SPEC CPU®2026 Floating Point Rate Result

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Supermicro
(Test Sponsor: Intel Corporation)

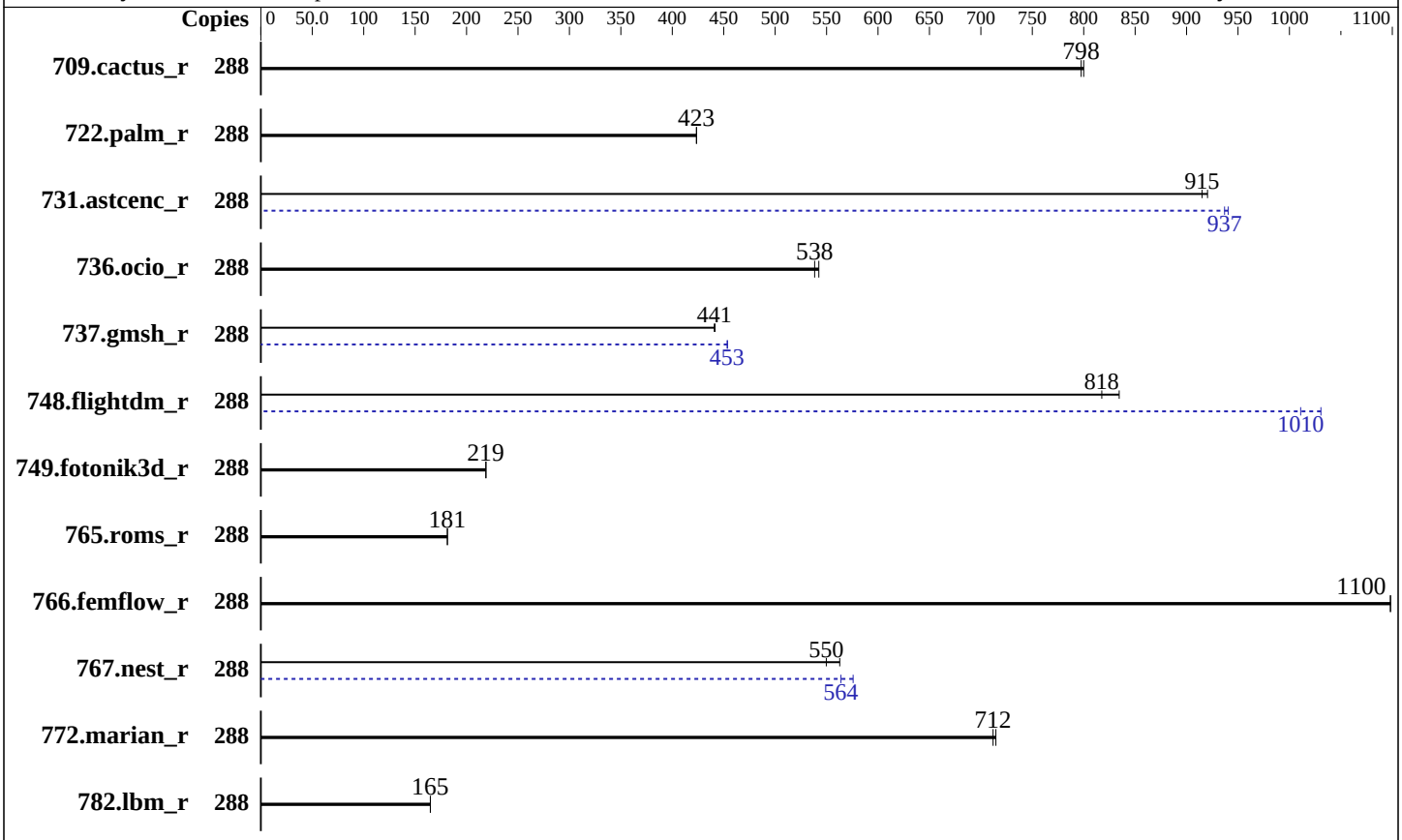
Hyper SuperServer SYS-222H-TN

SPECrate®2026_fp_base = 485

SPECrate®2026_fp_peak = 497

CPU2026 License: 13
Test Sponsor: Intel Corporation
Tested by: Intel Corporation

Test Date: Feb-2026
Hardware Availability: Feb-2025
Software Availability: Nov-2025



Hardware

CPU Name:	Intel Xeon 6780E
Max MHz:	3000
Nominal:	2200
Enabled:	288 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:	108 MB I+D on chip per chip
Other:	None
Memory:	1 TB (16 x 64 GB 2Rx4 PC5-6400B-R)
Storage:	1 x 900 GB M.2 NVMe SSD
Cooling:	Air
Other:	None

Software

OS:	Ubuntu 24.04 LTS 6.8.0-90-generic
Compiler:	C/C++: Version 2025.3 of Intel oneAPI DPC++/C++ Compiler for Linux; Fortran: Version 2025.3 of Intel Fortran Compiler for Linux
Compiler Category:	Vendor
Firmware:	Version 5.35 released Aug-2025
File System:	ext4
System State:	Run level 5 (Multiuser with networking)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	jemalloc memory allocator v5.3
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
709.cactus_r	288	**310**	**798**	309	800			288	**310**	**798**	309	800		
722.palm_r	288	**898**	**423**	897	424			288	**898**	**423**	897	424		
731.astcenc_r	288	263	920	**264**	**915**			288	**258**	**937**	257	940		
736.ocio_r	288	**468**	**538**	465	542			288	**468**	**538**	465	542		
737.gmsh_r	288	299	442	**300**	**441**			288	**292**	**453**	291	454		
748.flightdm_r	288	247	834	**252**	**818**			288	**204**	**1010**	200	1030		
749.fotonik3d_r	288	**1523**	**219**	1521	219			288	**1523**	**219**	1521	219		
765.roms_r	288	**2502**	**181**	2501	181			288	**2502**	**181**	2501	181		
766.femflow_r	288	385	1100	**385**	**1100**			288	385	1100	**385**	**1100**		
767.nest_r	288	406	563	**415**	**550**			288	**405**	**564**	397	576		
772.marian_r	288	636	715	**639**	**712**			288	636	715	**639**	**712**		
782.lbm_r	288	**1002**	**165**	1001	165			288	**1002**	**165**	1001	165		

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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 = "/root/cpu2026_new/lib"
MALLOC_CONF = "retain:true"
```

General Notes

```
Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
memory using CentOS Stream 9.
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
```

(Continued on next page)

General Notes (Continued)

```
 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)
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 CentOS Stream 9, and the system compiler gcc 11.5.0
 sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases
```

Platform Notes

```
BIOS Configuration :
Workload Profile set to Disabled
Power Performance Tuning set to BIOS Controls EPB
Energy Perf Bias CFG mode set to Extreme Performance
KTI Prefetch set to Enabled
LLC Dead Line Alloc set to Disabled
BMC Configuration:
System Fan speed set to full speed

 Sysinfo program /root/cpu2026_new/bin/sysinfo
 Rev: 069f95da7e7f5d81b2ce48a82150e54f
 running on smc-gnr-sp Tue Feb  3 06:48:06 2026

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

 ------------------------------------------------------------
 Table of contents
 ------------------------------------------------------------
  1. uname -srvm
  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 255 (255.4-1ubuntu8.8)
 12. Failed units, from systemctl list-units --state=failed
```

(Continued on next page)

Platform Notes (Continued)

```
 13. Services, from systemctl list-unit-files
 14. Linux kernel boot-time arguments, from /proc/cmdline
 15. cpupower frequency-info
 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 -srvm
  Linux 6.8.0-90-generic #91-Ubuntu SMP PREEMPT_DYNAMIC Tue Nov 18 14:14:30 UTC 2025 x86_64

------------------------------------------------------------
2. w
   06:48:06 up  7:29,  2 users,  load average: 97.67, 228.81, 258.74
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
  root     tty1     -                23:31    5:21m  0.07s  0.01s -bash

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

------------------------------------------------------------
4. ulimit -a
  time(seconds)        unlimited
  file(blocks)         unlimited
  data(kbytes)         unlimited
  stack(kbytes)        unlimited
  coredump(blocks)     0
  memory(kbytes)       unlimited
  locked memory(kbytes) 132038872
  process              4125903
  nofiles              1024
  vmemory(kbytes)      unlimited
  locks                unlimited
  rtprio               0

------------------------------------------------------------
5. sysinfo process ancestry
 /sbin/init
 tmux new -s spec
 -bash
```

(Continued on next page)

Platform Notes (Continued)

```
  -bash
 runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 288 -c
   ic2025.3-sierraforest-cpu2026-0.902-rate-20260121.cfg --define smt-on --define peakfpcopies=144 --define
   physicalfirst --define invoke_with_interleave --define drop_caches --reportable --tune base,peak -o all
    fprate
 runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 288 --configfile
   ic2025.3-sierraforest-cpu2026-0.902-rate-20260121.cfg --define smt-on --define peakfpcopies=144 --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/CPU2026.005/templogs/preenv.fprate.005.0.log --lognum 005.0
    --from_runcpu 2
  specperl $SPEC/bin/sysinfo
$SPEC = /root/cpu2026_new

------------------------------------------------------------
6. /proc/cpuinfo
     model name      : Intel(R) Xeon(R) 6780E
     vendor_id       : GenuineIntel
     cpu family      : 6
     model           : 175
     stepping        : 3
     microcode       : 0x3000382
     bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi vmscape
     cpu cores       : 144
     siblings        : 144
     2 physical ids (chips)
     288 processors (hardware threads)
     physical id 0: core ids 0-143
     physical id 1: core ids 0-143
     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
    4,186,188,190,192,194,196,198,200,202,204,206,208,210,212,214,216,218,220,222,224,226,228,230,232,234,236
    ,238,240,242,244,246,248,250,252,254,256,258,260,262,264,266,268,270,272,274,276,278,280,282,284,286
     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,
    722,724,726,728,730,732,734,736,738,740,742,744,746,748,750,752,754,756,758,760,762,764,766,768,770,772,7
     74,776,778,780,782,784,786,788,790,792,794,796,798
  Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
   virtualized systems.  Use the above data carefully.

------------------------------------------------------------
7. lscpu
```

(Continued on next page)

Platform Notes (Continued)

```
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):                                  288
  On-line CPU(s) list:                     0-287
  Vendor ID:                               GenuineIntel
  BIOS Vendor ID:                          Intel(R) Corporation
  Model name:                              Intel(R) Xeon(R) 6780E
  BIOS Model name:                         Intel(R) Xeon(R) 6780E  CPU @ 2.2GHz
  BIOS CPU family:                         179
  CPU family:                              6
  Model:                                   175
  Thread(s) per core:                      1
  Core(s) per socket:                      144
  Socket(s):                               2
  Stepping:                                3
  BogoMIPS:                                4400.00
  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 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
                                           ibpb_exit_to_user
  Virtualization:                          VT-x
  L1d cache:                               9 MiB (288 instances)
  L1i cache:                               18 MiB (288 instances)
  L2 cache:                                288 MiB (72 instances)
  L3 cache:                                216 MiB (2 instances)
  NUMA node(s):                            2
  NUMA node0 CPU(s):                       0-143
  NUMA node1 CPU(s):                       144-287
  Vulnerability Gather data sampling:      Not affected
  Vulnerability Itlb multihit:             Not affected
```

(Continued on next page)

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/swapgs barriers and __user pointer sanitization
  Vulnerability Spectre v2:            Mitigation; Enhanced / Automatic IBRS; IBPB conditional; RSB filling;
                                       PBRSB-eIBRS Not affected; BHI BHI_DIS_S
  Vulnerability Srbds:                 Not affected
  Vulnerability Tsx async abort:       Not affected
  Vulnerability Vmscape:               Mitigation; IBPB before exit to userspace

From lscpu --cache:
     NAME ONE-SIZE ALL-SIZE WAYS TYPE        LEVEL   SETS PHY-LINE COHERENCY-SIZE
     L1d       32K       9M    8 Data            1     64        1             64
     L1i       64K      18M    8 Instruction     1    128        1             64
     L2         4M     288M   16 Unified         2   4096        1             64
     L3       108M     216M   12 Unified         3 147456        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: 0-143
  node 0 size: 515523 MB
  node 0 free: 471611 MB
  node 1 cpus: 144-287
  node 1 size: 516030 MB
  node 1 free: 475893 MB
  node distances:
  node   0   1
    0:  10  21
    1:  21  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1056311004 kB

------------------------------------------------------------
10. who -r
  run-level 5 Feb 2 23:20

------------------------------------------------------------
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.8)
```

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Platform Notes (Continued)

```
  Default Target  Status
  graphical       degraded

------------------------------------------------------------
12. Failed units, from systemctl list-units --state=failed
    UNIT                                    LOAD   ACTIVE SUB    DESCRIPTION
  * fwupd-refresh.service                 loaded failed failed Refresh fwupd metadata and update motd
  * systemd-networkd-wait-online.service loaded failed failed Wait for Network to be Configured
  Legend: LOAD   -> Reflects whether the unit definition was properly loaded.
          ACTIVE -> The high-level unit activation state, i.e. generalization of SUB.
          SUB    -> The low-level unit activation state, values depend on unit type.
  2 loaded units listed.

------------------------------------------------------------
13. Services, from systemctl list-unit-files
  STATE             UNIT FILES
  enabled          ModemManager apparmor apport blk-availability cloud-config cloud-final cloud-init
                   cloud-init-local console-setup cron dmesg e2scrub_reap finalrd getty@ gpu-manager
                     grub-common grub-initrd-fallback keyboard-setup lvm2-monitor multipathd
                   networkd-dispatcher open-iscsi open-vm-tools pollinate rsyslog secureboot-db setvtrgb
                     snapd sysstat systemd-networkd systemd-networkd-wait-online systemd-pstore
                   systemd-resolved systemd-timesyncd thermald ua-reboot-cmds ubuntu-advantage udisks2 ufw
                     unattended-upgrades vgauth
  enabled-runtime  netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
  disabled         console-getty debug-shell ipmievd iscsid nftables rsync serial-getty@ ssh
                     systemd-boot-check-no-failures systemd-confext systemd-network-generator
                   systemd-networkd-wait-online@ systemd-pcrlock-file-system systemd-pcrlock-firmware-code
                   systemd-pcrlock-firmware-config systemd-pcrlock-machine-id systemd-pcrlock-make-policy
                   systemd-pcrlock-secureboot-authority systemd-pcrlock-secureboot-policy systemd-sysext
                     systemd-time-wait-sync upower
  generated        openipmi
  indirect         systemd-sysupdate systemd-sysupdate-reboot uuidd
  masked          cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common

------------------------------------------------------------
14. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.8.0-90-generic
  root=UUID=e15c24f4-c5fa-4691-a009-705a47ba067b
  ro

------------------------------------------------------------
15. cpupower frequency-info
  analyzing CPU 74:
    Unable to determine current policy
    boost state support:
      Supported: yes
      Active: yes
```

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Platform Notes (Continued)

```
------------------------------------------------------------
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
  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 Ubuntu 24.04 LTS

------------------------------------------------------------
20. Disk information
```

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Platform Notes (Continued)

```
 SPEC is set to: /root/cpu2026_new
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/nvme0n1p2 ext4  879G  285G  550G  35% /

 ------------------------------------------------------------
 21. /sys/devices/virtual/dmi/id
     Vendor:         Supermicro
     Product:        SYS-222H-TN
     Product Family: Family
     Serial:         S913244X4504458

 ------------------------------------------------------------
 22. 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:
      14x Micron Technology MTC40F2046S1RC64BDY QSFF 64 GB 2 rank 6400
      2x Micron Technology MTC40F2046S1RC64BDY USFF 64 GB 2 rank 6400


 ------------------------------------------------------------
 23. BIOS
 (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:       American Megatrends International, LLC.
    BIOS Version:      1.4
    BIOS Date:         08/21/2025
    BIOS Revision:     5.35
```

Compiler Version Notes

```
==============================================================================
C       | 782.lbm_r(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++     | 731.astcenc_r(base, peak) 736.ocio_r(base, peak)
        | 748.flightdm_r(base, peak) 766.femflow_r(base, peak)
        | 767.nest_r(base, peak) 772.marian_r(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
```

(Continued on next page)

Compiler Version Notes (Continued)

```
  Version 2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++, C  | 709.cactus_r(base, peak) 737.gmsh_r(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
Fortran | 722.palm_r(base, peak) 749.fotonik3d_r(base, peak) 765.roms_r(base,
        | peak)
------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
  2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Benchmarks using both C and C++:
icpx icx

Base Portability Flags

709.cactus_r: -DSPEC_LP64
722.palm_r: -DSPEC_LP64
731.astcenc_r: -DSPEC_LP64
736.ocio_r: -DSPEC_LP64
737.gmsh_r: -DSPEC_LP64 -fno-associative-math
748.flightdm_r: -DSPEC_LP64

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Base Portability Flags (Continued)

749.fotonik3d_r: `-DSPEC_LP64`
765.roms_r: `-DSPEC_LP64`
766.femflow_r: `-DSPEC_LP64`
767.nest_r: `-DSPEC_LP64`
772.marian_r: `-DSPEC_LP64`
782.lbm_r: `-DSPEC_LP64`

Base Optimization Flags

C benchmarks:
```
-m64 -std=c18 -Wl,-z,muldefs -xsierraforest -O3 -ffp-model=fast
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc
```

C++ benchmarks:
```
-m64 -std=c++17 -Wl,-z,muldefs -xsierraforest -O3 -ffp-model=fast
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc
```

Fortran benchmarks:
```
-m64 -stand f18 -Wl,-z,muldefs -xsierraforest -O3 -ffp-model=fast
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc
```

Benchmarks using both C and C++:
```
-m64 -std=c++17 -std=c18 -Wl,-z,muldefs -xsierraforest -O3
-ffp-model=fast -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib -ljemalloc
```

Peak Compiler Invocation

C benchmarks:
```
icx
```

C++ benchmarks:
```
icpx
```

Fortran benchmarks:
```
ifx
```

(Continued on next page)

Peak Compiler Invocation (Continued)

Benchmarks using both C and C++:
icpx icx

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

782.lbm_r: basepeak = yes

C++ benchmarks:

731.astcenc_r: -m64 -std=c++17 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-ffp-model=fast -xsierraforest(pass 2) -flto
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

736.ocio_r: basepeak = yes

748.flightdm_r: Same as 731.astcenc_r

766.femflow_r: basepeak = yes

767.nest_r: Same as 731.astcenc_r

772.marian_r: basepeak = yes

Fortran benchmarks:

722.palm_r: basepeak = yes

749.fotonik3d_r: basepeak = yes

765.roms_r: basepeak = yes

Benchmarks using both C and C++:

(Continued on next page)

Peak Optimization Flags (Continued)

709.cactus_r: `basepeak = yes`

737.gmsh_r: `-m64 -std=c++17 -std=c18 -Wl,-z,muldefs`
`-fprofile-generate`(pass 1)
`-fprofile-use=default.profdata`(pass 2) `-xCORE-AVX2`(pass 1)
`-ffp-model=fast -xsierraforest`(pass 2) `-flto`
`-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops`
`-L/usr/local/jemalloc-5.3.0/lib -ljemalloc`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.html`
`http://www.spec.org/cpu2026/results/flags/Intel-Platform-Settings-standard-v1.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.xml`
`http://www.spec.org/cpu2026/results/flags/Intel-Platform-Settings-standard-v1.xml`

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