SPEC CPU®2017 Floating Point Speed Result

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xFusion

FusionServer 1288 V8 (Intel Xeon 6730P)

$SPECspeed®2017\_fp\_base =$ 380

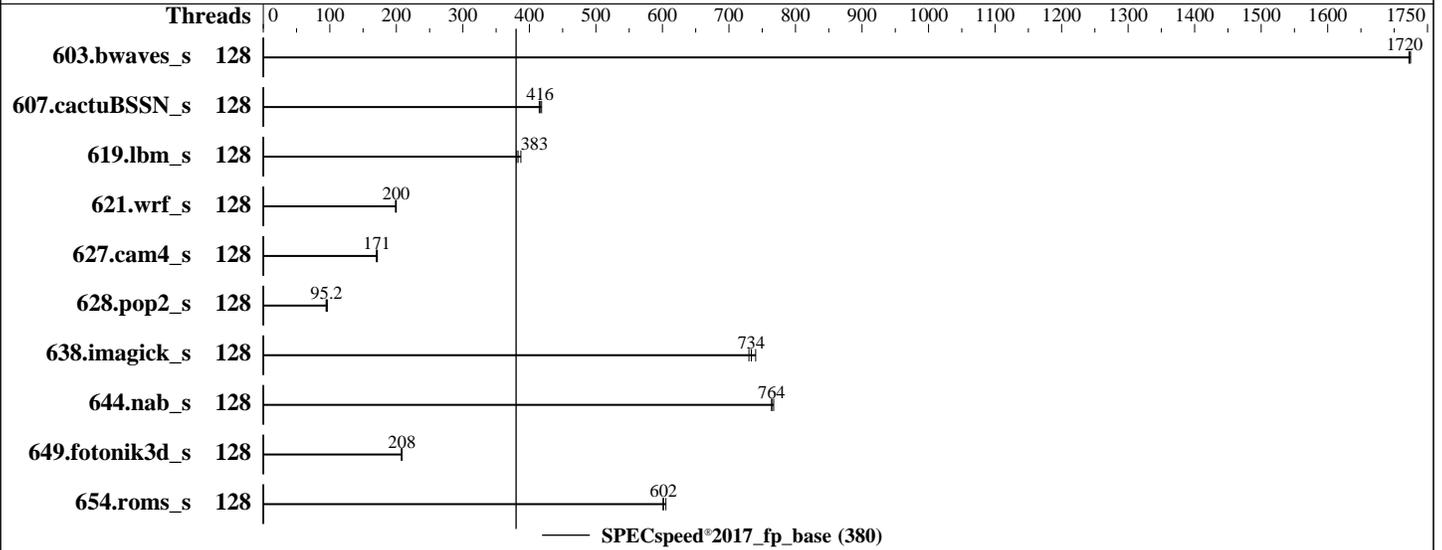$SPECspeed®2017\_fp\_peak =$ Not Run

CPU2017 License: 6488
Test Sponsor: xFusion
Tested by: xFusion

Test Date: Feb-2026
Hardware Availability: May-2025
Software Availability: Apr-2024

Threads — scale 0 to 1750

Benchmark	Threads	Result
603.bwaves_s	128	1720
607.cactuBSSN_s	128	416
619.lbm_s	128	383
621.wrf_s	128	200
627.cam4_s	128	171
628.pop2_s	128	95.2
638.imagick_s	128	734
644.nab_s	128	764
649.fotonik3d_s	128	208
654.roms_s	128	602

SPECspeed®2017_fp_base (380)

Hardware

CPU Name: Intel Xeon 6730P
 Max MHz: 3800
 Nominal: 2500
Enabled: 64 cores, 2 chips, 2 threads/core
Orderable: 1,2 chips
Cache L1: 64 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 288 MB I+D on chip per chip
 Other: None
Memory: 512 GB (16 x 32 GB 2Rx8 PC5-6400B-R)
Storage: 1 x 1.92 TB SATA SSD
Other: CPU Cooling: Air

Software

OS: Red Hat Enterprise Linux 9.4 (Plow)
 5.14.0-427.13.1.el9_4.x86_64
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 01.31.01.19 released Dec-2025
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other: jemalloc memory allocator V5.0.1
Power Management: BIOS 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	128	**34.2**	**1720**	34.3	1720	34.2	1720							
607.cactuBSSN_s	128	40.2	415	**40.1**	**416**	39.8	418							
619.lbm_s	128	13.8	381	13.5	387	**13.7**	**383**							
621.wrf_s	128	66.2	200	**66.2**	**200**	66.6	199							
627.cam4_s	128	**51.8**	**171**	52.1	170	51.7	172							
628.pop2_s	128	126	94.4	123	96.2	**125**	**95.2**							
638.imagick_s	128	19.8	730	**19.7**	**734**	19.5	740							
644.nab_s	128	22.9	764	**22.9**	**764**	22.8	767							
649.fotonik3d_s	128	43.7	209	**43.7**	**208**	43.9	208							
654.roms_s	128	26.2	601	**26.2**	**602**	26.0	605							
SPECspeed®2017_fp_base =		**380**												
SPECspeed®2017_fp_peak =		**Not Run**												

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

Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
tuned-adm profile was set to throughput-performance using "tuned-adm profile throughput-performance"
```

Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
KMP_AFFINITY = "granularity=fine,compact"
LD_LIBRARY_PATH = "/home/QYL/cpu2017/lib/intel64:/home/QYL/cpu2017/je5.0.1-64"
MALLOC_CONF = "retain:true"
OMP_STACKSIZE = "192M"
```

General Notes

```
 Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
 memory using Redhat Enterprise Linux 8.0
 Transparent Huge Pages enabled by default
 Prior to runcpu invocation
 Filesystem page cache synced and cleared with:
 sync; echo 3>        /proc/sys/vm/drop_caches
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
is mitigated in the system as tested and documented.
 jemalloc, a general purpose malloc implementation
 built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5
 sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases
```

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Platform Notes

```
BIOS configuration:
Performance Profile Set to Load Balance
LLC Prefetch Set to Enabled
Adjacent Cache Prefetch Set to Disabled
Latency Optimized Mode Set to Enabled
SNC Set to Disabled

Sysinfo program /home/QYL/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Thu Feb  5 20:12:51 2026

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

------------------------------------------------------------
Table of contents
------------------------------------------------------------
 1. uname -a
 2. w
 3. Username
 4. ulimit -a
 5. sysinfo process ancestry
 6. /proc/cpuinfo
 7. lscpu
 8. numactl --hardware
 9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 252 (252-32.el9_4)
12. Failed units, from systemctl list-units --state=failed
13. Services, from systemctl list-unit-files
14. Linux kernel boot-time arguments, from /proc/cmdline
15. cpupower frequency-info
16. tuned-adm active
17. sysctl
18. /sys/kernel/mm/transparent_hugepage
19. /sys/kernel/mm/transparent_hugepage/khugepaged
20. OS release
21. Disk information
22. /sys/devices/virtual/dmi/id
23. dmidecode
24. BIOS
------------------------------------------------------------

------------------------------------------------------------
1. uname -a
  Linux localhost.localdomain 5.14.0-427.13.1.el9_4.x86_64 #1 SMP PREEMPT_DYNAMIC Wed Apr 10 10:29:16 EDT
  2024 x86_64 x86_64 x86_64 GNU/Linux

------------------------------------------------------------
2. w
  20:12:51 up  3:46,  1 user,  load average: 12.31, 74.58, 96.80
  USER      TTY        LOGIN@   IDLE   JCPU   PCPU WHAT
  root      tty1       16:30    3:32m  0.94s  0.02s sh run_speed.sh

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

------------------------------------------------------------
4. ulimit -a
  real-time non-blocking time  (microseconds, -R) unlimited
```

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Platform Notes (Continued)

```
  core file size              (blocks, -c) 0
  data seg size               (kbytes, -d) unlimited
  scheduling priority             (-e) 0
  file size                   (blocks, -f) unlimited
  pending signals                 (-i) 2060102
  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) 2060102
  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 loop.sh
 sh run_speed.sh
 runcpu --nobuild --action validate --define default-platform-flags -c
   ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define cores=128 --tune base -o all --define drop_caches
   fpspeed
 runcpu --nobuild --action validate --define default-platform-flags --configfile
   ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define cores=128 --tune base --output_format all --define
   drop_caches --nopower --runmode speed --tune base --size refspeed fpspeed --nopreenv --note-preenv
   --logfile $SPEC/tmp/CPU2017.001/templogs/preenv.fpspeed.001.0.log --lognum 001.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
 $SPEC = /home/QYL/cpu2017

    ----------------------------------------------------------
6. /proc/cpuinfo
    model name      : Intel(R) Xeon(R) 6730P
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 173
    stepping        : 1
    microcode       : 0x10003c2
    bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs
    cpu cores       : 32
    siblings        : 64
    2 physical ids (chips)
    128 processors (hardware threads)
    physical id 0: core ids 0-15,64-79
    physical id 1: core ids 0-15,64-79
    physical id 0: apicids 0-31,128-159
    physical id 1: apicids 256-287,384-415
  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
```

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Platform Notes (Continued)

```
Address sizes:                      52 bits physical, 57 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) 6730P
BIOS Model name:                    Intel(R) Xeon(R) 6730P
CPU family:                         6
Model:                              173
Thread(s) per core:                 2
Core(s) per socket:                 32
Socket(s):                          2
Stepping:                           1
CPU(s) scaling MHz:                 94%
CPU max MHz:                        3800.0000
CPU min MHz:                        800.0000
BogoMIPS:                           5000.00
Flags:                              fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36
                                    clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb
                                    rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good nopl
                                    xtopology nonstop_tsc cpuid aperfmperf tsc_known_freq pni pclmulqdq
                                    dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm
                                    pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
                                    avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cat_l2
                                    cdp_l3 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 avx512f avx512dq rdseed adx smap avx512ifma
                                    clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt
                                    xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
                                    split_lock_detect avx_vnni avx512_bf16 wbnoinvd dtherm ida arat pln pts
                                    hwp hwp_act_window hwp_epp hwp_pkg_req hfi vnmi avx512vbmi umip pku
                                    ospke waitpkg vaes vpclmulqdq avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni
                                    avx512_bitalg tme avx512_vpopcntdq la57 rdpid bus_lock_detect cldemote
                                    movdiri movdir64b enqcmd fsrm md_clear serialize tsxldtrk pconfig
                                    arch_lbr ibt amx_bf16 avx512_fp16 amx_tile amx_int8 flush_l1d
                                    arch_capabilities
Virtualization:                     VT-x
L1d cache:                          3 MiB (64 instances)
L1i cache:                          4 MiB (64 instances)
L2 cache:                           128 MiB (64 instances)
L3 cache:                           576 MiB (2 instances)
NUMA node(s):                       2
NUMA node0 CPU(s):                  0-31,64-95
NUMA node1 CPU(s):                  32-63,96-127
Vulnerability Gather data sampling: Not affected
Vulnerability Itlb multihit:        Not affected
Vulnerability L1tf:                 Not affected
Vulnerability Mds:                  Not affected
Vulnerability Meltdown:             Not affected
Vulnerability Mmio stale data:      Not affected
Vulnerability 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,
                                    PBRSB-eIBRS Not affected
Vulnerability Srbds:                Not affected
Vulnerability Tsx async abort:      Not affected
```

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Platform Notes (Continued)

```
  From lscpu --cache:
      NAME ONE-SIZE ALL-SIZE WAYS TYPE         LEVEL   SETS PHY-LINE COHERENCY-SIZE
      L1d      48K       3M   12 Data             1     64        1             64
      L1i      64K       4M   16 Instruction      1     64        1             64
      L2        2M     128M   16 Unified          2   2048        1             64
      L3      288M     576M   16 Unified          3 294912        1             64


  -------------------------------------------------------------
  8. numactl --hardware
  NOTE: a numactl 'node' might or might not correspond to a physical chip.
    available: 2 nodes (0-1)
    node 0 cpus: 0-31,64-95
    node 0 size: 257080 MB
    node 0 free: 256170 MB
    node 1 cpus: 32-63,96-127
    node 1 size: 257984 MB
    node 1 free: 255759 MB
    node distances:
    node   0   1
      0:  10  21
      1:  21  10


  -------------------------------------------------------------
  9. /proc/meminfo
     MemTotal:      527426548 kB


  -------------------------------------------------------------
  10. who -r
    run-level 3 Feb 5 16:26


  -------------------------------------------------------------
  11. Systemd service manager version: systemd 252 (252-32.el9_4)
    Default Target  Status
    multi-user      degraded


  -------------------------------------------------------------
  12. Failed units, from systemctl list-units --state=failed
      UNIT                   LOAD   ACTIVE SUB    DESCRIPTION
    * dnf-makecache.service loaded failed failed dnf makecache


  -------------------------------------------------------------
  13. Services, from systemctl list-unit-files
    STATE           UNIT FILES
    enabled         NetworkManager NetworkManager-dispatcher NetworkManager-wait-online auditd chronyd crond
                    dbus-broker firewalld getty@ insights-client-boot irqbalance kdump low-memory-monitor
                    mdmonitor microcode nis-domainname nvmefc-boot-connections rhsmcertd rsyslog rtkit-daemon
                    selinux-autorelabel-mark smartd sshd sssd sysstat systemd-boot-update
                    systemd-network-generator tuned udisks2 upower
    enabled-runtime systemd-remount-fs
    disabled        canberra-system-bootup canberra-system-shutdown canberra-system-shutdown-reboot
                    chrony-wait chronyd-restricted console-getty cpupower debug-shell dnf-system-upgrade
                    hwloc-dump-hwdata kvm_stat man-db-restart-cache-update nftables nvmf-autoconnect pesign
                    rdisc rhcd rhsm rhsm-facts rpmdb-rebuild selinux-check-proper-disable serial-getty@
                    sshd-keygen@ systemd-boot-check-no-failures systemd-pstore systemd-sysext
    indirect        sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo systemd-sysupdate
                    systemd-sysupdate-reboot


  -------------------------------------------------------------
  14. Linux kernel boot-time arguments, from /proc/cmdline
    BOOT_IMAGE=(hd0,gpt8)/boot/vmlinuz-5.14.0-427.13.1.el9_4.x86_64
```

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Platform Notes (Continued)

```
  root=UUID=45ad91b5-aaa9-437b-b5af-4538b8b78281
  ro
  crashkernel=1G-4G:192M,4G-64G:256M,64G-:512M
  resume=UUID=19bb8617-ccca-496d-887b-547fa97b185c

  ----------------------------------------------------------
15. cpupower frequency-info
  analyzing CPU 47:
    current policy: frequency should be within 800 MHz and 3.80 GHz.
                    The governor "performance" may decide which speed to use
                    within this range.
    boost state support:
      Supported: yes
      Active: yes


  ----------------------------------------------------------
16. tuned-adm active
  Current active profile: throughput-performance


  ----------------------------------------------------------
17. 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                    40
  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                     10
  vm.watermark_boost_factor      15000
  vm.watermark_scale_factor         10
  vm.zone_reclaim_mode               0

  ----------------------------------------------------------
18. /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

  ----------------------------------------------------------
19. /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

  ----------------------------------------------------------
20. OS release
```

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Platform Notes (Continued)

```
   From /etc/*-release /etc/*-version
 os-release    Red Hat Enterprise Linux 9.4 (Plow)
 redhat-release Red Hat Enterprise Linux release 9.4 (Plow)
 system-release Red Hat Enterprise Linux release 9.4 (Plow)

----------------------------------------------------------------
21. Disk information
SPEC is set to: /home/QYL/cpu2017
 Filesystem     Type  Size  Used Avail Use% Mounted on
 /dev/sda8      xfs   996G   50G  947G   5% /

----------------------------------------------------------------
22. /sys/devices/virtual/dmi/id
    Vendor:        XFUSION
    Product:       1288 V8
    Product Family: Birch Stream

----------------------------------------------------------------
23. dmidecode
  Additional information from dmidecode 3.5 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:
    16x Samsung M321R4GA3EB2-CCPWF 32 GB 2 rank 6400


----------------------------------------------------------------
24. BIOS
(This section combines info from /sys/devices and dmidecode.)
  BIOS Vendor:      XFUSION
  BIOS Version:     01.31.01.19
  BIOS Date:        12/18/2025
  BIOS Revision:    1.19
```

Compiler Version Notes

```
========================================================================================================
C             | 619.lbm_s(base) 638.imagick_s(base) 644.nab_s(base)
--------------------------------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------------------------------


========================================================================================================
C++, C, Fortran | 607.cactuBSSN_s(base)
--------------------------------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------------------------------


========================================================================================================
Fortran       | 603.bwaves_s(base) 649.fotonik3d_s(base) 654.roms_s(base)
--------------------------------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
```

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Compiler Version Notes (Continued)

```
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
Fortran, C    | 621.wrf_s(base) 627.cam4_s(base) 628.pop2_s(base)
------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
`icx`

Fortran benchmarks:
`ifx`

Benchmarks using both Fortran and C:
`ifx icx`

Benchmarks using Fortran, C, and C++:
`icpx icx ifx`

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
`-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math`

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

xFusion

FusionServer 1288 V8 (Intel Xeon 6730P)

SPECspeed®2017_fp_base = 380

SPECspeed®2017_fp_peak = Not Run

CPU2017 License: 6488
Test Sponsor: xFusion
Tested by: xFusion

Test Date: Feb-2026
Hardware Availability: May-2025
Software Availability: Apr-2024

Base Optimization Flags (Continued)

C benchmarks (continued):
```
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -mprefer-vector-width=512
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Fortran benchmarks:
```
-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xsapphirerapids -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 -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -mprefer-vector-width=512
-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 -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int
-mprefer-vector-width=512 -nostandard-realloc-lhs -align array32byte
-auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.html
http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-GNR-V1.7.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/xFusion-Platform-Settings-GNR-V1.7.xml

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

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