



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

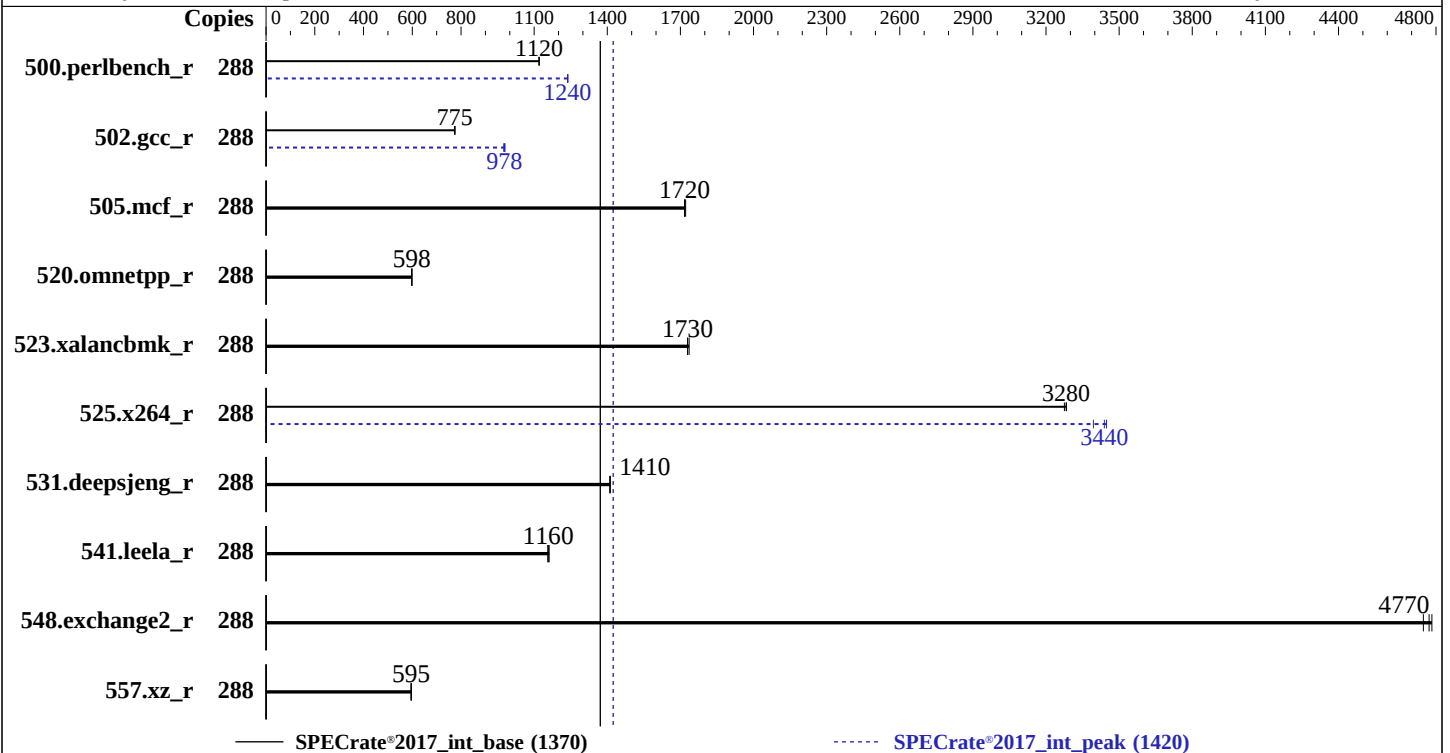
Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024



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: 512 GB (16 x 32 GB 2Rx8 PC5-6400B-R)
Storage: 1 x 1.0 TB M.2 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: AMI version 02.40.00 released Mar-2025
File System: btrfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other: jemalloc memory allocator V5.0.1
Power Management: BIOS and OS set to prefer performance
at the cost of additional power usage.



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	288	409	1120	409	1120	409	1120	288	370	1240	371	1240	371	1240
502.gcc_r	288	526	775	526	775	528	773	288	418	975	417	978	416	980
505.mcf_r	288	271	1720	271	1720	270	1720	288	271	1720	271	1720	270	1720
520.omnetpp_r	288	632	598	632	598	632	598	288	632	598	632	598	632	598
523.xalancbmk_r	288	176	1730	176	1730	175	1740	288	176	1730	176	1730	175	1740
525.x264_r	288	154	3280	154	3280	154	3280	288	147	3440	149	3390	146	3450
531.deepsjeng_r	288	234	1410	234	1410	234	1410	288	234	1410	234	1410	234	1410
541.leela_r	288	413	1160	411	1160	412	1160	288	413	1160	411	1160	412	1160
548.exchange2_r	288	158	4780	158	4770	159	4750	288	158	4780	158	4770	159	4750
557.xz_r	288	522	596	523	595	522	595	288	522	596	523	595	522	595

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

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/lib/ia32:/home/cpu2017/je5.0.1-32"

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>

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>



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Platform Notes

Aptio BIOS Settings:

Hardware Prefetcher	: Enabled
Adjacent Cache Prefetch	: Enabled
DCU Streamer Prefetcher	: Enabled
DCU IP Prefetcher	: Enabled
Patrol Scrub	: Enable at End of POST
LLC Dead-Line Alloc	: Disabled
Package C State	: Auto
Performance Mode	: Custom
CPU C6 report	: Auto
Turbo Mode	: Enabled
Energy Efficient Turbo	: Enabled
Enhanced Halt State (C1E)	: Enabled
Enable Monitor MWAIT	: Enabled
Hardware P-state	: Native Mode
CPU C State Control	
ACPI C1 Enumeration	: C1e
ACPI C6x Enumeration	: Auto
Power Performance Tuning	: BIOS Controls EPB
ENERGY_PERF_BIAS_CFG mode	: Performance
Workload Configuration	: Balanced
Latency Optimized Mode	: Enabled
Page Policy	: Adaptive
UPI(KTI) Prefetch	: Enabled
UPI Port Link	: Disabled, CPU0 Port 1 2 3

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Sun Aug 31 09:34:25 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. lspcu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)
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

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Platform Notes (Continued)

```
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
09:34:25 up 4 min, 3 users, load average: 0.26, 1.02, 0.55
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU WHAT
root      tty1      -               09:32    1:13   0.09s  0.09s -bash
root      pts/0    192.168.68.2    09:33    6.00s  1.40s  0.01s -bash
```

```
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) 2061563
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) 2061563
virtual memory           (kbytes, -v) unlimited
file locks               (-x) unlimited
```

```
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=42
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: root [priv]
sshd: root@pts/0
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=288 -c
ic2024.1-lin-sierraforest-rate-20240308.cfg --define smt-on --define cores=288 --define physicalfirst
--define invoke_with_interleave --define drop_caches --reportable --tune base,peak -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=288 --configfile
ic2024.1-lin-sierraforest-rate-20240308.cfg --define smt-on --define cores=288 --define physicalfirst
--define invoke_with_interleave --define drop_caches --reportable --tune base,peak --output_format all
--nopower --runmode rate --tune base:peak --size refrate intrate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.147/temlogs/preenv.intrate.147.0.log --lognum 147.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017
```

```
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6780E
vendor_id       : GenuineIntel
cpu family      : 6
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Platform Notes (Continued)

```
model          : 175
stepping       : 3
microcode      : 0x3000330
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
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

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
CPU(s) scaling MHz:    30%
CPU max MHz:           3000.0000
CPU min MHz:           800.0000
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 xtology 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
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Platform Notes (Continued)

vpid ept_ad fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms invpcid cqm
rdt_a rdseed adx smap clflushopt clwb intel_pt sha_ni xsaveopt xsavec
xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
split_lock_detect user_shstk avx_vnni lam wbnoinvd dtherm ida arat
pln pts hwp hwp_act_window hwp_epp hwp_pkg_req vnmi umip pku ospke
waitpkg gfni vaes vpclmulqdq tme rdpid bus_lock_detect cldemote
movdiri movdir64b enqcmd fsrm md_clear serialize pconfig arch_lbr ibt
flush_lld arch_capabilities

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

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	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: 257523 MB

node 0 free: 256449 MB

node 1 cpus: 144-287

node 1 size: 257896 MB

node 1 free: 256883 MB

node distances:

node 0 1

0: 10 21

1: 21 10

9. /proc/meminfo

MemTotal: 527790020 kB

10. who -r

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Platform Notes (Continued)

run-level 3 Aug 31 09:31

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

Default Target	Status
multi-user	degraded

12. Failed units, from systemctl list-units --state=failed

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
* sep5.service	loaded	failed	failed	systemd script to load sep5 driver at boot time

13. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	YaST2-Firstboot YaST2-Second-Stage apparmor appstream-sync-cache auditd bluetooth cron display-manager getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections nvme-fc-autoconnect postfix purge-kernels rollback rsyslog sep5 smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime	systemd-remount-fs
disabled	accounts-daemon acpid autofs autostart-initscripts blk-availability bluetooth-mesh boot-sysctl ca-certificates chrony-wait chronyd console-getty cups cups-browsed debug-shell ebtables exchange-bmc-os-info firewalld fsidd gpm grub2-once haveged ipmi ipmievd issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap nmb ostree-remount rpcbind rpmconfigcheck rsyncd rtkit-daemon serial-getty@ smartd_generate_opts smb snmpd snmptrapd speech-dispatcher sysstat systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd tuned udisks2 update-system-flatpaks upower vncserver@
generated	ntop
indirect	systemd-userdbd wickedd

14. Linux kernel boot-time arguments, from /proc/cmdline

BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
root=UUID=4f1d54d4-b9e7-453e-97df-3582f1712553
splash=silent
quiet
security=apparmor
mitigations=auto

15. cpupower frequency-info

analyzing CPU 155:
current policy: frequency should be within 800 MHz and 3.00 GHz.
The governor "performance" may decide which speed to use within this range.
boost state support:
Supported: yes
Active: yes

16. tuned-adm active

It seems that tuned daemon is not running, preset profile is not activated.
Preset profile: throughput-performance

17. sysctl

kernel.numa_balancing	1
kernel.randomize_va_space	2

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Platform Notes (Continued)

```
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
```

```
-----
18. /sys/kernel/mm/transparent_hugepage
defrag      always 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
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP6
-----
```

```
-----
21. Disk information
SPEC is set to: /home/cpu2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/nvme0n1p2 btrfs 930G  688G  241G   75% /home
-----
```

```
-----
22. /sys/devices/virtual/dmi/id
Product Family: COMPAL
-----
```

```
-----
23. 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:
16x Samsung M321R4GA3EB2-CCPKC 32 GB 2 rank 6400
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Platform Notes (Continued)

24. BIOS

(This section combines info from /sys/devices and dmidecode.)

BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 02.40.00
BIOS Date: 03/06/2025
BIOS Revision: 5.35

Compiler Version Notes

C | 502.gcc_r(peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

C | 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak)
| 557.xz_r(base, peak)

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

C | 502.gcc_r(peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

C | 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak)
| 557.xz_r(base, peak)

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

C++ | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak) 531.deepsjeng_r(base, peak)
| 541.leela_r(base, peak)

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

Fortran | 548.exchange2_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.



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Base Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64

502.gcc_r: -DSPEC_LP64

505.mcf_r: -DSPEC_LP64

520.omnetpp_r: -DSPEC_LP64

523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX

525.x264_r: -DSPEC_LP64

531.deepsjeng_r: -DSPEC_LP64

541.leela_r: -DSPEC_LP64

548.exchange2_r: -DSPEC_LP64

557.xz_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:

-w -std=c11 -m64 -Wl,-z,muldefs -xsierraforest -O3 -ffast-math

-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4

-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc

C++ benchmarks:

-w -std=c++14 -m64 -Wl,-z,muldefs -xsierraforest -O3 -ffast-math

-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4

-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc

Fortran benchmarks:

-w -m64 -Wl,-z,muldefs -xsierraforest -O3 -ffast-math -flto

-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4

-nostandard-realloc-lhs -align array32byte -auto

-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Peak Portability Flags

```
500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -D_FILE_OFFSET_BITS=64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64
```

Peak Optimization Flags

C benchmarks:

```
500.perlbench_r: -w -std=c11 -m64 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2 -flto
-Ofast -ffast-math -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-strict-overflow
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmallo

502.gcc_r: -m32 -L/opt/intel/oneapi/compiler/2024.1/lib32 -std=gnu89
-Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2 -flto
-Ofast -ffast-math -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -L/usr/local/jemalloc32-5.0.1/lib
-ljemalloc

505.mcf_r: basepeak = yes
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Compal Electronics, Inc.
SR230-2 (Intel Xeon 6780E)

SPECrate®2017_int_base = 1370

SPECrate®2017_int_peak = 1420

CPU2017 License: 6857

Test Sponsor: Compal Electronics, Inc.

Tested by: Compal Electronics, Inc.

Test Date: Aug-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

Peak Optimization Flags (Continued)

525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xsierraforest -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-alias
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc

557.xz_r: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes

523.xalancbmk_r: basepeak = yes

531.deepsjeng_r: basepeak = yes

541.leela_r: basepeak = yes

Fortran benchmarks:

548.exchange2_r: basepeak = yes

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

http://www.spec.org/cpu2017/flags/Compal-Platform-Flags-Linux-Intel_v1.1.html

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

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

http://www.spec.org/cpu2017/flags/Compal-Platform-Flags-Linux-Intel_v1.1.xml

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

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU®2017 v1.1.9 on 2025-08-30 21:34:24-0400.

Report generated on 2025-10-02 11:38:24 by CPU2017 PDF formatter v6716.

Originally published on 2025-10-02.