



SPEC CPU®2017 Floating Point Rate Result

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Kaytus Systems Pte. Ltd. KR2280V3 (Intel Xeon 6710E)

SPECrate®2017_fp_base = 695 SPECrate®2017_fp_peak = 699

CPU2017 License: 6865

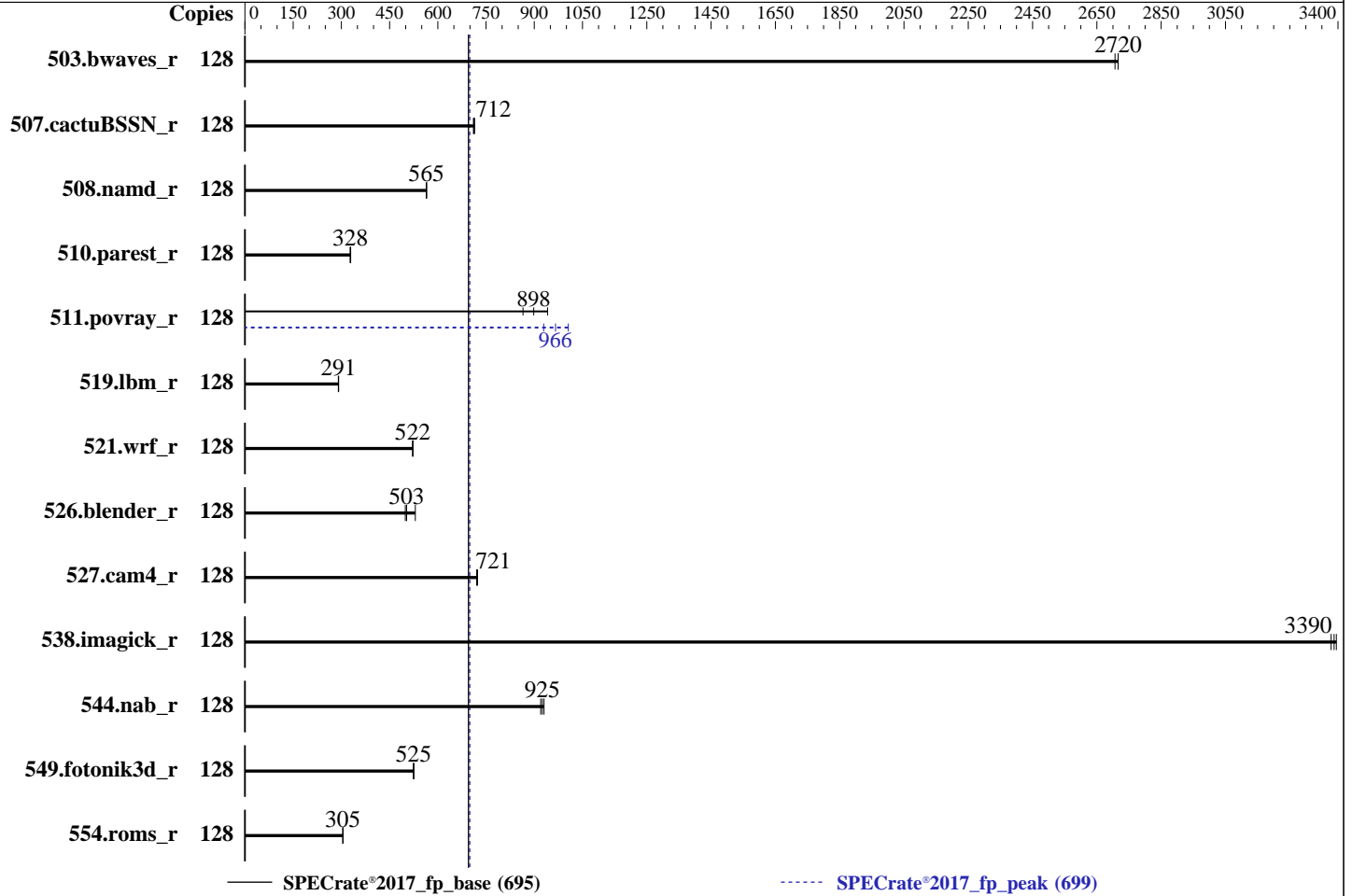
Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Dec-2024

Hardware Availability: Oct-2024

Software Availability: Jun-2024



Hardware

CPU Name: Intel Xeon 6710E
 Max MHz: 3200
 Nominal: 2400
 Enabled: 128 cores, 2 chips
 Orderable: 1,2 chips
 Cache L1: 64 KB I + 32 KB D on chip per core
 L2: 4 MB I+D on chip per core
 L3: 96 MB I+D on chip per chip
 Other: None
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-6400B-R, running at 5600)
 Storage: 1 x 960 GB NVME SSD
 Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP6 6.4.0-150600.21-default
 Compiler: C/C++: Version 2024.1 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2024.1 of Intel Fortran Compiler for Linux;
 Parallel: No
 Firmware: Version 00.18.00 released Oct-2024
 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 set to prefer performance at the cost of additional power usage.



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Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|-----------------|--------|------------|------------|-------------|-------------|-------------|------------|--------|------------|------------|-------------|-------------|-------------|------------|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 503.bwaves_r | 128 | 474 | 2710 | 473 | 2720 | 473 | 2720 | 128 | 474 | 2710 | 473 | 2720 | 473 | 2720 |
| 507.cactuBSSN_r | 128 | 227 | 714 | 228 | 711 | 228 | 712 | 128 | 227 | 714 | 228 | 711 | 228 | 712 |
| 508.namd_r | 128 | 215 | 565 | 215 | 565 | 215 | 564 | 128 | 215 | 565 | 215 | 565 | 215 | 564 |
| 510.parest_r | 128 | 1023 | 327 | 1018 | 329 | 1021 | 328 | 128 | 1023 | 327 | 1018 | 329 | 1021 | 328 |
| 511.povray_r | 128 | 346 | 865 | 333 | 898 | 317 | 941 | 128 | 322 | 929 | 297 | 1010 | 309 | 966 |
| 519.lbm_r | 128 | 464 | 291 | 464 | 291 | 463 | 291 | 128 | 464 | 291 | 464 | 291 | 463 | 291 |
| 521.wrf_r | 128 | 549 | 522 | 549 | 522 | 549 | 522 | 128 | 549 | 522 | 549 | 522 | 549 | 522 |
| 526.blender_r | 128 | 388 | 503 | 391 | 499 | 368 | 530 | 128 | 388 | 503 | 391 | 499 | 368 | 530 |
| 527.cam4_r | 128 | 309 | 724 | 310 | 721 | 310 | 721 | 128 | 309 | 724 | 310 | 721 | 310 | 721 |
| 538.imagick_r | 128 | 93.8 | 3390 | 94.0 | 3390 | 94.2 | 3380 | 128 | 93.8 | 3390 | 94.0 | 3390 | 94.2 | 3380 |
| 544.nab_r | 128 | 234 | 920 | 233 | 925 | 232 | 930 | 128 | 234 | 920 | 233 | 925 | 232 | 930 |
| 549.fotonik3d_r | 128 | 950 | 525 | 951 | 524 | 950 | 525 | 128 | 950 | 525 | 951 | 524 | 950 | 525 |
| 554.roms_r | 128 | 666 | 305 | 668 | 305 | 668 | 305 | 128 | 666 | 305 | 668 | 305 | 668 | 305 |

SPECrate®2017_fp_base = **695**

SPECrate®2017_fp_peak = **699**

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/CPU2017/lib/intel64:/home/CPU2017/je5.0.1-64"
MALLOC_CONF = "retain:true"

General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
sync; echo 3> /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)

(Continued on next page)



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General Notes (Continued)

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 set to Performance
Hardware Prefetch set to Disable
VT Support set to Disable

Sysinfo program /home/CPU2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Wed Jan 15 16:02:54 2025

SUT (System Under Test) info as seen by some common utilities.

Table of contents

1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. sysctl
16. /sys/kernel/mm/transparent_hugepage
17. /sys/kernel/mm/transparent_hugepage/khugepaged
18. OS release
19. Disk information
20. /sys/devices/virtual/dmi/id
21. dmidecode
22. BIOS

1. uname -a
Linux localhost 6.4.0-150600.21-default #1 SMP PREEMPT_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09)
x86_64 x86_64 x86_64 GNU/Linux

2. w
16:02:54 up 5:15, 1 user, load average: 72.90, 113.99, 122.16
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT

(Continued on next page)



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Platform Notes (Continued)

```
root      tty1      -                10:48    5:12m  1.63s  0.05s  sh
reportable-ic2024.1-lin-sierraforest-rate-20240308.sh
```

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) 4124828
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) 4124828
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited
```

5. sysinfo process ancestry

```
/usr/lib/systemd/systemd --switched-root --system --deserialize=31
login -- root
-bash
sh reportable-ic2024.1-lin-sierraforest-rate-20240308.sh
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 -c
ic2024.1-lin-sierraforest-rate-20240308.cfg --define smt-on --define peakfpcopies=64 --define
physicalfirst --define invoke_with_interleave --define drop_caches --reportable --tune base,peak -o all
fprate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 --configfile
ic2024.1-lin-sierraforest-rate-20240308.cfg --define smt-on --define peakfpcopies=64 --define
physicalfirst --define invoke_with_interleave --define drop_caches --reportable --tune base,peak
--output_format all --nopower --runmode rate --tune base:peak --size refrate fprate --nopreenv
--note-preenv --logfile $SPEC/tmp/CPU2017.002/templogs/preenv.fprate.002.0.log --lognum 002.0
--from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/CPU2017
```

6. /proc/cpuinfo

```
model name      : Intel(R) Xeon(R) 6710E
vendor_id      : GenuineIntel
cpu family     : 6
model          : 175
stepping       : 3
microcode      : 0x3000190
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores      : 64
siblings       : 64
2 physical ids (chips)
128 processors (hardware threads)
physical id 0: core ids 0-63
physical id 1: core ids 0-63
```

(Continued on next page)



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Platform Notes (Continued)

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

physical id 1: apicids

512,514,516,518,520,522,524,526,528,530,532,534,536,538,540,542,544,546,548,550,552,554,556,558,560,562,564,566,568,570,572,574,576,578,580,582,584,586,588,590,592,594,596,598,600,602,604,606,608,610,612,614,616,618,620,622,624,626,628,630,632,634,636,638

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):                 128
On-line CPU(s) list:   0-127
Vendor ID:              GenuineIntel
BIOS Vendor ID:        Intel(R) Corporation
Model name:             Intel(R) Xeon(R) 6710E
BIOS Model name:       Intel(R) Xeon(R) 6710E  CPU @ 2.4GHz
BIOS CPU family:       179
CPU family:             6
Model:                  175
Thread(s) per core:    1
Core(s) per socket:    64
Socket(s):              2
Stepping:               3
Frequency boost:        enabled
CPU(s) scaling MHz:    36%
CPU max MHz:            2401.0000
CPU min MHz:            800.0000
BogoMIPS:               4800.00
Flags:                  fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx
pdpelgb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good
nopl xtopology nonstop_tsc cpuid aperfmperf tsc_known_freq pni
pclmulqdq dtes64 ds_cpl 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 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 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_lld arch_capabilities

L1d cache:             4 MiB (128 instances)
L1i cache:             8 MiB (128 instances)
L2 cache:              128 MiB (32 instances)
L3 cache:              192 MiB (2 instances)
NUMA node(s):          2
NUMA node0 CPU(s):    0-63
NUMA node1 CPU(s):    64-127
Vulnerability Gather data sampling: Not affected
Vulnerability Itlb multihit:    Not affected

```

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Platform Notes (Continued)

| | |
|---------------------------------------|---|
| 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 | 32K | 4M | 8 | Data | 1 | 64 | 1 | 64 |
| L1i | 64K | 8M | 8 | Instruction | 1 | 128 | 1 | 64 |
| L2 | 4M | 128M | 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: 0-63
node 0 size: 515602 MB
node 0 free: 486655 MB
node 1 cpus: 64-127
node 1 size: 515629 MB
node 1 free: 489499 MB
node distances:
node  0  1
  0: 10 21
  1: 21 10

```

9. /proc/meminfo

MemTotal: 1055982236 kB

10. who -r

run-level 3 Jan 15 10:47

11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)

| | |
|----------------|---------|
| Default Target | Status |
| multi-user | running |

12. Services, from systemctl list-unit-files

| STATE | UNIT FILES |
|-----------------|--|
| enabled | apparmor auditd cron firewalld getty@ irqbalance issue-generator kbdsettings kdump kdump-early kdump-notify nvme-fc-boot-connections nvme-autoconnect postfix purge-kernels rollback sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny |
| enabled-runtime | systemd-remount-fs |
| disabled | boot-sysctl ca-certificates chrony-wait chronyd console-getty debug-shell ebttables exchange-bmc-os-info fsidd grub2-once haveged ipmievd issue-add-ssh-keys kexec-load lunmask nfs nfs-blkmap rpcbind rpmconfigcheck serial-getty@ systemd-boot-check-no-failures |

(Continued on next page)



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Platform Notes (Continued)

```
systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync
systemd-timesyncd
generated jexec
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=3d2e35de-7a40-49d4-9b7e-5a61505ac35b
splash=silent
resume=/dev/disk/by-uuid/12ee3b15-7778-419b-ab9f-ab402e71e53d
mitigations=auto
quiet
security=apparmor
crashkernel=370M,high
crashkernel=72M,low

14. cpupower frequency-info
analyzing CPU 31:
current policy: frequency should be within 800 MHz and 2.40 GHz.
The governor "ondemand" may decide which speed to use
within this range.
boost state support:
Supported: yes
Active: yes

15. sysctl
kernel.numa_balancing 1
kernel.randomize_va_space 2
vm.compaction_proactiveness 20
vm.dirty_background_bytes 0
vm.dirty_background_ratio 10
vm.dirty_bytes 0
vm.dirty_expire_centisecs 3000
vm.dirty_ratio 20
vm.dirty_writeback_centisecs 500
vm.dirtytime_expire_seconds 43200
vm.extfrag_threshold 500
vm.min_unmapped_ratio 1
vm.nr_hugepages 0
vm.nr_hugepages_mempolicy 0
vm.nr_overcommit_hugepages 0
vm.swappiness 60
vm.watermark_boost_factor 15000
vm.watermark_scale_factor 10
vm.zone_reclaim_mode 0

16. /sys/kernel/mm/transparent_hugepage
defrag always defer defer+madvice [madvice] never
enabled [always] madvice never
hpage_pmd_size 2097152
shmem_enabled always within_size advise [never] deny force

17. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs 60000
defrag 1

(Continued on next page)



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Platform Notes (Continued)

```
max_ptes_none          511
max_ptes_shared        256
max_ptes_swap          64
pages_to_scan          4096
scan_sleep_millisecs   10000
```

18. OS release
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP6

19. Disk information
SPEC is set to: /home/CPU2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/nvme0n1p3 xfs 381G 160G 221G 43% /home

20. /sys/devices/virtual/dmi/id
Vendor: KAYTUS
Product: KR2280-X3-A0-R0-00
Product Family: Not specified
Serial: 012345678

21. dmidecode
Additional information from dmidecode 3.4 follows. WARNING: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.
Memory:
15x Samsung M321R8GA0PB2-CCPEC 64 GB 2 rank 6400, configured at 5600
1x Samsung M321R8GA0PB2-CCPWC 64 GB 2 rank 6400, configured at 5600

22. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 00.18.00
BIOS Date: 10/29/2024

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

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(Continued on next page)



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Compiler Version Notes (Continued)

```

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
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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)
-----
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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
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Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
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```

Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using both C and C++:

icpx icx

(Continued on next page)



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Kaytus Systems Pte. Ltd.

SPECrate®2017_fp_base = 695

KR2280V3 (Intel Xeon 6710E)

SPECrate®2017_fp_peak = 699

CPU2017 License: 6865

Test Date: Dec-2024

Test Sponsor: Kaytus Systems Pte. Ltd.

Hardware Availability: Oct-2024

Tested by: Kaytus Systems Pte. Ltd.

Software Availability: Jun-2024

Base Compiler Invocation (Continued)

Benchmarks using Fortran, C, and C++:

icpx icx ifx

Base Portability Flags

```

503.bwaves_r: -DSPEC_LP64
507.cactuBSSN_r: -DSPEC_LP64
508.namd_r: -DSPEC_LP64
510.parest_r: -DSPEC_LP64
511.povray_r: -DSPEC_LP64
519.lbm_r: -DSPEC_LP64
521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char
527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG
538.imagick_r: -DSPEC_LP64
544.nab_r: -DSPEC_LP64
549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64

```

Base Optimization Flags

C benchmarks:

```

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

```

C++ benchmarks:

```

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

```

Fortran benchmarks:

```

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

```

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Base Optimization Flags (Continued)

Benchmarks using both C and C++:

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

Benchmarks using Fortran, C, and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xsierraforest -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -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

Peak Portability Flags

Same as Base Portability Flags



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CPU2017 License: 6865

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Test Date: Dec-2024

Hardware Availability: Oct-2024

Software Availability: Jun-2024

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: basepeak = yes

Fortran benchmarks:

503.bwaves_r: basepeak = yes

549.fotonik3d_r: basepeak = yes

554.roms_r: basepeak = yes

Benchmarks using both Fortran and C:

521.wrf_r: basepeak = yes

527.cam4_r: basepeak = yes

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 -flt0
-Ofast -ffast-math -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

526.blender_r: basepeak = yes

Benchmarks using Fortran, C, and C++:

507.cactuBSSN_r: basepeak = yes



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

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

<http://www.spec.org/cpu2017/flags/Kaytus-Platform-Settings-intel-V1.0.html>

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

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

<http://www.spec.org/cpu2017/flags/Kaytus-Platform-Settings-intel-V1.0.xml>

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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

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