



# SPEC CPU®2017 Integer Rate Result

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## Tyrone Systems

(Test Sponsor: Netweb Technologies India Ltd)

Tyrone Camarero SDI200A3N-212  
(2.90 GHz, Intel Xeon Gold 6542Y)

**SPECrate®2017\_int\_base = 509**

**SPECrate®2017\_int\_peak = 525**

CPU2017 License: 006802

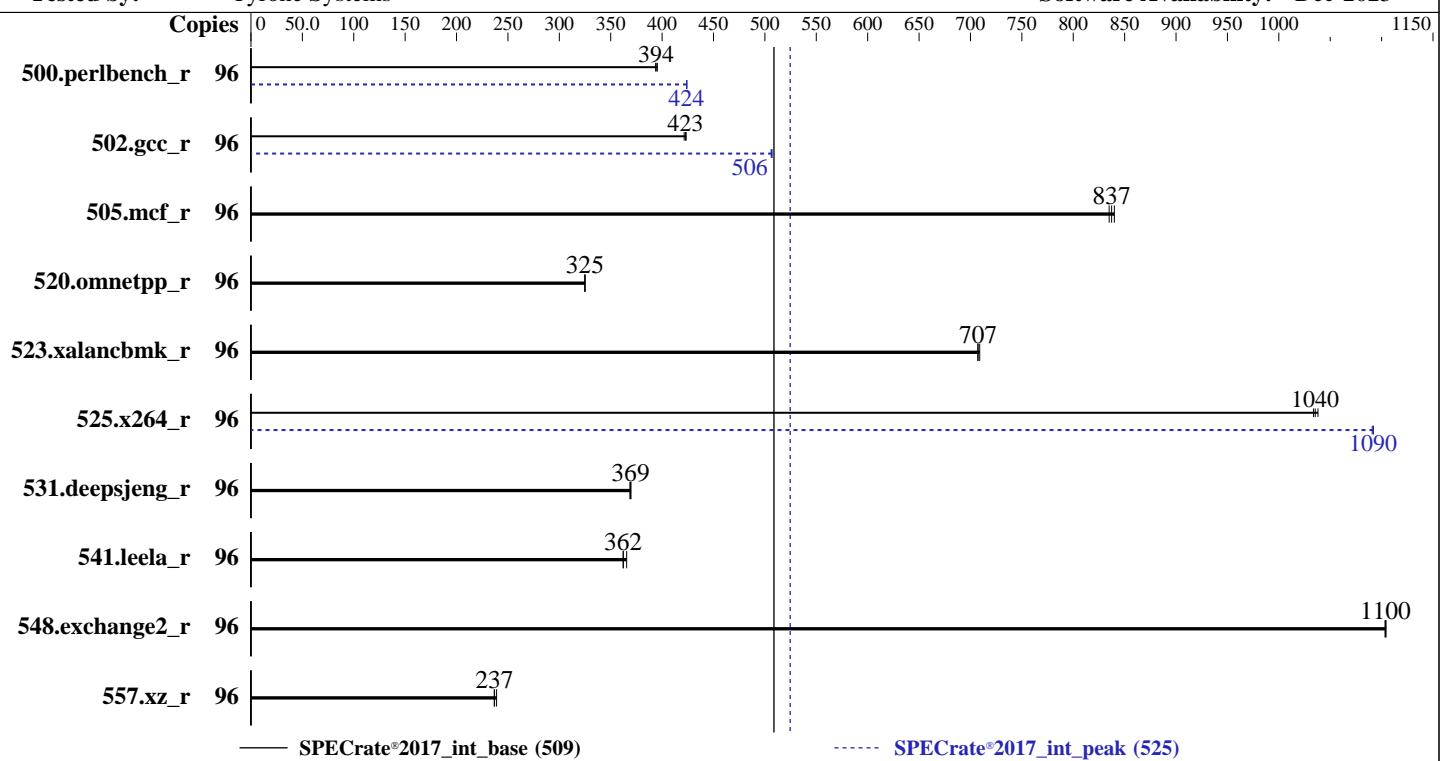
Test Date: Jan-2025

Test Sponsor: Netweb Technologies India Ltd

Hardware Availability: Jun-2024

Tested by: Tyrone Systems

Software Availability: Dec-2023



## Hardware

CPU Name: Intel Xeon Gold 6542Y  
Max MHz: 4100  
Nominal: 2900  
Enabled: 48 cores, 2 chips, 2 threads/core  
Orderable: 1,2 chips  
Cache L1: 32 KB I + 48 KB D on chip per core  
L2: 2 MB I+D on chip per core  
L3: 60 MB I+D on chip per chip  
Other: None  
Memory: 512 GB (16 x 32 GB 2Rx4 PC5-4800B-R)  
Storage: 1 x 960 GB NVMe  
Other: CPU Cooling: Air

## Software

OS: Red Hat Enterprise Linux 9.3 (Plow)  
Compiler: 5.14.0-362.13.1.el9\_3.x86\_64  
C/C++: Version 2023.2.3 of Intel oneAPI DPC++/C++ Compiler for Linux;  
Fortran: Version 2023.2.3 of Intel Fortran Compiler for Linux;  
Parallel: No  
Firmware: Version 2.1a released Mar-2024  
File System: xfs  
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 cost of additional power.



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## Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	96	387	395	388	394	<b>388</b>	<b>394</b>	96	<b>361</b>	<b>424</b>	361	424	360	424		
502.gcc_r	96	321	423	323	421	<b>322</b>	<b>423</b>	96	<b>268</b>	<b>506</b>	269	506	268	507		
505.mcf_r	96	<b>185</b>	<b>837</b>	185	840	186	835	96	<b>185</b>	<b>837</b>	185	840	186	835		
520.omnetpp_r	96	<b>388</b>	<b>325</b>	388	325	388	325	96	<b>388</b>	<b>325</b>	388	325	388	325		
523.xalancbmk_r	96	143	707	<b>143</b>	<b>707</b>	143	709	96	143	707	<b>143</b>	<b>707</b>	143	709		
525.x264_r	96	163	1030	162	1040	<b>162</b>	<b>1040</b>	96	154	1090	154	1090	154	1090	<b>154</b>	<b>1090</b>
531.deepsjeng_r	96	<b>298</b>	<b>369</b>	298	369	298	370	96	<b>298</b>	<b>369</b>	298	369	298	370		
541.leela_r	96	<b>439</b>	<b>362</b>	435	366	439	362	96	<b>439</b>	<b>362</b>	435	366	439	362		
548.exchange2_r	96	228	1100	228	1100	<b>228</b>	<b>1100</b>	96	228	1100	228	1100	228	1100	<b>228</b>	<b>1100</b>
557.xz_r	96	434	239	438	237	<b>437</b>	<b>237</b>	96	434	239	438	237	437	237		

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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"  
We are using specific Kernel Version

## 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>

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.

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.

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

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## General Notes (Continued)

system as tested and documented.

jemalloc, a general purpose malloc implementation

built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

sources available from jemalloc.net or <https://github.com/jemalloc/jemalloc/releases>

## Platform Notes

BIOS Settings:

Power Technology = Custom

ENERGY\_PERF\_BIAS\_CFG mode = Maximum Performance

KTI Prefetch = Enable

LLC Dead Line Alloc = Disable

```
Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Mon Jan 20 18:12:17 2025
```

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

-----  
Table of contents

```
1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. Systemd service manager version: systemd 252 (252-18.el9)
11. Services, from systemctl list-unit-files
12. Linux kernel boot-time arguments, from /proc/cmdline
13. cpupower frequency-info
14. tuned-adm active
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.localdomain 5.14.0-362.13.1.el9\_3.x86\_64 #1 SMP PREEMPT\_DYNAMIC Fri Nov 24 01:57:57 EST  
2023 x86\_64 x86\_64 x86\_64 GNU/Linux

-----  
2. w  
18:12:17 up 1 min, 1 user, load average: 0.06, 0.03, 0.01  
USER TTY LOGIN@ IDLE JCPU PCPU WHAT  
xeon tty1 18:11 6.00s 0.93s 0.01s login -- xeon

-----  
3. Username

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## Platform Notes (Continued)

From environment variable \$USER: xeon

```
4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited
core file size (blocks, -c) 0
data seg size (kbytes, -d) unlimited
scheduling priority (-e) 0
file size (blocks, -f) unlimited
pending signals (-i) 2062291
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) 2062291
virtual memory (kbytes, -v) unlimited
file locks (-x) unlimited
```

```
5. sysinfo process ancestry
/usr/lib/systemd/systemd rhgb --switched-root --system --deserialize 31
login -- xeon
-bash
su
bash
bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=96 -c
  ic2023.2.3-lin-sapphirerapids-rate-20231121.cfg --define smt-on --define cores=48 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base,peak -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=96 --configfile
  ic2023.2.3-lin-sapphirerapids-rate-20231121.cfg --define smt-on --define cores=48 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base,peak --output_format all --nopower
  --runmode rate --tune base:peak --size refrate intrate --nopreenv --note-preenv --logfile
  $SPEC/tmp/CPU2017.001/templogs/preenv.intrate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017
```

```
6. /proc/cpuinfo
model name      : INTEL(R) XEON(R) GOLD 6542Y
vendor_id       : GenuineIntel
cpu family     : 6
model          : 207
stepping        : 2
microcode       : 0x21000200
bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrp_brs
cpu cores       : 24
siblings         : 48
2 physical ids (chips)
96 processors (hardware threads)
physical id 0: core ids 0-23
physical id 1: core ids 0-23
physical id 0: apicids 0-47
physical id 1: apicids 128-175
```

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for virtualized systems. Use the above data carefully.

(Continued on next page)



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## Platform Notes (Continued)

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, 57 bits virtual
Byte Order: Little Endian
CPU(s): 96
On-line CPU(s) list: 0-95
Vendor ID: GenuineIntel
BIOS Vendor ID: Intel(R) Corporation
Model name: INTEL(R) XEON(R) GOLD 6542Y
BIOS Model name: INTEL(R) XEON(R) GOLD 6542Y
CPU family: 6
Model: 207
Thread(s) per core: 2
Core(s) per socket: 24
Socket(s): 2
Stepping: 2
BogoMIPS: 5800.00
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 aperfmpf perf 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 invpcid_single 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 cqmq rdt_a avx512f avx512dq
       rdseed adx smap avx512fma clflushopt clwb intel_pt avx512cd sha_ni
       avx512bw avx512vl xsaveopt xsaved xgetbv1 xsaves cqmq_llc cqmq_occup_llc
       cqmq_mbm_total cqmq_mbm_local split_lock_detect avx_vnmi avx512_bf16
       wbnoinvd dtherm ida arat pln pts hfi vnmi avx512vbmi umip pku ospke
       waitpkg avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg tme
       avx512_vpocntdq la57 rdpid bus_lock_detect cldemote 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: 2.3 MiB (48 instances)
L1i cache: 1.5 MiB (48 instances)
L2 cache: 96 MiB (48 instances)
L3 cache: 120 MiB (2 instances)
NUMA node(s): 4
NUMA node0 CPU(s): 0-11,48-59
NUMA node1 CPU(s): 12-23,60-71
NUMA node2 CPU(s): 24-35,72-83
NUMA node3 CPU(s): 36-47,84-95
Vulnerability Gather data sampling: Not affected
Vulnerability Itlb multihit: Not affected
Vulnerability Llft: 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/swaps barriers and __user pointer sanitization
```

(Continued on next page)



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## Platform Notes (Continued)

Vulnerability Spectre v2:

Mitigation: Enhanced / Automatic IBRS, IBPB conditional, RSB filling, PBRSB-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	2.3M	12	Data	1	64	1	64
L1i	32K	1.5M	8	Instruction	1	64	1	64
L2	2M	96M	16	Unified	2	2048	1	64
L3	60M	120M	15	Unified	3	65536	1	64

-----  
8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

available: 4 nodes (0-3)

node 0 cpus: 0-11,48-59

node 0 size: 128643 MB

node 0 free: 127970 MB

node 1 cpus: 12-23,60-71

node 1 size: 129017 MB

node 1 free: 128555 MB

node 2 cpus: 24-35,72-83

node 2 size: 128964 MB

node 2 free: 128489 MB

node 3 cpus: 36-47,84-95

node 3 size: 129012 MB

node 3 free: 128062 MB

node distances:

node 0 1 2 3

0: 10 12 21 21

1: 12 10 21 21

2: 21 21 10 12

3: 21 21 12 10

-----  
9. /proc/meminfo

MemTotal: 528013916 kB

'who -r' did not return a run level

-----  
10. Systemd service manager version: systemd 252 (252-18.el9)

Default Target Status

multi-user starting

-----  
11. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon atd auditd avahi-daemon bluetooth chronyd crond cups dbus-broker firewalld gdm getty@ insights-client-boot irqbalance iscsi iscsi-onboot kdump libstoragemgmt lm_sensors low-memory-monitor lvm2-monitor mcelog mdmonitor microcode multipathd nis-domainname nvmefc-boot-connections ostree-remount pmcd pmie pmlogger power-profiles-daemon qemu-guest-agent rhsmcertd rpcbind rsyslog rtkit-daemon selinux-autorelabel-mark smartd sshd sssd switcheroo-control sysstat systemd-boot-update systemd-network-generator tuned udisks2 upower vgaauthd virtqemud vmtoolsd
enabled-runtime	systemd-remount-fs
disabled	arp-ethers autofs blk-availability brltty canberra-system-bootup canberra-system-shutdown canberra-system-shutdown-reboot chrony-wait cni-dhcp console-getty cpupower cups-browsed

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## Platform Notes (Continued)

```
dbus-daemon debug-shell dnf-system-upgrade dnsmasq dovecot fancontrol fcoe grafana-server
gssproxy httpd httpd@ ibacm iprdump iprinit iprupdate ipsec iscsid iscsiuiio kpatch
kvm_stat ledmon libvirt-guests libvirtd lldpad man-db-restart-cache-update named
named-chroot netavark-dhcp-proxy nfs-blkmap nfs-server nftables nmb numad nvmf-autoconnect
ostree-readonly-sysroot-migration pesign pmfind pmie_farm pmlogger_farm pmproxy podman
podman-auto-update podman-clean-transient podman-kube@ podman-restart postfix powertop
psacct ras-mc-ctl rasdaemon rdisc rhcd rhsm rhsm-facts rpmdb-rebuild rrdcached saslauthd
selinux-check-proper-disable serial-getty@ smb snmpd snmptrapd spamassassin
speech-dispatcherd srp_daemon srp_daemon_port@ sshd-keygen@ systemd-boot-check-no-failures
systemd-nspawn@ systemd-pstore systemd-sysext target targetclid tog-pegasus trace-cmd
virtinterfaced virtnetworkd virtnodeudev virtnwfilterd virtproxyd virtsecretd virtstoraged
vsftpd wpa_supplicant
indirect pcsd spice-vdagentd sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo
systemd-sysupdate systemd-sysupdate-reboot virtlockd virtlogd vsftpd@
```

```
-----  
12. Linux kernel boot-time arguments, from /proc/cmdline  
BOOT_IMAGE=(hd0,gpt2)/vmlinuz-5.14.0-362.13.1.el9_3.x86_64  
root=/dev/mapper/rhel-root  
ro  
resume=/dev/mapper/rhel-swap  
rd.lvm.lv=rhel/root  
rd.lvm.lv=rhel/swap  
rhgb  
quiet
```

```
-----  
13. cpupower frequency-info  
analyzing CPU 0:  
    Unable to determine current policy  
    boost state support:  
        Supported: yes  
        Active: yes
```

```
-----  
14. tuned-adm active  
Current active profile: throughput-performance
```

```
-----  
15. sysctl  
kernel.numa_balancing          1  
kernel.randomize_va_space       2  
vm.compression_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
```

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## Platform Notes (Continued)

-----  
16. /sys/kernel/mm/transparent\_hugepage  
defrag always defer defer+madvise [madvise] never  
enabled [always] madvise never  
hugepage\_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 Red Hat Enterprise Linux 9.3 (Plow)  
redhat-release Red Hat Enterprise Linux release 9.3 (Plow)  
system-release Red Hat Enterprise Linux release 9.3 (Plow)

-----  
19. Disk information  
SPEC is set to: /home/cpu2017  
Filesystem Type Size Used Avail Use% Mounted on  
/dev/mapper/rhel-home xfs 856G 721G 135G 85% /home

-----  
20. /sys/devices/virtual/dmi/id  
Vendor: Tyrone Systems  
Product: Tyrone Camarero SDI200A3N-212  
Product Family: Family  
Serial: A495115X4412722

-----  
21. 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 M321R4GA3BB6-CQKVS 32 GB 2 rank 4800

-----  
22. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: American Megatrends International, LLC.  
BIOS Version: 2.1a  
BIOS Date: 03/20/2024  
BIOS Revision: 5.32

## Compiler Version Notes

=====

C | 502.gcc\_r(peak)

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## Compiler Version Notes (Continued)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2023.2.3 Build x  
Copyright (C) 1985-2023 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 2023.2.3 Build x  
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=====

C | 502.gcc\_r(peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2023.2.3 Build x  
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=====

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 2023.2.3 Build x  
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=====

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 2023.2.3 Build x  
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=====

Fortran | 548.exchange2\_r(base, peak)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x  
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## Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx



# SPEC CPU®2017 Integer Rate Result

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## Tyrone Systems

(Test Sponsor: Netweb Technologies India Ltd)

Tyrone Camarero SDI200A3N-212  
(2.90 GHz, Intel Xeon Gold 6542Y)

**SPECrate®2017\_int\_base = 509**

**SPECrate®2017\_int\_peak = 525**

CPU2017 License: 006802

Test Sponsor: Netweb Technologies India Ltd

Tested by: Tyrone Systems

Test Date: Jan-2025

Hardware Availability: Jun-2024

Software Availability: Dec-2023

## 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 -xsapphirerapids -O3 -ffast-math  
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin  
-lqkmalloc
```

C++ benchmarks:

```
-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math  
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin  
-lqkmalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math -flto  
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-nostandard-realloc-lhs -align array32byte -auto  
-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin  
-lqkmalloc
```

## Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx



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## Tyrone Systems

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SPECrate®2017\_int\_base = 509

SPECrate®2017\_int\_peak = 525

CPU2017 License: 006802

Test Sponsor: Netweb Technologies India Ltd

Tested by: Tyrone Systems

Test Date: Jan-2025

Hardware Availability: Jun-2024

Software Availability: Dec-2023

## 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(pass 1)  
-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse  
-funroll-loops -qopt-mem-layout-trans=4  
-fno-strict-overflow  
-L/home/specdev/new\_compilers/ic2023.2.3/compiler/lib/intel64\_lin  
-lqkmalloc

502.gcc\_r: -m32  
-L/home/specdev/new\_compilers/ic2023.2.3/compiler/lib/ia32\_lin  
-std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)  
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)  
-flto -Ofast -xCORE-AVX512 -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

525.x264\_r: -w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast  
-ffast-math -flto -mfpmath=sse -funroll-loops  
-qopt-mem-layout-trans=4 -fno-alias  
-L/home/specdev/new\_compilers/ic2023.2.3/compiler/lib/intel64\_lin  
-lqkmalloc

557.xz\_r: basepeak = yes

C++ benchmarks:

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

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CPU2017 License: 006802

Test Sponsor: Netweb Technologies India Ltd

Tested by: Tyrone Systems

Test Date: Jan-2025

Hardware Availability: Jun-2024

Software Availability: Dec-2023

## Peak Optimization Flags (Continued)

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/Intel-ic2023p2-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-SPR-revC.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2023p2-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-SPR-revC.xml>

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