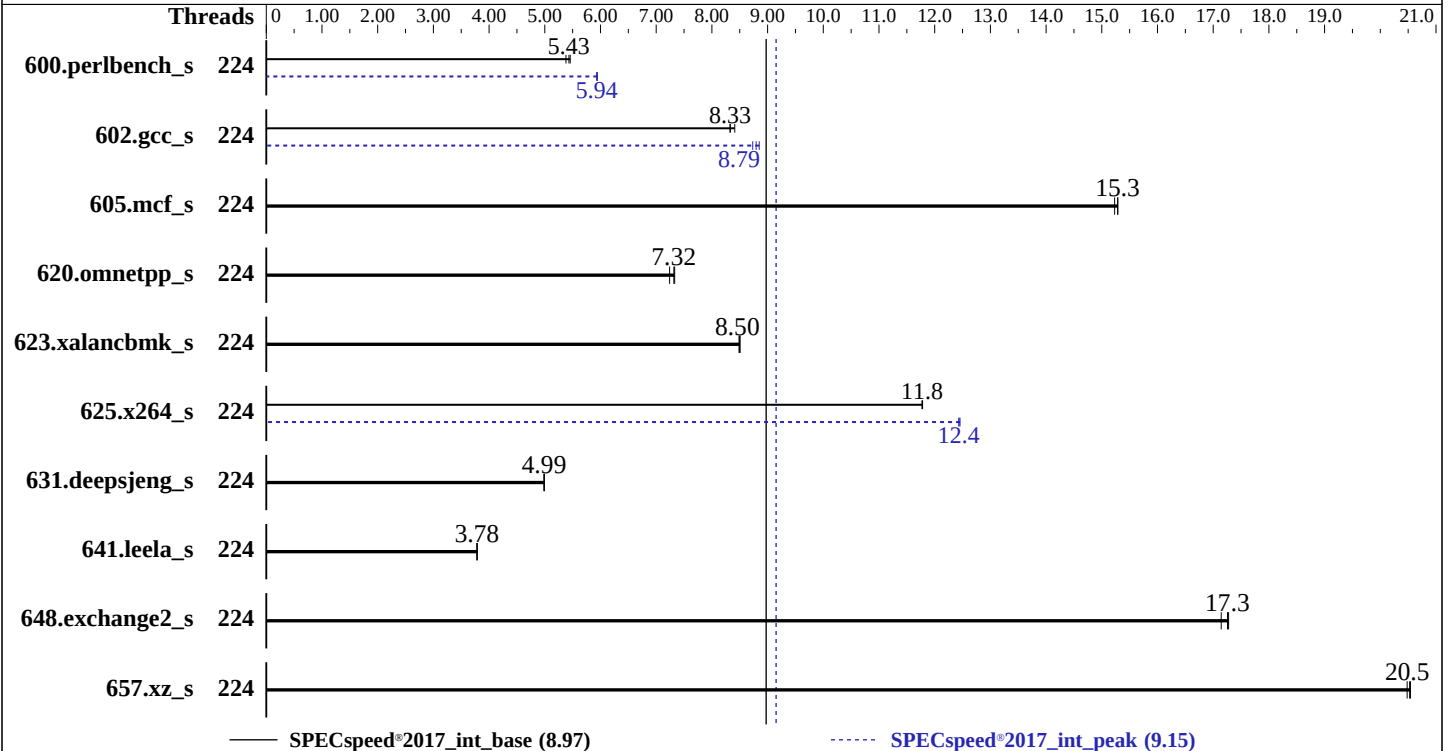
Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Dec-2025

Hardware Availability: Jul-2025

Software Availability: Jun-2024



## Hardware

CPU Name: Intel Xeon 6746E  
Max MHz: 2700  
Nominal: 2000  
Enabled: 224 cores, 2 chips  
Orderable: 1, 2 chip(s)  
Cache L1: 64 KB I + 32 KB D on chip per core  
L2: 112 MB I+D on chip per chip,  
4 MB shared / 4 cores  
L3: 96 MB I+D on chip per chip  
Other: None  
Memory: 512 GB (16 x 32 GB 2Rx8 PC5-6400B-R,  
running at 5600)  
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: Yes  
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.



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## Results Table

| Benchmark       | Base    |                   |                    |                   |                    |                   |                    | Peak    |                   |                    |                   |                    |                   |                    |
|-----------------|---------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|---------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|
|                 | Threads | Seconds           | Ratio              | Seconds           | Ratio              | Seconds           | Ratio              | Threads | Seconds           | Ratio              | Seconds           | Ratio              | Seconds           | Ratio              |
| 600.perlbench_s | 224     | <b><u>327</u></b> | <b><u>5.43</u></b> | 325               | 5.46               | 330               | 5.38               | 224     | 299               | 5.94               | 299               | 5.93               | <b><u>299</u></b> | <b><u>5.94</u></b> |
| 602.gcc_s       | 224     | 478               | 8.33               | 473               | 8.41               | <b><u>478</u></b> | <b><u>8.33</u></b> | 224     | 450               | 8.85               | 456               | 8.73               | <b><u>453</u></b> | <b><u>8.79</u></b> |
| 605.mcf_s       | 224     | 309               | 15.3               | <b><u>309</u></b> | <b><u>15.3</u></b> | 310               | 15.2               | 224     | 309               | 15.3               | <b><u>309</u></b> | <b><u>15.3</u></b> | 310               | 15.2               |
| 620.omnetpp_s   | 224     | 225               | 7.24               | <b><u>223</u></b> | <b><u>7.32</u></b> | 222               | 7.33               | 224     | 225               | 7.24               | <b><u>223</u></b> | <b><u>7.32</u></b> | 222               | 7.33               |
| 623.xalancbmk_s | 224     | 167               | 8.51               | <b><u>167</u></b> | <b><u>8.50</u></b> | 167               | 8.49               | 224     | 167               | 8.51               | <b><u>167</u></b> | <b><u>8.50</u></b> | 167               | 8.49               |
| 625.x264_s      | 224     | <b><u>150</u></b> | <b><u>11.8</u></b> | 150               | 11.8               | 150               | 11.8               | 224     | 142               | 12.4               | <b><u>142</u></b> | <b><u>12.4</u></b> | 142               | 12.5               |
| 631.deepsjeng_s | 224     | 287               | 4.99               | 287               | 4.99               | <b><u>287</u></b> | <b><u>4.99</u></b> | 224     | 287               | 4.99               | 287               | 4.99               | <b><u>287</u></b> | <b><u>4.99</u></b> |
| 641.leela_s     | 224     | 451               | 3.79               | <b><u>451</u></b> | <b><u>3.78</u></b> | 451               | 3.78               | 224     | 451               | 3.79               | <b><u>451</u></b> | <b><u>3.78</u></b> | 451               | 3.78               |
| 648.exchange2_s | 224     | <b><u>170</u></b> | <b><u>17.3</u></b> | 170               | 17.3               | 171               | 17.1               | 224     | <b><u>170</u></b> | <b><u>17.3</u></b> | 170               | 17.3               | 171               | 17.1               |
| 657.xz_s        | 224     | <b><u>301</u></b> | <b><u>20.5</u></b> | 301               | 20.5               | 302               | 20.5               | 224     | <b><u>301</u></b> | <b><u>20.5</u></b> | 301               | 20.5               | 302               | 20.5               |

SPECspeed®2017\_int\_base = **8.97**

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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"  
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:  
KMP\_AFFINITY = "granularity=fine,scatter"  
LD\_LIBRARY\_PATH = "/ic24u1/lib/intel64:/ic24u1/je5.0.1-64"  
MALLOCONF = "retain:true"  
OMP\_STACKSIZE = "192M"

## General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM  
memory using Red Hat 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>



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## Platform Notes

### BIOS Configuration:

ENERGY\_PERF\_BIAS\_CFG mode = Performance

Latency Optimized Mode = Enabled

Engine Boost = Aggressive

SR-IOV Support = Disabled

Page Policy = Adaptive

Adjacent Cache Prefetch = Disable

Sysinfo program /ic24u1/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost Tue Dec 30 16:52:18 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. 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
16:52:18 up 4:55, 2 users, load average: 102.30, 168.89, 187.17
USER      TTY      FROM      LOGIN@   IDLE   JCPU   PCPU WHAT
root      tty1      -          11:57    7.00s  1.46s  0.00s /bin/bash ./speed.sh
root      tty2      -          12:58   10.00s 0.07s  0.07s -bash
```

```
3. Username
From environment variable $USER: root
```

```
4. ulimit -a
```

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## Platform Notes (Continued)

```
core file size      (blocks, -c) unlimited
data seg size      (kbytes, -d) unlimited
scheduling priority      (-e) 0
file size          (blocks, -f) unlimited
pending signals     (-i) 2061896
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) 2061896
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 ./speed.sh
/bin/bash ./speed.sh
runcpu --nobuild --action validate --define default-platform-flags -c
ic2024.1-lin-sierraforest-speed-20240308.cfg --define cores=224 --tune base,peak -o all --define
intspeedaffinity --define smt-on --define drop_caches intspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
ic2024.1-lin-sierraforest-speed-20240308.cfg --define cores=224 --tune base,peak --output_format all
--define intspeedaffinity --define smt-on --define drop_caches --nopower --runmode speed --tune base:peak
--size refspeed intspeed --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.594/temlogs/preenv.intspeed.594.0.log --lognum 594.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /ic24u1
```

```
-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6746E
vendor_id      : GenuineIntel
cpu family     : 6
model          : 175
stepping       : 3
microcode      : 0x3000382
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores      : 112
siblings       : 112
2 physical ids (chips)
224 processors (hardware threads)
physical id 0: core ids 0-111
physical id 1: core ids 0-111
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, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72
, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 1
32, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 18
4, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222
physical id 1: apicids
512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 5
64, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 61
6, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668
, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720,
```

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## Platform Notes (Continued)

722,724,726,728,730,732,734

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, 48 bits virtual                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Byte Order:                         | Little Endian                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| CPU(s):                             | 224                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| On-line CPU(s) list:                | 0-223                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Vendor ID:                          | GenuineIntel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| BIOS Vendor ID:                     | Intel(R) Corporation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Model name:                         | Intel(R) Xeon(R) 6746E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| BIOS Model name:                    | Intel(R) Xeon(R) 6746E CPU @ 2.0GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| BIOS CPU family:                    | 179                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| CPU family:                         | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Model:                              | 175                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Thread(s) per core:                 | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Core(s) per socket:                 | 112                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Socket(s):                          | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Stepping:                           | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| CPU(s) scaling MHz:                 | 33%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| CPU max MHz:                        | 2700.0000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CPU min MHz:                        | 800.0000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| BogoMIPS:                           | 4000.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 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 avx2 smep bmi2 erms invpcid cqm rdt_a rdseed adx smap clflushopt clwb intel_pt sha_ni xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local split_lock_detect user_shstk avx_vnni lam wbnoinvd dtherm ida arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req vnmi umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear serialize pconfig arch_lbr ibt flush_l1d arch_capabilities |
| Virtualization:                     | VT-x                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| L1d cache:                          | 7 MiB (224 instances)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| L1i cache:                          | 14 MiB (224 instances)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| L2 cache:                           | 224 MiB (56 instances)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| L3 cache:                           | 192 MiB (2 instances)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| NUMA node(s):                       | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| NUMA node0 CPU(s):                  | 0-111                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| NUMA node1 CPU(s):                  | 112-223                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

(Continued on next page)



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## Platform Notes (Continued)

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  | 32K      | 7M       | 8    | Data        | 1     | 64     | 1        | 64             |
| L1i  | 64K      | 14M      | 8    | Instruction | 1     | 128    | 1        | 64             |
| L2   | 4M       | 224M     | 16   | Unified     | 2     | 4096   | 1        | 64             |
| L3   | 96M      | 192M     | 12   | Unified     | 3     | 131072 | 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: 0-111  
node 0 size: 257561 MB  
node 0 free: 255380 MB  
node 1 cpus: 112-223  
node 1 size: 257938 MB  
node 1 free: 256967 MB  
node distances:  
node 0 1  
0: 10 21  
1: 21 10

9. /proc/meminfo

MemTotal: 527872624 kB

10. who -r

run-level 3 Dec 30 11:57

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 nsd 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 autostart-initscripts blk-availability boot-sysctl ca-certificates chrony-wait chronyd console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info firewallld fsidd gpm grub2-once haveged hwloc-dump-hwdata ipmi ipmiev issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd serial-getty@ smartd_generate_opts snmpd snmptrapd svnservice systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-sysexit systemd-time-wait-sync systemd-timesyncd tuned udisks2 vncserver@ |

(Continued on next page)



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ASUSTeK Computer Inc.

ASUS RS720-E12-RS8G  
(2.00 GHz, Intel Xeon 6746E)

SPECspeed®2017\_int\_base = 8.97

SPECspeed®2017\_int\_peak = 9.15

CPU2017 License: 9016

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Test Date: Dec-2025

Hardware Availability: Jul-2025

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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=9bcf0374-b29f-4a4c-932e-9c0e90fb0803
splash=silent
mitigations=auto
quiet
video=1024x768
```

### 14. cpupower frequency-info

```
analyzing CPU 131:
  current policy: frequency should be within 800 MHz and 2.70 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
```

### 18. /sys/kernel/mm/transparent\_hugepage/khugepaged

```
alloc_sleep_millisecs 60000
defrag                1
max_ptes_none         511
```

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## 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: /ic24u1

| Filesystem     | Type | Size | Used | Avail | Use% | Mounted on |
|----------------|------|------|------|-------|------|------------|
| /dev/nvme0n1p8 | xfs  | 500G | 82G  | 418G  | 17%  | /          |

### 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-CCPEC 32 GB 2 rank 6400, configured at 5600  
8x Samsung M321R4GA3PB2-CCPPC 32 GB 2 rank 6400, configured at 5600

### 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 | 600.perlbench\_s(base, peak) 602.gcc\_s(base, peak) 605.mcf\_s(base, peak) 625.x264\_s(base, peak)  
| 657.xz\_s(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++ | 620.omnetpp\_s(base, peak) 623.xalanbmk\_s(base, peak) 631.deepsjeng\_s(base, peak)  
| 641.leela\_s(base, peak)

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## Compiler Version Notes (Continued)

=====

Fortran | 648.exchange2\_s(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.

-----

## Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

## Base Portability Flags

600.perlbench\_s: -DSPEC\_LP64 -DSPEC\_LINUX\_X64  
602.gcc\_s: -DSPEC\_LP64  
605.mcf\_s: -DSPEC\_LP64  
620.omnetpp\_s: -DSPEC\_LP64  
623.xalancbmk\_s: -DSPEC\_LP64 -DSPEC\_LINUX  
625.x264\_s: -DSPEC\_LP64  
631.deepsjeng\_s: -DSPEC\_LP64  
641.leela\_s: -DSPEC\_LP64  
648.exchange2\_s: -DSPEC\_LP64  
657.xz\_s: -DSPEC\_LP64

## Base Optimization Flags

C benchmarks:

-w -std=c11 -m64 -Wl,-z,muldefs -xsierraforest -O3 -ffast-math  
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp  
-DSPEC\_OPENMP -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

C++ benchmarks:

-w -std=c++14 -m64 -Wl,-z,muldefs -xsierraforest -O3 -ffast-math  
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

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## Base Optimization Flags (Continued)

Fortran benchmarks:

-w -m64 -WL,-z,muldefs -xsierraforest -O3 -ffast-math -flto  
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-nostandard-realloc-lhs -align array32byte  
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

## Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

600.perlbench\_s: -w -m64 -std=c11 -WL,-z,muldefs  
-fprofile-generate(pass 1)  
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2 -flto  
-Ofast(pass 1) -O3 -ffast-math -mfpmath=sse  
-funroll-loops -qopt-mem-layout-trans=4 -fiopenmp  
-DSPEC\_OPENMP -fno-strict-overflow  
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

602.gcc\_s: -w -m64 -std=c11 -WL,-z,muldefs  
-fprofile-generate(pass 1)  
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2 -flto  
-Ofast(pass 1) -O3 -ffast-math -mfpmath=sse  
-funroll-loops -qopt-mem-layout-trans=4 -fiopenmp

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## Peak Optimization Flags (Continued)

602.gcc\_s (continued):

-DSPEC\_OPENMP -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

605.mcf\_s: basepeak = yes

625.x264\_s: -w -std=c11 -m64 -Wl,-z,muldefs -xsierraforest -O3

-ffast-math -flto -mfpmath=sse -funroll-loops

-qopt-mem-layout-trans=4 -fiopenmp -DSPEC\_OPENMP

-fno-alias -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

657.xz\_s: basepeak = yes

C++ benchmarks:

620.omnetpp\_s: basepeak = yes

623.xalancbmk\_s: basepeak = yes

631.deepsjeng\_s: basepeak = yes

641.leela\_s: basepeak = yes

Fortran benchmarks:

648.exchange2\_s: basepeak = yes

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>

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