



# SPEC CPU®2017 Floating Point Speed Result

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## ASUSTeK Computer Inc.

ASUS RS300-E12-RS4  
(2.90 GHz, Intel Xeon E-2436)

SPECspeed®2017\_fp\_base = 79.9

SPECspeed®2017\_fp\_peak = 79.9

CPU2017 License: 9016

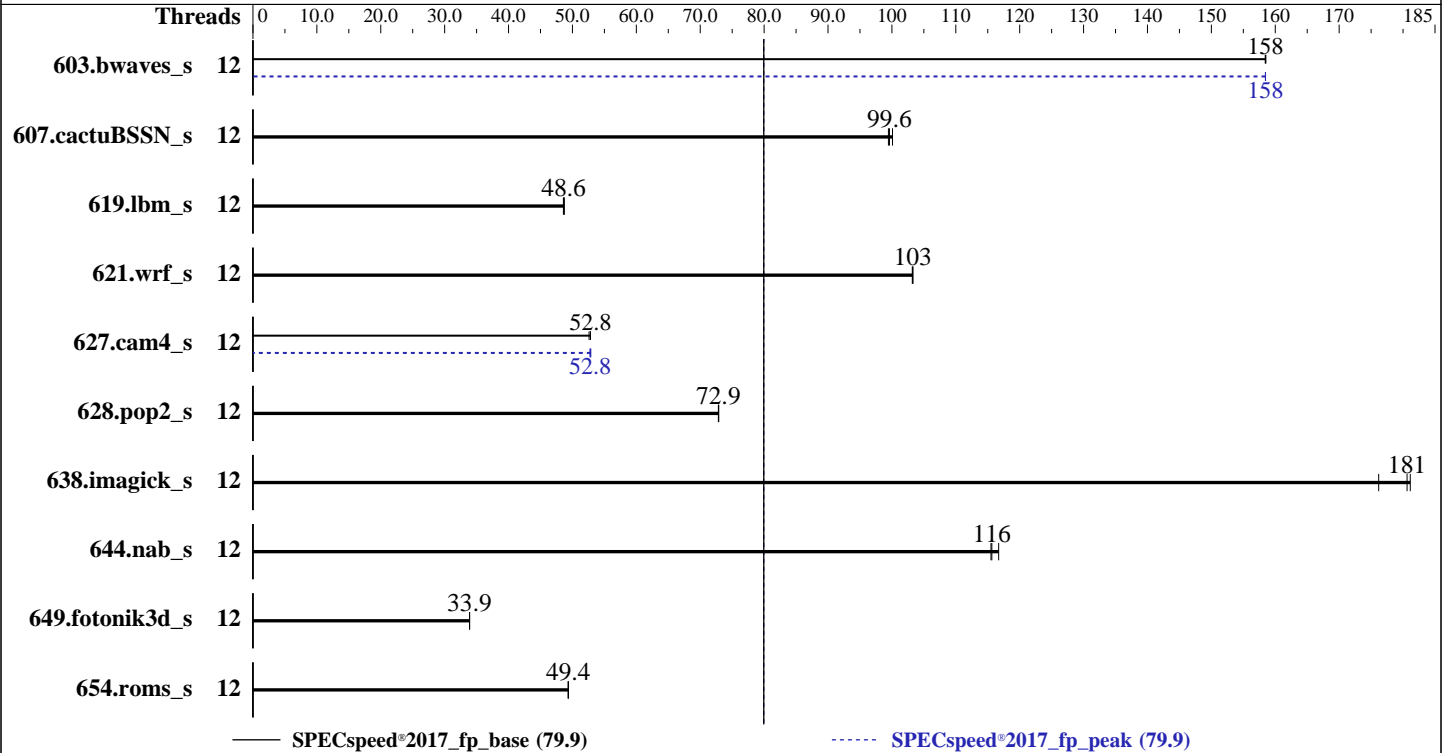
Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Apr-2024

Hardware Availability: Dec-2023

Software Availability: Dec-2023



### Hardware

CPU Name: Intel Xeon E-2436  
 Max MHz: 5000  
 Nominal: 2900  
 Enabled: 6 cores, 1 chip, 2 threads/core  
 Orderable: 1 chip  
 Cache L1: 32 KB I + 48 KB D on chip per core  
 L2: 2 MB I+D on chip per core  
 L3: 18 MB I+D on chip per chip  
 Other: None  
 Memory: 64 GB (2 x 32 GB 2Rx8 PC5-4800B-E, running at 4400)  
 Storage: 1 x 1 TB SATA SSD  
 Other: CPU Cooling: Air

### Software

OS: SUSE Linux Enterprise Server 15 SP5 (x86\_64)  
 Kernel 5.14.21-150500.53-default  
 Compiler: C/C++: Version 2024.0.2 of Intel oneAPI DPC++/C++ Compiler for Linux;  
 Fortran: Version 2024.0.2 of Intel Fortran Compiler for Linux;  
 Parallel: Yes  
 Firmware: Version 0502 released Dec-2023  
 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
603.bwaves_s	12	372	158	372	159	<b><u>372</u></b>	<b><u>158</u></b>	12	372	158	<b><u>372</u></b>	<b><u>158</u></b>	372	158
607.cactuBSSN_s	12	168	99.5	<b><u>167</u></b>	<b><u>99.6</u></b>	167	100	12	168	99.5	<b><u>167</u></b>	<b><u>99.6</u></b>	167	100
619.lbm_s	12	108	48.6	<b><u>108</u></b>	<b><u>48.6</u></b>	107	48.7	12	108	48.6	<b><u>108</u></b>	<b><u>48.6</u></b>	107	48.7
621.wrf_s	12	<b><u>128</u></b>	<b><u>103</u></b>	128	103	128	103	12	<b><u>128</u></b>	<b><u>103</u></b>	128	103	128	103
627.cam4_s	12	<b><u>168</u></b>	<b><u>52.8</u></b>	168	52.8	168	52.6	12	168	52.9	<b><u>168</u></b>	<b><u>52.8</u></b>	168	52.8
628.pop2_s	12	163	72.8	<b><u>163</u></b>	<b><u>72.9</u></b>	163	72.9	12	163	72.8	<b><u>163</u></b>	<b><u>72.9</u></b>	163	72.9
638.imagick_s	12	<b><u>79.9</u></b>	<b><u>181</u></b>	81.9	176	79.6	181	12	<b><u>79.9</u></b>	<b><u>181</u></b>	81.9	176	79.6	181
644.nab_s	12	150	117	<b><u>151</u></b>	<b><u>116</u></b>	151	116	12	150	117	<b><u>151</u></b>	<b><u>116</u></b>	151	116
649.fotonik3d_s	12	269	33.9	269	33.9	<b><u>269</u></b>	<b><u>33.9</u></b>	12	269	33.9	269	33.9	<b><u>269</u></b>	<b><u>33.9</u></b>
654.roms_s	12	319	49.4	319	49.3	<b><u>319</u></b>	<b><u>49.4</u></b>	12	319	49.4	319	49.3	<b><u>319</u></b>	<b><u>49.4</u></b>

SPECspeed®2017\_fp\_base = **79.9**

SPECspeed®2017\_fp\_peak = **79.9**

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,compact"  
LD\_LIBRARY\_PATH = "/ic24u0/lib/intel64:/ic24u0/je5.0.1-64"  
MALLOC\_CONF = "retain:true"  
OMP\_STACKSIZE = "192M"

## General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM  
memory using 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:  
VT-d = Disabled  
Package C State Limit = C0/C1  
AES = Disabled  
Engine Boost = Level3(Max)  
SR-IOV Support = Disabled  
BMC Configuration:  
Fan mode = Full speed mode

Sysinfo program /ic24u0/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on localhost Wed Apr 17 15:23:31 2024

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 249 (249.16+suse.171.gdad0071f15)
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 5.14.21-150500.53-default #1 SMP PREEMPT\_DYNAMIC Wed May 10 07:56:26 UTC 2023 (b630043)  
x86\_64 x86\_64 x86\_64 GNU/Linux  
-----

2. w  
15:23:31 up 2:58, 1 user, load average: 2.77, 4.67, 3.29  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
root tty1 - 12:25 2:57m 0.59s 0.00s /bin/bash ./speed.sh  
-----

3. Username  
From environment variable \$USER: root  
-----

4. ulimit -a  
core file size (blocks, -c) unlimited  
-----

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### Platform Notes (Continued)

```

data seg size      (kbytes, -d) unlimited
scheduling priority (-e) 0
file size          (blocks, -f) unlimited
pending signals    (-i) 256580
max locked memory  (kbytes, -l) 64
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) 256580
virtual memory     (kbytes, -v) unlimited
file locks         (-x) unlimited

```

```

-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize 30
login -- root
-bash
/bin/bash ./speed.sh
/bin/bash ./speed.sh
runcpu --nobuild --action validate --define default-platform-flags -c
  ic2024.0.2-lin-core-avx2-speed-20231213.cfg --define cores=12 --tune base,peak -o all --define drop_caches
  fpspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
  ic2024.0.2-lin-core-avx2-speed-20231213.cfg --define cores=12 --tune base,peak --output_format all
  --define drop_caches --nopower --runmode speed --tune base:peak --size refspeed fpspeed --nopreenv
  --note-preenv --logfile $SPEC/tmp/CPU2017.206/templogs/preenv.fpspeed.206.0.log --lognum 206.0
  --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /ic24u0

```

```

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) E E-2436
vendor_id      : GenuineIntel
cpu family     : 6
model          : 183
stepping      : 1
microcode     : 0x11f
bugs          : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
cpu cores     : 6
siblings      : 12
1 physical ids (chips)
12 processors (hardware threads)
physical id 0: core ids 0-5
physical id 0: apicids 0-11
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 2.37.4:
Architecture:      x86_64
CPU op-mode(s):    32-bit, 64-bit
Address sizes:     46 bits physical, 48 bits virtual
Byte Order:        Little Endian

```

(Continued on next page)



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### Platform Notes (Continued)

```

CPU(s): 12
On-line CPU(s) list: 0-11
Vendor ID: GenuineIntel
Model name: Intel(R) Xeon(R) E E-2436
CPU family: 6
Model: 183
Thread(s) per core: 2
Core(s) per socket: 6
Socket(s): 1
Stepping: 1
CPU max MHz: 6400.0000
CPU min MHz: 800.0000
BogoMIPS: 5836.80
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 sse4_1 sse4_2
x2apic movbe popcnt tsc_deadline_timer xsave avx f16c rdrand lahf_lm abm
3dnowprefetch cpuid_fault epb invpcid_single ssbd ibrs ibpb stibp
ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase
tsc_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt
clwb intel_pt sha_ni xsaveopt xsavec xgetbv1 xsaves split_lock_detect
avx_vnni dtherm ida arat pln pts hwp hwp_notify hwp_act_window hwp_epp
hwp_pkg_req hfi umip pku ospke waitpkg gfni vpcmlmulqdq tme rdpid movdiri
movdir64b fsrm md_clear serialize pconfig arch_lbr flush_l1d
arch_capabilities

Virtualization: VT-x
L1d cache: 288 KiB (6 instances)
L1i cache: 192 KiB (6 instances)
L2 cache: 12 MiB (6 instances)
L3 cache: 18 MiB (1 instance)
NUMA node(s): 1
NUMA node0 CPU(s): 0-11
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Retbleed: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling, PBRBS-eIBRS SW
sequence
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 288K 12 Data 1 64 1 64
L1i 32K 192K 8 Instruction 1 64 1 64
L2 2M 12M 16 Unified 2 2048 1 64
L3 18M 18M 9 Unified 3 32768 1 64

```

```

8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
available: 1 nodes (0)
node 0 cpus: 0-11
node 0 size: 64175 MB

```

(Continued on next page)



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### Platform Notes (Continued)

```
node 0 free: 56840 MB
node distances:
node 0
0: 10
```

```
-----
9. /proc/meminfo
MemTotal: 65715420 kB
```

```
-----
10. who -r
run-level 3 Apr 17 12:25
```

```
-----
11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)
Default Target Status
multi-user running
```

```
-----
12. Services, from systemctl list-unit-files
STATE UNIT FILES
enabled YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron getty@ haveged irqbalance
issue-generator kbdsettings klog lvm2-monitor nscd postfix purge-kernels rollback rsyslog
smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime systemd-remount-fs
disabled autofsd autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
chronyd console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info
firewalld gpm grub2-once haveged-switch-root ipmi ipmievd issue-add-ssh-keys kexec-load
lunmask man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd
serial-getty@ smartd_generate_opts snmpd snmptrapd systemd-boot-check-no-failures
systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2
indirect wickedd
```

```
-----
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
root=UUID=c7ea704b-969d-4a21-bb75-dacf025811fc
splash=silent
mitigations=auto
quiet
security=apparmor
```

```
-----
14. cpupower frequency-info
analyzing CPU 0:
current policy: frequency should be within 800 MHz and 6.40 GHz.
The governor "performance" may decide which speed to use
within this range.
boost state support:
Supported: yes
Active: yes
```

```
-----
15. sysctl
kernel.numa_balancing 0
kernel.randomize_va_space 2
vm.compaction_proactiveness 20
vm.dirty_background_bytes 0
vm.dirty_background_ratio 10
vm.dirty_bytes 0
```

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### Platform Notes (Continued)

```

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+madvise [madvise] never
enabled         [always] madvise never
hpage_pmd_size 2097152
shmem_enabled   always within_size advise [never] deny force

```

```

-----
17. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs  60000
defrag                  1
max_ptes_none          511
max_ptes_shared        256
max_ptes_swap          64
pages_to_scan          4096
scan_sleep_millisecs   10000

```

```

-----
18. OS release
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP5

```

```

-----
19. Disk information
SPEC is set to: /ic24u0
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda8       xfs   763G  29G  735G  4% /

```

```

-----
20. /sys/devices/virtual/dmi/id
Vendor:          ASUSTeK COMPUTER INC.
Product:         RS300-E12-RS4
Product Family:  Server
Serial:          865236000406

```

```

-----
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:
  1x SK Hynix HMC88MEBEA081N 32 GB 2 rank 4800, configured at 4400
  1x SK Hynix HMC88MEBEA084N 32 GB 2 rank 4800, configured at 4400

```

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## Platform Notes (Continued)

-----  
22. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: American Megatrends Inc.  
BIOS Version: 0502  
BIOS Date: 12/28/2023  
BIOS Revision: 5.2

## Compiler Version Notes

=====  
C | 619.lbm\_s(base, peak) 638.imagick\_s(base, peak) 644.nab\_s(base, peak)  
-----

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
-----

=====  
C++, C, Fortran | 607.cactuBSSN\_s(base, peak)  
-----

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
-----

=====  
Fortran | 603.bwaves\_s(base, peak) 649.fotonik3d\_s(base, peak) 654.roms\_s(base, peak)  
-----

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
-----

=====  
Fortran, C | 621.wrf\_s(base, peak) 627.cam4\_s(base, peak) 628.pop2\_s(base, peak)  
-----

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
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-----

## Base Compiler Invocation

C benchmarks:  
icx

Fortran benchmarks:  
ifx

Benchmarks using both Fortran and C:  
ifx icx

(Continued on next page)





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## Base Compiler Invocation (Continued)

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Base Portability Flags

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

## Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using Fortran, C, and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
```

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# SPEC CPU®2017 Floating Point Speed Result

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**ASUSTeK Computer Inc.**

SPECspeed®2017\_fp\_base = 79.9

ASUS RS300-E12-RS4  
(2.90 GHz, Intel Xeon E-2436)

SPECspeed®2017\_fp\_peak = 79.9

CPU2017 License: 9016

Test Date: Apr-2024

Test Sponsor: ASUSTeK Computer Inc.

Hardware Availability: Dec-2023

Tested by: ASUSTeK Computer Inc.

Software Availability: Dec-2023

## Base Optimization Flags (Continued)

Benchmarks using Fortran, C, and C++ (continued):

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

## Peak Compiler Invocation

C benchmarks:

icx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

619.lbm\_s: basepeak = yes

638.imagick\_s: basepeak = yes

644.nab\_s: basepeak = yes

Fortran benchmarks:

```
603.bwaves_s: -w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc
```

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## Peak Optimization Flags (Continued)

649.fotonik3d\_s: basepeak = yes

654.roms\_s: basepeak = yes

Benchmarks using both Fortran and C:

621.wrf\_s: basepeak = yes

```
627.cam4_s: -w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP
-Wno-implicit-int -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc
```

628.pop2\_s: basepeak = yes

Benchmarks using Fortran, C, and C++:

607.cactuBSSN\_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-p13-V1.2.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-p13-V1.2.xml>

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

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