



# SPECaccel<sup>®</sup>2023 Result

Copyright 2023-2025 Standard Performance Evaluation Corporation

**Supermicro**  
**Intel Xeon 6960P**

SuperServer SYS-122HA-TN-LCC (2 x Intel Xeon 6960P, 2.7GHz)

SPECaccel2023\_base = 2.19

SPECaccel2023\_peak = Not Run

accel2023 License: 001176

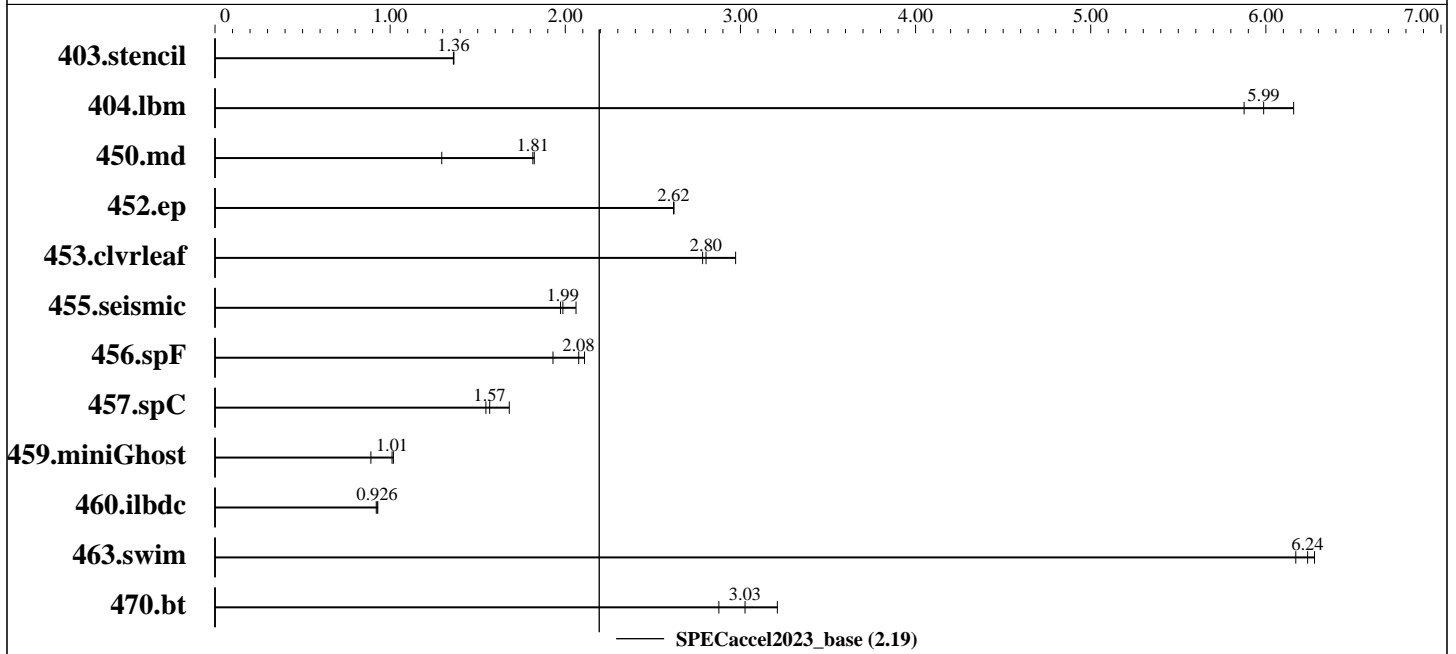
Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Dec-2024

Hardware Availability: Nov-2024

Software Availability: Oct-2024



### Hardware

CPU Name: Intel Xeon 6960P  
 Max MHz.: 3900  
 Nominal: 2700  
 Enabled: 144 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: 432 MB I+D on chip per chip  
 Other: None  
 Memory: 1536 GB (24 x 64 GB DDR5 2Rx4 PC5-6400B-R)  
 Storage: 1 x 1.6TB NVMe SSD  
 Other: None  
 Base Threads Run: 288  
 Min. Peak Threads: --  
 Max. Peak Threads: --

### Accelerator

Accel Model Name: Intel Xeon 6960P  
 Accel Vendor: Intel  
 Accel Name: Intel Xeon 6960P  
 Type of Accel: CPU  
 Accel Connection: N/A  
 Does Accel Use ECC: yes  
 Accel Description: Intel Xeon 6960P  
 SMT ON, Turbo ON  
 Accel Driver: None

### Software

OS: SUSE Linux Enterprise Server 15 SP6  
 6.4.0-150600.21-default  
 Compiler: Intel oneAPI Compiler 2025.0.0  
 Firmware: Version 1.1 released Nov-2024  
 File System: btrfs  
 System State: Run level 3 (multi-user)  
 Other: None  
 Base Parallel Model: SMD  
 Base Threads Run: 288  
 Peak Parallel Models: Not Run

(Continued on next page)



# SPECaccel<sup>®</sup>2023 Result

Copyright 2023-2025 Standard Performance Evaluation Corporation

**Supermicro**  
**Intel Xeon 6960P**

SuperServer SYS-122HA-TN-LCC (2 x Intel Xeon 6960P, 2.7GHz)

SPECaccel2023\_base = 2.19

SPECaccel2023\_peak = Not Run

accel2023 License: 001176  
Test Sponsor: Supermicro  
Tested by: Supermicro

Test Date: Dec-2024  
Hardware Availability: Nov-2024  
Software Availability: Oct-2024

## Software (Continued)

Max. Peak Threads: --  
Min. Peak Threads: --

## Results Table

Benchmark	Base							Peak						
	Model	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Model	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
403.stencil	SMD	323	1.36	323	1.36	<u>323</u>	<u>1.36</u>							
404.lbm	SMD	77.4	5.88	73.9	6.16	<u>76.0</u>	<u>5.99</u>							
450.md	SMD	463	1.29	329	1.82	<u>331</u>	<u>1.81</u>							
452.ep	SMD	159	2.62	<u>158</u>	<u>2.62</u>	158	2.62							
453.clvleaf	SMD	<u>357</u>	<u>2.80</u>	359	2.78	336	2.97							
455.seismic	SMD	395	1.97	378	2.06	<u>393</u>	<u>1.99</u>							
456.spF	SMD	<u>229</u>	<u>2.08</u>	225	2.11	246	1.93							
457.spC	SMD	321	1.68	<u>344</u>	<u>1.57</u>	349	1.55							
459.miniGhost	SMD	<u>584</u>	<u>1.01</u>	579	1.02	663	0.890							
460.ilbdc	SMD	603	0.921	<u>599</u>	<u>0.926</u>	597	0.929							
463.swim	SMD	71.3	6.17	<u>70.5</u>	<u>6.24</u>	70.1	6.28							
470.bt	SMD	<u>349</u>	<u>3.03</u>	329	3.21	367	2.88							

SPEC accel2023\_base = 2.19

SPEC accel2023\_peak = Not Run

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

## General Notes

Environment variables set by runaccel before the start of the run:

```

FORT_BUFFERED = "true"
KMP_AFFINITY = "compact,0,granularity=thread"
KMP_BLOCKTIME = "infinite"
KMP_HW_SUBSET = "2S,72C,2T"
KMP_LIBRARY = "turnaround"
KMP_STACKSIZE = "8M"
OMP_DYNAMIC = "FALSE"
OMP_WAIT_POLICY = "active"

```

BIOS Setting:

```

Power Performance Tuning = BIOS Controls EPB
ENERGY_PERF_BIAS_CFG Mode = Extreme Performance

```

OS tuning:

```

Stack size set to unlimited using "ulimit -s unlimited"

```

## Platform Notes

Sysinfo program /home/accel2023/bin/sysinfo

(Continued on next page)



# SPECaccel<sup>®</sup>2023 Result

Copyright 2023-2025 Standard Performance Evaluation Corporation

**Supermicro**  
**Intel Xeon 6960P**

SuperServer SYS-122HA-TN-LCC (2 x Intel Xeon 6960P, 2.7GHz)

SPECaccel2023\_base = 2.19

SPECaccel2023\_peak = Not Run

**accel2023 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Dec-2024  
**Hardware Availability:** Nov-2024  
**Software Availability:** Oct-2024

## Platform Notes (Continued)

Rev: r6622 of 2021-04-07 b1a7d5f8f71be5aff70a755cad7211a0  
running on 164-84 Wed Dec 18 11:14:33 2024

SUT (System Under Test) info as seen by some common utilities.  
For more information on this section, see  
<https://www.spec.org/cpu2017/Docs/config.html#sysinfo>

From /proc/cpuinfo

```
model name : Intel(R) Xeon(R) 6960P
 2 "physical id"s (chips)
 288 "processors"
```

cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

```
cpu cores : 72
siblings  : 144
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 64
65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 128 129 130
131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 64
65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 128 129 130
131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151
```

From lscpu from util-linux 2.39.3:

```
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:          52 bits physical, 57 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) 6960P
BIOS Model name:       Intel(R) Xeon(R) 6960P  CPU @ 2.7GHz
BIOS CPU family:       179
CPU family:             6
Model:                  173
Thread(s) per core:    2
Core(s) per socket:    72
Socket(s):              2
Stepping:               1
BogoMIPS:               5400.00
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
```

(Continued on next page)



# SPECaccel<sup>®</sup>2023 Result

Copyright 2023-2025 Standard Performance Evaluation Corporation

**Supermicro**  
**Intel Xeon 6960P**

SuperServer SYS-122HA-TN-LCC (2 x Intel Xeon 6960P, 2.7GHz)

SPECaccel2023\_base = 2.19

SPECaccel2023\_peak = Not Run

accel2023 License: 001176  
Test Sponsor: Supermicro  
Tested by: Supermicro

Test Date: Dec-2024  
Hardware Availability: Nov-2024  
Software Availability: Oct-2024

## Platform Notes (Continued)

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 hle avx2 smep bmi2 erms invpcid rtm 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 user\_shstk avx\_vnni 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\_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\_llc arch\_capabilities

Virtualization: VT-x  
L1d cache: 6.8 MiB (144 instances)  
L1i cache: 9 MiB (144 instances)  
L2 cache: 288 MiB (144 instances)  
L3 cache: 864 MiB (2 instances)  
NUMA node(s): 6  
NUMA node0 CPU(s): 0-23,144-167  
NUMA node1 CPU(s): 24-47,168-191  
NUMA node2 CPU(s): 48-71,192-215  
NUMA node3 CPU(s): 72-95,216-239  
NUMA node4 CPU(s): 96-119,240-263  
NUMA node5 CPU(s): 120-143,264-287  
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; PBRSSB-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	48K	6.8M	12	Data	1	64	1	64
L1i	64K	9M	16	Instruction	1	64	1	64
L2	2M	288M	16	Unified	2	2048	1	64
L3	432M	864M	16	Unified	3	442368	1	64

(Continued on next page)



# SPECaccel<sup>®</sup>2023 Result

Copyright 2023-2025 Standard Performance Evaluation Corporation

**Supermicro**  
**Intel Xeon 6960P**

SuperServer SYS-122HA-TN-LCC (2 x Intel Xeon 6960P, 2.7GHz)

SPECaccel2023\_base = 2.19

SPECaccel2023\_peak = Not Run

accel2023 License: 001176  
Test Sponsor: Supermicro  
Tested by: Supermicro

Test Date: Dec-2024  
Hardware Availability: Nov-2024  
Software Availability: Oct-2024

## Platform Notes (Continued)

```
/proc/cpuinfo cache data
cache size : 442368 KB
```

From numactl --hardware

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

available: 6 nodes (0-5)

node 0 cpus: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 144 145 146  
147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167

node 0 size: 257479 MB

node 0 free: 256070 MB

node 1 cpus: 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47  
168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189  
190 191

node 1 size: 258035 MB

node 1 free: 257148 MB

node 2 cpus: 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71  
192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213  
214 215

node 2 size: 258035 MB

node 2 free: 257480 MB

node 3 cpus: 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95  
216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237  
238 239

node 3 size: 257996 MB

node 3 free: 257362 MB

node 4 cpus: 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114  
115 116 117 118 119 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256  
257 258 259 260 261 262 263

node 4 size: 258035 MB

node 4 free: 257359 MB

node 5 cpus: 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137  
138 139 140 141 142 143 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279  
280 281 282 283 284 285 286 287

node 5 size: 257588 MB

node 5 free: 256959 MB

node distances:

```
node  0  1  2  3  4  5
  0:  10  12  12  21  21  21
  1:  12  10  12  21  21  21
  2:  12  12  10  21  21  21
  3:  21  21  21  10  12  12
  4:  21  21  21  12  10  12
  5:  21  21  21  12  12  10
```

From /proc/meminfo

MemTotal: 1584303020 kB

HugePages\_Total: 0

(Continued on next page)



# SPECaccel<sup>®</sup>2023 Result

Copyright 2023-2025 Standard Performance Evaluation Corporation

**Supermicro**  
**Intel Xeon 6960P**

SuperServer SYS-122HA-TN-LCC (2 x Intel Xeon 6960P, 2.7GHz)

SPECaccel2023\_base = 2.19

SPECaccel2023\_peak = Not Run

**accel2023 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Dec-2024  
**Hardware Availability:** Nov-2024  
**Software Availability:** Oct-2024

## Platform Notes (Continued)

Hugepagesize: 2048 kB

From /etc/\*release\* /etc/\*version\*

```
os-release:
  NAME="SLES"
  VERSION="15-SP6"
  VERSION_ID="15.6"
  PRETTY_NAME="SUSE Linux Enterprise Server 15 SP6"
  ID="sles"
  ID_LIKE="suse"
  ANSI_COLOR="0;32"
  CPE_NAME="cpe:/o:suse:sles:15:sp6"
```

uname -a:

```
Linux 164-84 6.4.0-150600.21-default #1 SMP PREEMPT_DYNAMIC Thu May 16 11:09:22 UTC
2024 (36cle09) x86_64 x86_64 x86_64 GNU/Linux
```

Kernel self-reported vulnerability status:

```
gather_data_sampling: Not affected
CVE-2018-12207 (iTLB Multihit): Not affected
CVE-2018-3620 (L1 Terminal Fault): Not affected
Microarchitectural Data Sampling: Not affected
CVE-2017-5754 (Meltdown): Not affected
mmio_stale_data: Not affected
reg_file_data_sampling: Not affected
retbleed: Not affected
spec_rstack_overflow: Not affected
CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store
Bypass disabled via prctl
CVE-2017-5753 (Spectre variant 1): Mitigation: usercopy/swapgs
barriers and __user pointer
sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced / Automatic
IBRS; IBPB: conditional; RSB
filling; PBRSE-eIBRS: Not
affected; BHI: BHI_DIS_S
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected
```

run-level 3 Dec 18 11:09 last=5

SPEC is set to: /home/accel2023

```
Filesystem Type Size Used Avail Use% Mounted on
/dev/nvme0n1p2 btrfs 1.5T 24G 1.5T 2% /home
```

From /sys/devices/virtual/dmi/id

(Continued on next page)



# SPECaccel<sup>®</sup>2023 Result

Copyright 2023-2025 Standard Performance Evaluation Corporation

**Supermicro**  
**Intel Xeon 6960P**

SuperServer SYS-122HA-TN-LCC (2 x Intel Xeon 6960P, 2.7GHz)

SPECaccel2023\_base = 2.19

SPECaccel2023\_peak = Not Run

**accel2023 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Dec-2024  
**Hardware Availability:** Nov-2024  
**Software Availability:** Oct-2024

## Platform Notes (Continued)

Vendor: Supermicro  
Product: Super Server  
Product Family: Family  
Serial: 0123456789

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:  
24x Samsung M321R8GA0PB2-CCPKC 64 GB 2 rank 6400

BIOS:  
BIOS Vendor: American Megatrends International, LLC.  
BIOS Version: 1.1  
BIOS Date: 11/06/2024  
BIOS Revision: 5.35

(End of data from sysinfo program)

## Compiler Version Notes

```
=====  
C | 403.stencil(base) 404.lbm(base) 452.ep(base) 457.spC(base)  
 | 470.bt(base)  
-----
```

```
Intel(R) oneAPI DPC++/C++ Compiler 2025.0.0 (2025.0.0.20241008)  
Target: x86_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/intel/oneapi/compiler/2025.0/bin/compiler  
Configuration file: /opt/intel/oneapi/compiler/2025.0/bin/compiler/./icx.cfg  
-----
```

```
=====  
Fortran | 450.md(base) 455.seismic(base) 456.spF(base) 460.ilbdc(base)  
 | 463.swim(base)  
-----
```

```
ifx (IFX) 2025.0.0 20241008  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
-----
```

```
=====  
Fortran, C | 453.clvrleaf(base) 459.miniGhost(base)  
-----
```

```
ifx (IFX) 2025.0.0 20241008  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
```

(Continued on next page)



# SPEC<sup>®</sup>Caccel<sup>®</sup>2023 Result

Copyright 2023-2025 Standard Performance Evaluation Corporation

**Supermicro**  
**Intel Xeon 6960P**

SuperServer SYS-122HA-TN-LCC (2 x Intel Xeon 6960P, 2.7GHz)

SPEC<sup>®</sup>Caccel2023\_base = 2.19

SPEC<sup>®</sup>Caccel2023\_peak = Not Run

**accel2023 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Dec-2024  
**Hardware Availability:** Nov-2024  
**Software Availability:** Oct-2024

## Compiler Version Notes (Continued)

Intel(R) oneAPI DPC++/C++ Compiler 2025.0.0 (2025.0.0.20241008)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/intel/oneapi/compiler/2025.0/bin/compiler  
Configuration file: /opt/intel/oneapi/compiler/2025.0/bin/compiler/./icx.cfg  
-----

## Base Compiler Invocation

C benchmarks:  
icx

Fortran benchmarks:  
ifx

Benchmarks using both Fortran and C:  
ifx icx

## Base Portability Flags

450.md: -80  
457.spC: -mcmmodel=medium -Wl,--no-relax  
459.miniGhost: -nofor-main

## Base Optimization Flags

C benchmarks:  
-Ofast -O3 -xCORE-AVX512 -mprefer-vector-width=512  
-qopt-multiple-gather-scatter-by-shuffles -flto -ffast-math -fiopenmp  
-qopt-dynamic-align -fvec-peel-loops -qopt-streaming-stores always  
-fimf-precision=low -Xclang  
-fopenmp-declare-target-scalar-defaultmap-firstprivate

Fortran benchmarks:  
-Ofast -O3 -xCORE-AVX512 -mprefer-vector-width=512  
-qopt-multiple-gather-scatter-by-shuffles -flto -ffast-math -fiopenmp  
-qopt-dynamic-align -fvec-peel-loops -qopt-streaming-stores always  
-fimf-precision=low -nostandard-realloc-lhs -align array32byte -auto  
-fimf-accuracy-bits-sqrt=14

(Continued on next page)





# SPECaccel<sup>®</sup>2023 Result

Copyright 2023-2025 Standard Performance Evaluation Corporation

**Supermicro**  
**Intel Xeon 6960P**

SuperServer SYS-122HA-TN-LCC (2 x Intel Xeon 6960P, 2.7GHz)

SPECaccel2023\_base = 2.19

SPECaccel2023\_peak = Not Run

**accel2023 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Dec-2024  
**Hardware Availability:** Nov-2024  
**Software Availability:** Oct-2024

## Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

```
-Ofast -O3 -xCORE-AVX512 -mprefer-vector-width=512
-qopt-multiple-gather-scatter-by-shuffles -flto -ffast-math -fiopenmp
-qopt-dynamic-align -fvec-peel-loops -qopt-streaming-stores always
-fimf-precision=low -Xclang
-fopenmp-declare-target-scalar-defaultmap-firstprivate
-nostandard-realloc-lhs -align array32byte -auto
-fimf-accuracy-bits-sqrt=14
```

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

<http://www.spec.org/accel2023/flags/Supermicro-Platform-Settings-V1.2-SPR-revG.html>  
[http://www.spec.org/accel2023/flags/Intel\\_compiler\\_flags.2024-12-31.html](http://www.spec.org/accel2023/flags/Intel_compiler_flags.2024-12-31.html)

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

<http://www.spec.org/accel2023/flags/Supermicro-Platform-Settings-V1.2-SPR-revG.xml>  
[http://www.spec.org/accel2023/flags/Intel\\_compiler\\_flags.2024-12-31.xml](http://www.spec.org/accel2023/flags/Intel_compiler_flags.2024-12-31.xml)

SPECaccel is a registered trademark 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](mailto:info@spec.org).

Tested with SPECaccel2023 v2.0.18 on 2024-12-18 14:14:33-0500.  
Report generated on 2025-02-21 10:18:51 by accel2023 PDF formatter v112.  
Originally published on 2025-02-20.