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xeon-platinum-8380-2p-smoke-run

2 x Intel Xeon Platinum 8380 testing with a Intel M50CYP2SB2U (SE5C6200.86B.0022.D08.2103221623 BIOS) and ASPEED on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

r1a had the most wins, coming in first place for 41% of the tests.

The results with the greatest spread from best to worst included:

*oneDNN (Harness: Deconvolution Batch shapes_1d - Data Type: f32 - Engine: CPU) at 3.798x
AOM AV1 (Encoder Mode: Speed 9 Realtime - Input: Bosphorus 1080p) at 2.956x
AOM AV1 (Encoder Mode: Speed 8 Realtime - Input: Bosphorus 1080p) at 2.882x
AOM AV1 (Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 1080p) at 2.879x
AOM AV1 (Encoder Mode: Speed 6 Realtime - Input: Bosphorus 1080p) at 2.758x
AOM AV1 (Encoder Mode: Speed 6 Realtime - Input: Bosphorus 4K) at 2.544x
AOM AV1 (Encoder Mode: Speed 8 Realtime - Input: Bosphorus 4K) at 2.446x
AOM AV1 (Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 4K) at 2.359x
AOM AV1 (Encoder Mode: Speed 9 Realtime - Input: Bosphorus 4K) at 2.352x
SVT-VP9 (Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p) at 2.279x.*

Test Systems:

r1

Processor: 2 x Intel Xeon Platinum 8380 @ 3.40GHz (80 Cores / 160 Threads), Motherboard: Intel M50CYP2SB2U (SE5C6200.86B.0022.D08.2103221623 BIOS), Chipset: Intel Device 0998, Memory: 16 x 32 GB DDR4-3200MT/s Hynix HMA84GR7CJR4N-XN, Disk: 2 x 7682GB INTEL SSDPF2KX076TZ + 2 x 800GB INTEL SSDPF21Q800GB + 3841GB Micron_9300_MTFDHAL3T8TDP + 960GB INTEL SSDSC2KG96, Graphics: ASPEED, Monitor: VE228, Network: 2 x Intel X710 for 10GBASE-T + 2 x Intel E810-C for QSFP

OS: Ubuntu 20.04, Kernel: 5.11.0-051100-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale-gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0xd0000270
Python Notes: Python 2.7.18 + Python 3.8.5
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

r1a

r2

r2a

r2b

r3

r4

r5

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Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd0000270
Python Notes: Python 2.7.18 + Python 3.8.5
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and

seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbd: Not affected + tsx_async_abort: Not affected

	r1	r1a	r2	r2a	r2b	r3	r4	r5
oneDNN - D.B.s - f32 - CPU (ms)	7.49467	7.50059			28.4023	28.1815	28.4613	
Normalized	100%	99.92%			26.39%	26.59%	26.33%	
Standard Deviation	0.5%	0.4%			4%	4.2%	4.7%	
AOM AV1 - Speed 9		125.25			43.26	43.42	42.37	
Realtime - Bosphorus 1080p (FPS)								
Normalized	100%				34.54%	34.67%	33.83%	
Standard Deviation	2.5%				2%	2.7%	1.1%	
AOM AV1 - Speed 8		103.92			36.20	36.06	36.35	
Realtime - Bosphorus 1080p (FPS)								
Normalized	100%				34.83%	34.7%	34.98%	
Standard Deviation	3.8%				0.9%	1.2%	1.3%	
AOM AV1 - Speed 6		21.25			7.45	7.38	7.43	
Two-Pass - Bosphorus 1080p (FPS)								
Normalized	100%				35.06%	34.73%	34.96%	
Standard Deviation	1.4%				0.2%	1.5%	1.1%	
AOM AV1 - Speed 6		28.66			10.39	10.39	10.54	
Realtime - Bosphorus 1080p (FPS)								
Normalized	100%				36.25%	36.25%	36.78%	
Standard Deviation	0.3%				0.5%	0.1%	0.8%	
AOM AV1 - Speed 6	15.09	15.19			5.97	5.97	6.00	
Realtime - Bosphorus 4K (FPS)								
Normalized	99.34%	100%			39.3%	39.3%	39.5%	
Standard Deviation	0.6%	0.4%			1.6%	3.9%	0.3%	
AOM AV1 - Speed 8	29.20	28.99			12.03	11.94	12.10	
Realtime - Bosphorus 4K (FPS)								
Normalized	100%	99.28%			41.2%	40.89%	41.44%	
Standard Deviation	1.1%	2.2%			2.7%	3.9%	2.4%	
AOM AV1 - Speed 6	7.37	7.55			3.22	3.20	3.23	
Two-Pass - Bosphorus 4K (FPS)								
Normalized	97.62%	100%			42.65%	42.38%	42.78%	
Standard Deviation	4.5%	1.5%			3%	2.2%	2.4%	
AOM AV1 - Speed 9	33.07	32.51			14.30	14.06	14.73	
Realtime - Bosphorus 4K (FPS)								
Normalized	100%	98.31%			43.24%	42.52%	44.54%	
Standard Deviation	1.5%	1.5%			4.1%	2.5%	0.9%	

SVT-VP9 - P.S.O -	401.29	408.24		182.17	181.52	179.13	
Bosphorus 1080p (FPS)							
Normalized	98.3%	100%		44.62%	44.46%	43.88%	
Standard Deviation	0.6%	0.3%		0.9%	2.1%	0.5%	
SVT-HEVC - 10 -	499.23	493.51		234.51	234.39	233.96	
Bosphorus 1080p (FPS)							
Normalized	100%	98.85%		46.97%	46.95%	46.86%	
Standard Deviation	1.3%	1.7%		2.2%	2.4%	0.8%	
Intel Memory Latency	35.1	33.0	67.5	32.5		67.6	67.8
Checker - Idle Latency (ns)							68.1
Normalized	92.59%	98.48%	48.15%	100%		48.08%	47.94%
Standard Deviation	0.5%	2.1%	0.2%	2.4%		0.3%	0.3%
AOM AV1 - Speed 4	6.89			3.30	3.36		3.36
Two-Pass - Bosphorus 1080p (FPS)							
Normalized	100%			47.9%	48.77%	48.77%	
Standard Deviation	0.5%			1.6%	2.4%	0.6%	
AOM AV1 - Speed 4	4.17			2.01	2.05		2.10
Two-Pass - Bosphorus 4K (FPS)							
Normalized	100%			48.2%	49.16%	50.36%	
Standard Deviation	1.4%			2.3%	2.8%	0.5%	
SVT-VP9 - V.Q.O -	327.87	329.53		164.32	164.51	162.21	
Bosphorus 1080p (FPS)							
Normalized	99.5%	100%		49.86%	49.92%	49.22%	
Standard Deviation	0.6%	0.6%		1.2%	1.7%	1.7%	
SVT-HEVC - 7 -	290.67	288.99		158.16	157.83	156.26	
Bosphorus 1080p (FPS)							
Normalized	100%	99.42%		54.41%	54.3%	53.76%	
Standard Deviation	1%	0.8%		2.5%	1.8%	1.4%	
Timed Erlang/OTP	114.550	113.800		191.746	192.245	193.839	
Compilation - Time To Compile (sec)							
Normalized	99.35%	100%		59.35%	59.2%	58.71%	
Standard Deviation	0.3%	0.6%		1%	0.3%	1.4%	
AOM AV1 - Speed 0	0.51			0.32	0.33		0.33
Two-Pass - Bosphorus 1080p (FPS)							
Normalized	100%			62.75%	64.71%	64.71%	
Standard Deviation	1.1%			1.8%	0%	0%	
LuxCoreRender -	7.84	8.04		5.84	5.92		5.87
LuxCore Benchmark - CPU (M samples/sec)							
Normalized	97.51%	100%		72.64%	73.63%	73.01%	
Standard Deviation	1.1%	0.3%		0.6%	0.4%	0.9%	
AOM AV1 - Speed 0	0.19			0.14	0.15	0.14	
Two-Pass - Bosphorus 4K (FPS)							
Normalized	100%			73.68%	78.95%	73.68%	
Standard Deviation	2.3%			3.4%	0%	0%	

SVT-HEVC - 1 -	36.91	37.34	27.80	28.22	28.01
Bosphorus 1080p (FPS)					
Normalized	98.85%	100%	74.45%	75.58%	75.01%
Standard Deviation	1.4%	1.1%	0.6%	0.9%	1.9%
LuxCoreRender -	7.42	7.55	5.73	5.65	5.68
Danish Mood - CPU (M samples/sec)					
Normalized	98.28%	100%	75.89%	74.83%	75.23%
Standard Deviation	1.9%	2.2%	1.2%	2.1%	1.3%
Xcompact3d	2.74370996	2.73859096	3.02281992	3.56592774	3.57278153
Incompact3d - i.i.1.C.P.D (sec)					
Normalized	99.81%	100%	90.6%	76.8%	76.65%
Standard Deviation	0.5%	1%	1.6%	3.3%	3.1%
Xcompact3d	11.3586022	11.2727114	11.5617158	14.5982965	14.6577489
Incompact3d - i.i.1.C.P.D (sec)					
Normalized	99.24%	100%	97.5%	77.22%	76.91%
Standard Deviation	0.4%	0.5%	0.6%	0.3%	0.2%
Xcompact3d	313.920451	311.960785	307.622108	386.390001	389.698280
Incompact3d - X.b.i.i (sec)					
Normalized	97.99%	98.61%	100%	79.61%	78.94%
Standard Deviation	0.3%	0.1%	2.7%	3.4%	3%
libavif avifenc - 6 (sec)	13.247	13.328	16.065	16.615	16.211
Normalized	100%	99.39%	82.46%	79.73%	81.72%
Standard Deviation	0.7%	1.1%	2.4%	3.1%	2.9%
libavif avifenc - 6, Lossless (sec)	32.113	31.624	38.395	38.590	38.507
Normalized	98.48%	100%	82.36%	81.95%	82.13%
Standard Deviation	0.2%	0.5%	1.1%	1.6%	2.3%
libavif avifenc - 2 (sec)	31.539	31.479	38.372	38.313	37.796
Normalized	99.81%	100%	82.04%	82.16%	83.29%
Standard Deviation	0.5%	0.2%	1.8%	0.9%	0.4%
LuaRadio - Complex	546.8	548.2	458.7	458.2	452.7
Phase (MiB/s)					
Normalized	99.74%	100%	83.67%	83.58%	82.58%
Standard Deviation	0.1%	0.2%	2.4%	2.3%	2.4%
libavif avifenc - 10, Lossless (sec)	8.852	8.812	10.282	10.088	10.208
Normalized	99.55%	100%	85.7%	87.35%	86.32%
Standard Deviation	0.7%	0.3%	5.8%	5%	6%
Timed Wasmer	62.160	61.930	71.928	71.130	70.758
Compilation - Time To Compile (sec)					
Normalized	99.63%	100%	86.1%	87.07%	87.52%
Standard Deviation	0.6%	1.7%	1%	2.5%	1.3%
Timed Linux Kernel	24.382	24.360	27.997	28.018	28.094
Compilation - Time To Compile (sec)					
Normalized	99.91%	100%	87.01%	86.94%	86.71%
Standard Deviation	2.5%	2.3%	4.3%	5.5%	4.9%

libavif enc - 0 (sec)	57.975	57.710	64.971	65.960	65.888
Normalized	99.54%	100%	88.82%	87.49%	87.59%
Standard Deviation	0.6%	0.7%	0.6%	0.5%	1.8%
LuaRadio - F.D.F	410.0	409.6	370.1	370.3	368.0
Normalized	100%	99.9%	90.27%	90.32%	89.76%
Standard Deviation	0.1%	0.6%	4.3%	3.2%	0.8%
Timed Node.js	101.101	100.446	110.930	111.790	111.673
Compilation - Time To Compile (sec)					
Normalized	99.35%	100%	90.55%	89.85%	89.95%
Standard Deviation	0.5%	0.5%	0.8%	1%	1.2%
Xmrig - Monero - 1M	19300	19452	19311	20653	20575
(H/s)					
Normalized	93.45%	94.19%	93.5%	100%	99.62%
Standard Deviation	0.2%	0.2%	1.4%	2.1%	4.6%
Timed Mesa	20.952	20.379	21.575	21.369	21.313
Compilation - Time To					
Normalized	97.27%	100%	94.46%	95.37%	95.62%
Standard Deviation	0.2%	1%	0.3%	1.2%	0.9%
LuxCoreRender - DLSC	9.70	9.61	9.27	9.24	9.25
- CPU (M samples/sec)					
Normalized	100%	99.07%	95.57%	95.26%	95.36%
Standard Deviation	1.6%	3.6%	3.3%	1.8%	1.7%
Timed LLVM	216.323	215.760	226.440	226.199	224.290
Compilation - Unix					
Normalized	99.74%	100%	95.28%	95.39%	96.2%
Standard Deviation	0.7%	0.6%	0.6%	1%	0.3%
Mobile Neural Network			3.213		3.362
- mobilenet-v1-1.0 (ms)					
Normalized			100%		95.57%
Standard Deviation			4.8%		2.2%
Liquid-DSP - 1 - 256 -	57792000		56230333	57197667	55251667
57 (samples/s)					
Normalized	100%		97.3%	98.97%	95.6%
Standard Deviation	0.5%		1.9%	1.7%	1.7%
Xmrig - Wownero - 1M	48052	50166	49908	49813	49937
(H/s)					
Normalized	95.78%	100%	99.49%	99.3%	99.54%
Standard Deviation	2.3%	2%	0.8%	1.2%	0.8%
srsLTE - PHY_DL_Test	76.9	77.3	75.0	76.1	78.3
(UE Mb/s)					
Normalized	98.21%	98.72%	95.79%	97.19%	100%
Standard Deviation	1.7%	2.6%	0.9%	2.6%	1.4%
toyBrot Fractal	7879	7724	8050	8048	8037
Generator - C++ Tasks					
Normalized	98.03%	100%	95.95%	95.97%	96.11%
Standard Deviation	1%	2.1%	2.2%	2.3%	2.1%
Stockfish - Total Time	181644819	186263552	181554218	189214499	186013261
(Nodes/s)					
Normalized	96%	98.44%	95.95%	100%	98.31%
Standard Deviation	3.4%	2.2%	1.9%	1.8%	2.3%

VOSK Speech Recognition Toolkit	35.918	35.009	36.424	35.581	35.503
Normalized	97.47%	100%	96.12%	98.39%	98.61%
Standard Deviation	1.5%	2.4%	2%	2.1%	1.6%
oneDNN - C.B.S.A -	0.877815	0.879137	0.869978	0.901823	0.875421
u8s8f32 - CPU (ms)					
Normalized	99.11%	98.96%	100%	96.47%	99.38%
Standard Deviation	1.2%	0.8%	1%	1.3%	1%
Liquid-DSP - 16 - 256 -	885320000	890273333	862890000	865410000	860046667
57 (samples/s)					
Normalized	99.44%	100%	96.92%	97.21%	96.6%
Standard Deviation	0.1%	0.1%	0.7%	0.2%	2.1%
oneDNN - IP Shapes 1D	0.918568	0.912279	0.943624	0.936941	0.940714
- f32 - CPU (ms)					
Normalized	99.32%	100%	96.68%	97.37%	96.98%
Standard Deviation	0.4%	0.4%	2.1%	1.3%	1.6%
LuxCoreRender -	14.36	14.26	14.28	13.89	13.94
Orange Juice - CPU (M samples/sec)					
Normalized	100%	99.3%	99.44%	96.73%	97.08%
Standard Deviation	1.5%	2.5%	2.2%	3.3%	3.7%
Liquid-DSP - 8 - 256 -	441953333		428100000	432170000	432013333
57 (samples/s)					
Normalized	100%		96.87%	97.79%	97.75%
Standard Deviation	0.2%		1%	0.5%	1.1%
oneDNN - C.B.S.A - f32	1.10991	1.12224	1.11874	1.14578	1.11811
- CPU (ms)					
Normalized	100%	98.9%	99.21%	96.87%	99.27%
Standard Deviation	0.4%	0.2%	0.5%	1.5%	1.8%
toyBrot Fractal	7018	6980	7149	7203	7141
Generator - C++					
Normalized	99.46%	100%	97.64%	96.9%	97.75%
Standard Deviation	1.2%	0.7%	2.2%	2.4%	2.2%
HammerDB - MariaDB -	64298	62311			
64 - 500 (New Orders/min)					
Normalized	100%	96.91%			
Standard Deviation	1.7%	3.5%			
HammerDB - MariaDB -	194684	188761			
64 - 500 (Transactions/min)					
Normalized	100%	96.96%			
Standard Deviation	1.9%	3.3%			
GNU GMP GMPbench -	4642	4643	4525	4505	4526
Total Time (GMPbench Score)					
Normalized	99.98%	100%	97.45%	97.02%	97.48%
libjpeg-turbo tjbench -	161.634619	156.969016	160.262559	159.187038	159.237752
D.T (Megapixels/sec)					
Normalized	100%	97.11%	99.15%	98.49%	98.52%
Standard Deviation	0.2%	0.4%	0.1%	1.1%	0.5%

oneDNN - IP Shapes 3D	0.398282	0.395588	0.403409	0.406877	0.402919
- u8s8f32 - CPU (ms)					
Normalized	99.32%	100%	98.06%	97.23%	98.18%
Standard Deviation	0.5%	0.5%	2.1%	2.5%	2.2%
LuaRadio - Hilbert Transform (MiB/s)	80.3	80.3	78.2	78.2	78.4
Normalized	100%	100%	97.38%	97.38%	97.63%
Standard Deviation	0%	0%	1.6%	1.5%	1.9%
oneDNN - IP Shapes 3D	1.80046	1.79881	1.81774	1.84339	1.81913
- bf16bf16bf16 - CPU (ms)					
Normalized	99.91%	100%	98.96%	97.58%	98.88%
Standard Deviation	0.6%	0.1%	1.3%	1.9%	0.9%
toyBrot Fractal Generator - TBB (ms)	6850	6964	6984	7003	7016
Normalized	100%	98.36%	98.08%	97.82%	97.63%
Standard Deviation	3.3%	2%	4.1%	3.8%	4.5%
oneDNN - IP Shapes 1D	1.21594	1.22278	1.23796	1.24508	1.24116
- u8s8f32 - CPU (ms)					
Normalized	100%	99.44%	98.22%	97.66%	97.97%
Standard Deviation	3.4%	3.6%	3.7%	3.3%	2.8%
Liquid-DSP - 32 - 256 - 57 (samples/s)	173510000	173680000	169933333	170450000	169750000
Normalized	0	0	3	0	0
Standard Deviation	99.9%	100%	97.84%	98.14%	97.74%
MariaDB - 4 - 4 - MariaDB - 4 (Queries/sec)			1%		0.7%
Normalized			1614	1580	
Standard Deviation			100%	97.89%	
Liquid-DSP - 4 - 256 - 57 (samples/s)	217643333		213203333	215343333	216773333
Normalized			1.7%	0.8%	
Standard Deviation			213203333	215343333	216773333
Intel Memory Latency Checker - P.I.B - 1:1	442422	442843	442144	440455	449554
Reads-Writes (MB/s)				446396	448800
Normalized	98.41%	98.51%	98.35%	98.94%	99.6%
Standard Deviation	0.5%	0.1%	0.1%	1.3%	1.6%
oneDNN - R.N.N.T - f32	801.409	804.323		808.289	792.296
- CPU (ms)				796.689	
Normalized	98.86%	98.5%	98.02%	99.45%	100%
Standard Deviation	1.6%	1%	2.1%	0.2%	0.6%
Timed LLVM Compilation - Ninja	145.717	145.550	148.484	147.163	146.909
Normalized					
Standard Deviation					
oneDNN - D.B.s	3.57247	3.57662	3.64232	3.64033	3.64319
bf16bf16bf16 - CPU					
Normalized	100%	99.88%	98.08%	98.14%	98.06%
Standard Deviation	0.4%	0.4%	5.6%	5.8%	5.8%

Liquid-DSP - 2 - 256 -	110713333	110173333	111510000	109430000
57 (samples/s)				
Normalized	99.29%	98.8%	100%	98.13%
Standard Deviation	1.1%	1.4%	0.7%	0.2%
Liquid-DSP - 128 - 256 -	341593333	335273333	340006666	341100000
57 (samples/s)	3	3	7	0
Normalized	100%	98.15%	99.54%	99.5%
Standard Deviation	0.4%	2%	0.7%	0.8%
KTX-Software toktx -		5.664		5.562
UASTC 3 (sec)				
Normalized		98.2%	100%	
Standard Deviation		3.6%	0.3%	
oneDNN - C.B.S.A -	2.07944	2.08532	2.11712	2.10841
bf16bf16bf16 - CPU				2.10837
Normalized	100%	99.72%	98.22%	98.63%
Standard Deviation	0.1%	0.1%	1.6%	1.5%
toyBrot Fractal	7318	7308	7412	7439
Generator - OpenMP				7429
Normalized	99.86%	100%	98.6%	98.37%
Standard Deviation	0.1%	0%	2.4%	2.5%
Mobile Neural Network			53.073	52.227
- inception-v3 (ms)				
Normalized		98.41%	100%	
Standard Deviation		5%	5%	
oneDNN - IP Shapes 1D	2.96135	2.96857	3.00464	3.00929
-bf16bf16bf16 - CPU				3.00907
(ms)				
Normalized	100%	99.76%	98.56%	98.41%
Standard Deviation	0.1%	0.2%	2.7%	3.1%
MariaDB - 128			192	189
(Queries/sec)				
Normalized		100%	98.44%	
Standard Deviation		0.6%	0.3%	
oneDNN - M.M.B.S.T -	0.593042	0.595661	0.602122	0.602314
bf16bf16bf16 - CPU				0.602038
Normalized	100%	99.56%	98.49%	98.51%
Standard Deviation	0.5%	0.2%	1.2%	1%
KTX-Software toktx -			19.781	20.082
Z.C.1 (sec)				
Normalized		100%	98.5%	
Standard Deviation		1.9%	1.7%	
oneDNN - D.B.s - f32 -	0.864164	0.863214	0.874080	0.874968
CPU (ms)				0.876227
Normalized	99.89%	100%	98.76%	98.51%
Standard Deviation	0.5%	0.4%	3.6%	3.2%
oneDNN - M.M.B.S.T -	0.215115	0.213643	0.216806	0.216586
u8s8f32 - CPU (ms)				0.215085
Normalized	99.32%	100%	98.54%	99.33%
Standard Deviation	0.7%	0.6%	2.5%	2.5%
srsLTE - PHY_DL_Test	183.4	184.2	181.6	181.6
(eNb Mb/s)				183.7
Normalized	99.57%	100%	98.59%	99.73%
Standard Deviation	1.1%	0.3%	1.2%	0.5%

Botan - AES-256	5670	5671	5607	5593	5612
Normalized	99.98%	100%	98.87%	98.63%	98.96%
Standard Deviation	0%	0%	1.7%	1.3%	1.6%
oneDNN - M.M.B.S.T - f32 - CPU (ms)	0.239989	0.240122	0.243026	0.243308	0.242450
Normalized	100%	99.94%	98.75%	98.64%	98.98%
Standard Deviation	0.6%	0.5%	2.3%	2.3%	2.5%
Botan - KASUMI (MiB/s)	77.287	77.310	76.286	76.407	76.403
Normalized	99.97%	100%	98.68%	98.83%	98.83%
Standard Deviation	0%	0.1%	2.3%	1.7%	2%
Basis Universal - UASTC Level 2 (sec)			13.979		14.159
Normalized			100%		98.73%
Standard Deviation			2.3%		1.9%
Botan - CAST-256 (MiB/s)	115.972	115.970	114.663	114.517	114.646
Normalized	100%	100%	98.87%	98.75%	98.86%
Standard Deviation	0%	0%	1.7%	2%	1.8%
Botan - ChaCha20Poly1305 (MiB/s)	623.494	623.198	615.806	616.501	619.638
Normalized	100%	99.95%	98.77%	98.88%	99.38%
Standard Deviation	0%	0%	1%	0.9%	0.8%
Liquid-DSP - 64 - 256 - 57 (samples/s)	326713333	326370000	322743333	323270000	324566666
Normalized	3	0	3	0	7
Standard Deviation	0.3%	0.1%	0.9%	0.8%	0.7%
Botan - ChaCha20Poly1305 - Decrypt (MiB/s)	619.458	619.538	612.438	612.149	615.975
Normalized	100%	99.89%	98.78%	98.95%	99.34%
Standard Deviation	0.3%	0.1%	0.9%	0.8%	0.7%
SecureMark - SecureMark-TLS	225412	225366	225343	225291	222747
Normalized	100%	99.98%	99.97%	99.95%	98.82%
Standard Deviation	0.2%	0.2%	0.1%	0.2%	2.2%
Botan - Blowfish	363.038	363.615	362.926	359.452	359.573
Normalized	99.84%	100%	99.81%	98.86%	98.89%
Standard Deviation	0.3%	0%	0.1%	1.8%	1.7%
Google Draco - Church Facade (ms)			7001		7082
Normalized			100%		98.86%
Standard Deviation			0.5%		0.1%
Botan - Twofish (MiB/s)	289.126	288.852	288.562	286.180	286.004
Normalized	100%	99.91%	99.8%	98.98%	98.92%
Standard Deviation	0.1%	0.1%	0.1%	1.6%	1.7%
oneDNN - D.B.s - u8s8f32 - CPU (ms)	0.338327	0.341663	0.341893	0.341955	0.340243
Normalized	100%	99.02%	98.96%	98.94%	99.44%
Standard Deviation	0.4%	1.3%	2.3%	2.4%	2.1%
Liquid-DSP - 160 - 256 - 57 (samples/s)	314480000	316206666	313186666	314330000	314026666
Normalized	0	7	7	0	7
Standard Deviation	99.45%	100%	99.04%	99.41%	99.31%

Standard Deviation	0.9%	0.1%	0.8%	0.8%	0.9%		
oneDNN - R.N.N.I - f32 -	447.971	447.308	446.389	450.648	446.536		
CPU (ms)							
Normalized	99.65%	99.79%	100%	99.05%	99.97%		
Standard Deviation	0.2%	0.3%	0.3%	0.9%	0.4%		
oneDNN - IP Shapes 3D	1.24809	1.25267	1.25313	1.24176	1.24222		
- f32 - CPU (ms)							
Normalized	99.49%	99.13%	99.09%	100%	99.96%		
Standard Deviation	0.2%	4.9%	1.3%	1.7%	1.8%		
oneDNN - D.B.s -	3.53026	3.54367	3.53121	3.56224	3.54783		
bf16bf16bf16 - CPU							
Normalized	100%	99.62%	99.97%	99.1%	99.5%		
Standard Deviation	0.1%	0.4%	0.4%	0.6%	0.3%		
Helsing - 14 digit (sec)	77.872	78.159	78.33	78.079	78.539		
Normalized	100%	99.63%	99.42%	99.73%	99.15%		
oneDNN - R.N.N.I -	445.144	446.936	447.287	447.144	448.906		
bf16bf16bf16 - CPU							
Normalized	100%	99.6%	99.52%	99.55%	99.16%		
Standard Deviation	0.2%	0.7%	0.3%	0.5%	1.4%		
Blender - Fishy Cat -			46.38		46.73		
CPU-Only (sec)							
Normalized			100%		99.25%		
Standard Deviation			0.6%		0.9%		
Google Draco - Lion			6126		6170		
Normalized			100%		99.29%		
Standard Deviation			0.7%		0.6%		
Blender - Classroom -			71.78		72.29		
CPU-Only (sec)							
Normalized			100%		99.29%		
Standard Deviation			0.2%		0.3%		
Intel Memory Latency	439497	441408	442460	441733	440939	440315	440205
Checker - Max							
Bandwidth - 1:1							
Reads-Writes (MB/s)							
Normalized	99.33%	99.76%	100%	99.84%	99.66%	99.52%	99.49%
Standard Deviation	0.3%	0.4%	0.7%	1.2%	0.1%	0.9%	0.4%
Intel Memory Latency	459039	456260	456409	459310	457191	458942	458831
Checker - P.I.B - 2:1							
Reads-Writes (MB/s)							
Normalized	99.94%	99.34%	99.37%	100%	99.54%	99.92%	99.9%
Standard Deviation	0.1%	0%	0%	0%	0%	0%	0%
Intel Memory Latency	459455	456630	456546	459227	457141	458791	458756
Checker - Max							
Bandwidth - 2:1							
Reads-Writes (MB/s)							
Normalized	100%	99.39%	99.37%	99.95%	99.5%	99.86%	99.85%
Standard Deviation	0%	0%	0%	0%	0%	0%	0%
srsLTE - OFDM_Test	120300000	120133333		120733333	120833333	120666667	
(Samples / Second)							
Normalized	99.56%	99.42%	99.92%	100%	99.86%		
Standard Deviation	0.9%	0.3%	0.5%	0.9%	0.3%		

ASTC Encoder - Medium (sec)		7.1887		7.1472	
Normalized		99.42%		100%	
Standard Deviation		4.9%		0.7%	
Intel Memory Latency Checker - P.I.B - All Reads (MB/s)	356476	358386	358270	357743	358464
Normalized	99.45%	99.98%	99.95%	99.8%	100%
Standard Deviation	0.3%	0%	0%	0%	0%
oneDNN - R.N.N.I - u8s8f32 - CPU (ms)	445.519	447.436		447.701	446.917
Normalized	100%	99.57%		99.51%	99.69%
Standard Deviation	0.3%	0.8%		0.4%	0%
Basis Universal - ETC1S (sec)				34.237	
Normalized				100%	99.47%
Standard Deviation				1%	2.1%
MariaDB - 8 (Queries/sec)				1413	1420
Normalized				99.51%	100%
Standard Deviation				1.3%	0.4%
Blender - BMW27 - CPU-Only (sec)				29.56	
Normalized				100%	99.56%
Standard Deviation				0.4%	1.8%
Intel Memory Latency Checker - P.I.B - 3:1 Reads-Writes (MB/s)	425934	424097	424077	425926	424905
Normalized	100%	99.57%	99.56%	100%	99.97%
Standard Deviation	0.1%	0%	0.1%	0%	0%
oneDNN - R.N.N.T - u8s8f32 - CPU (ms)	792.831	791.927		789.836	793.080
Normalized	99.62%	99.74%		100%	99.59%
Standard Deviation	0.5%	0.8%		0.3%	0.5%
Intel Memory Latency Checker - Max Bandwidth - 3:1 Reads-Writes (MB/s)	426149	424613		424819	425997
Normalized	100%	99.64%	99.69%	99.96%	99.71%
Standard Deviation	0%	0.2%	0.2%	0%	0%
Sysbench - RAM / Memory (MiB/sec)				12511	
Normalized				99.66%	100%
Standard Deviation				3.9%	3.7%
Intel Memory Latency Checker - Max Bandwidth - All Reads (MB/s)	357285	358365	358456	357774	358268
Normalized	99.67%	99.97%	100%	99.81%	99.95%
Standard Deviation	0%	0.1%	0.1%	0%	0%

Botan - CAST-256 -	116.074	116.069	116.080	115.723	116.070
Decrypt (MiB/s)					
Normalized	99.99%	99.99%	100%	99.69%	99.99%
Standard Deviation	0%	0%	0%	0.5%	0%
MariaDB - 64			403	404	
(Queries/sec)					
Normalized			99.75%	100%	
Standard Deviation			0.3%	0.1%	
Botan - AES-256 -	5663	5664	5663	5662	5650
Decrypt (MiB/s)					
Normalized	99.99%	100%	99.99%	99.98%	99.76%
Standard Deviation	0%	0%	0%	0%	0.4%
MariaDB - 32			885	887	
(Queries/sec)					
Normalized			99.77%	100%	
Standard Deviation			0.1%	0.4%	
Basis Universal -			11.251		11.226
UASTC Level 0 (sec)					
Normalized			99.78%		100%
Standard Deviation			2.9%		1.2%
ASTC Encoder -			9.2907		9.3091
Thorough (sec)					
Normalized			100%		99.8%
Standard Deviation			2.4%		2.5%
KTX-Software toktx -			56.660		56.770
U.4.Z.C.1 (sec)					
Normalized			100%		99.81%
Standard Deviation			2.4%		2.3%
KTX-Software toktx -			10.011		10.029
U.3.Z.C.1 (sec)					
Normalized			100%		99.82%
Standard Deviation			1.1%		2.5%
Intel Memory Latency	325767	325185	325260	325410	325219
Checker - Max					
Bandwidth -					
Stream-Triad Like					
Normalized	100%	99.82%	99.84%	99.89%	99.83%
Standard Deviation	0%	0%	0%	0%	0%
Intel Memory Latency	324377	323924	323827	324210	324227
Checker - P.I.B -					
Stream-Triad Like					
Normalized	100%	99.86%	99.83%	99.95%	99.95%
Standard Deviation	0.1%	0%	0%	0%	0%
MariaDB - 16			1264	1262	
(Queries/sec)					
Normalized			100%	99.84%	
Standard Deviation			0.3%	0.5%	
Botan - Twofish -	292.736	292.374	292.396	292.827	292.610
Decrypt (MiB/s)					
Normalized	99.97%	99.85%	99.85%	100%	99.93%
Standard Deviation	0.1%	0.1%	0.1%	0%	0%

Basis Universal - UASTC Level 3 (sec)		17.163		17.185
Normalized		100%		99.87%
Standard Deviation		0.2%		0.1%
Blender - Pabellon		88.57		88.68
Barcelona - CPU-Only (sec)				
Normalized		100%		99.88%
Standard Deviation		0.2%		0.5%
HammerDB - MariaDB - 128 - 500 (New Orders/min)	57190	57242		
Normalized	99.91%	100%		
Standard Deviation	4.7%	2.5%		
ASTC Encoder - Exhaustive (sec)		16.3621		16.3729
Normalized		100%		99.93%
Standard Deviation		0%		0.2%
Botan - KASUMI - Decrypt (MiB/s)	74.320	74.288	74.275	74.309
Normalized	100%	99.96%	99.94%	99.96%
Standard Deviation	0%	0%	0.1%	0.1%
Mobile Neural Network - SqueezeNetV1.0 (ms)		7.174		7.170
Normalized		99.94%		100%
Standard Deviation		0%		3.8%
Blender - Barbershop - CPU-Only (sec)		110.02		109.96
Normalized		99.95%		100%
Standard Deviation		0.3%		0.9%
Botan - Blowfish - Decrypt (MiB/s)	363.255	363.326	363.196	363.314
Normalized	99.98%	100%	99.96%	100%
Standard Deviation	0%	0%	0%	0%
HammerDB - MariaDB - 128 - 500 (Transactions/min)	173288	173228		
Normalized	100%	99.97%		
Standard Deviation	4.7%	2.4%		
Sysbench - CPU (Events/sec)		214211		214241
Normalized		99.99%		100%
Standard Deviation		0.2%		0.2%
MariaDB - 512 (Queries/sec)		166		
Standard Deviation		0.9%		
MariaDB - 256 (Queries/sec)		160		
Standard Deviation		0.2%		

CP2K Molecular Dynamics -	1375
Fayalite-FIST (sec)	
HammerDB - MariaDB - 167809	
128 - 250	
(Transactions/min)	
Standard Deviation 4.7%	
HammerDB - MariaDB - 55415	
128 - 250 (New Orders/min)	
Standard Deviation 4.6%	
HammerDB - MariaDB - 191397	
64 - 250	
(Transactions/min)	
Standard Deviation 4.4%	
HammerDB - MariaDB - 63279	
64 - 250 (New Orders/min)	
Standard Deviation 4.4%	
HammerDB - MariaDB - 208419	
32 - 500	
(Transactions/min)	
Standard Deviation 4.2%	
HammerDB - MariaDB - 68818	
32 - 500 (New Orders/min)	
Standard Deviation 4%	
HammerDB - MariaDB - 209254	
32 - 250	
(Transactions/min)	
Standard Deviation 4.9%	
HammerDB - MariaDB - 69054	
32 - 250 (New Orders/min)	
Standard Deviation 4.7%	
HammerDB - MariaDB - 195258	
16 - 500	
(Transactions/min)	
Standard Deviation 4.9%	
HammerDB - MariaDB - 64477	
16 - 500 (New Orders/min)	
Standard Deviation 4.8%	
HammerDB - MariaDB - 192913	
16 - 250	
(Transactions/min)	
Standard Deviation 2.4%	

HammerDB - MariaDB - 63757

16 - 250 (New Orders/min)

Standard Deviation 2.4%

HammerDB - MariaDB - 285984

8 - 500

(Transactions/min)

Standard Deviation 1.4%

HammerDB - MariaDB - 94379

8 - 500 (New)

Standard Deviation 1.3%

HammerDB - MariaDB - 290082

8 - 250

(Transactions/min)

Standard Deviation 1.2%

HammerDB - MariaDB - 95768

8 - 250 (New)

Standard Deviation 1.2%

Mobile Neural Network

- MobileNetV2_224 (ms)

Normalized

Standard Deviation

Mobile Neural Network

- resnet-v2-50 (ms)

Normalized

Standard Deviation

KTX-Software toktx -

Zstd Compression 9

(sec)

Normalized

Standard Deviation

MariaDB - 1

(Queries/sec)

Normalized

Standard Deviation

ViennaCL - CPU BLAS - 76.3

77.2

4.078

4.100

100%

99.46%

14.2%

11.4%

48.732

48.041

98.58%

100%

9.2%

7.7%

3.470

3.697

100%

93.86%

0.1%

6.7%

3336 **3458**

96.47% 100%

8.6% 6.1%

54.7 61.7

100%

6.1%

63.7

dGEMM-TT (GFLOPs/s)

77.2

70.85% 79.92%

12.4% 14.6%

62.3 66.9

82.51%

17.9%

67.6

ViennaCL - CPU BLAS - 76.0

77.4

80.49% 86.43%

12.6% 10.9%

59.8 68.9

87.34%

13.4%

72.4

dGEMM-TN (GFLOPs/s)

77.4

77.86% 89.71%

7.4% 11.2%

59.8 68.9

94.27%

10.6%

72.4

ViennaCL - CPU BLAS - 75.6

76.8

77.86% 89.71%

7.4% 11.2%

59.8 68.9

94.27%

10.6%

72.4

dGEMM-NT (GFLOPs/s)

76.8

84.22% 90.34%

12.9% 12.7%

61.9 66.4

96.33%

10.7%

70.8

ViennaCL - CPU BLAS - 73.5

72.3

84.22% 90.34%

12.9% 12.7%

61.9 66.4

96.33%

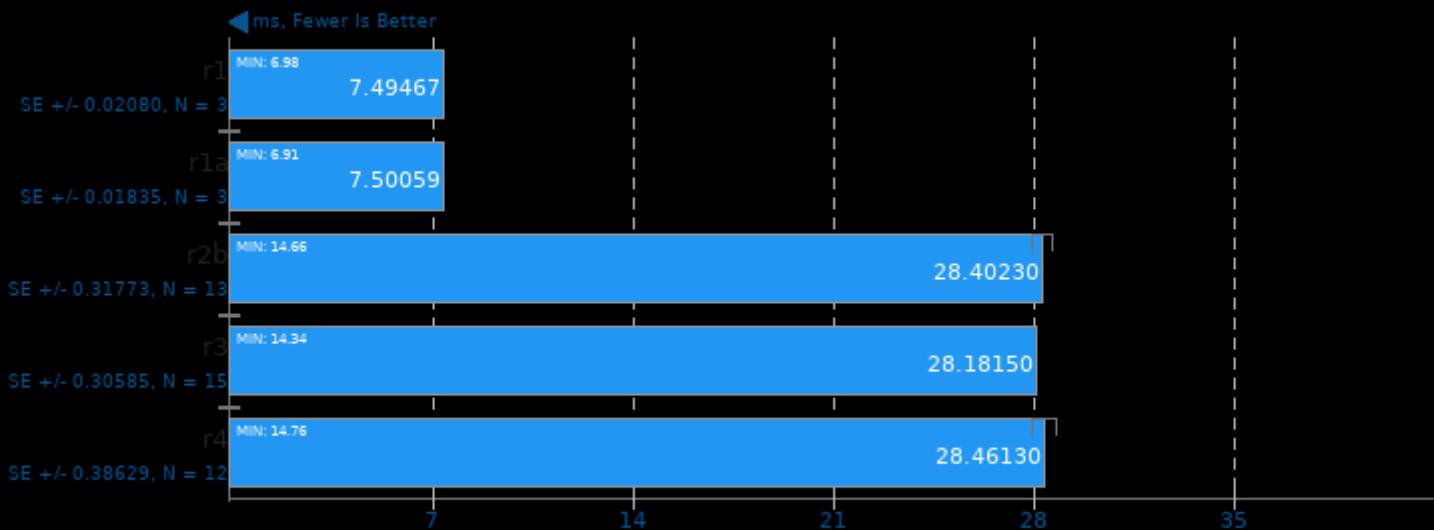
10.7%

ViennaCL - CPU BLAS -	719	319		389.9	647	647
dGEMV-T (GB/s)						
Normalized	100%	44.37%		54.23%	89.99%	89.99%
Standard Deviation	1.2%	2.7%		27.3%	1.2%	1.9%
ViennaCL - CPU BLAS -	72.3	63.6		62.3	64.3	70.2
dGEMV-N (GB/s)						
Normalized	100%	87.97%		86.17%	88.93%	97.1%
Standard Deviation	1.9%	7.9%		23.3%	23.7%	1.4%
ViennaCL - CPU BLAS -	720	371		447.65	713.47	765
dDOT (GB/s)						
Normalized	94.12%	48.5%		58.52%	93.26%	100%
Standard Deviation	3.3%	16.1%		28.7%	27.4%	1.4%
ViennaCL - CPU BLAS -	1058	392		507.1	1024	1158
dAXPY (GB/s)						
Normalized	91.36%	33.85%		43.79%	88.45%	100%
Standard Deviation	7.3%	10.2%		31.2%	31.1%	1.9%
ViennaCL - CPU BLAS -	843	335		422.2	913	936
dCOPY (GB/s)						
Normalized	90.06%	35.79%		45.11%	97.54%	100%
Standard Deviation	11.3%	15.5%		32.2%	11.4%	4%
ViennaCL - CPU BLAS -	620	277		349	532	535
SDOT (GB/s)						
Normalized	100%	44.68%		56.29%	85.81%	86.29%
Standard Deviation	1.4%	7.3%		6.2%	1.9%	1.8%
ViennaCL - CPU BLAS -	1003	370		474	862	855
sAXPY (GB/s)						
Normalized	100%	36.89%		47.26%	85.94%	85.24%
Standard Deviation	2.5%	7.1%		8.5%	3.6%	5.1%
ViennaCL - CPU BLAS -	1834	504		691	1135	1167
sCOPY (GB/s)						
Normalized	100%	27.48%		37.68%	61.89%	63.63%
Standard Deviation	3.4%	1.4%		12.4%	17.5%	18.1%
oneDNN - R.N.N.T -	804.392	793.363		791.695	793.916	811.941
bf16bf16bf16 - CPU						
Normalized	98.42%	99.79%		100%	99.72%	97.51%
Standard Deviation	1.5%	0.3%		0.1%	0.2%	7.8%
oneDNN - D.B.s -	0.210919	0.210728		0.210324	0.218349	0.217941
u8s8f32 - CPU (ms)						
Normalized	99.72%	99.81%		100%	96.32%	96.51%
Standard Deviation	4%	0.9%		8.2%	6%	8.8%
libavif avifenc - 10 (sec)	5.477	5.505		6.656	6.597	6.746
Normalized	100%	99.49%		82.29%	83.02%	81.19%
Standard Deviation	1.2%	0.4%		6.8%	8.5%	7.4%
SVT-VP9 - VMAF	386.29	393.46		182.26	185.53	184.07
Optimized - Bosphorus						
1080p (FPS)						
Normalized	98.18%	100%		46.32%	47.15%	46.78%
Standard Deviation	13.8%	14.1%		7.7%	1.5%	0.6%

LuxCoreRender - R.C.a.P - CPU (M samples/sec)	17.04	13.34	13.42	16.47	14.79
Normalized	100%	78.29%	78.76%	96.65%	86.8%
Standard Deviation	23.9%	13.5%	23.4%	23.7%	18.4%
GNU Radio - Hilbert Transform (MiB/s)	459.3	459.1	357.4	408.0	373.8
Normalized	100%	99.96%	77.81%	88.83%	81.38%
Standard Deviation	0.8%	0.6%	23.2%	12.8%	19.8%
GNU Radio - F.D.F (MiB/s)	734.0	727.4	645.8	621.0	622.0
Normalized	100%	99.1%	87.98%	84.6%	84.74%
Standard Deviation	0.5%	0.2%	14.3%	15.3%	15.4%
GNU Radio - IIR Filter (MiB/s)	610.6	609.5	498.2	487.4	487.7
Normalized	100%	99.82%	81.59%	79.82%	79.87%
Standard Deviation	0.1%	0.1%	15.7%	16.3%	15.8%
GNU Radio - FIR Filter (MiB/s)	603.0	604.8	470.0	502.0	515.6
Normalized	99.7%	100%	77.71%	83%	85.25%
Standard Deviation	0.4%	0.1%	16.4%	9.7%	6.5%
GNU Radio - S.S.C (MiB/s)	2184	2175	1684	1724	1619
Normalized	100%	99.62%	77.14%	78.95%	74.16%
Standard Deviation	0.1%	0.2%	17.3%	12.6%	15.2%
GNU Radio - F.B.t.B.F.F (MiB/s)	1024	1015	111.2	580.5	487.9
Normalized	100%	99.11%	10.86%	56.67%	47.63%
Standard Deviation	0.4%	0.4%	1.7%	20.5%	29.7%
LuaRadio - F.B.t.B.F.F (MiB/s)	1095	1095	804.5	662.8	706.1
Normalized	100%	99.97%	73.48%	60.54%	64.5%
Standard Deviation	0.4%	0.1%	8.5%	27.5%	25.4%

oneDNN 2.1.2

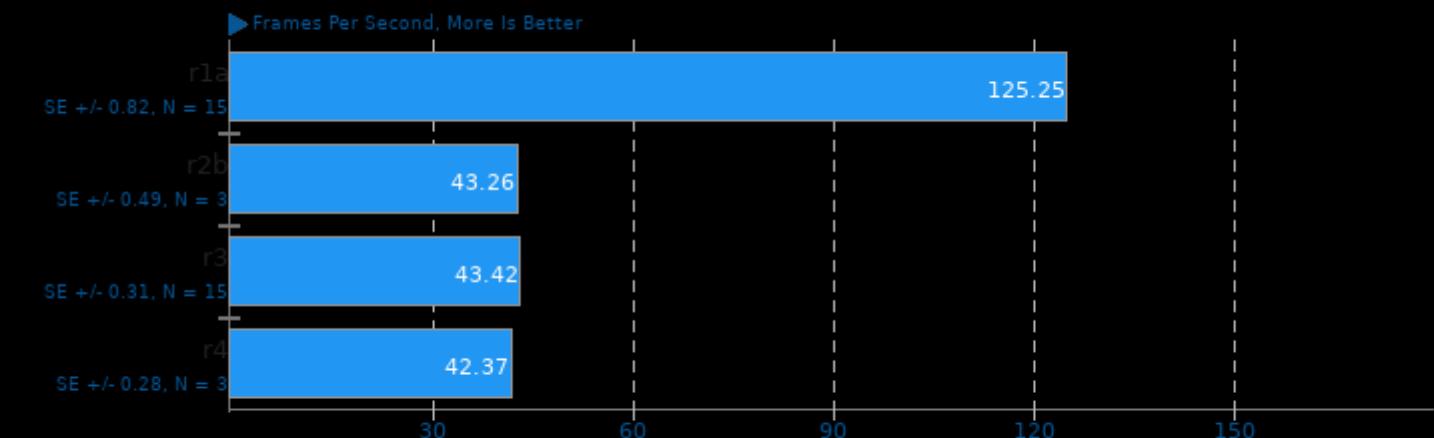
Harness: Deconvolution Batch shapes_1d - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

AOM AV1 3.0

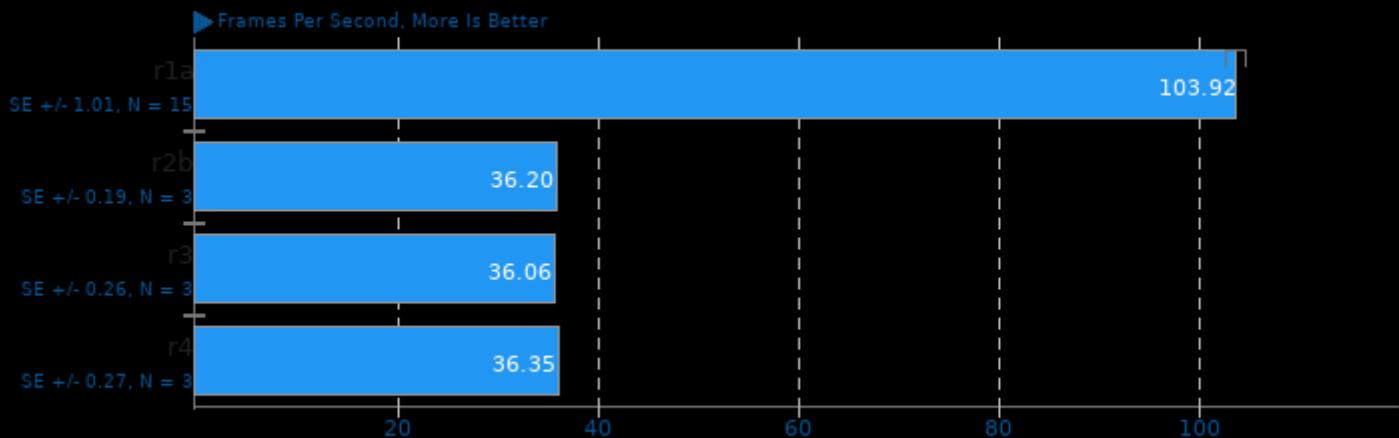
Encoder Mode: Speed 9 Realtime - Input: Bosphorus 1080p



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.0

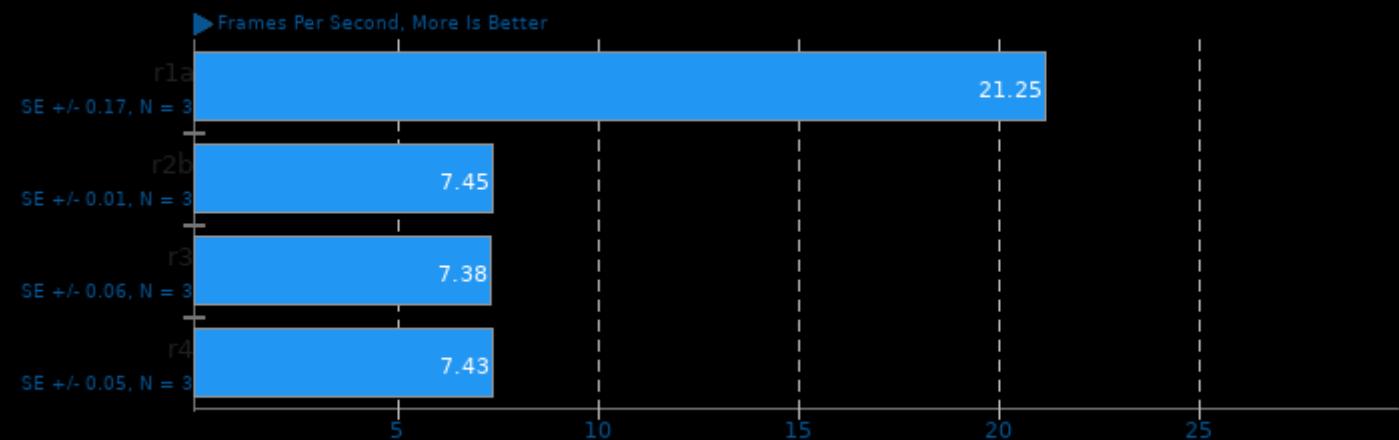
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 1080p



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -fPIC -fthreadsafe-statics

AOM AV1 3.0

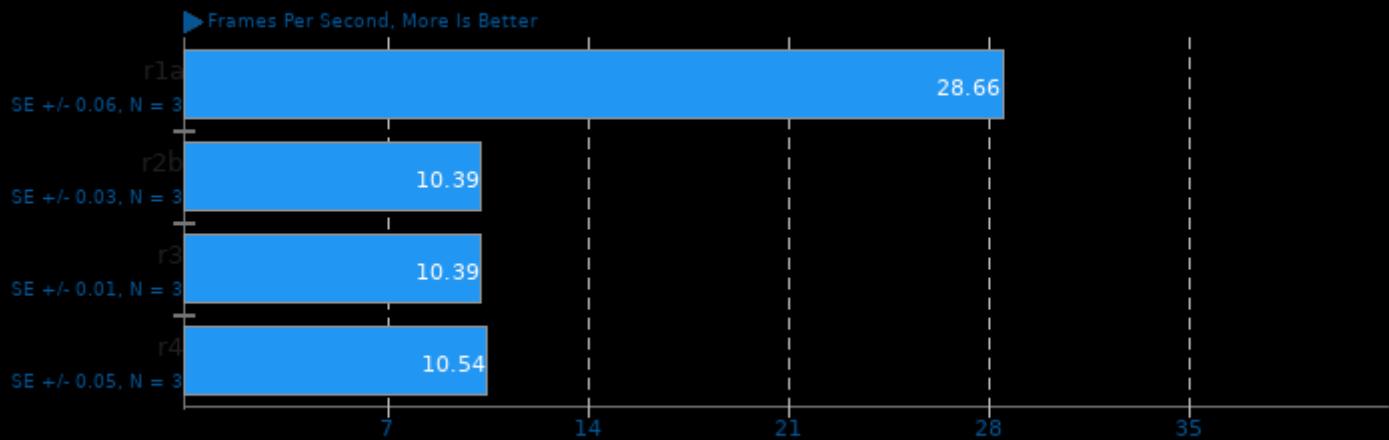
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 1080p



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -fPIC -fthreadsafe-statics

AOM AV1 3.0

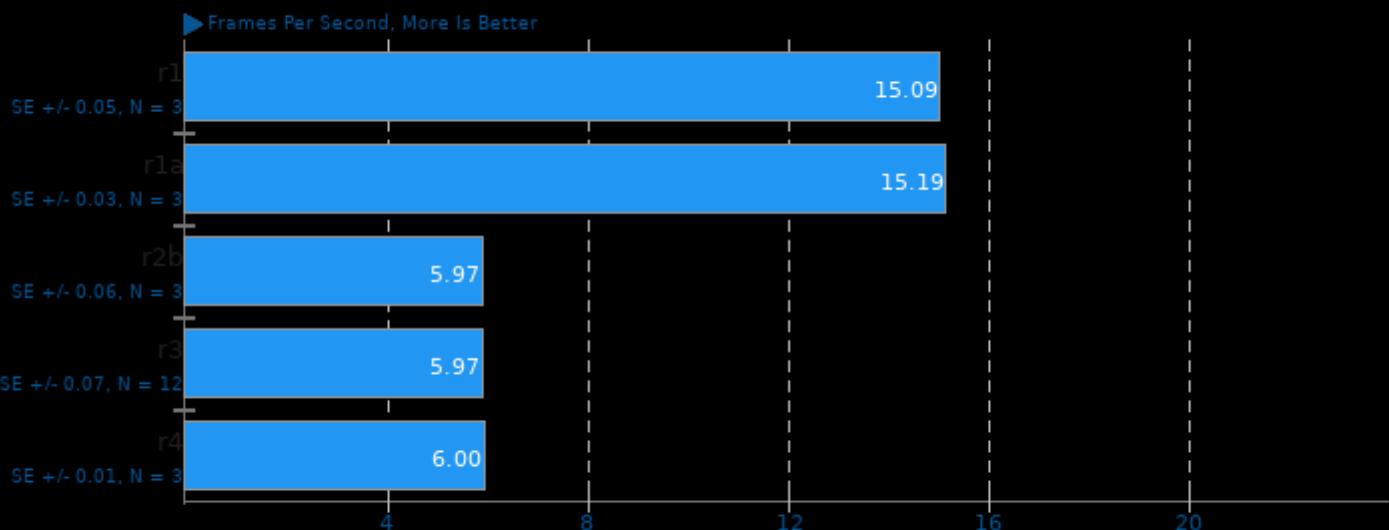
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 1080p



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.0

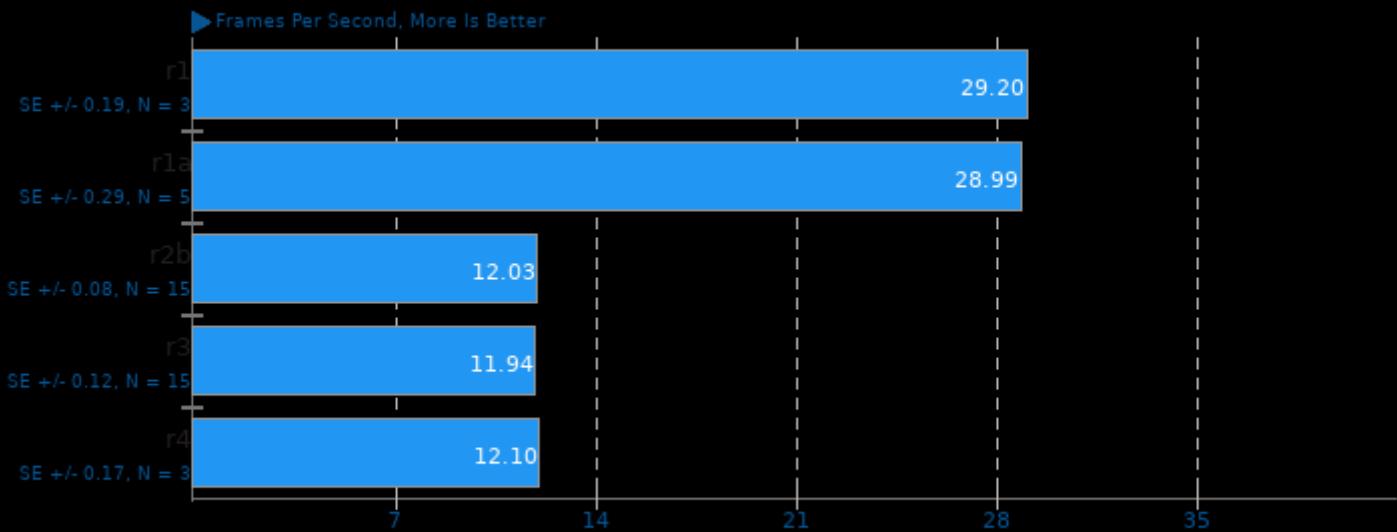
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.0

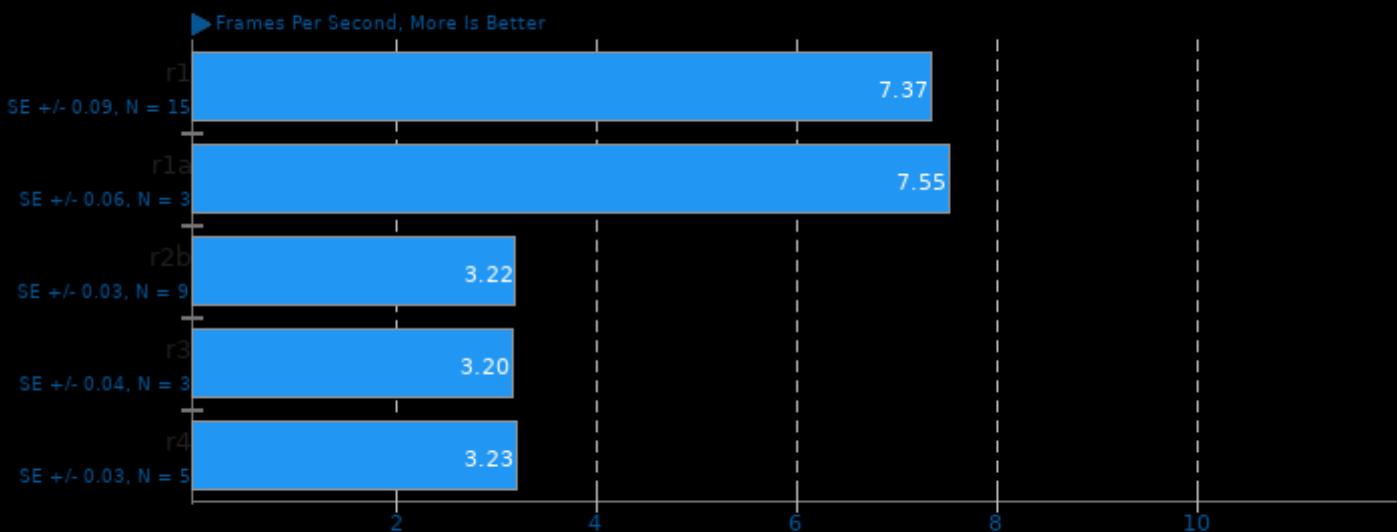
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.0

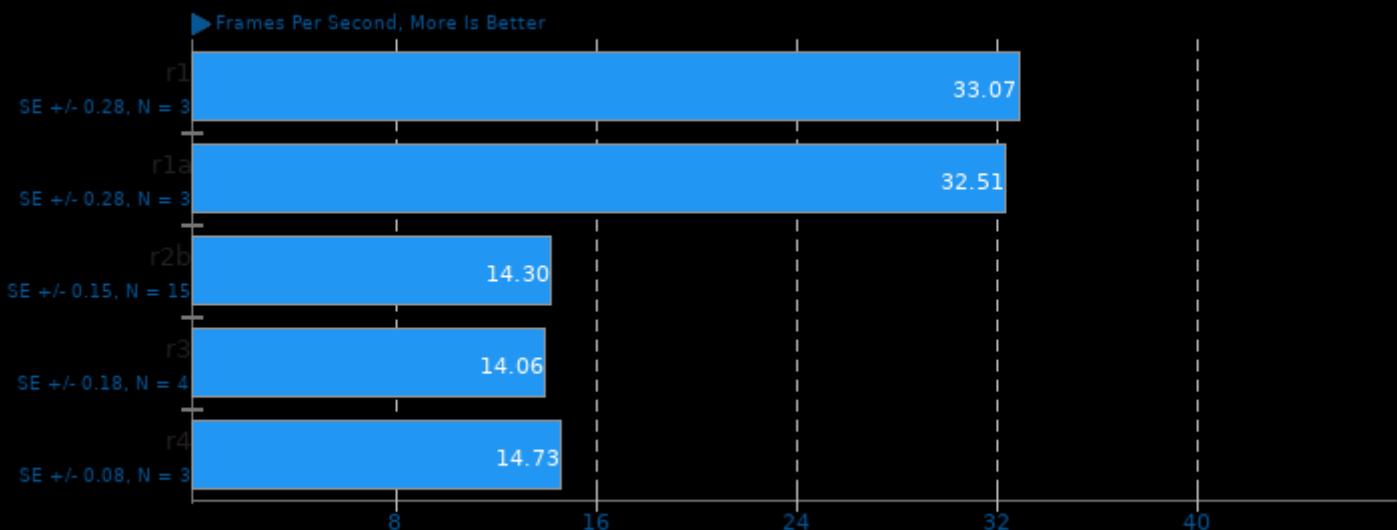
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.0

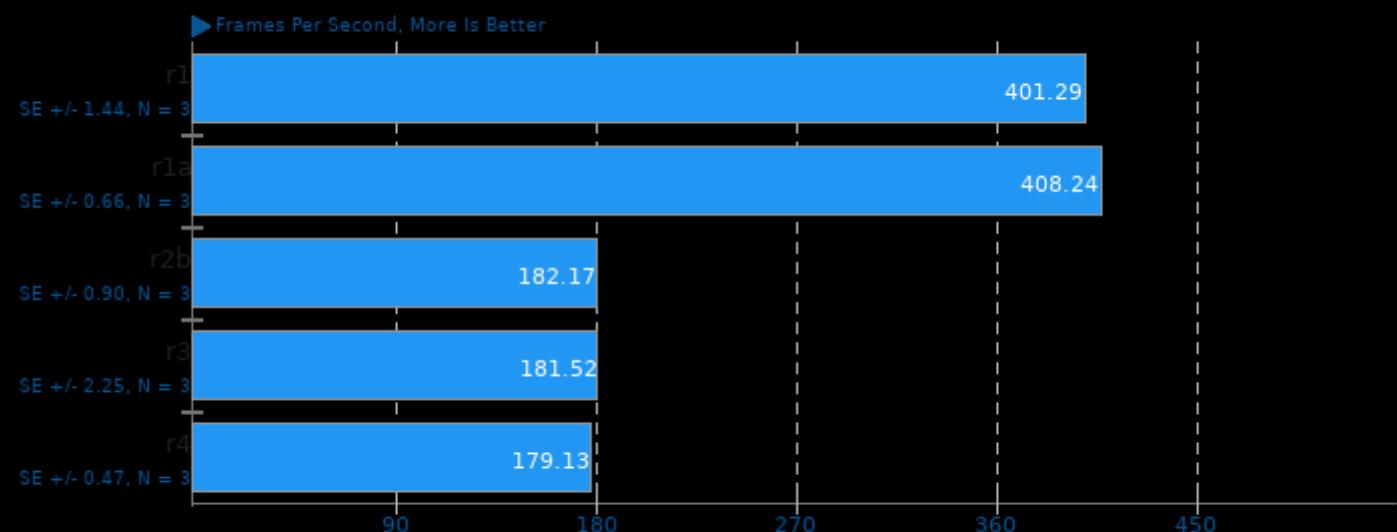
Encoder Mode: Speed 9 Realtime - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

SVT-VP9 0.3

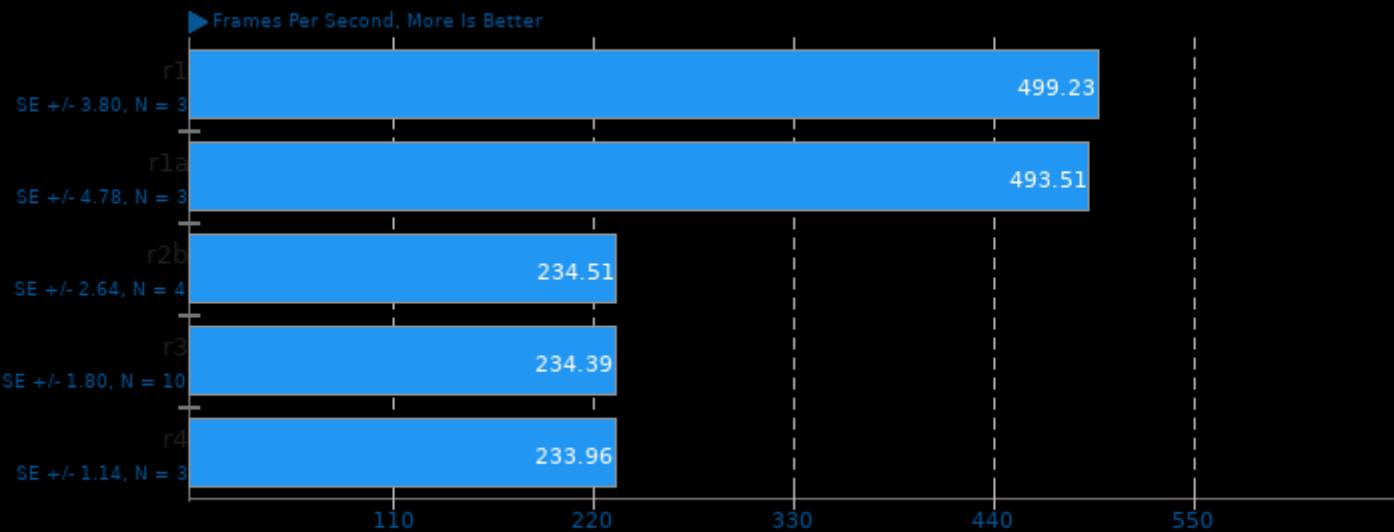
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

SVT-HEVC 1.5.0

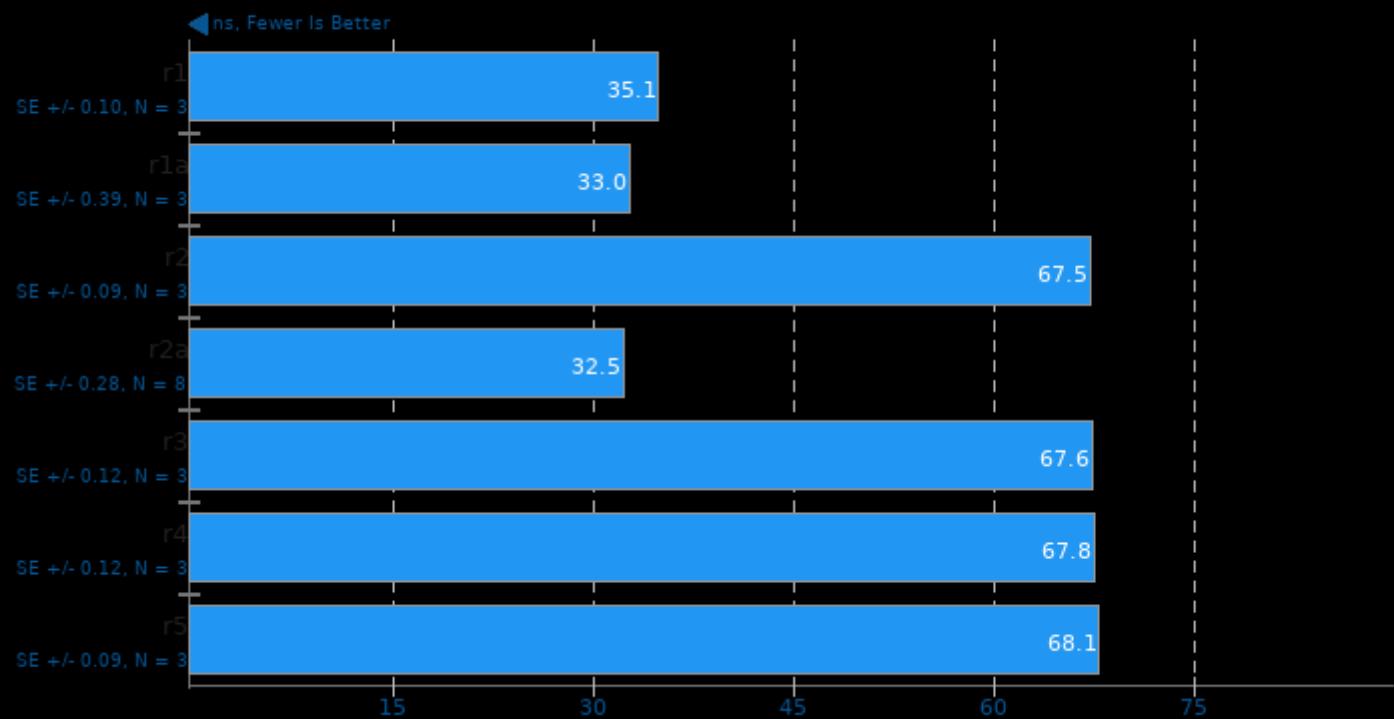
Tuning: 10 - Input: Bosphorus 1080p



1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

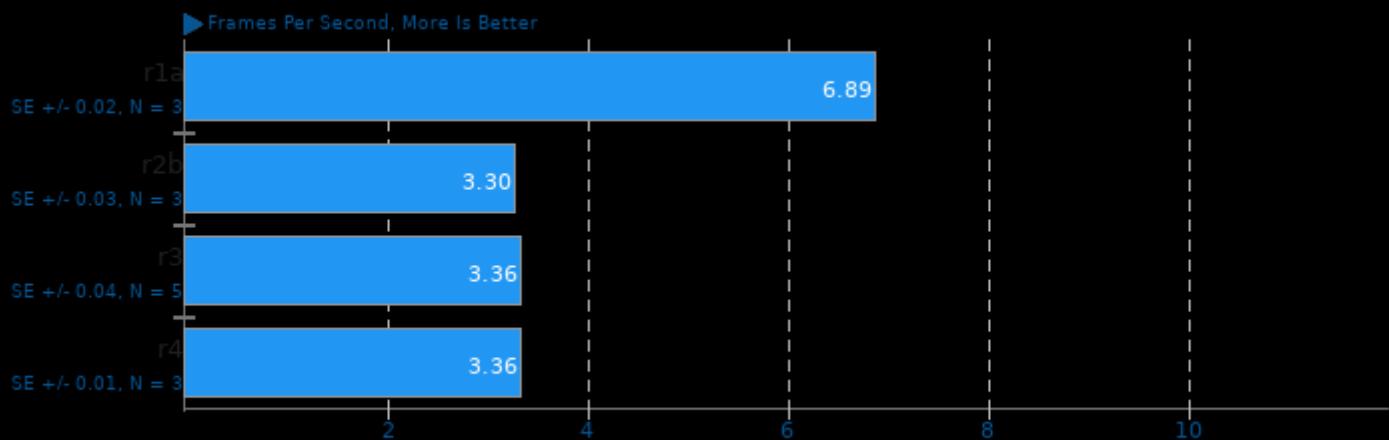
Intel Memory Latency Checker

Test: Idle Latency



AOM AV1 3.0

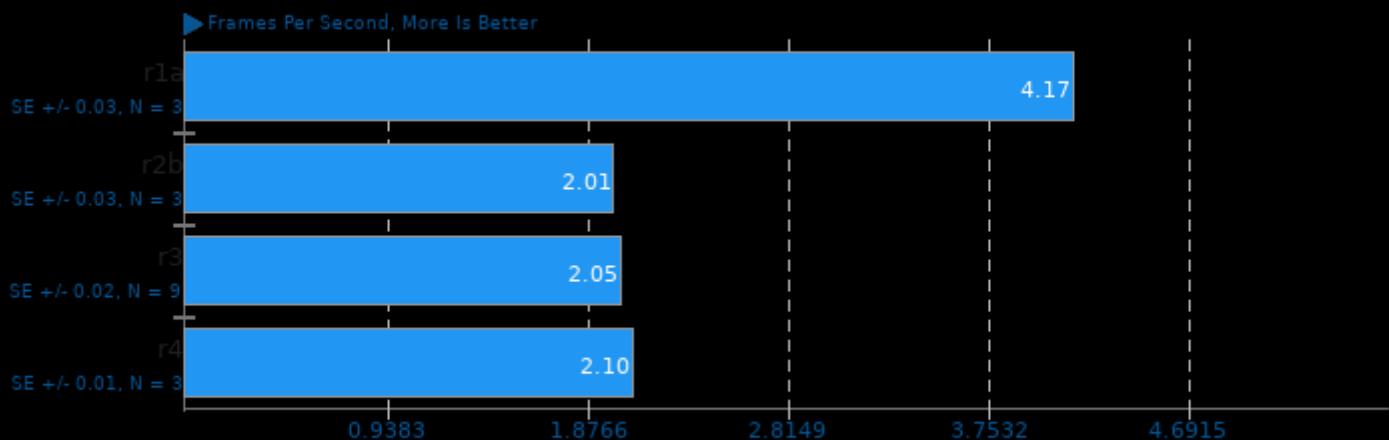
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 1080p



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -fPIC -fthread

AOM AV1 3.0

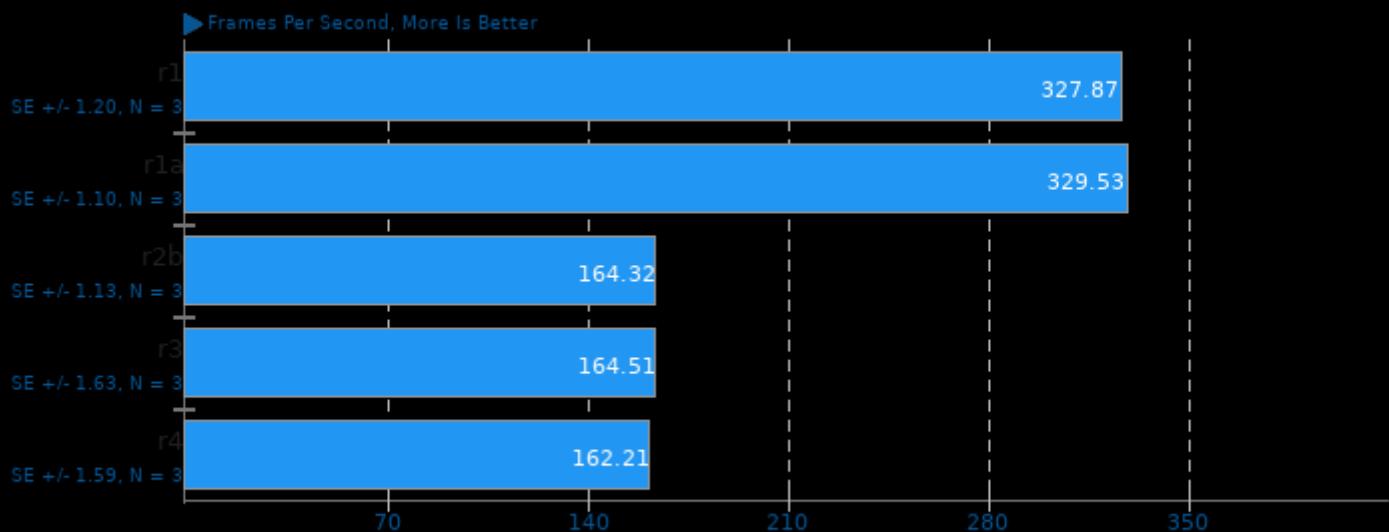
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -fPIC -fthread

SVT-VP9 0.3

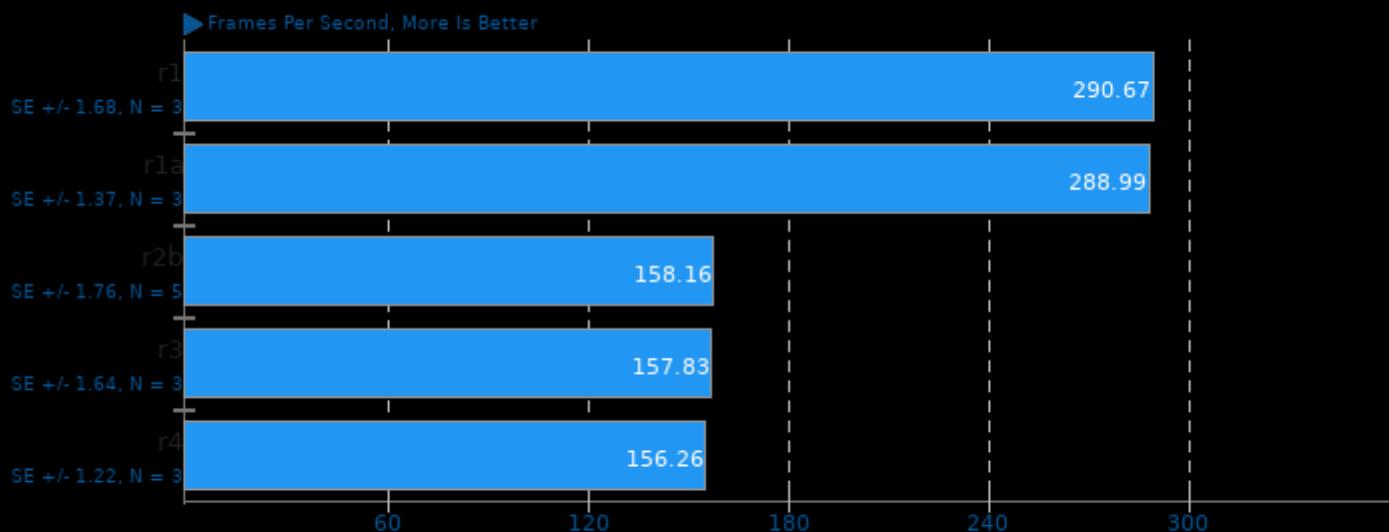
Tuning: Visual Quality Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

SVT-HEVC 1.5.0

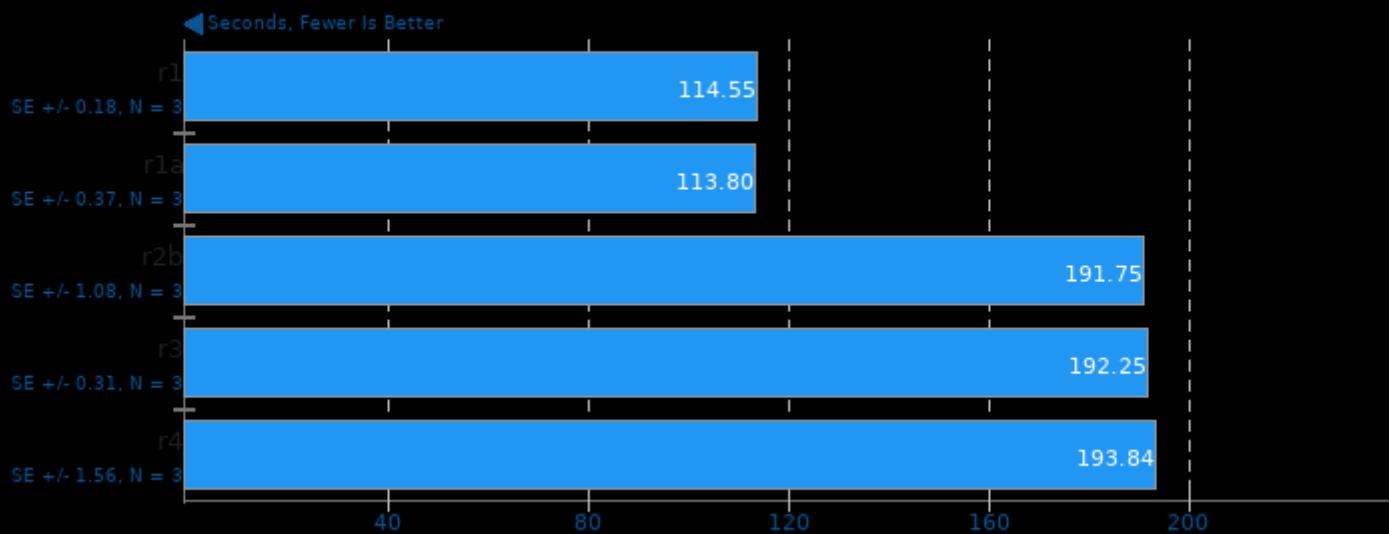
Tuning: 7 - Input: Bosphorus 1080p



1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

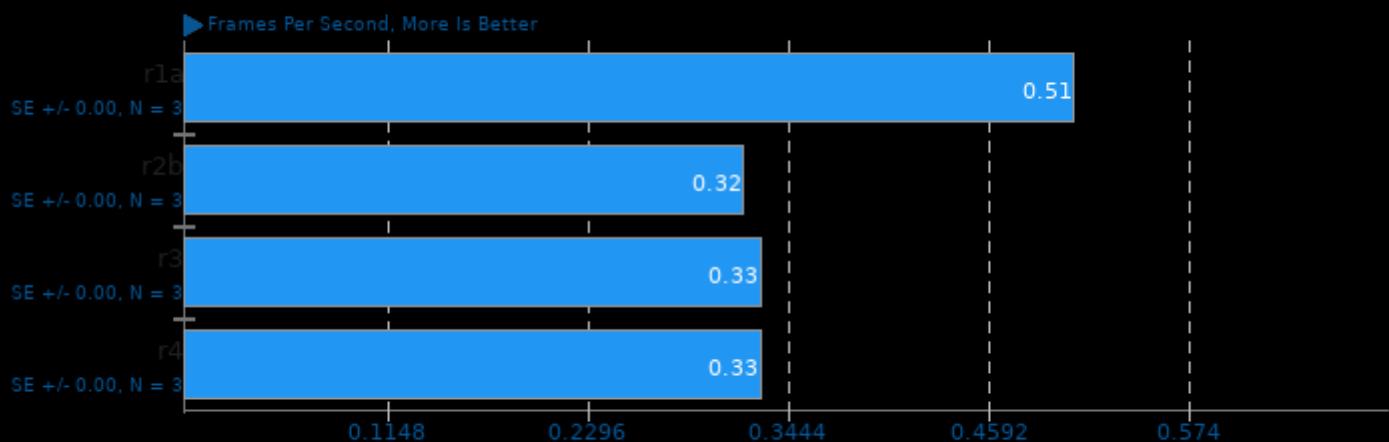
Timed Erlang/OTP Compilation 23.2

Time To Compile



AOM AV1 3.0

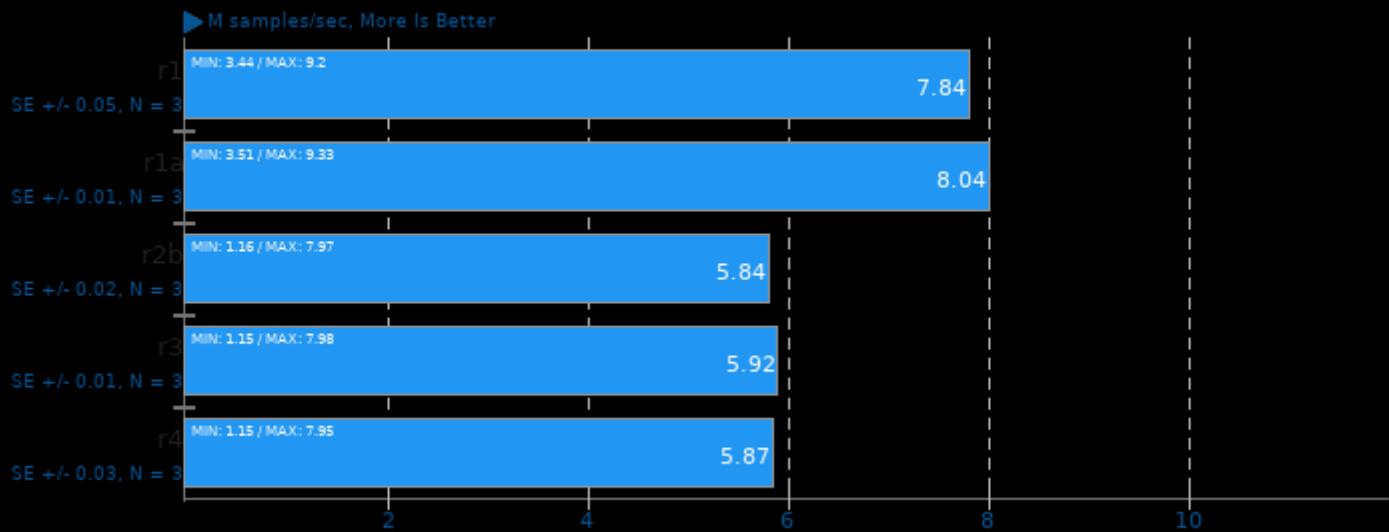
Encoder Mode: Speed 0 Two-Pass - Input: Bosphorus 1080p



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -fno-rtti -fno-threadsafe-statics

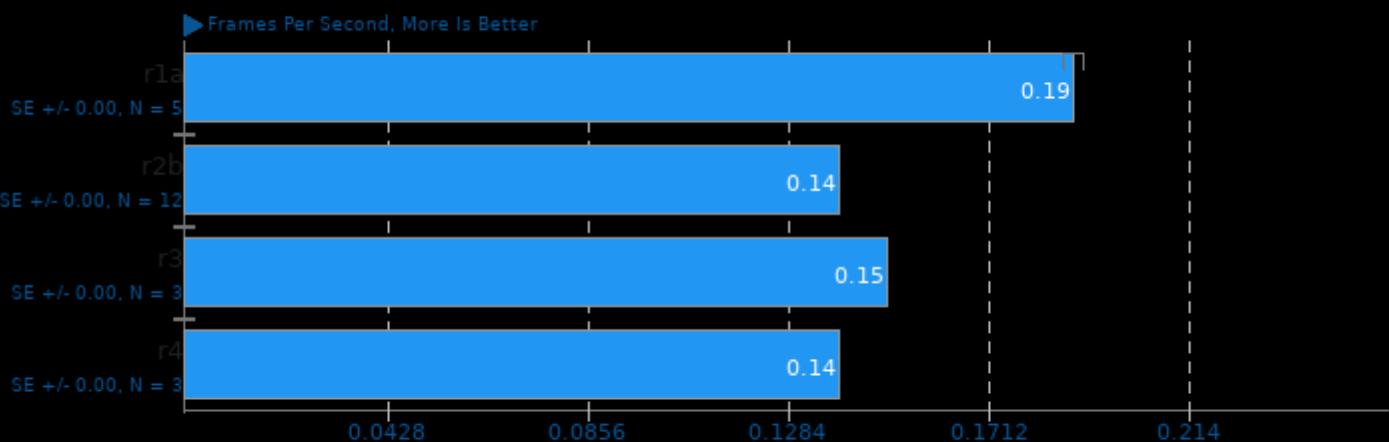
LuxCoreRender 2.5

Scene: LuxCore Benchmark - Acceleration: CPU



AOM AV1 3.0

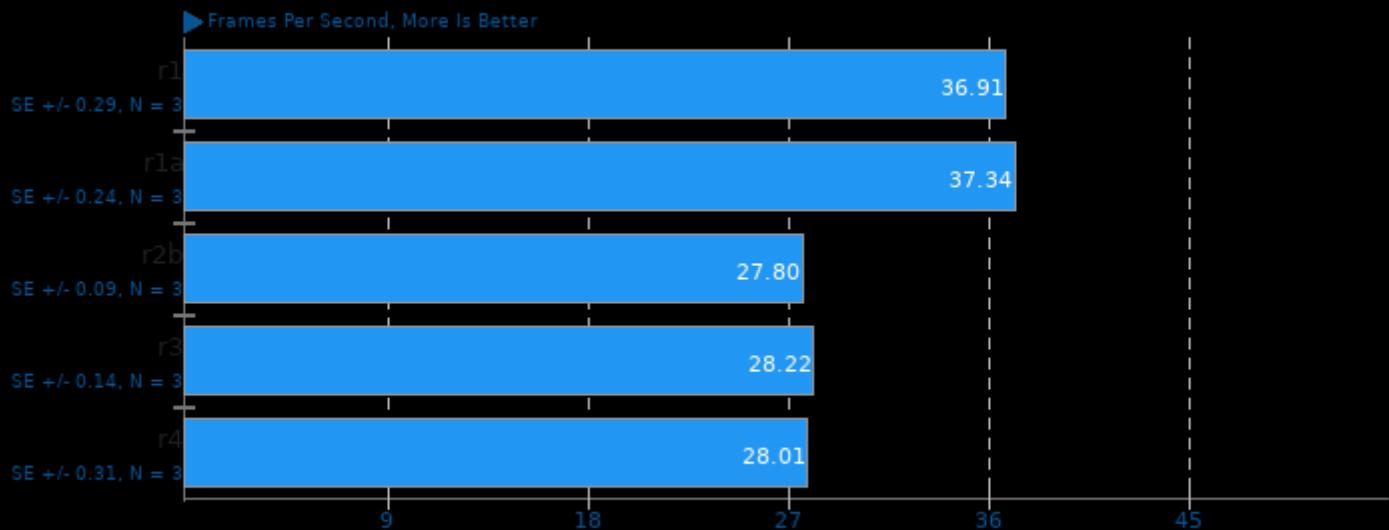
Encoder Mode: Speed 0 Two-Pass - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -fPIC -fthread

SVT-HEVC 1.5.0

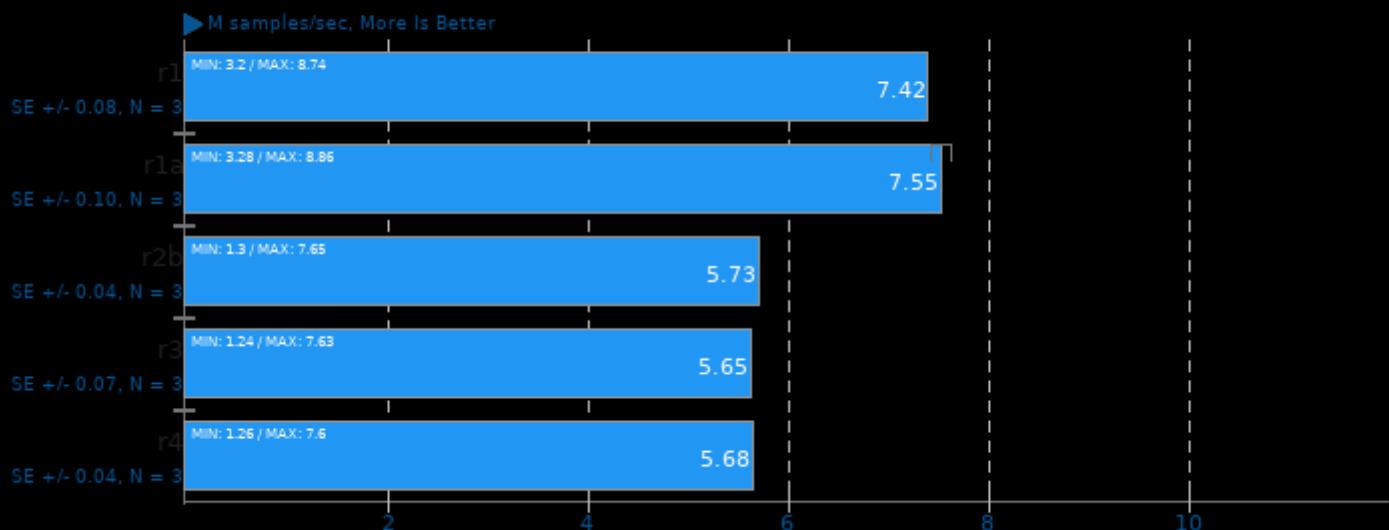
Tuning: 1 - Input: Bosphorus 1080p



1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

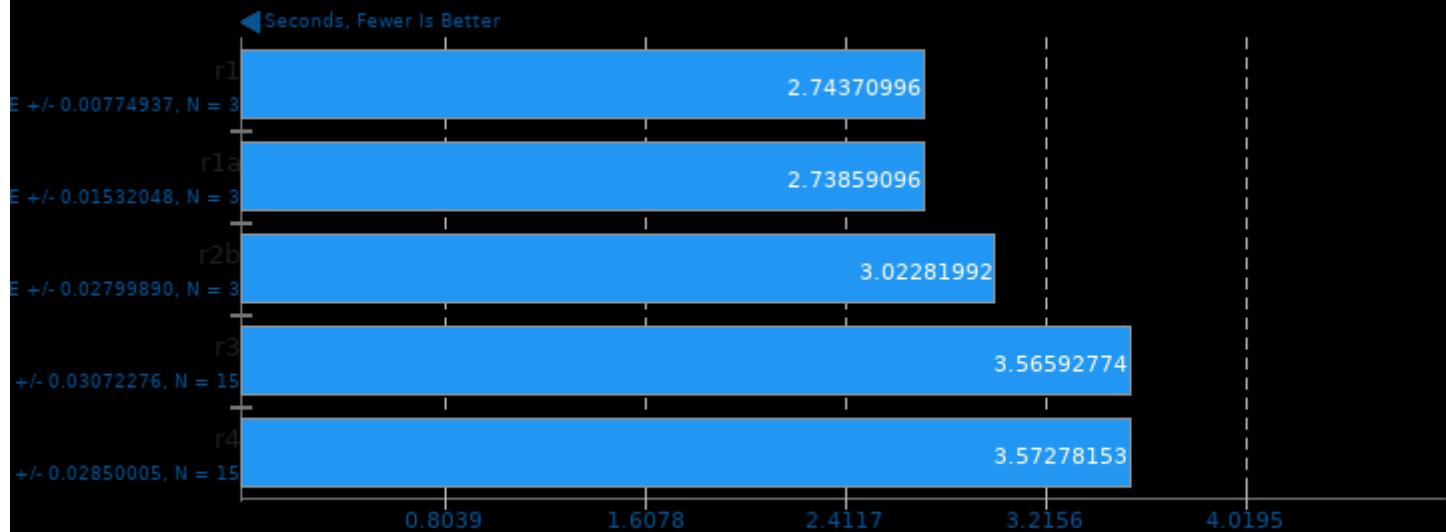
LuxCoreRender 2.5

Scene: Danish Mood - Acceleration: CPU



Xcompact3d Incompact3d 2021-03-11

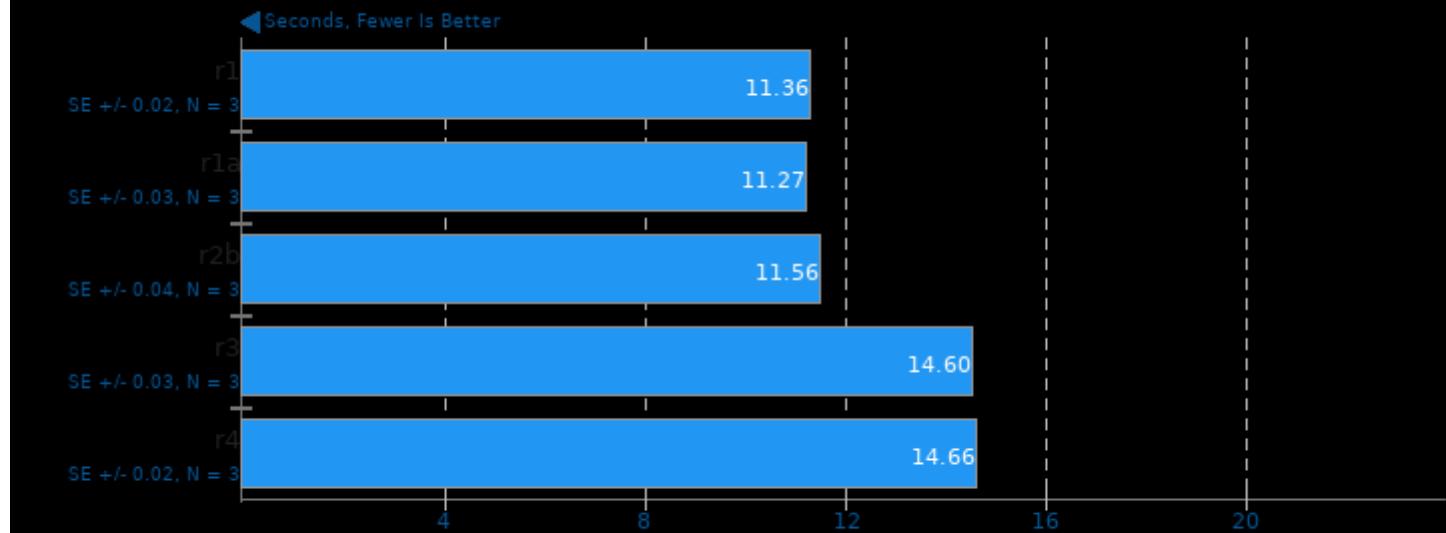
Input: input.i3d 129 Cells Per Direction



1. (F9X) gfortran options: -cpp -O2 -funroll-loops -floop-optimize -fcray-pointer -fbacktrace -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

Xcompact3d Incompact3d 2021-03-11

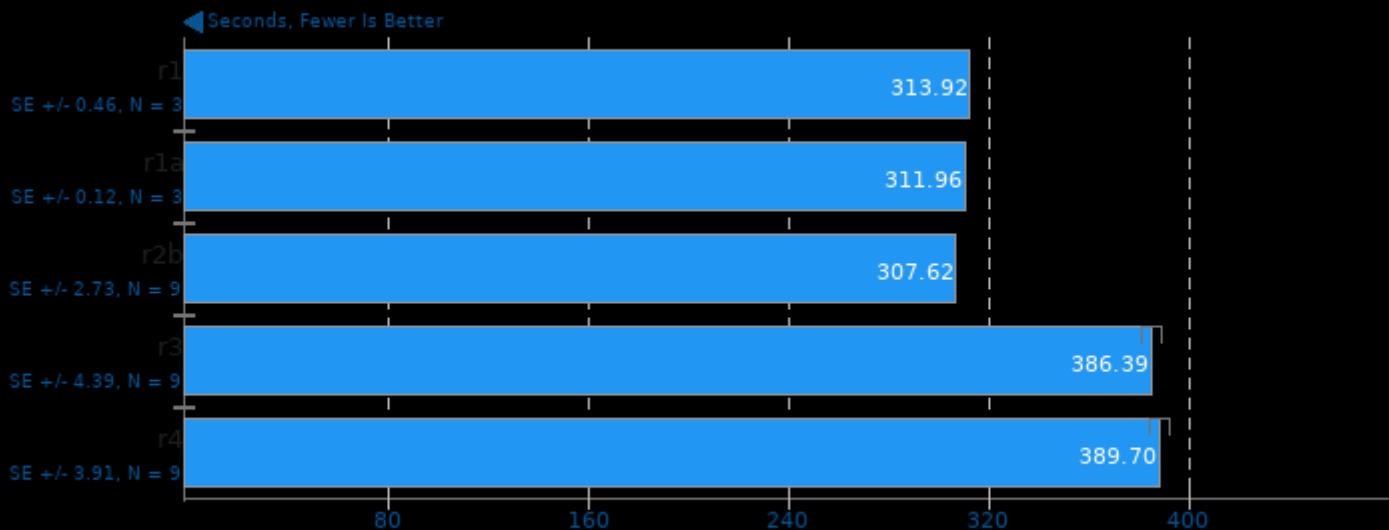
Input: input.i3d 193 Cells Per Direction



1. (F9X) gfortran options: -cpp -O2 -funroll-loops -floop-optimize -fcray-pointer -fbacktrace -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

Xcompact3d Incompact3d 2021-03-11

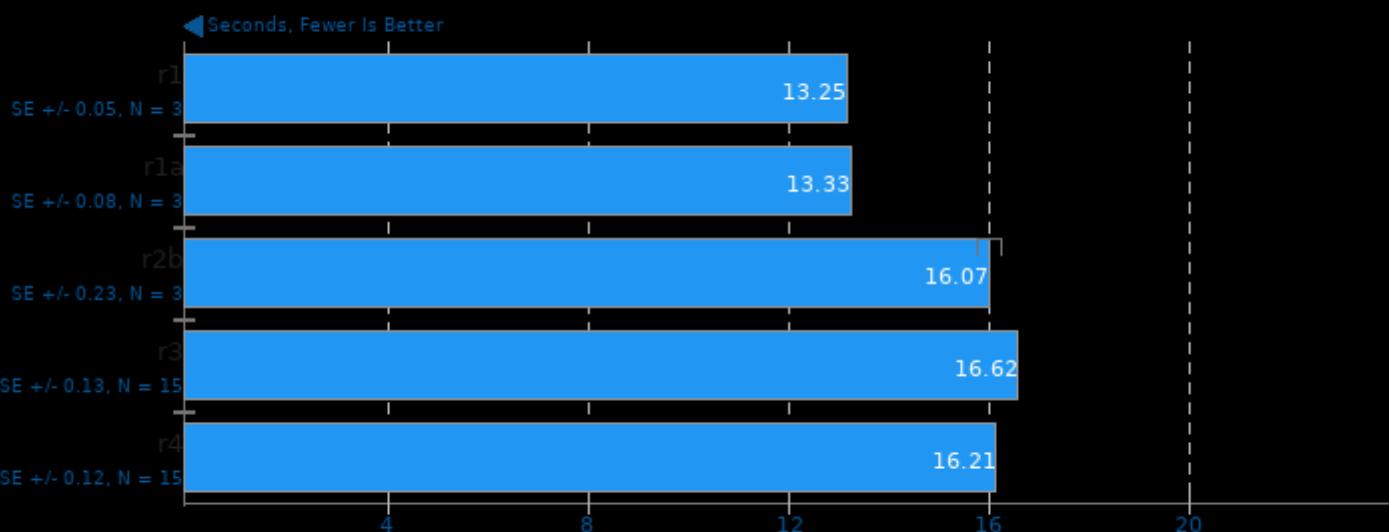
Input: X3D-benchmarking input.i3d



1. (F9X) gfortran options: -cpp -O2 -funroll-loops -floop-optimize -fcray-pointer -fbacktrace -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

libavif avifenc 0.9.0

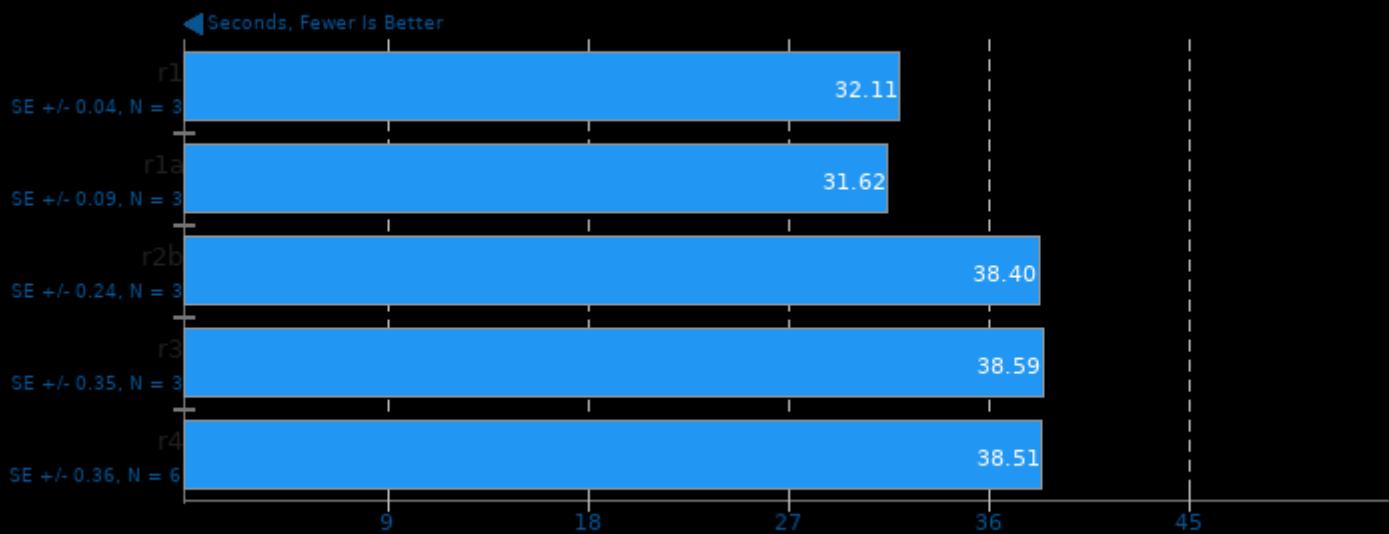
Encoder Speed: 6



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.9.0

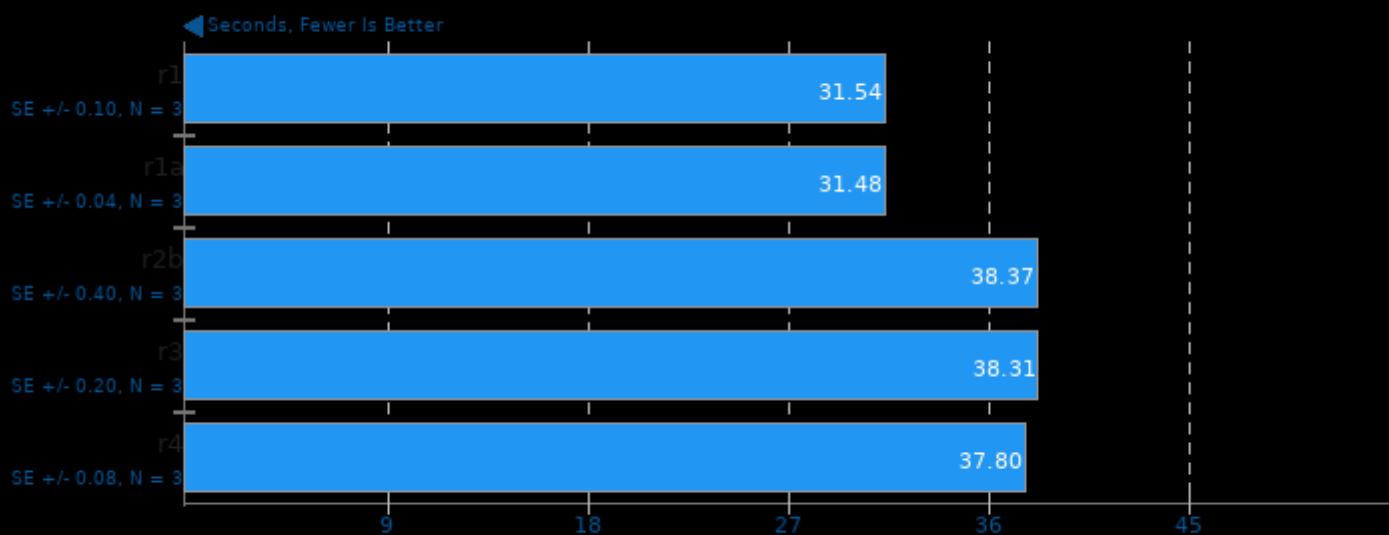
Encoder Speed: 6, Lossless



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.9.0

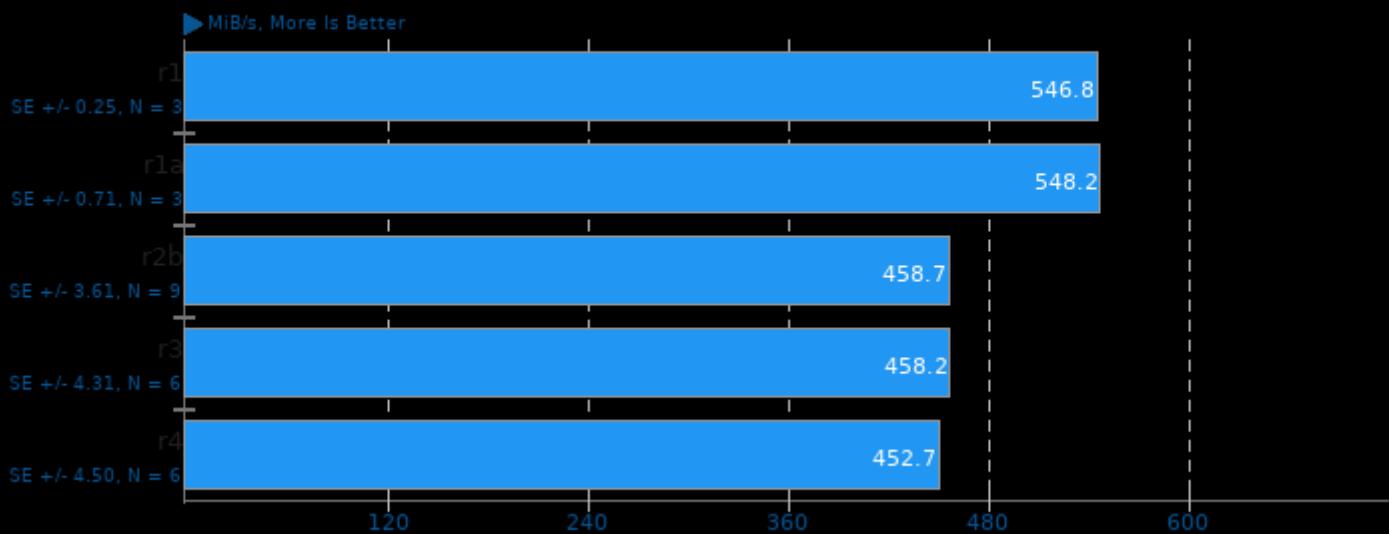
Encoder Speed: 2



1. (CXX) g++ options: -O3 -fPIC -lm

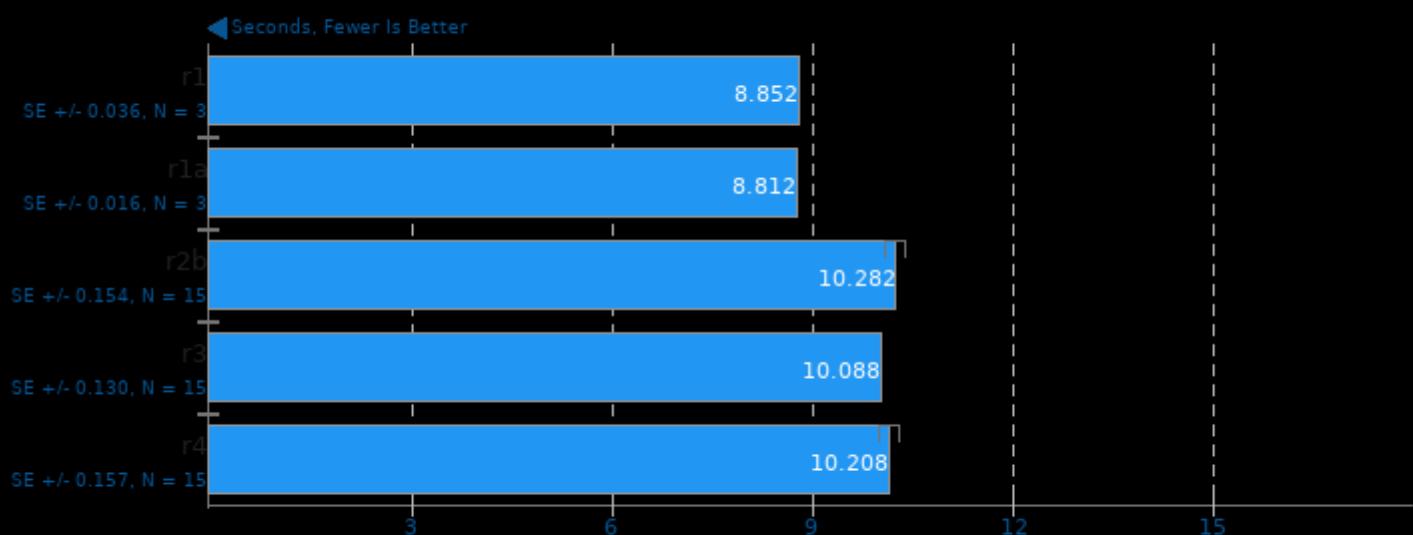
LuaRadio 0.9.1

Test: Complex Phase



libavif avifenc 0.9.0

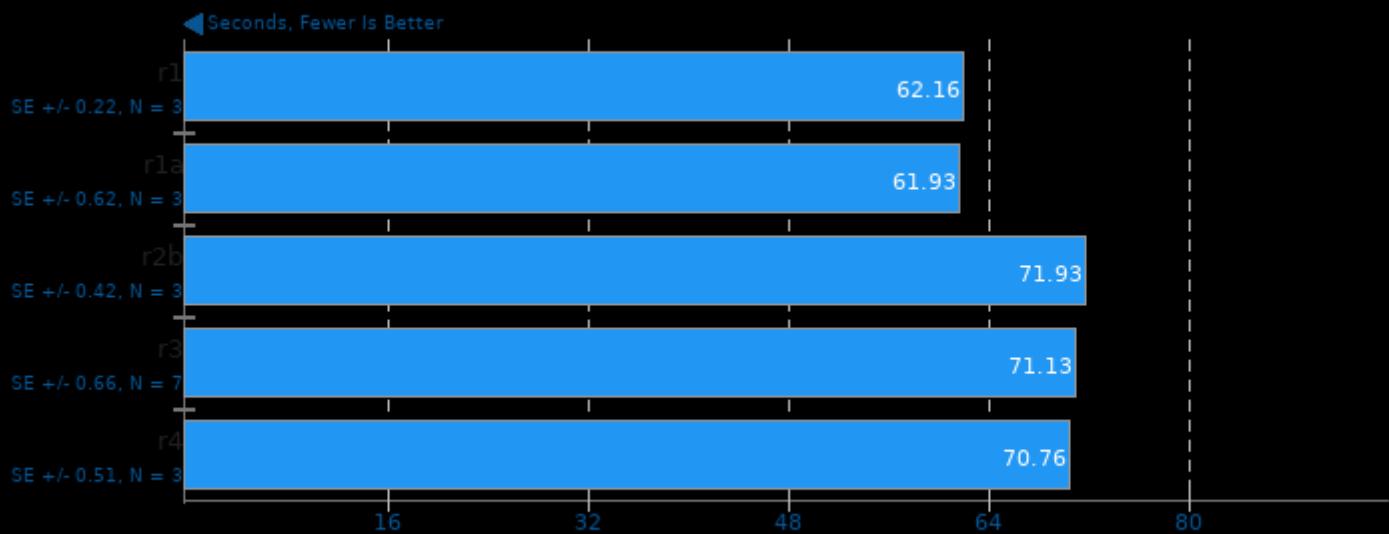
Encoder Speed: 10, Lossless



1. (CXX) g++ options: -O3 -fPIC -lm

Timed Wasmer Compilation 1.0.2

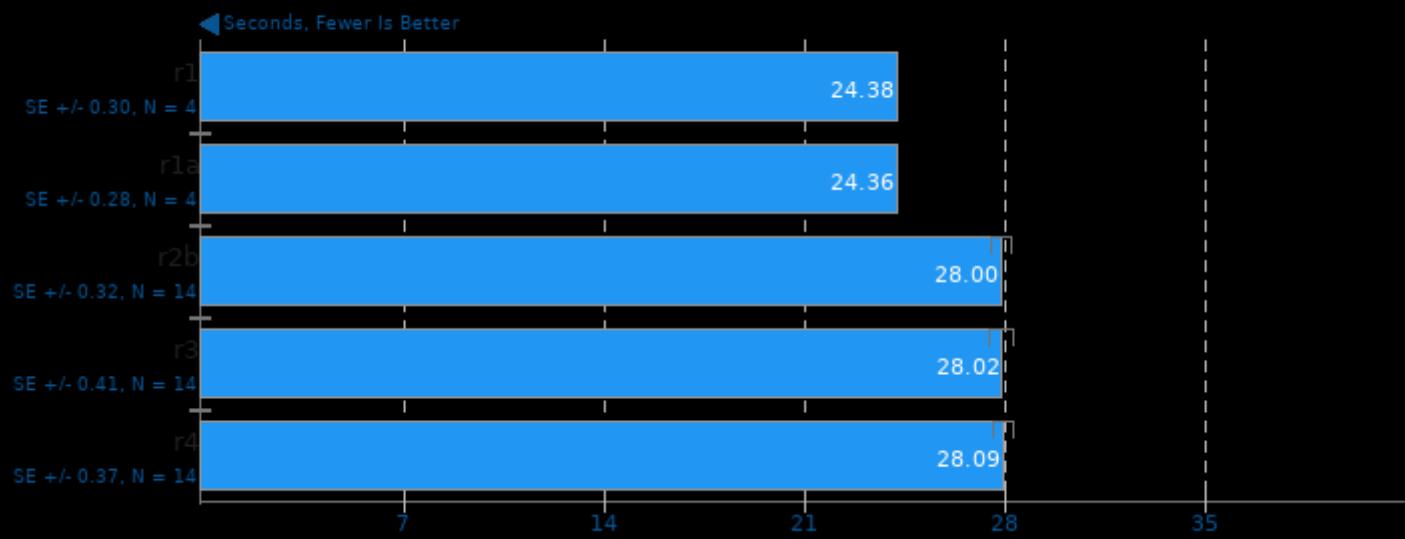
Time To Compile



1. (CC) gcc options: -m64 -pie -fno-default-lib -ldl -lrt -lpthread -lgcc_s -lc -lm -util

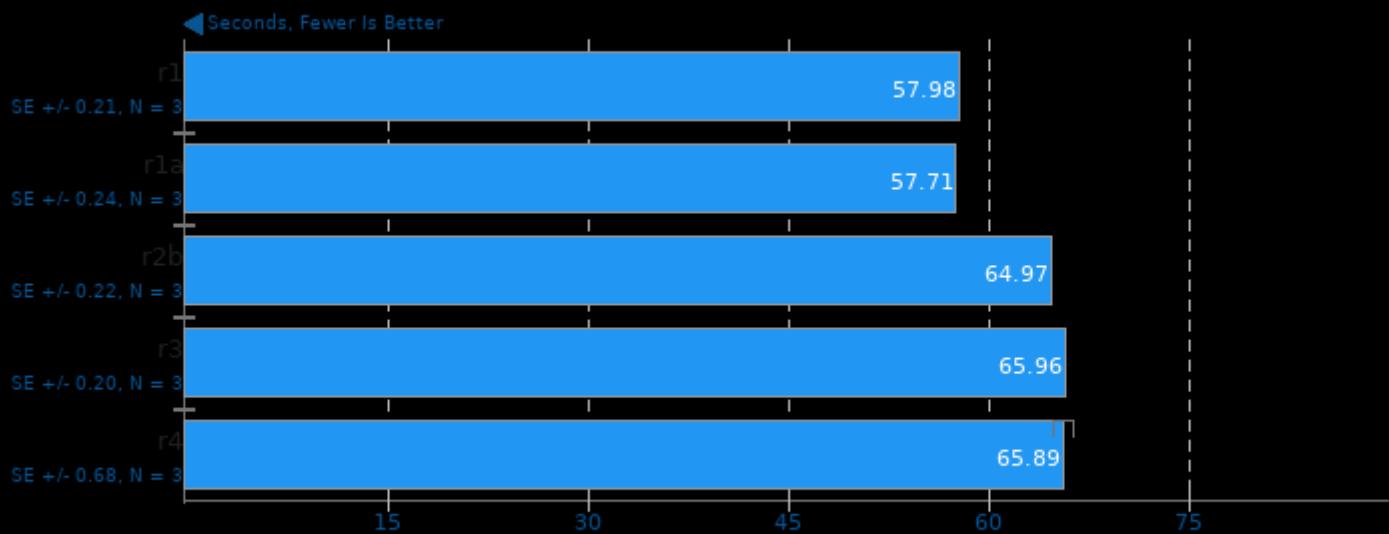
Timed Linux Kernel Compilation 5.10.20

Time To Compile



libavif avifenc 0.9.0

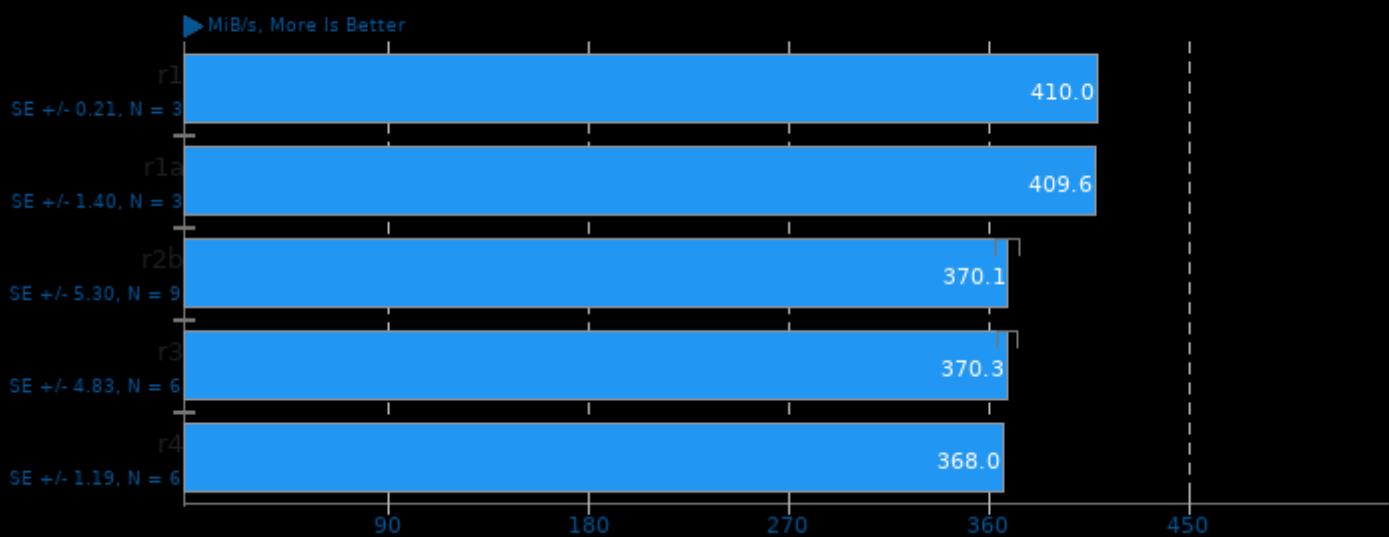
Encoder Speed: 0



1. (CXX) g++ options: -O3 -fPIC -lm

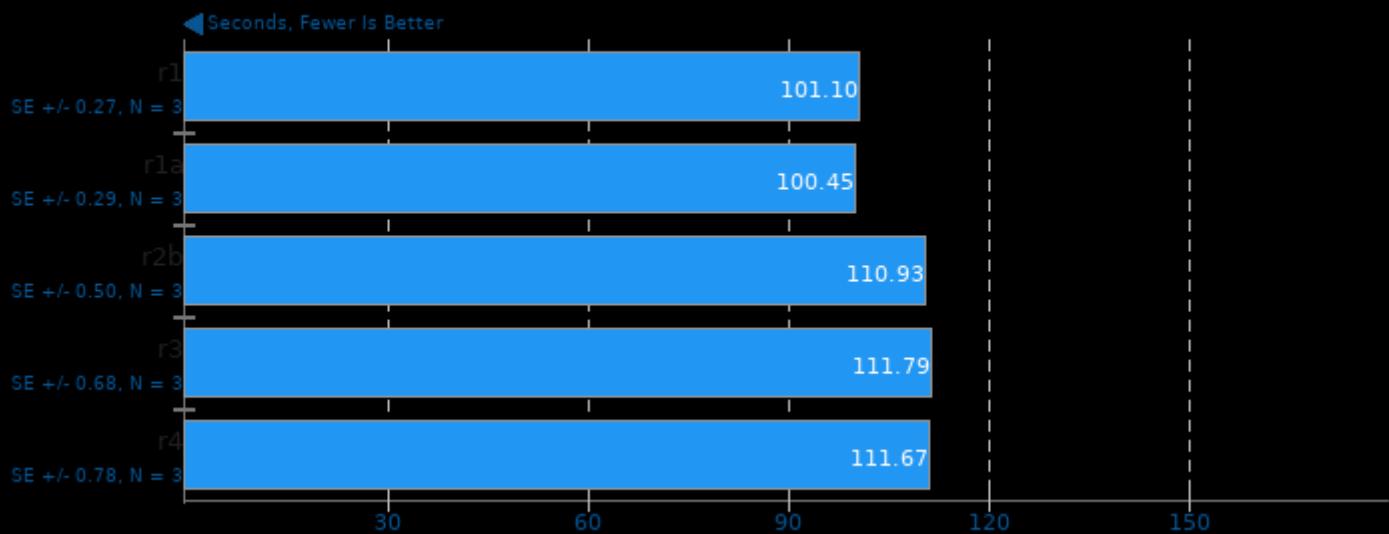
LuaRadio 0.9.1

Test: FM Deemphasis Filter



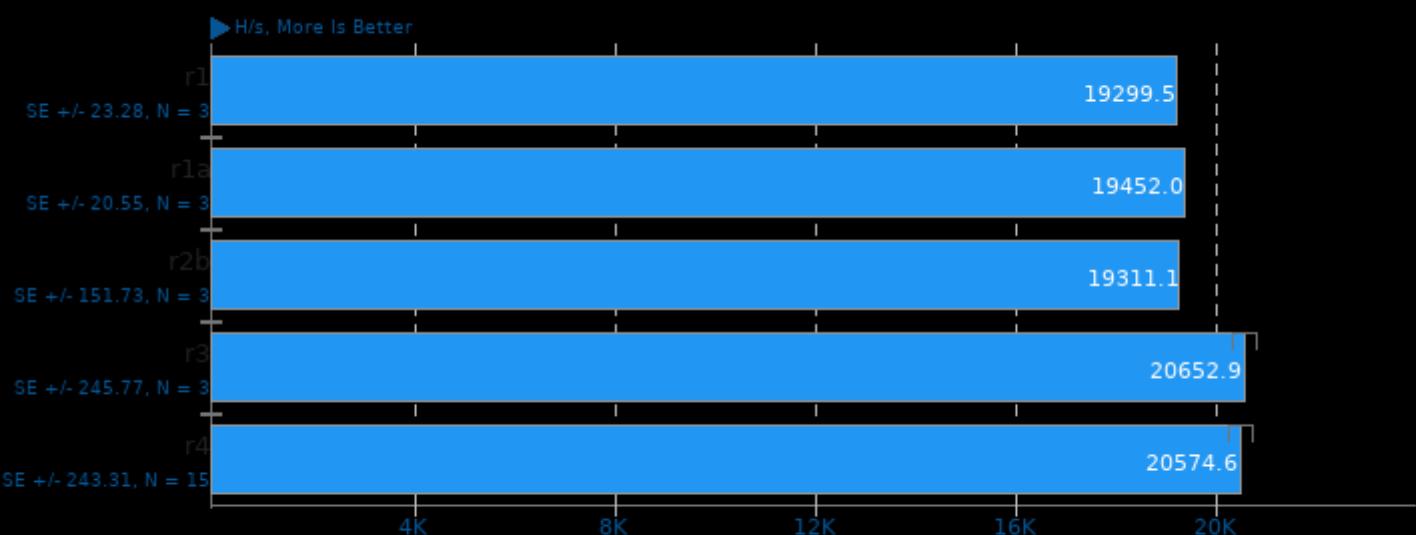
Timed Node.js Compilation 15.11

Time To Compile



Xmrig 6.12.1

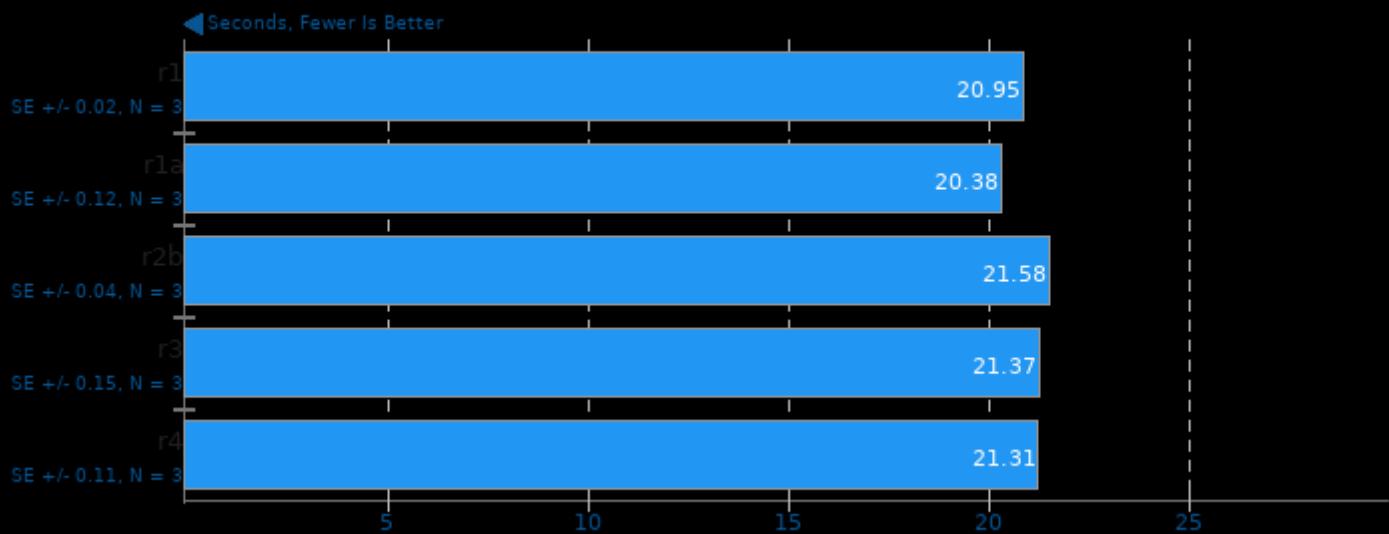
Variant: Monero - Hash Count: 1M



1. (CXX) g++ options: -fexceptions -fno-rtti -maes -O3 -Ofast -static-libgcc -static-libstdc++ -rdynamic -lssl -lcrypto -luv -lpthread -lrt -ldl -lhwloc

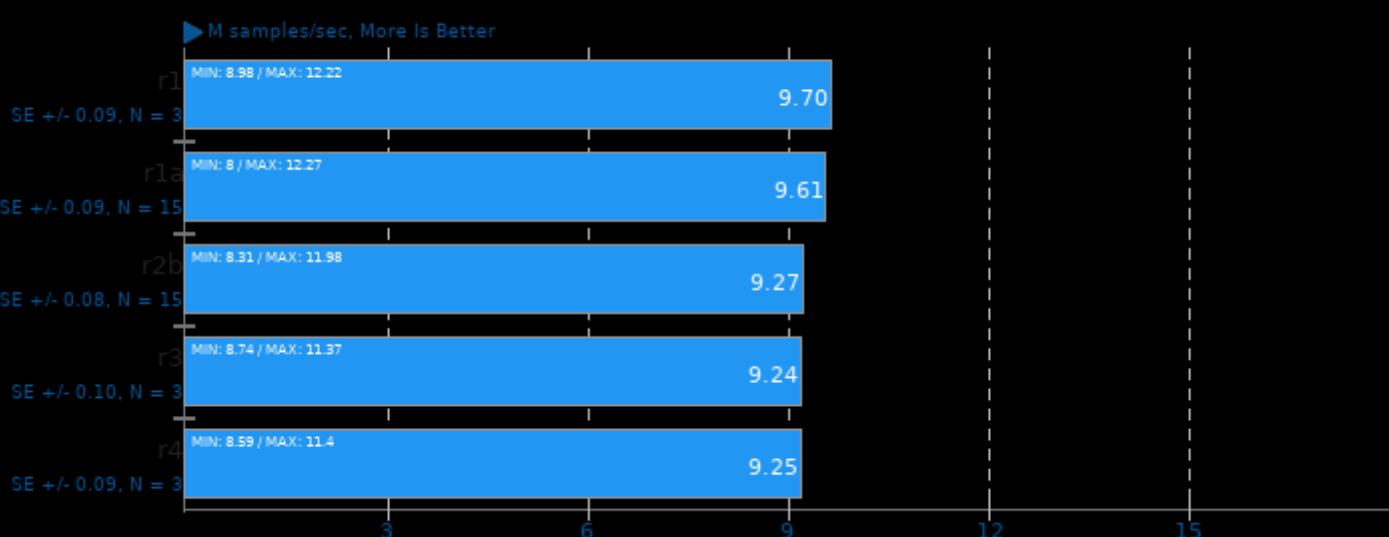
Timed Mesa Compilation 21.0

Time To Compile



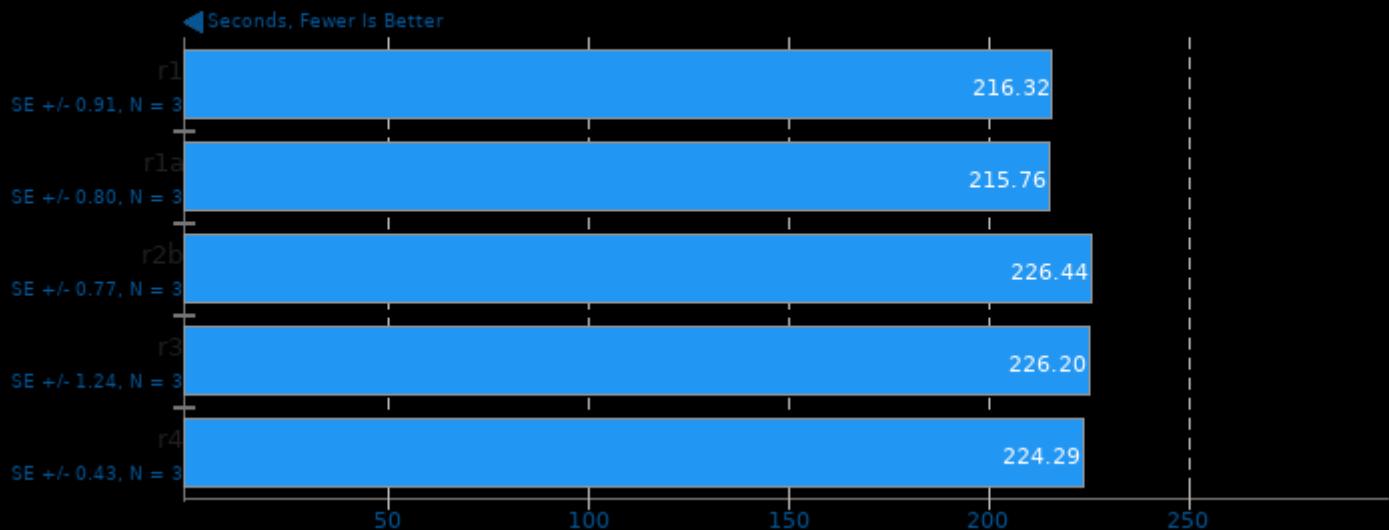
LuxCoreRender 2.5

Scene: DLSC - Acceleration: CPU



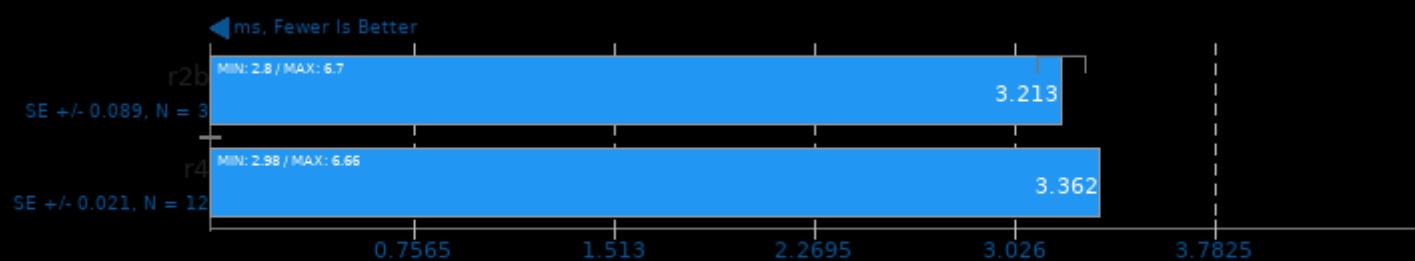
Timed LLVM Compilation 12.0

Build System: Unix Makefiles



Mobile Neural Network 1.1.3

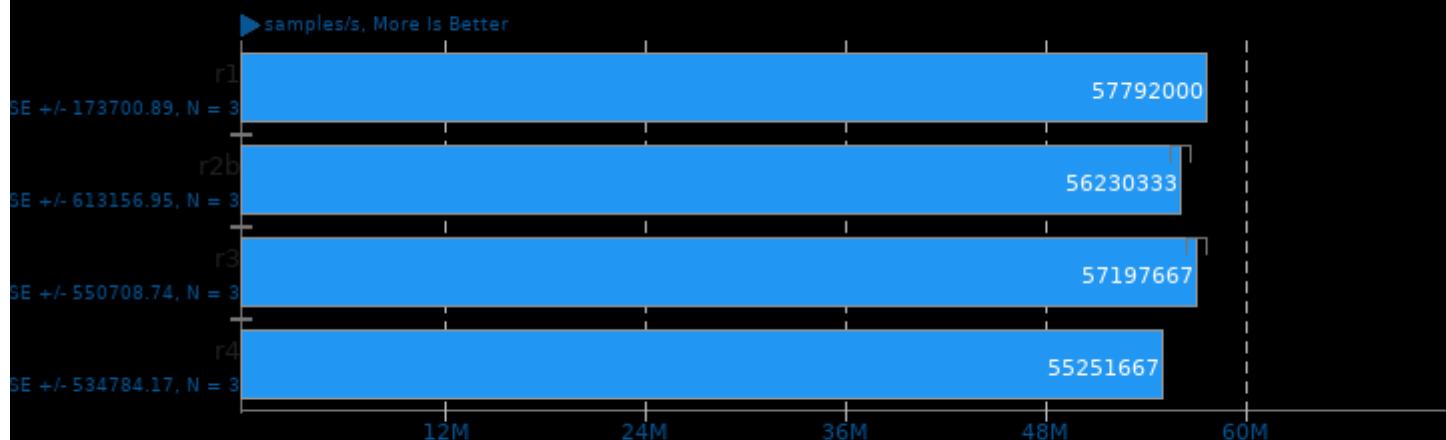
Model: mobilenet-v1-1.0



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fno-threadsafe-statics

Liquid-DSP 2021.01.31

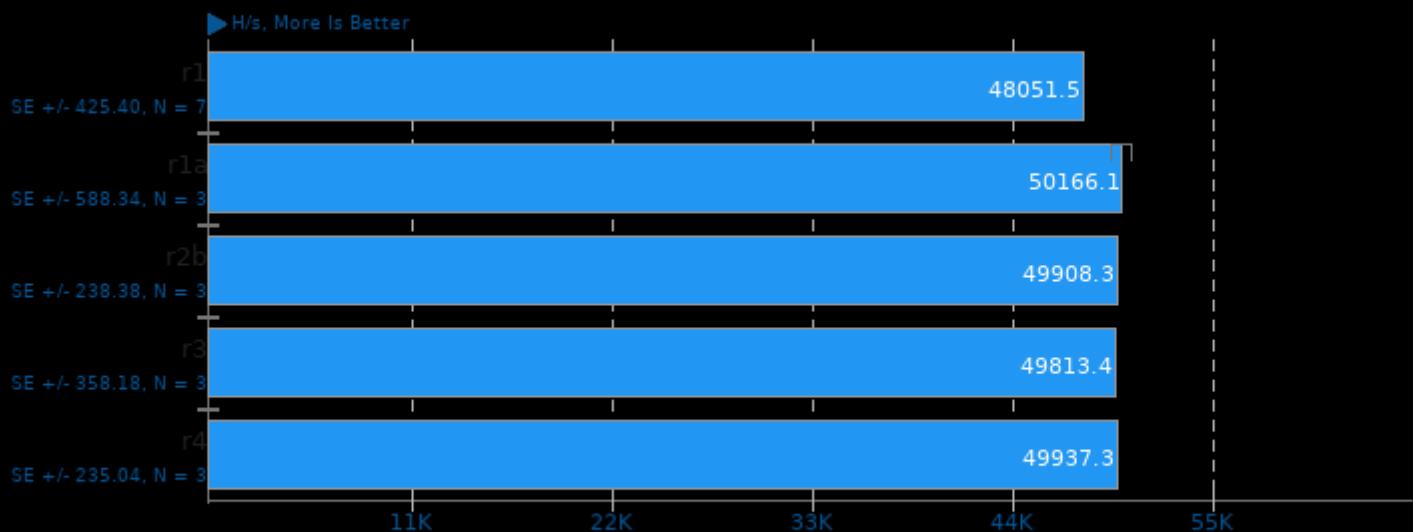
Threads: 1 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

Xmrig 6.12.1

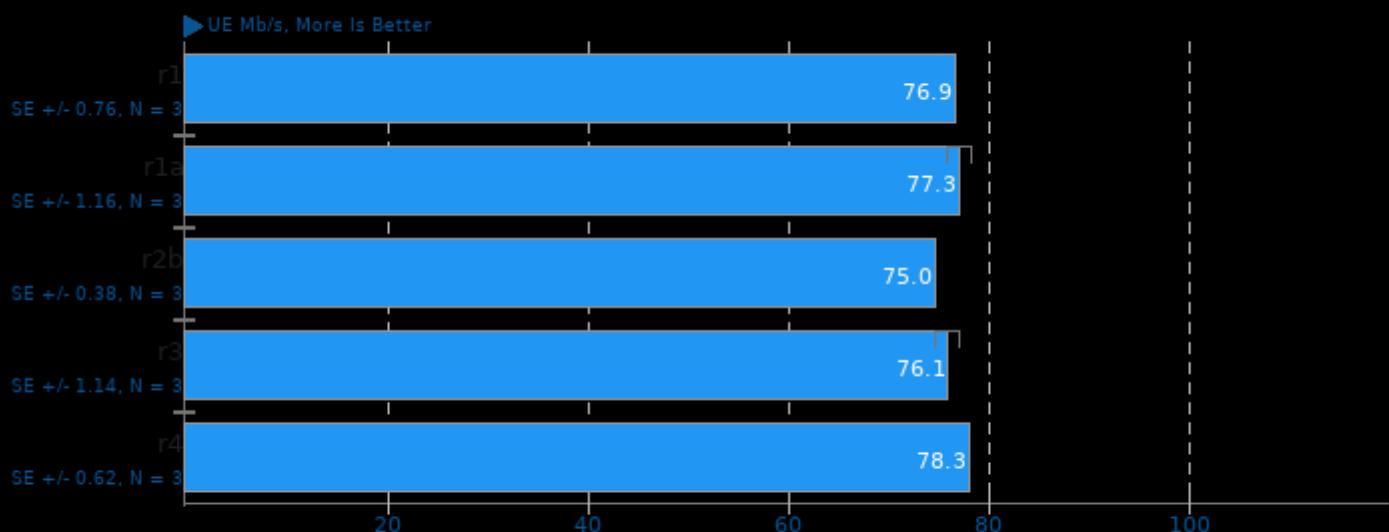
Variant: Wownero - Hash Count: 1M



1. (CXX) g++ options: -fexceptions -fno-rtti -maes -O3 -Ofast -static-libgcc -static-libstdc++ -rdynamic -lssl -lcrypto -luv -lpthread -lrt -ldl -lhwloc

srsLTE 20.10.1

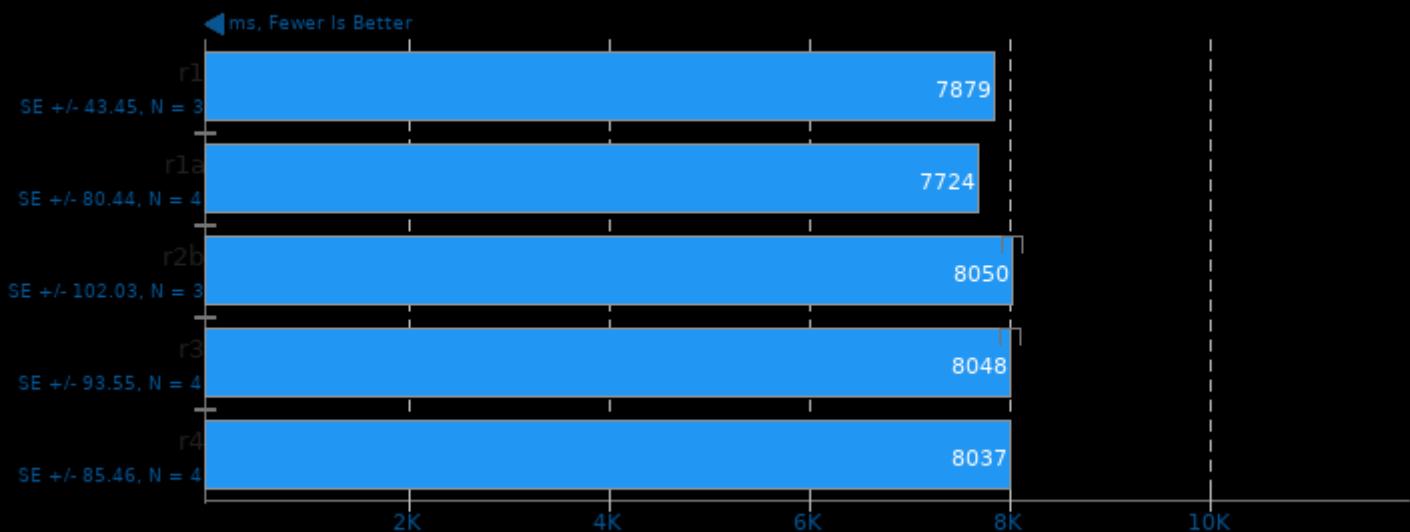
Test: PHY_DL_Test



1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno

toyBrot Fractal Generator 2020-11-18

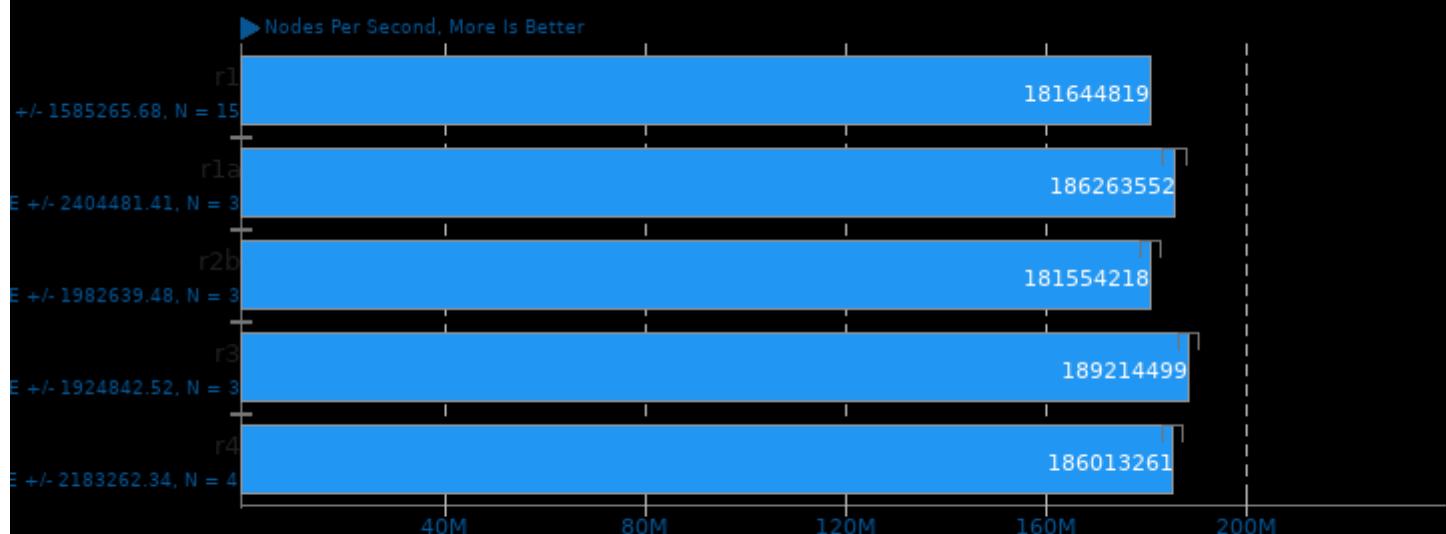
Implementation: C++ Tasks



1. (CXX) g++ options: -O3 -lpthread -lm -lgcc -lgcc_s -lc

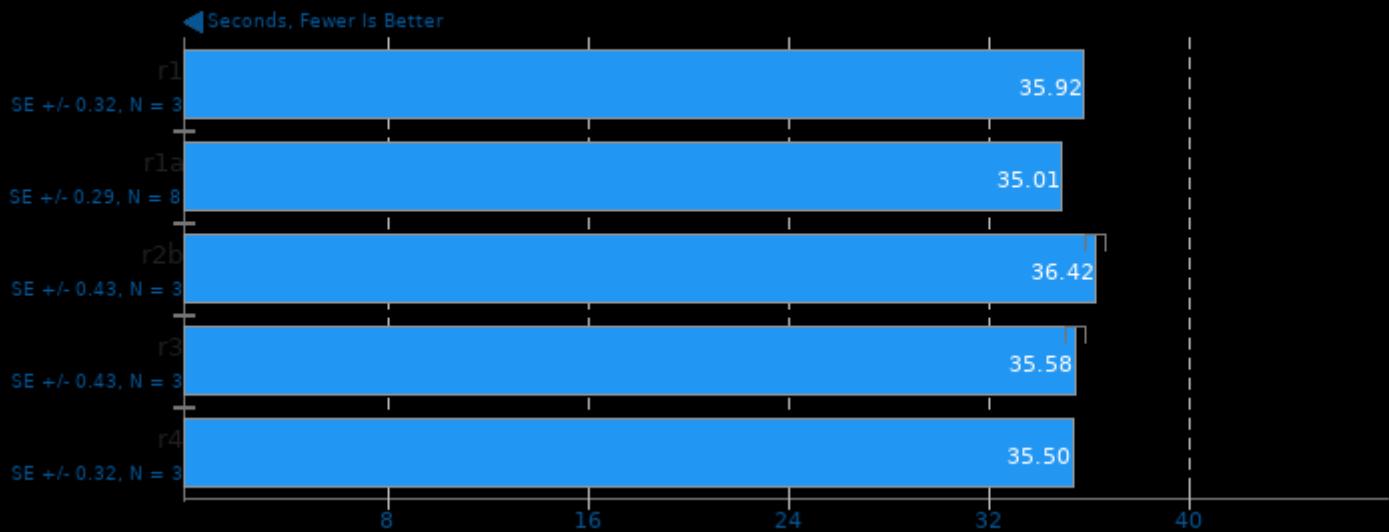
Stockfish 13

Total Time



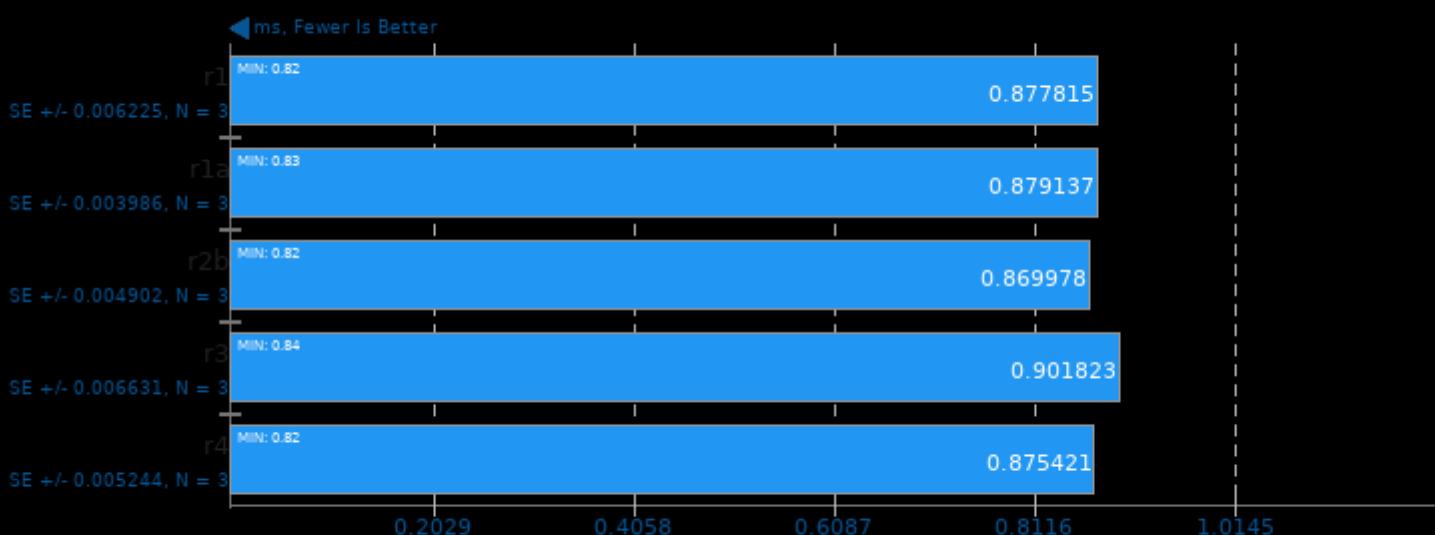
1. (CXX) g++ options: -lgcov -m64 -lpthread -fno-exceptions -std=c++17 -fprofile-use -fno-peel-loops -fno-tracer -pedantic -O3 -msse -msse3 -mpopcnt -

VOSK Speech Recognition Toolkit 0.3.21



oneDNN 2.1.2

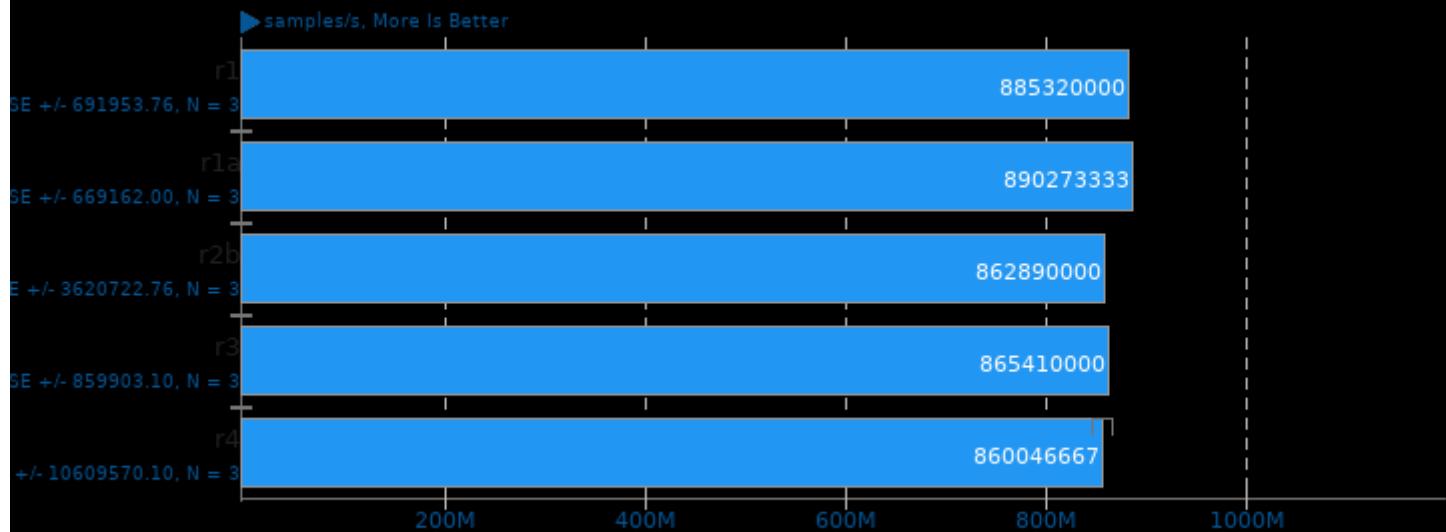
Harness: Convolution Batch Shapes Auto - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

Liquid-DSP 2021.01.31

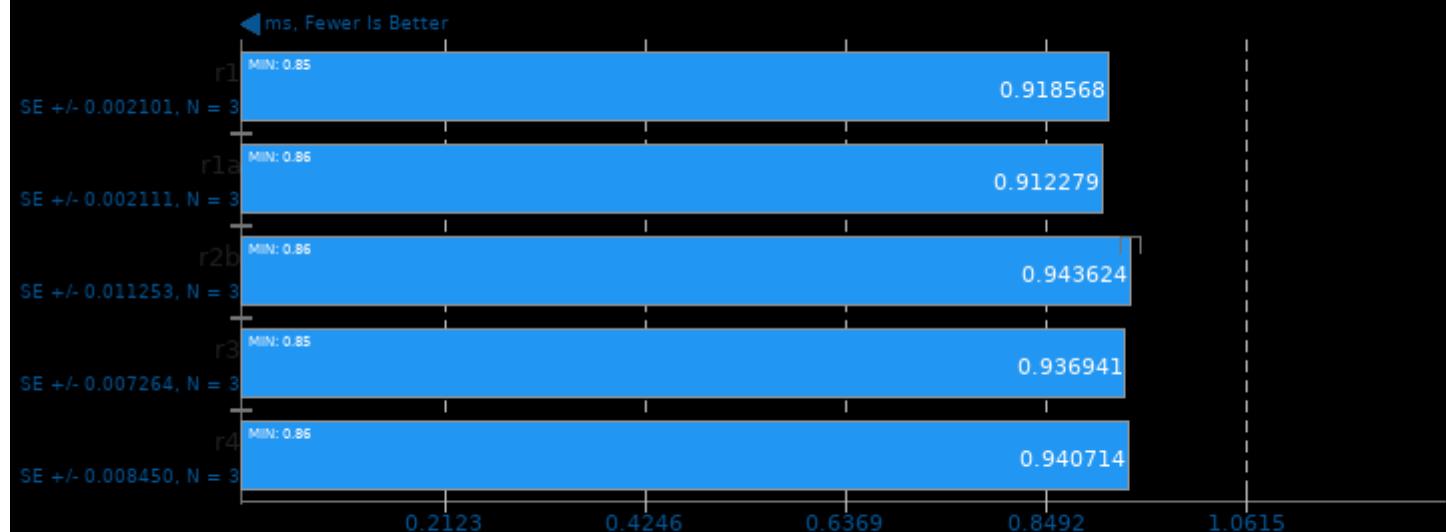
Threads: 16 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

oneDNN 2.1.2

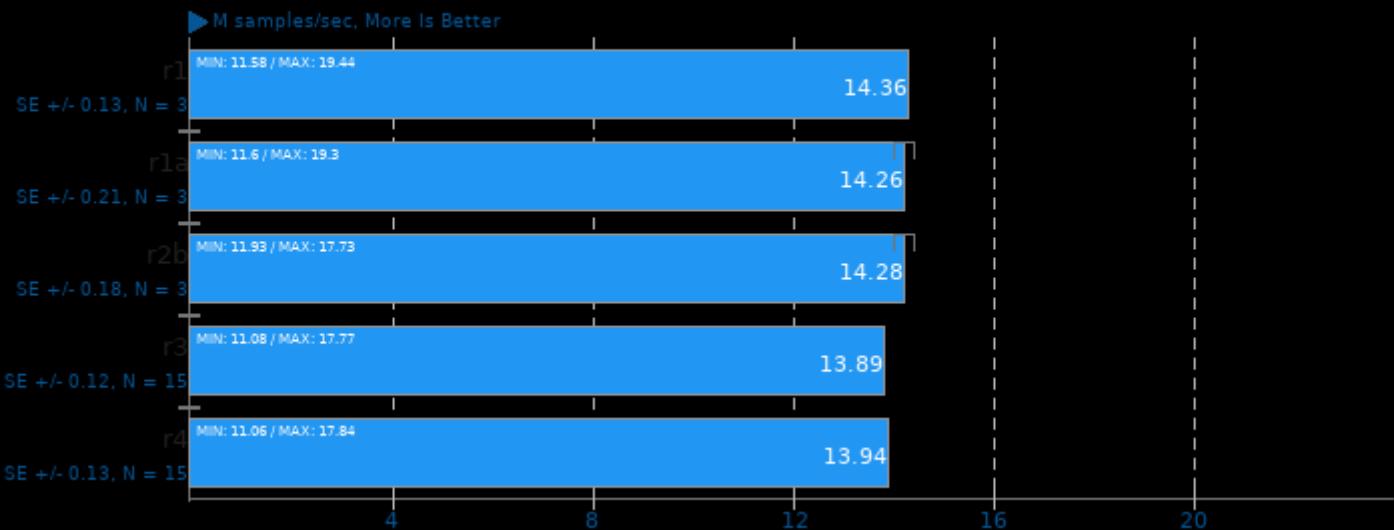
Harness: IP Shapes 1D - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

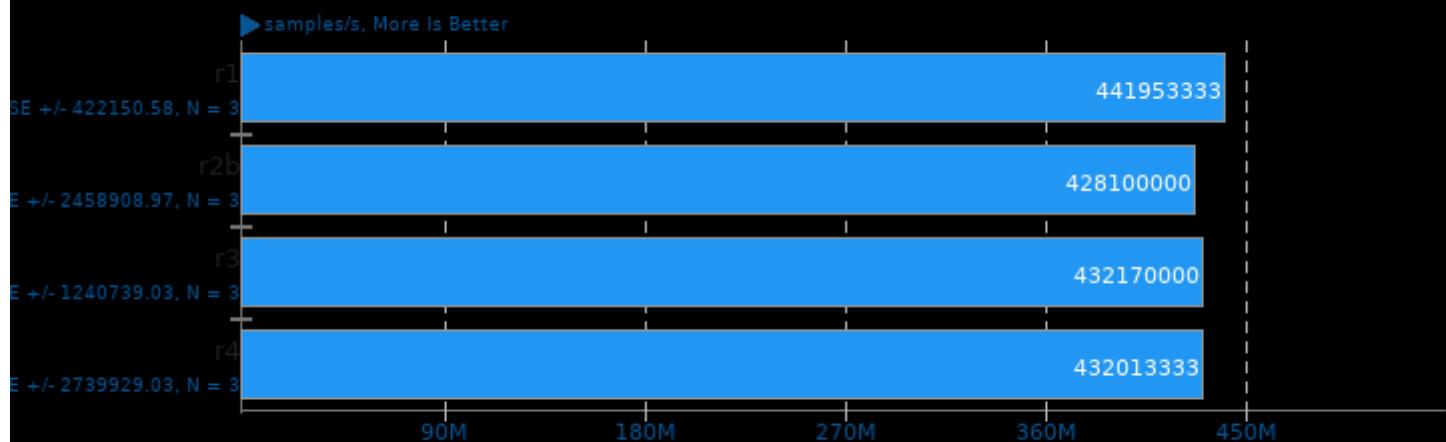
LuxCoreRender 2.5

Scene: Orange Juice - Acceleration: CPU



Liquid-DSP 2021.01.31

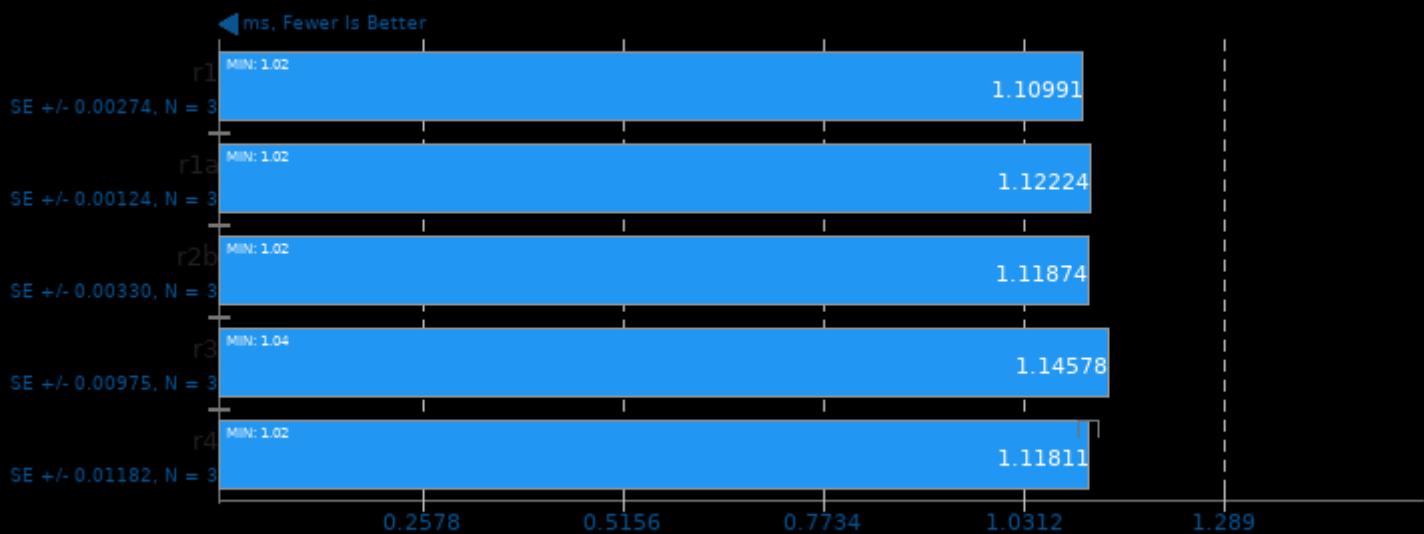
Threads: 8 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

oneDNN 2.1.2

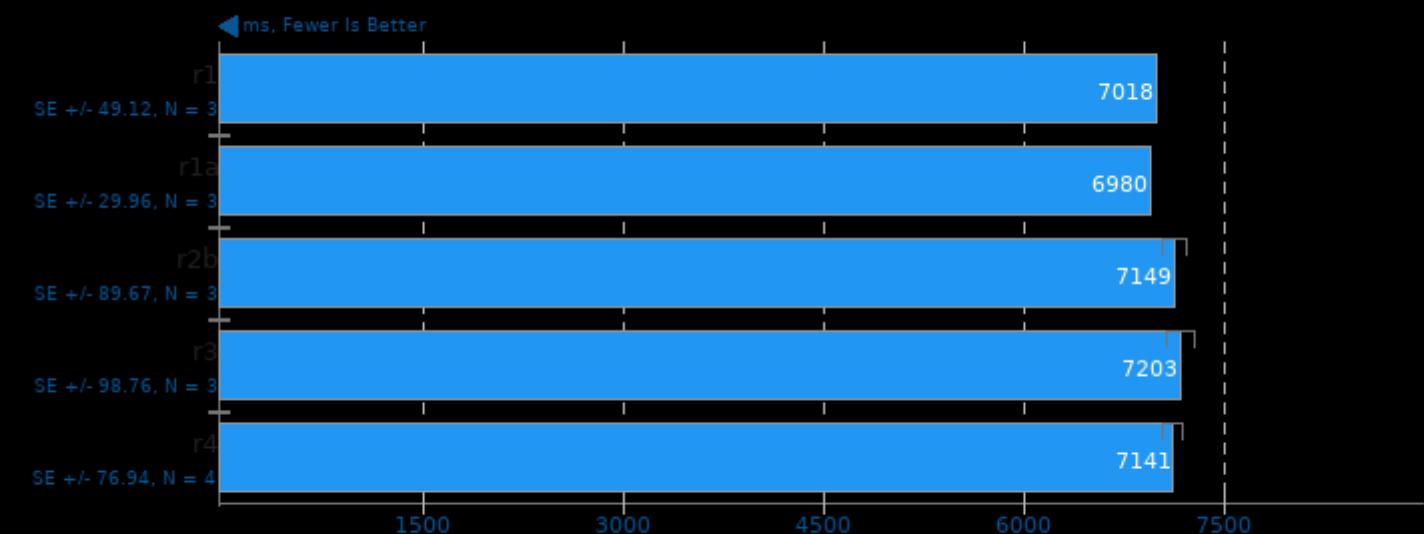
Harness: Convolution Batch Shapes Auto - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

toyBrot Fractal Generator 2020-11-18

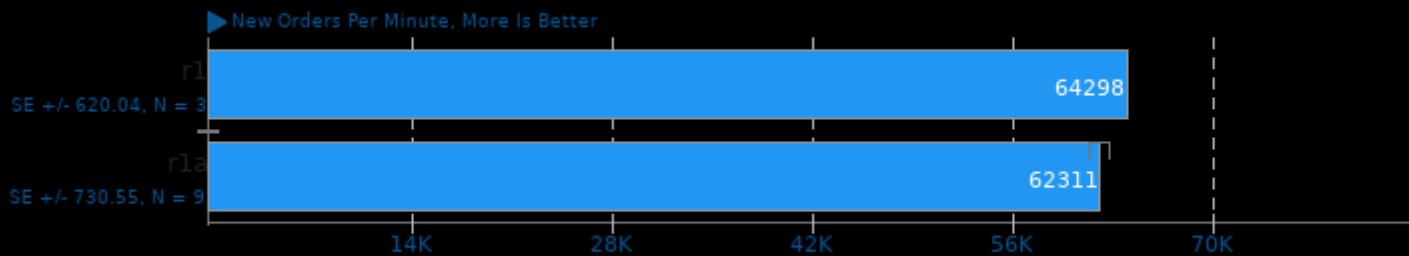
Implementation: C++ Threads



1. (CXX) g++ options: -O3 -lpthread -lm -lgcc -lgcc_s -lc

HammerDB - MariaDB 10.5.9

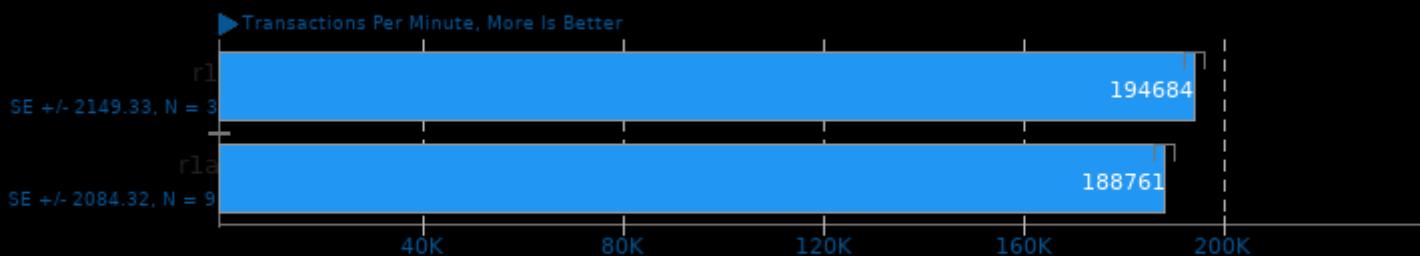
Virtual Users: 64 - Warehouses: 500



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

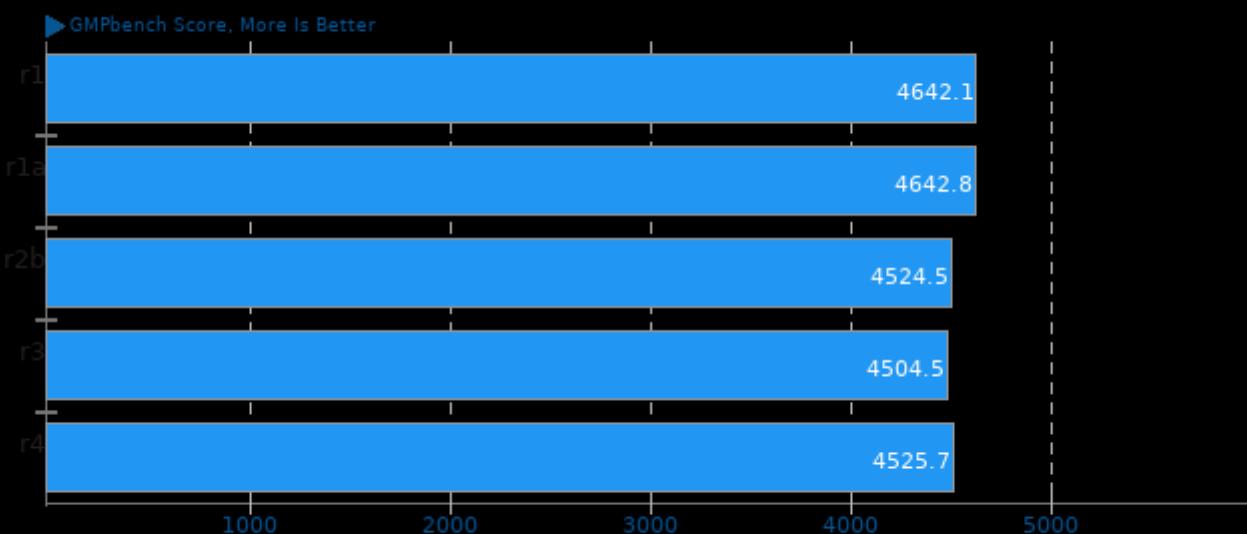
Virtual Users: 64 - Warehouses: 500



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

GNU GMP GMPbench 6.2.1

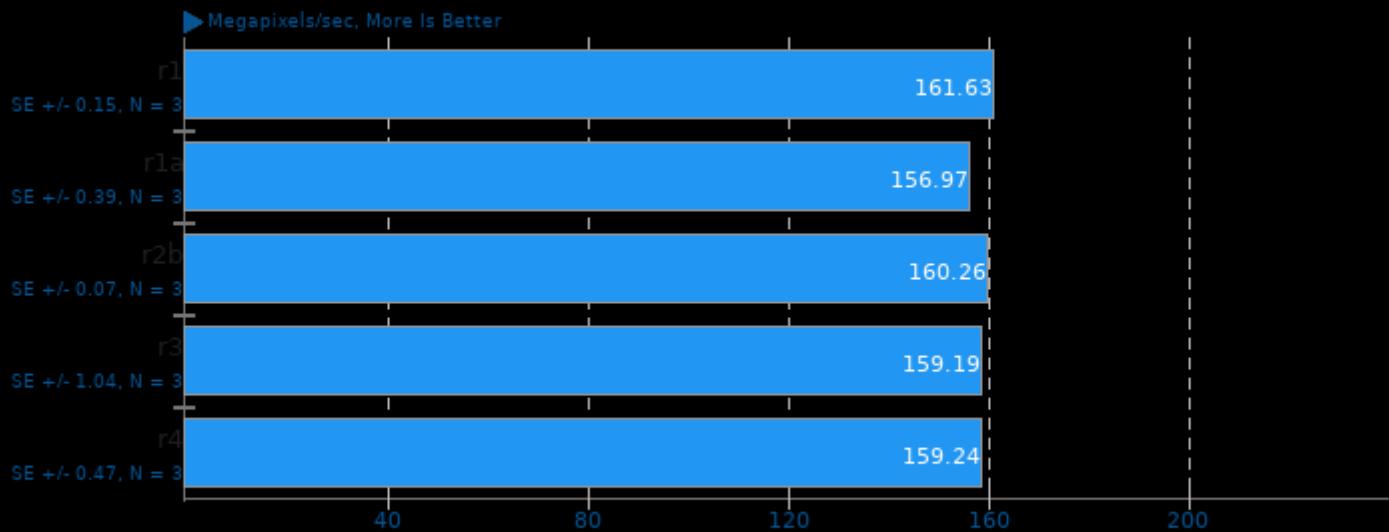
Total Time



1. (CC) gcc options: -O3 -fomit-frame-pointer -lm

libjpeg-turbo tjbench 2.1.0

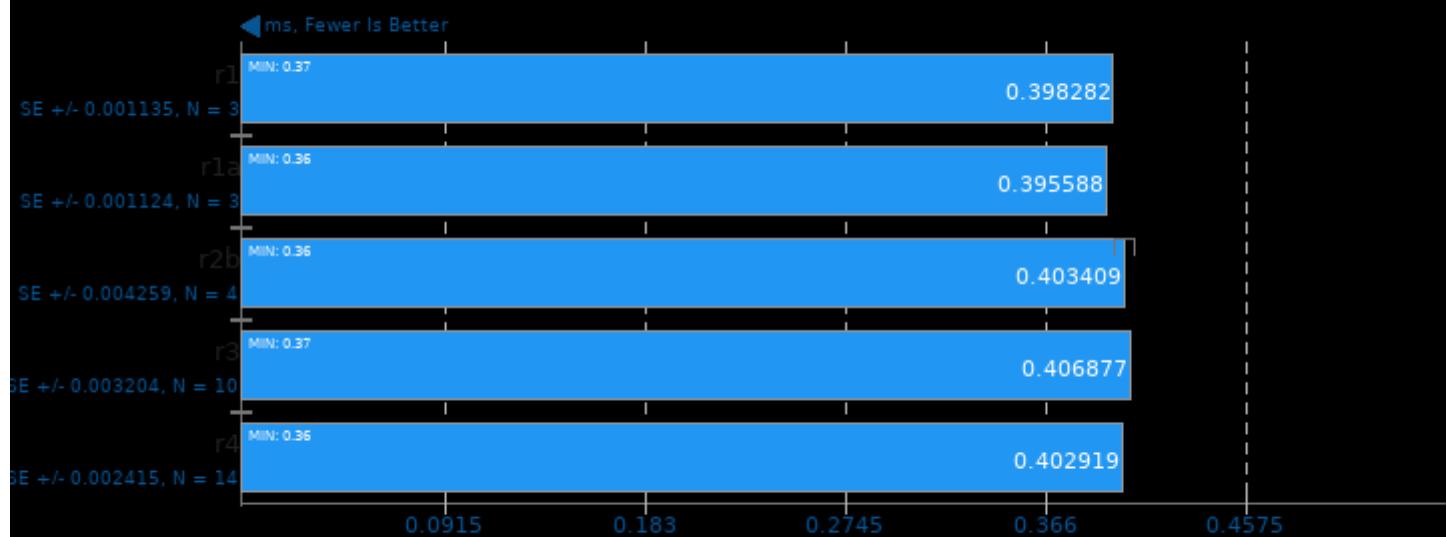
Test: Decompression Throughput



1. (CC) gcc options: -O3 -rdynamic

oneDNN 2.1.2

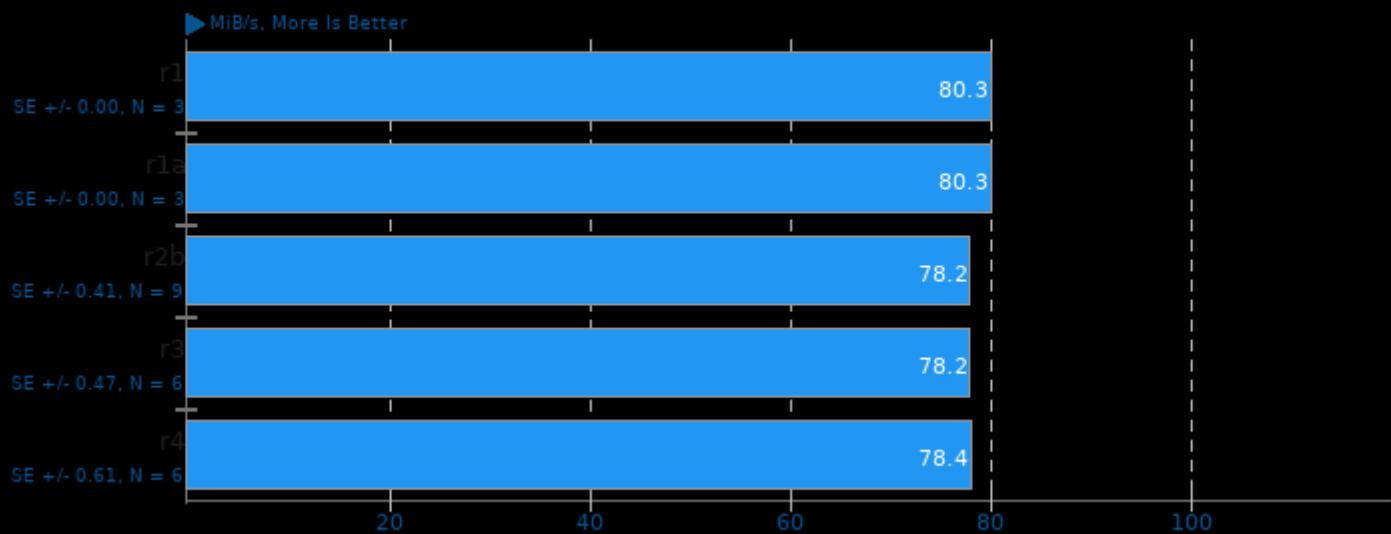
Harness: IP Shapes 3D - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

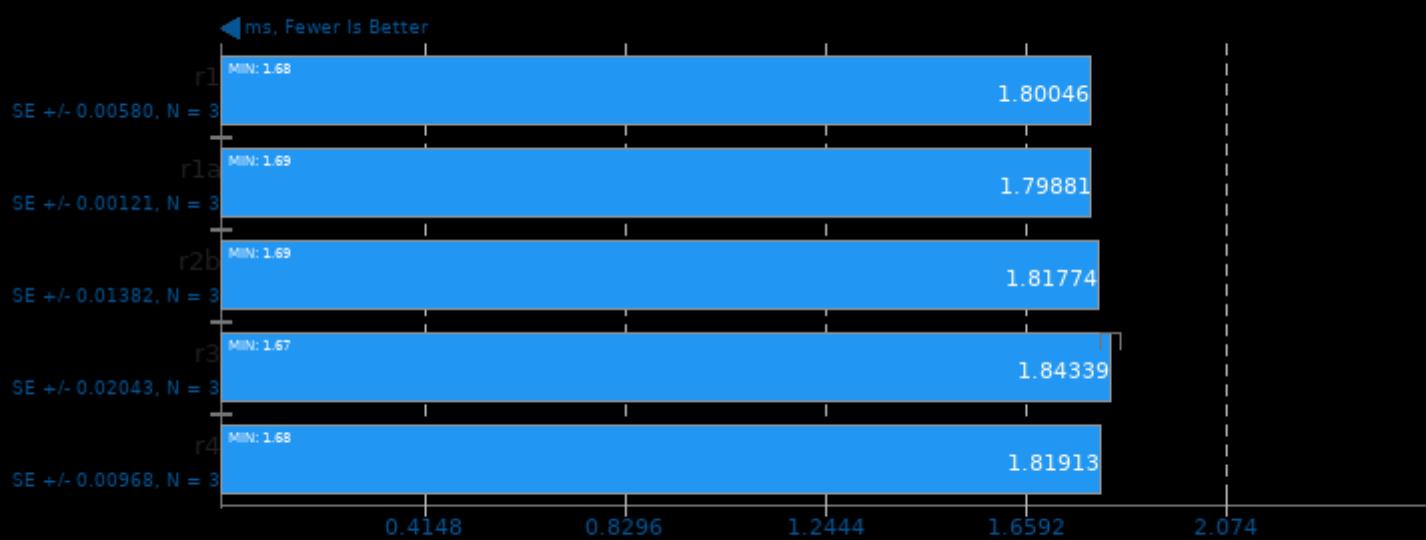
LuaRadio 0.9.1

Test: Hilbert Transform



oneDNN 2.1.2

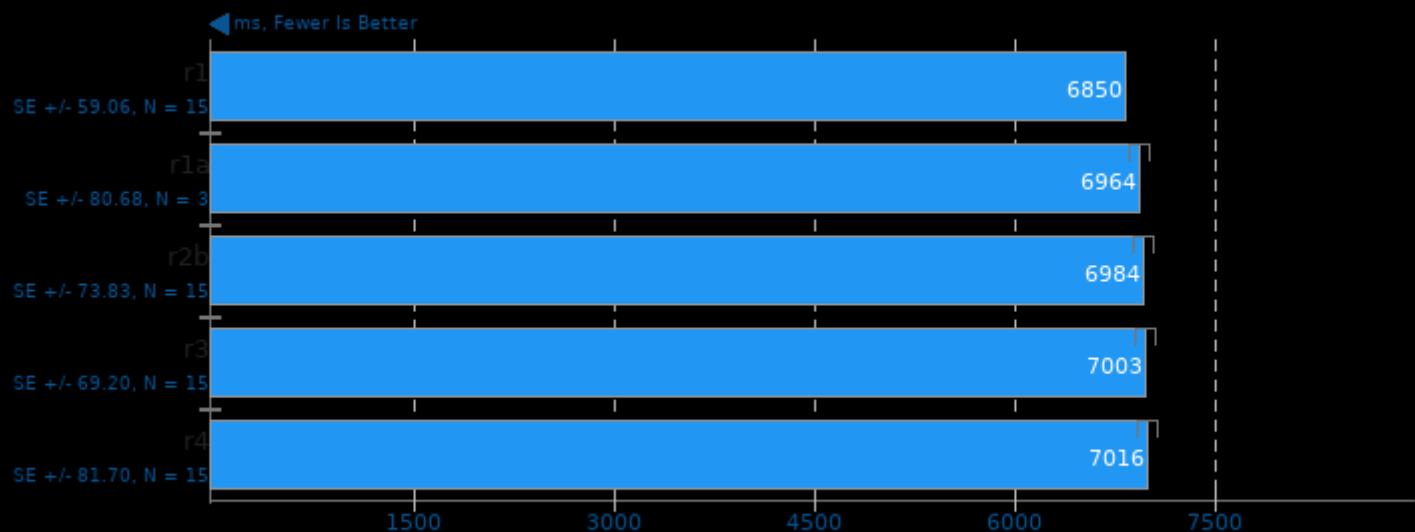
Harness: IP Shapes 3D - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

toyBrot Fractal Generator 2020-11-18

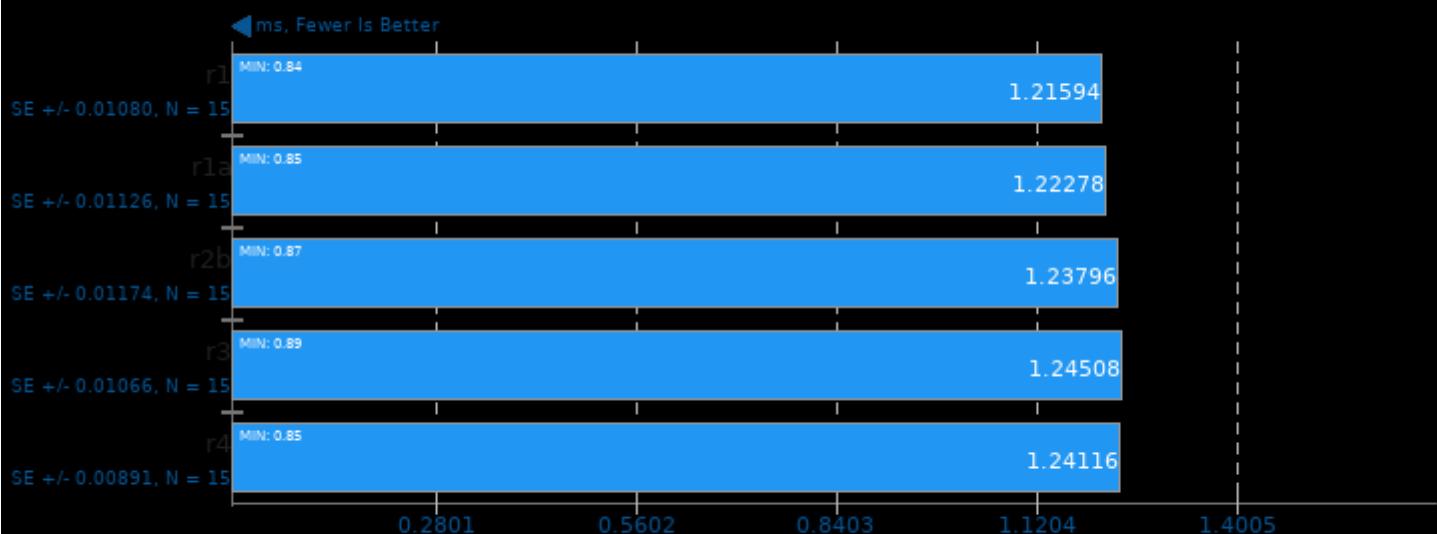
Implementation: TBB



1. (CXX) g++ options: -O3 -pthread -lm -lgcc -lgcc_s -lc

oneDNN 2.1.2

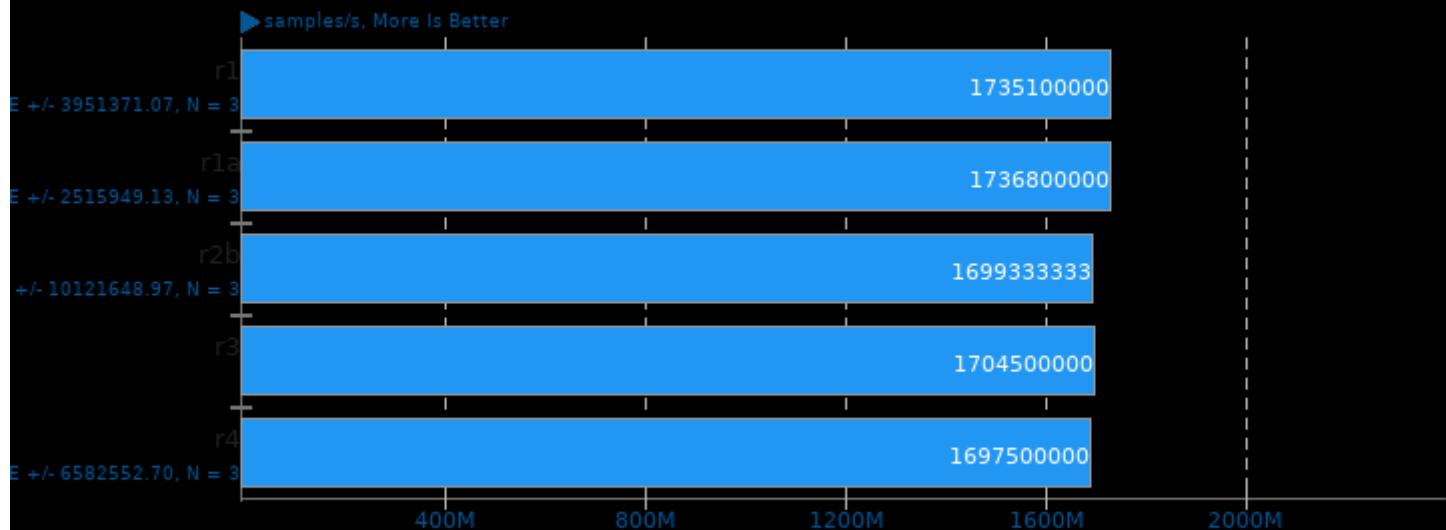
Harness: IP Shapes 1D - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -pthread -ldl

Liquid-DSP 2021.01.31

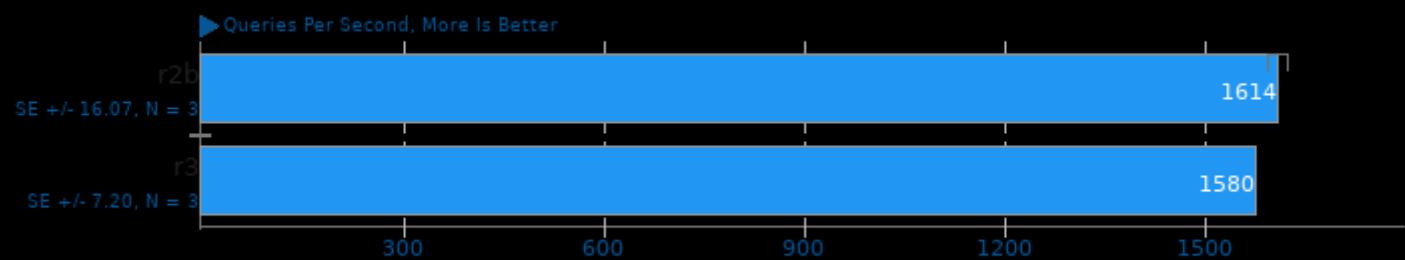
Threads: 32 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

MariaDB 10.5.2

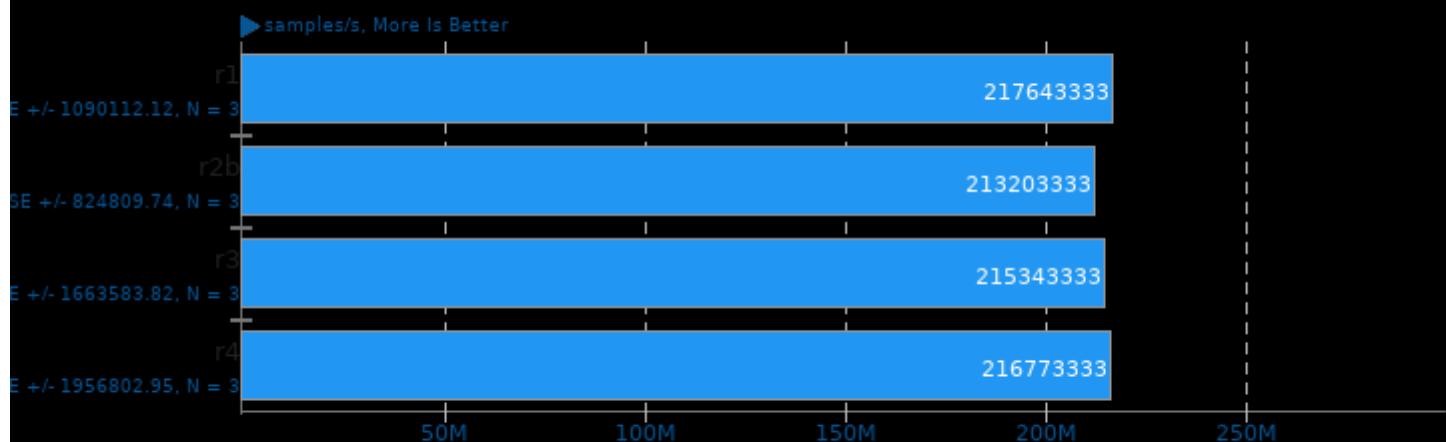
Clients: 4



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lsnappy -ldl -lz -lrt

Liquid-DSP 2021.01.31

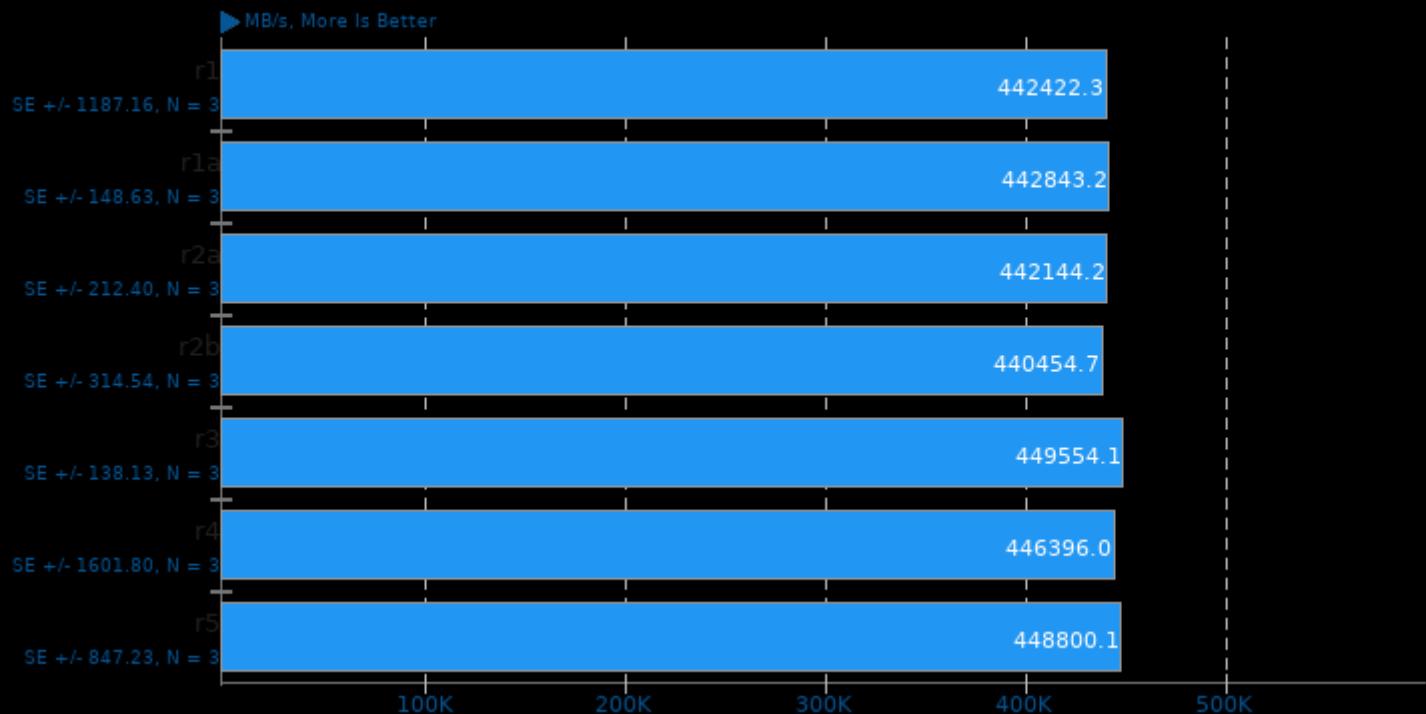
Threads: 4 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

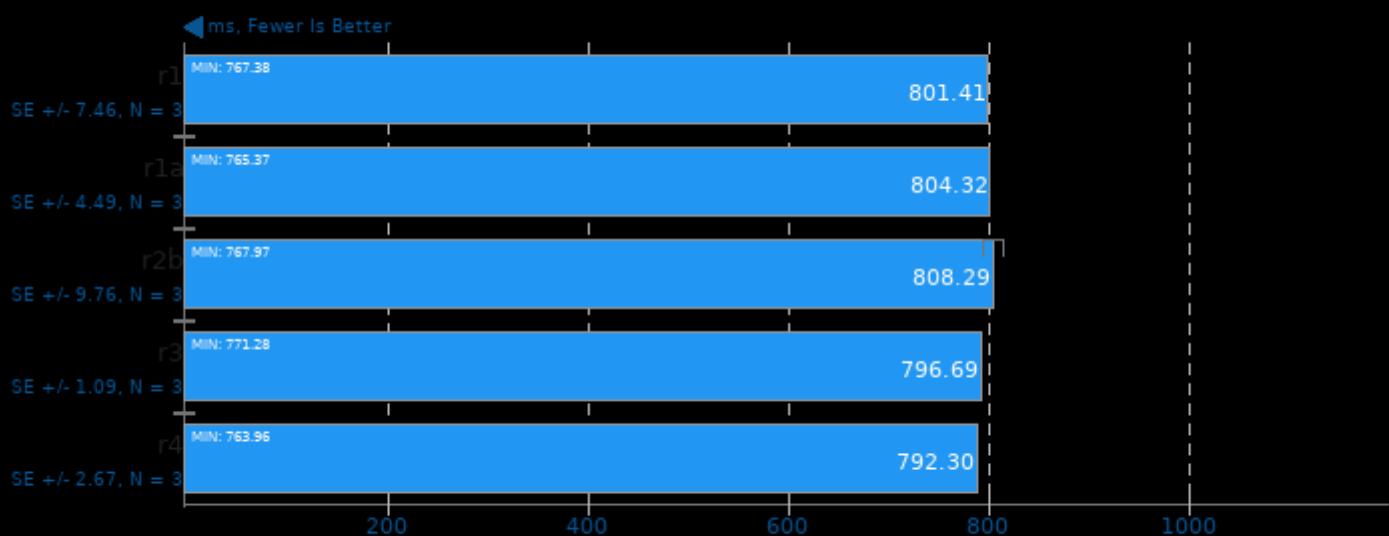
Intel Memory Latency Checker

Test: Peak Injection Bandwidth - 1:1 Reads-Writes



oneDNN 2.1.2

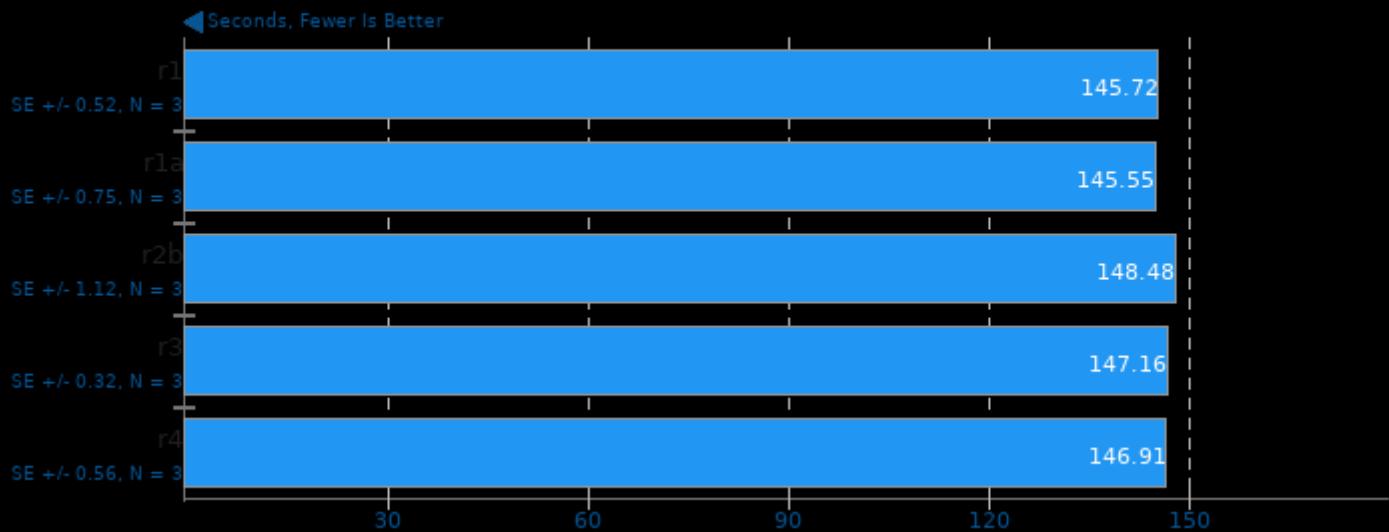
Harness: Recurrent Neural Network Training - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

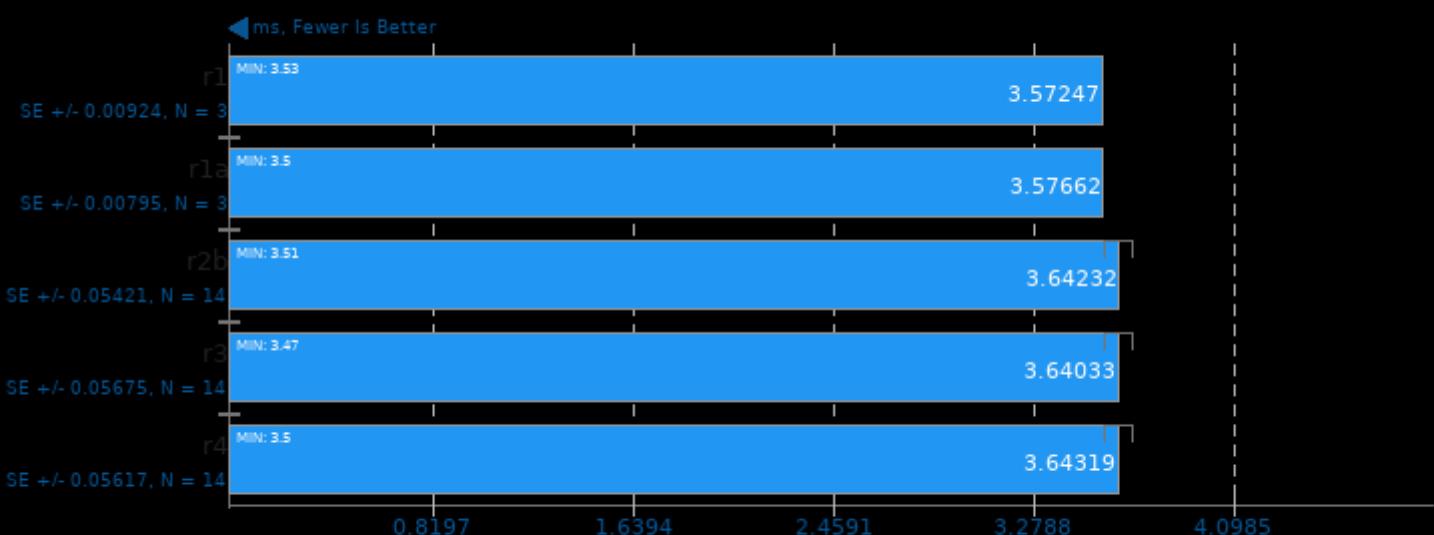
Timed LLVM Compilation 12.0

Build System: Ninja



oneDNN 2.1.2

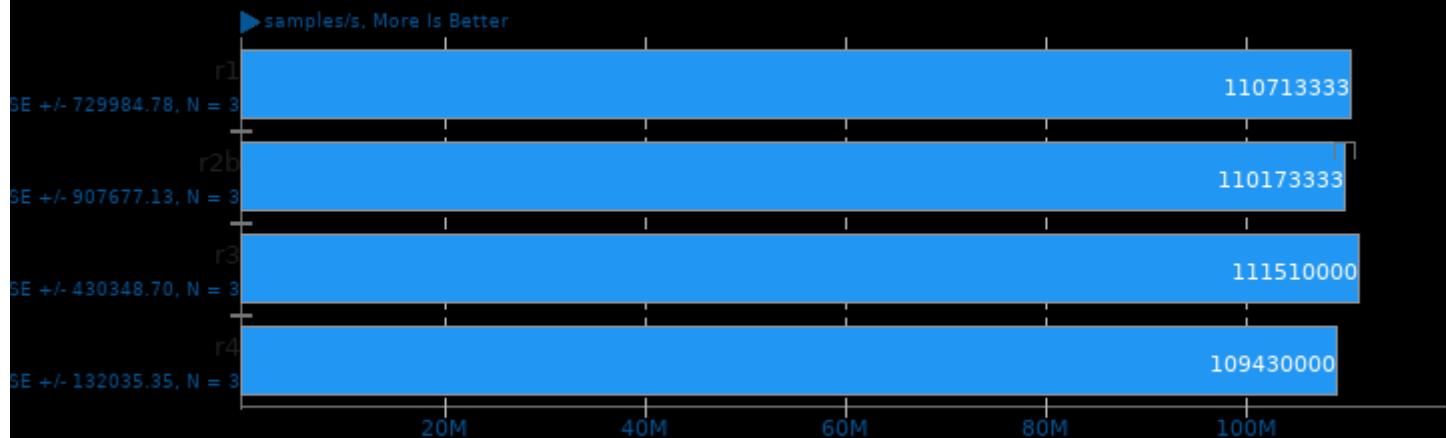
Harness: Deconvolution Batch shapes_3d - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

Liquid-DSP 2021.01.31

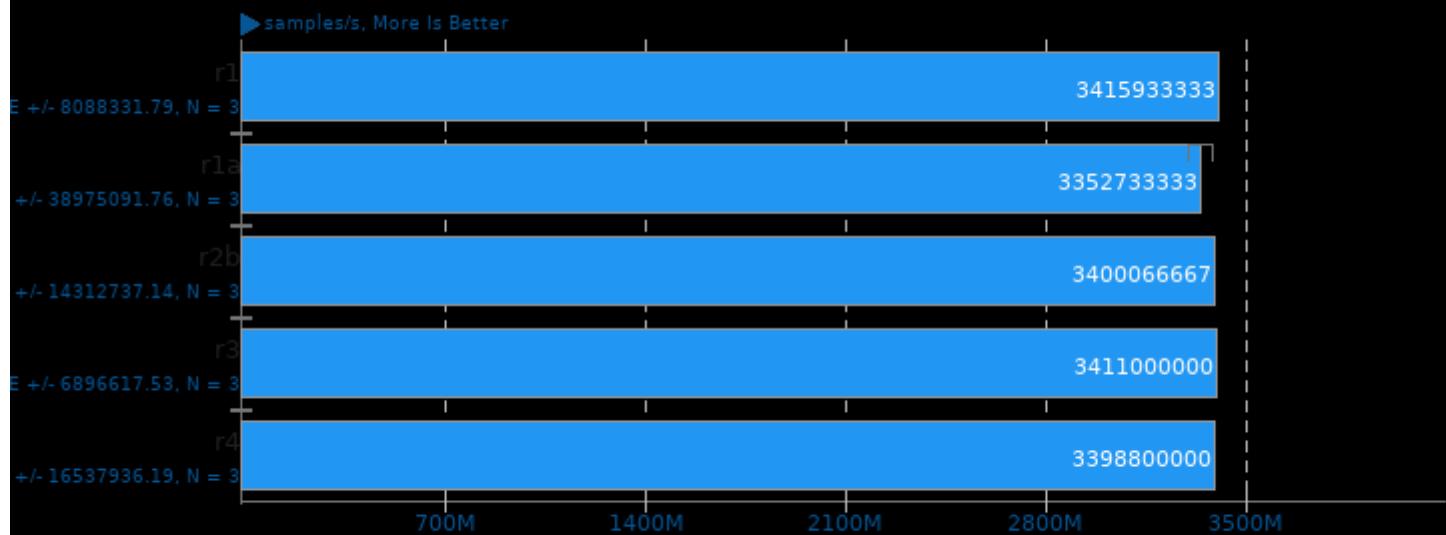
Threads: 2 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

Liquid-DSP 2021.01.31

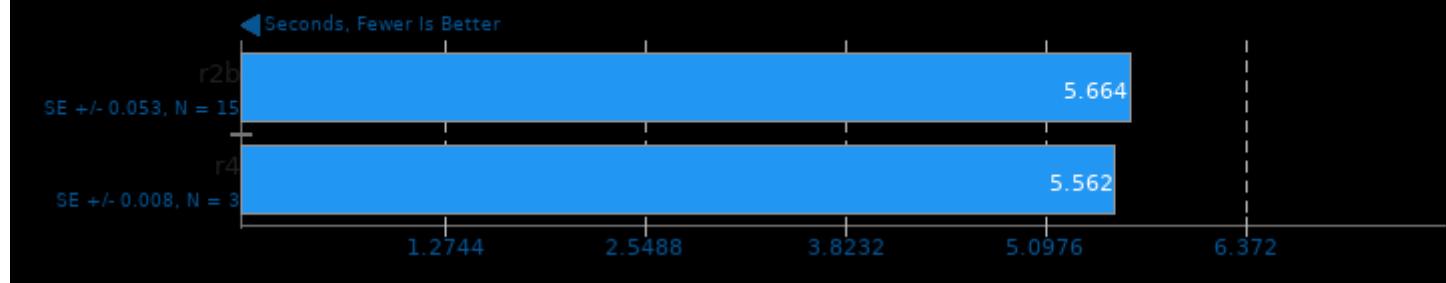
Threads: 128 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

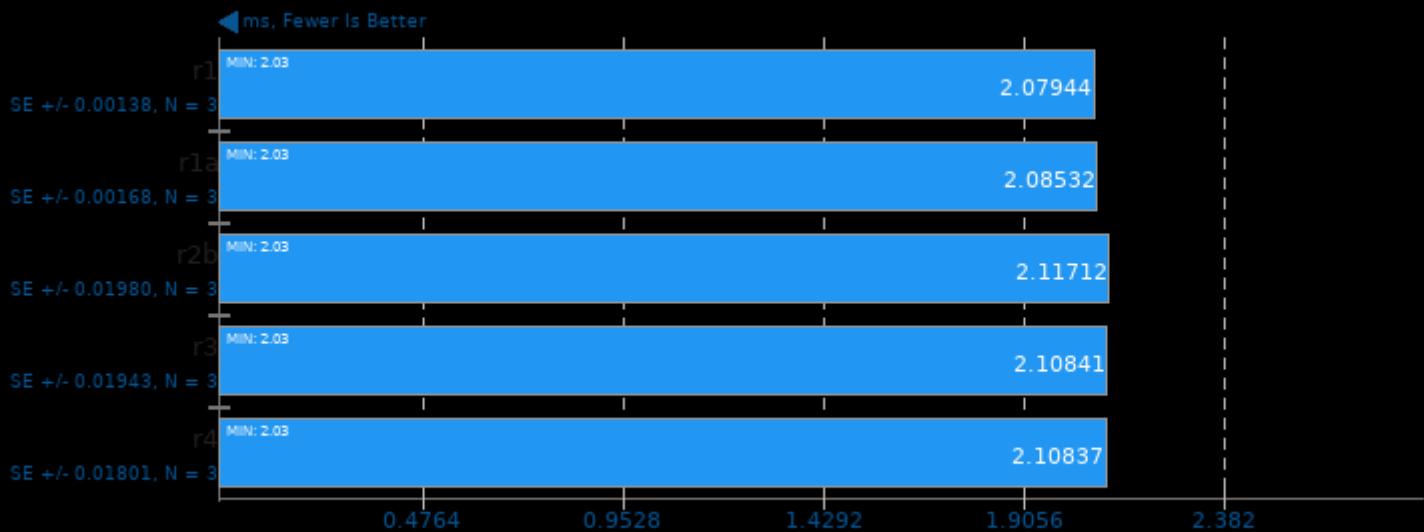
KTX-Software toktx 4.0

Settings: UASTC 3



oneDNN 2.1.2

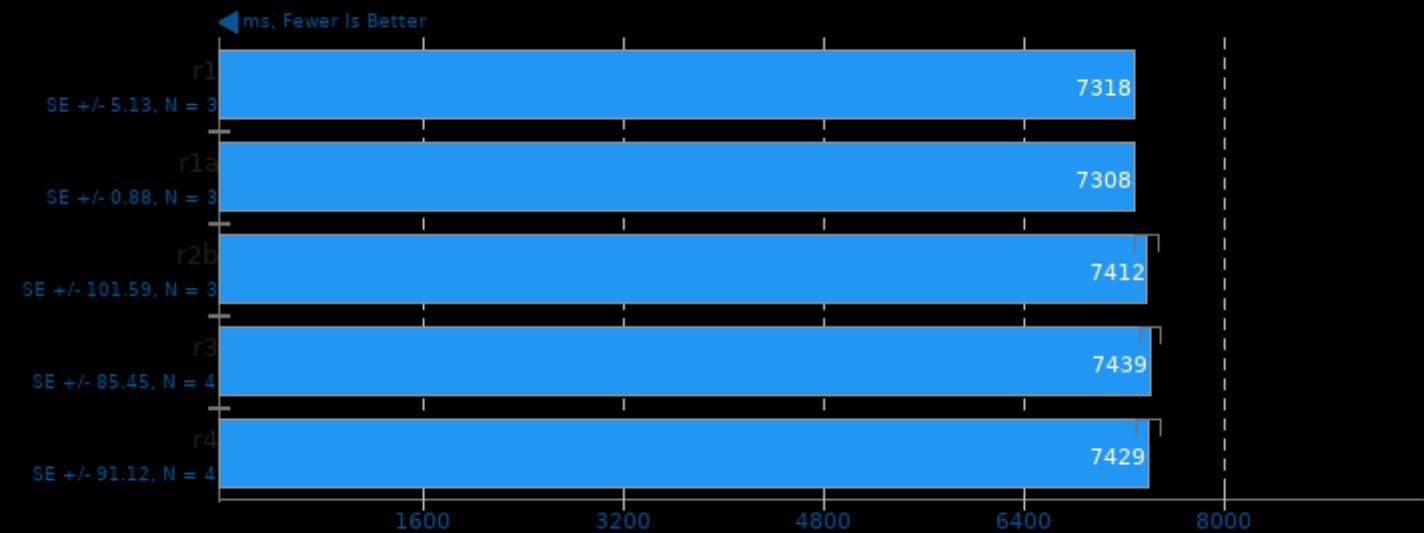
Harness: Convolution Batch Shapes Auto - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -mssse4.1 -fPIC -pie -lpthread -ldl

toyBrot Fractal Generator 2020-11-18

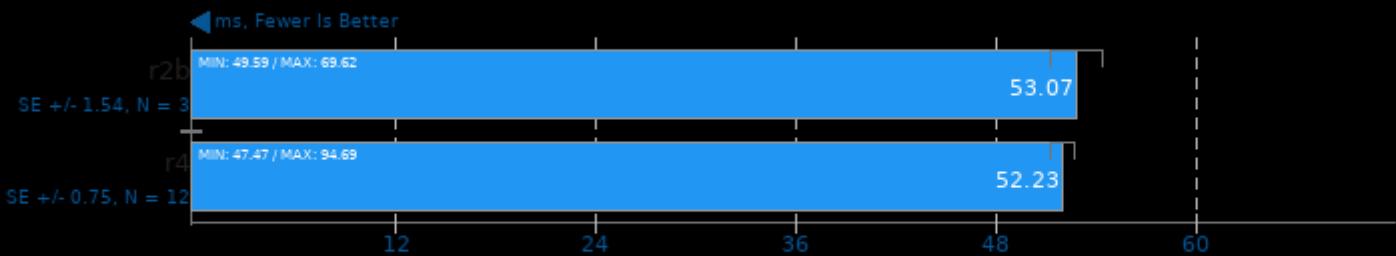
Implementation: OpenMP



1. (CXX) g++ options: -O3 -lpthread -lm -lgcc -lgcc_s -lc

Mobile Neural Network 1.1.3

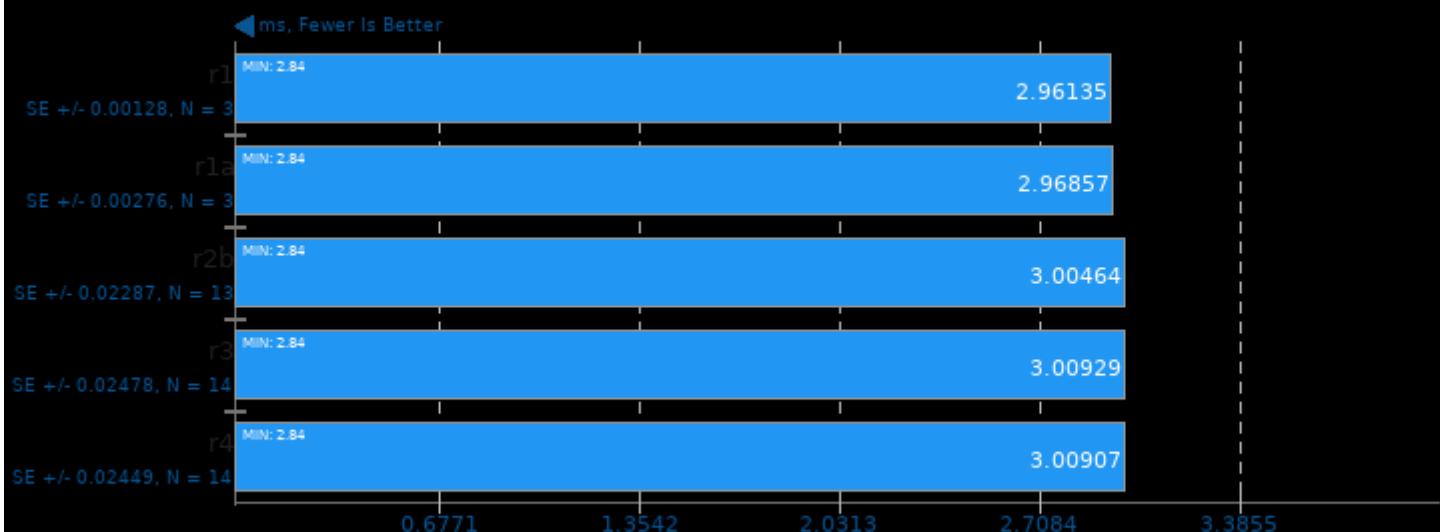
Model: inception-v3



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fno-threadsafe-statics

oneDNN 2.1.2

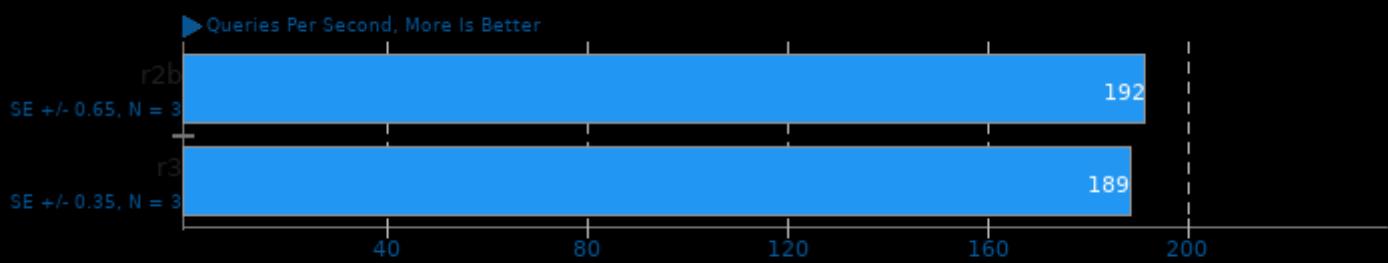
Harness: IP Shapes 1D - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

MariaDB 10.5.2

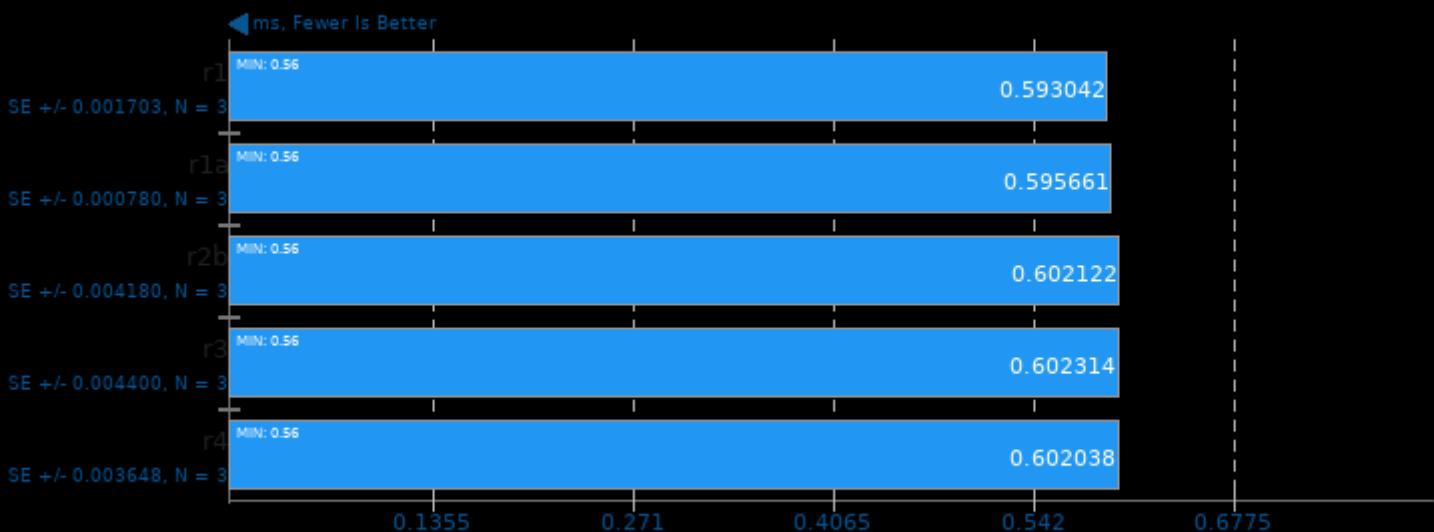
Clients: 128



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lsnappy -ldl -lz -lrt

oneDNN 2.1.2

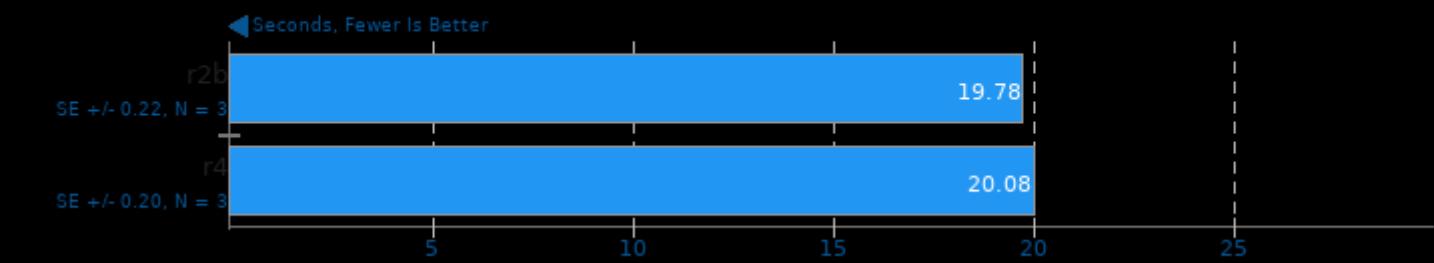
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

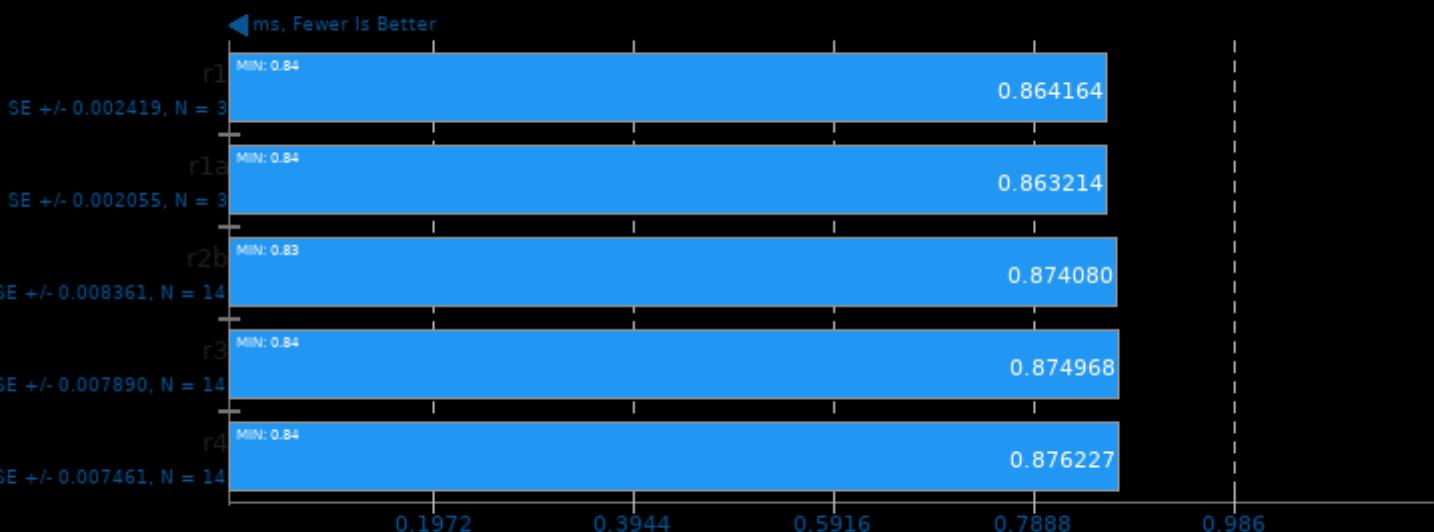
KTX-Software toktx 4.0

Settings: Zstd Compression 19



oneDNN 2.1.2

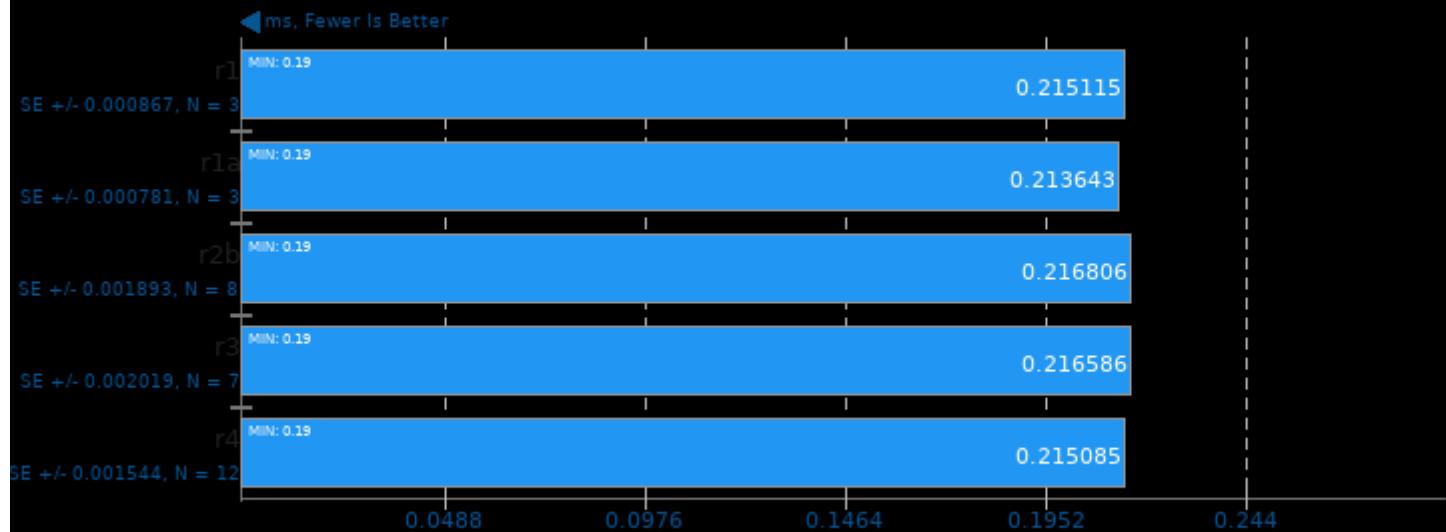
Harness: Deconvolution Batch shapes_3d - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 2.1.2

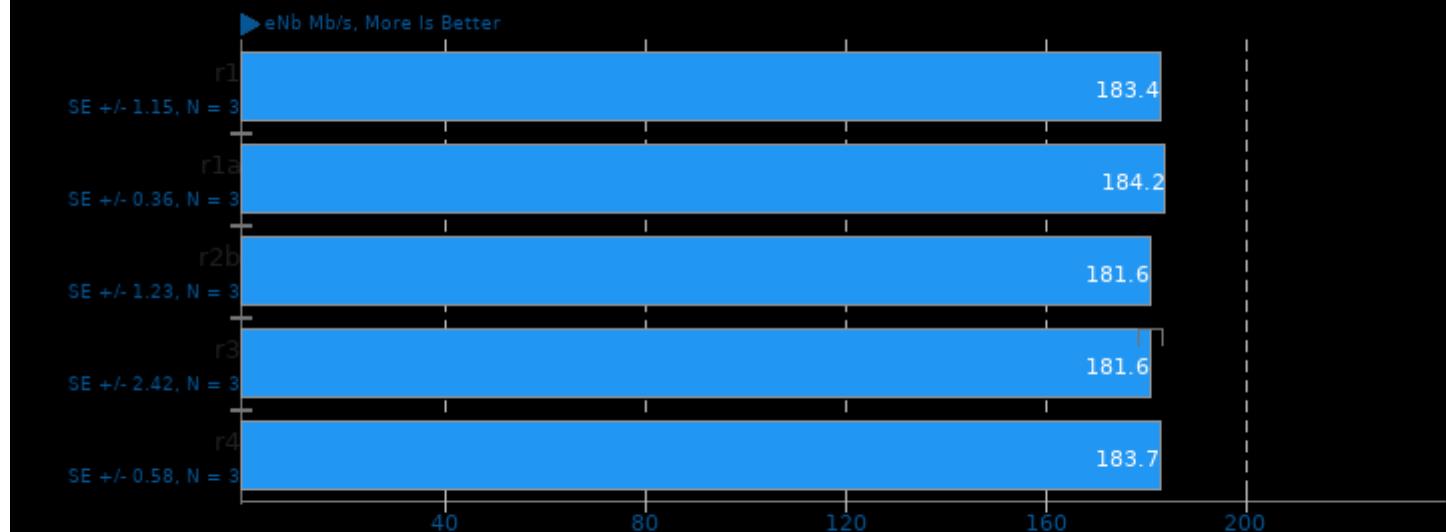
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

srsLTE 20.10.1

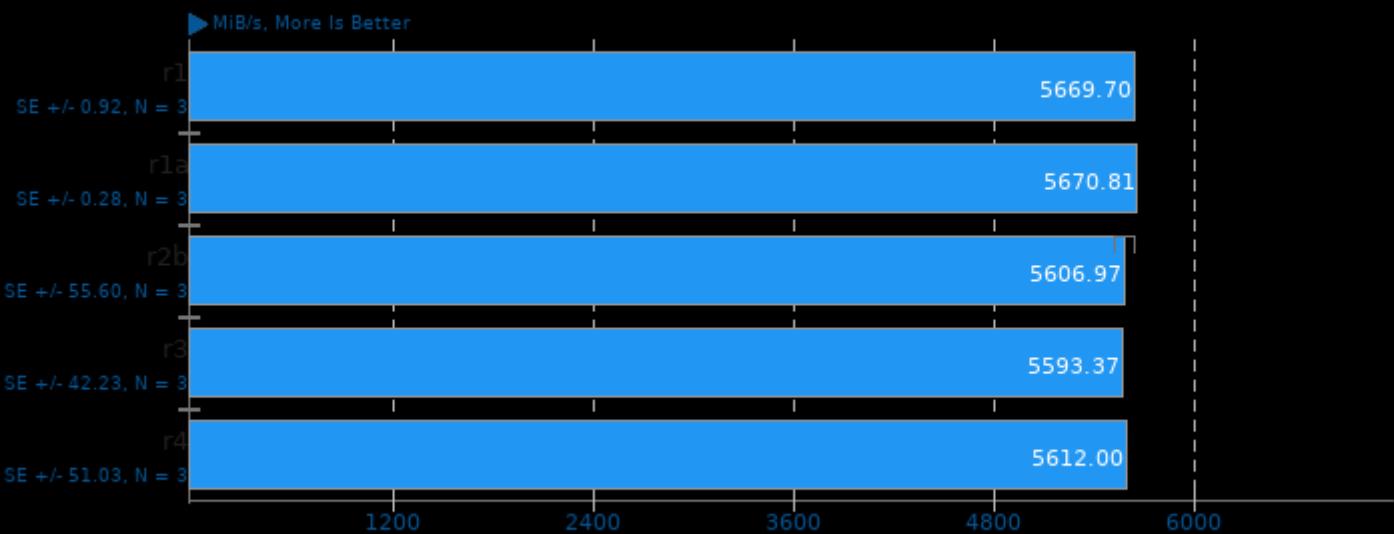
Test: PHY_DL_Test



1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno

Botan 2.17.3

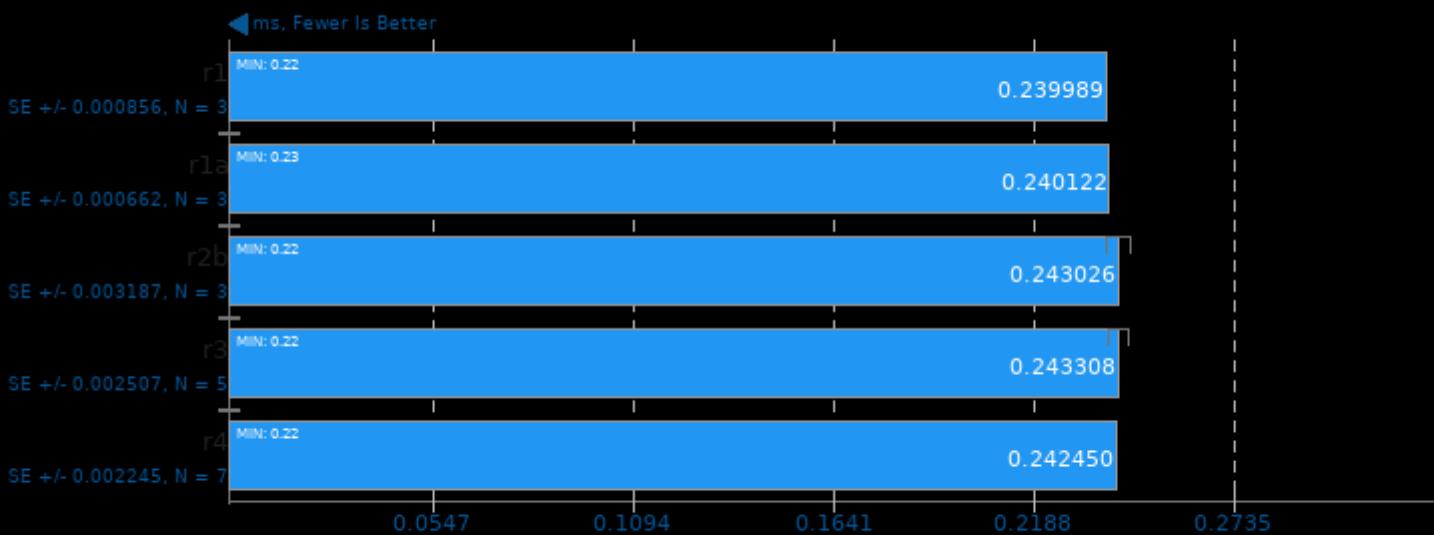
Test: AES-256



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

oneDNN 2.1.2

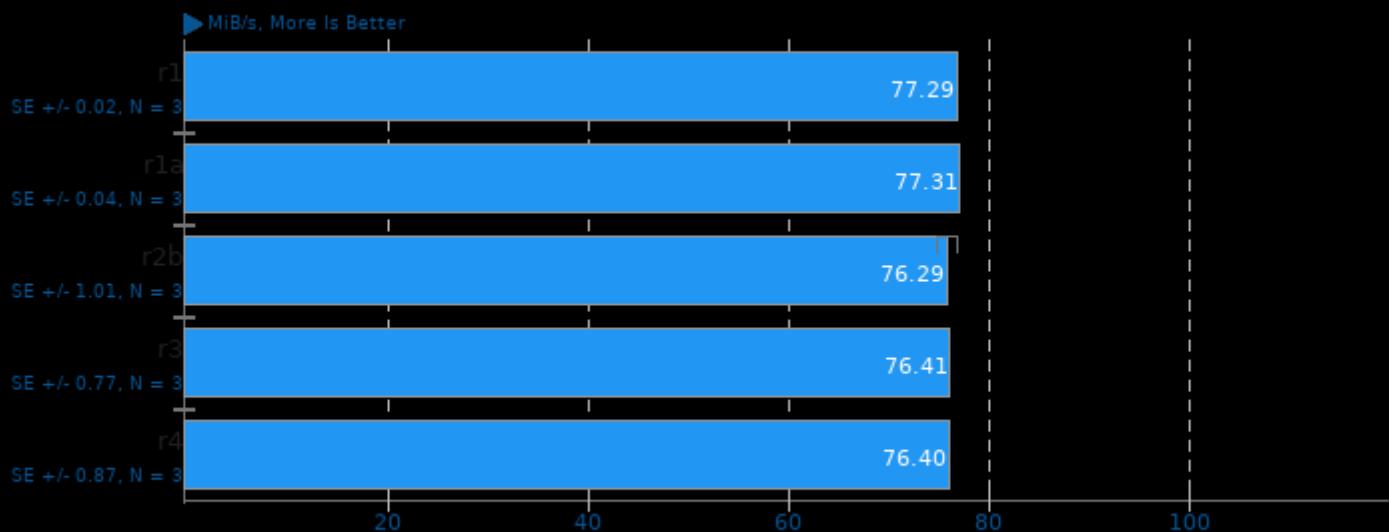
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

Botan 2.17.3

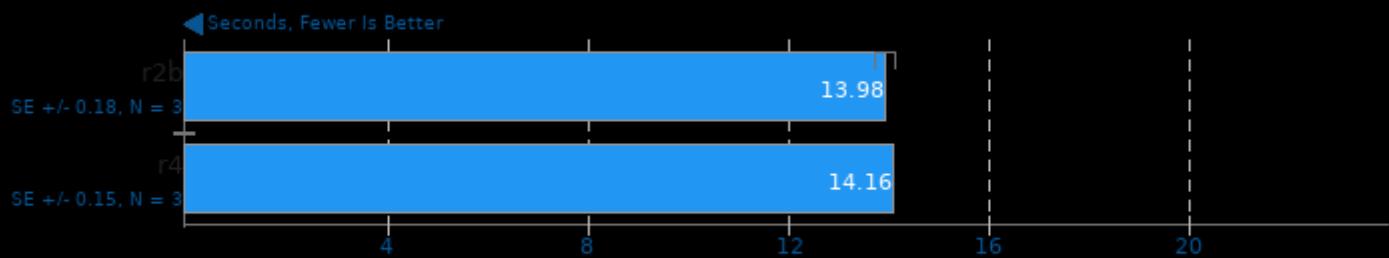
Test: KASUMI



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Basis Universal 1.13

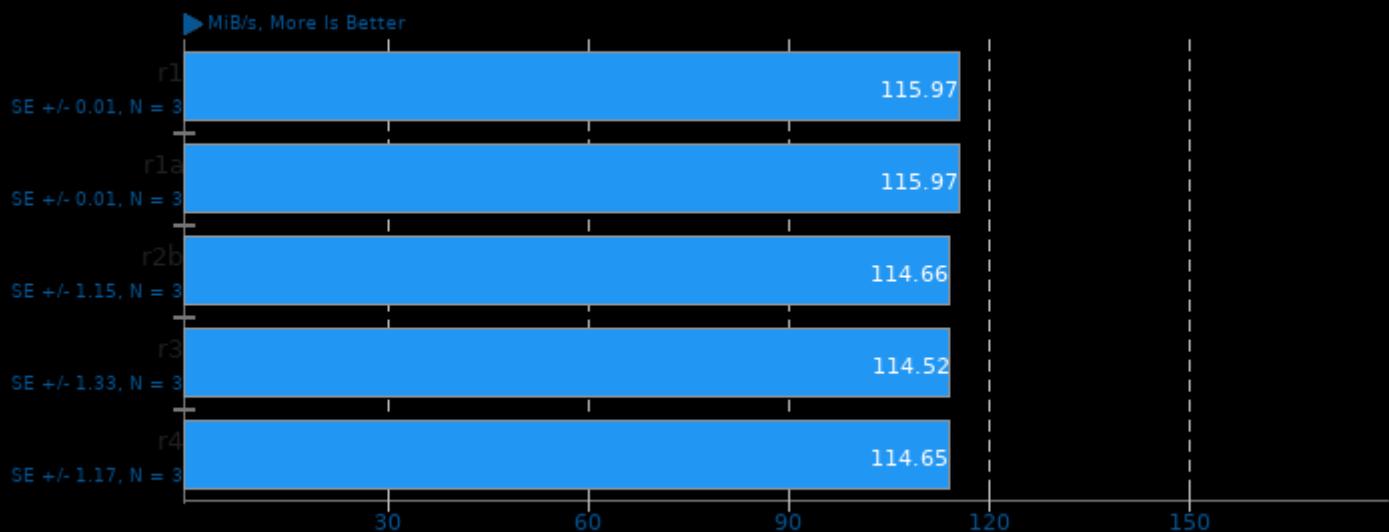
Settings: UASTC Level 2



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

Botan 2.17.3

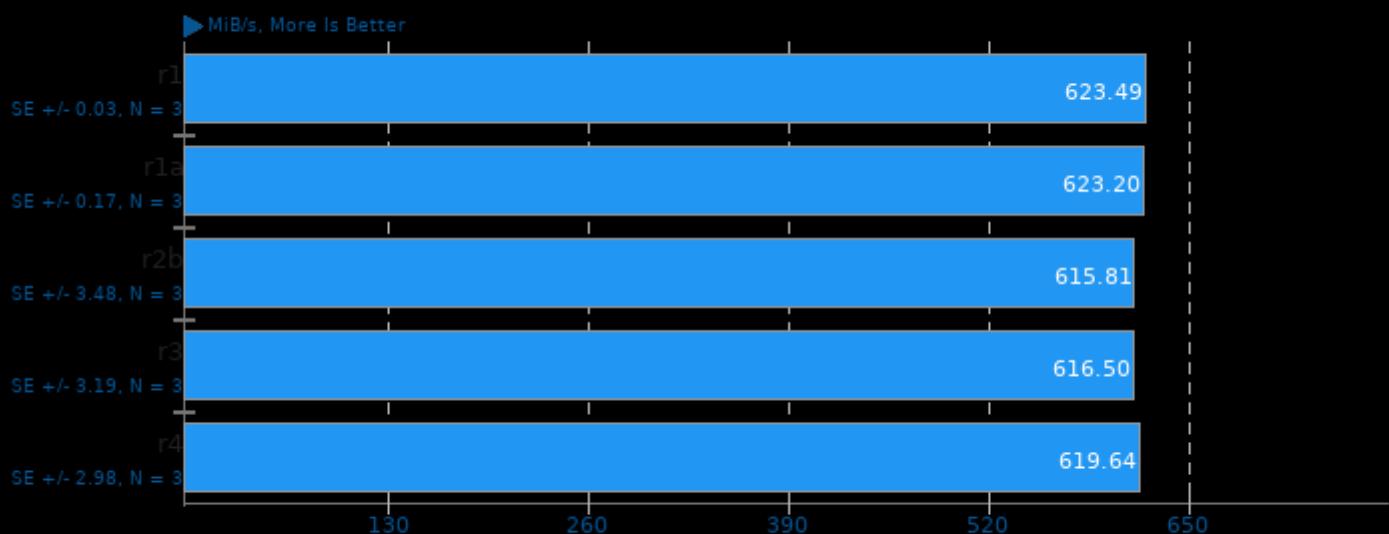
Test: CAST-256



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.17.3

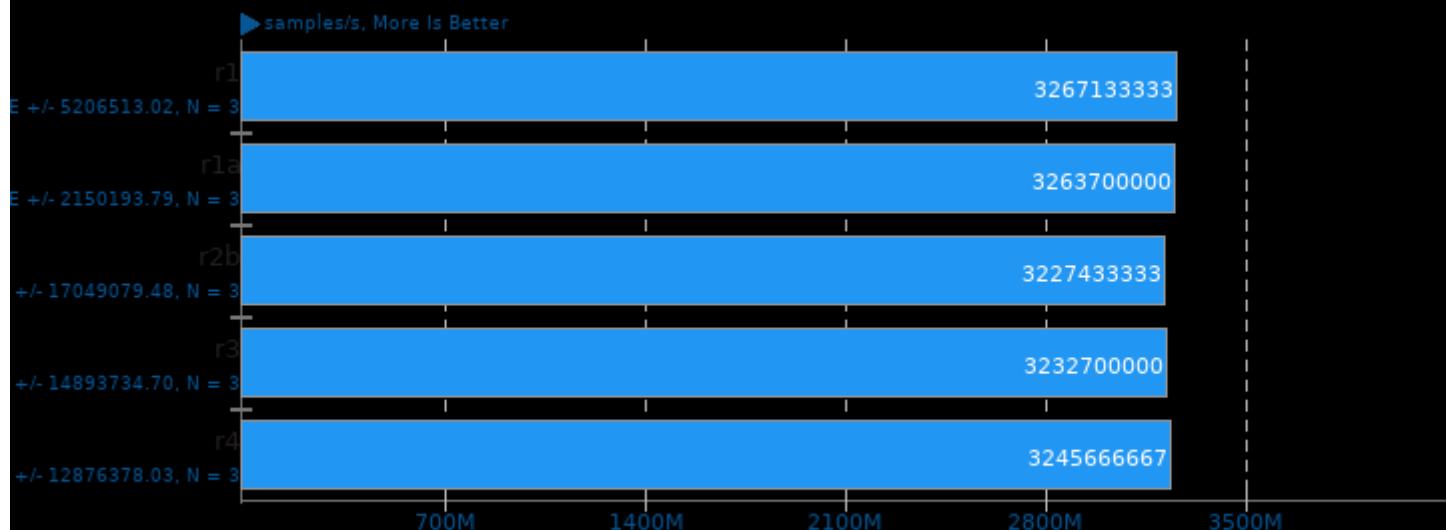
Test: ChaCha20Poly1305



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Liquid-DSP 2021.01.31

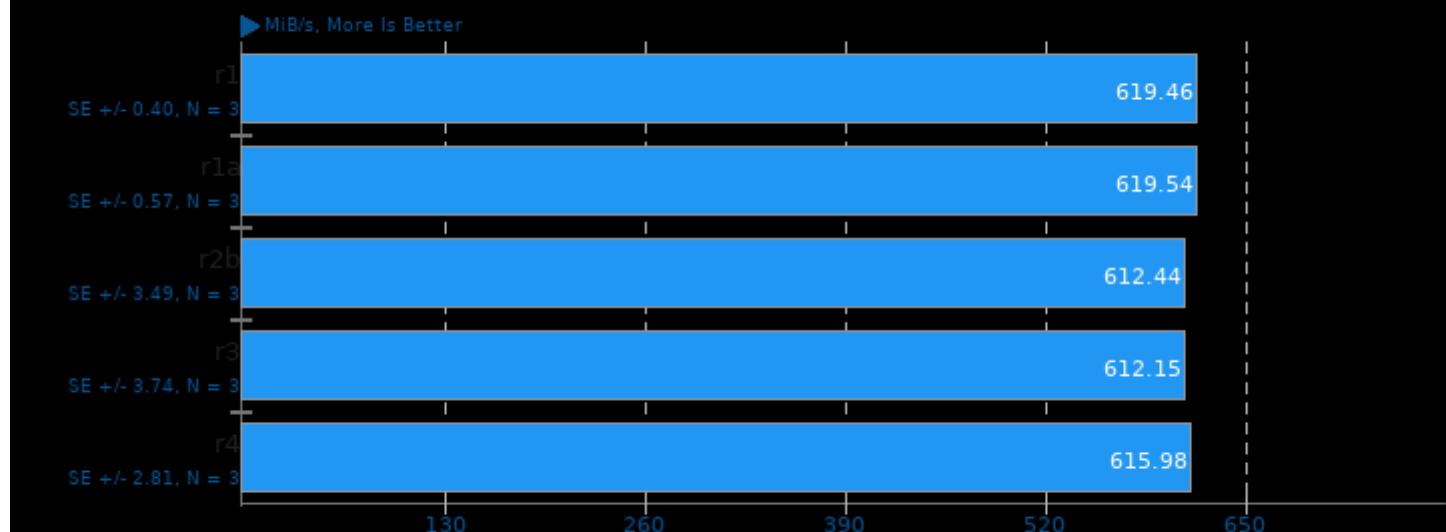
Threads: 64 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

Botan 2.17.3

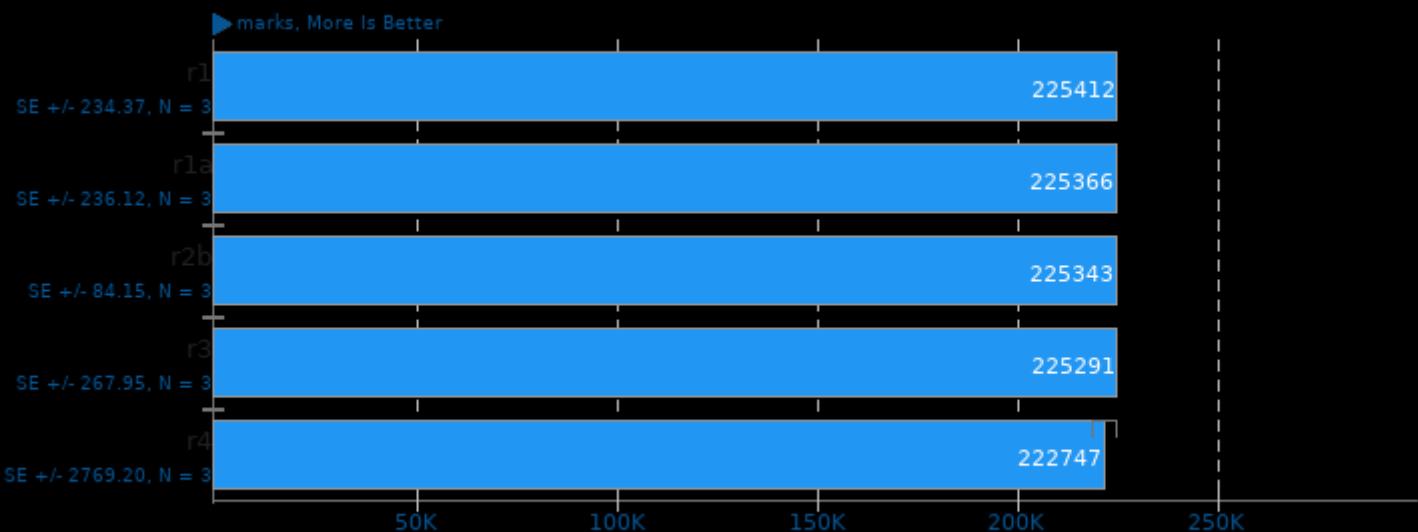
Test: ChaCha20Poly1305 - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

SecureMark 1.0.4

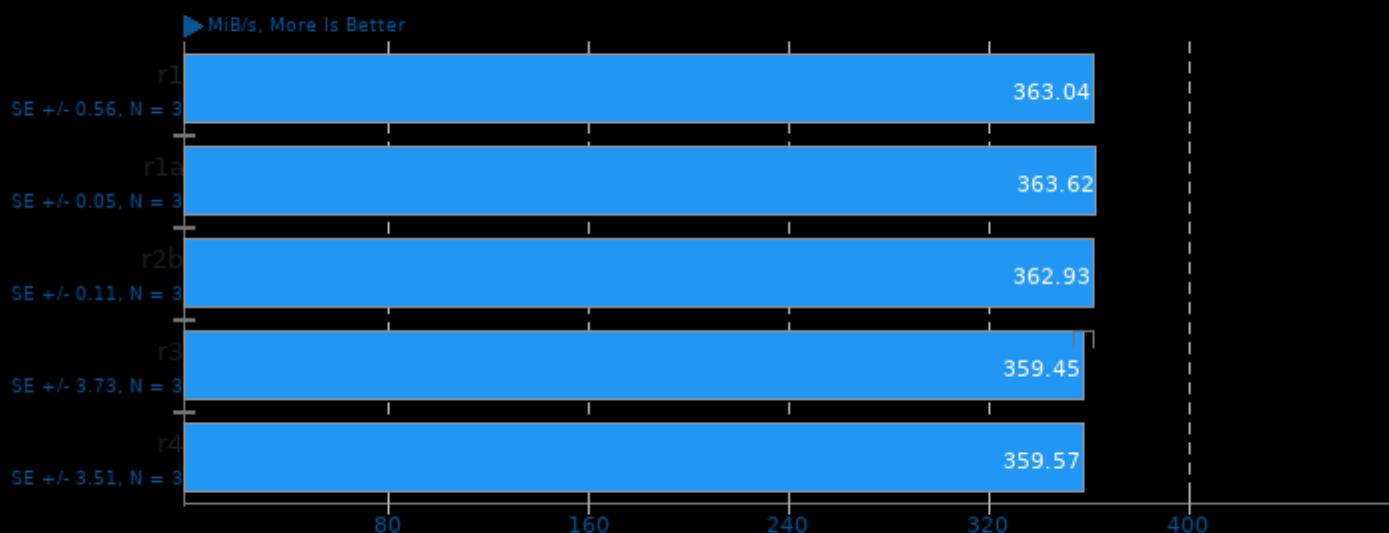
Benchmark: SecureMark-TLS



1. (CC) gcc options: -pedantic -O3

Botan 2.17.3

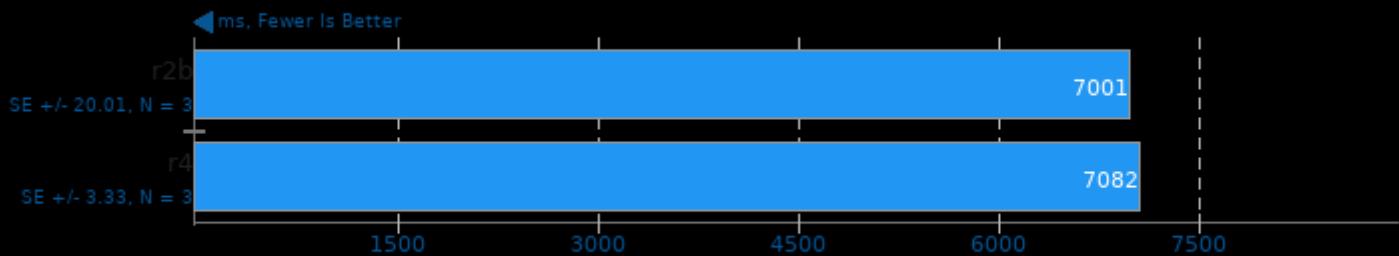
Test: Blowfish



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Google Draco 1.4.1

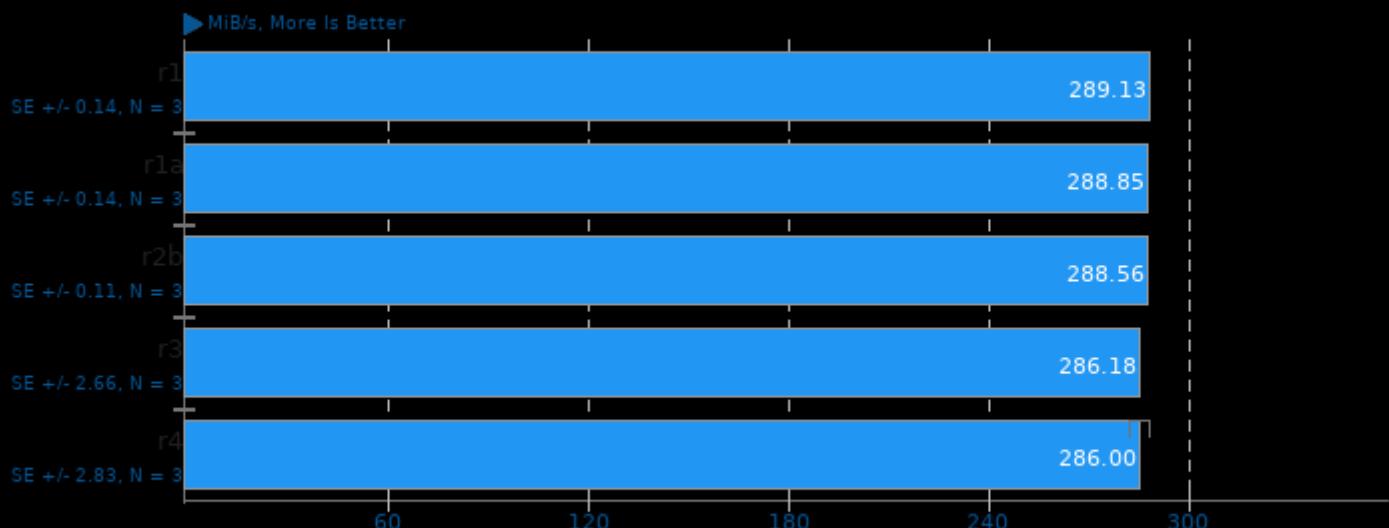
Model: Church Facade



1. (CXX) g++ options: -O3

Botan 2.17.3

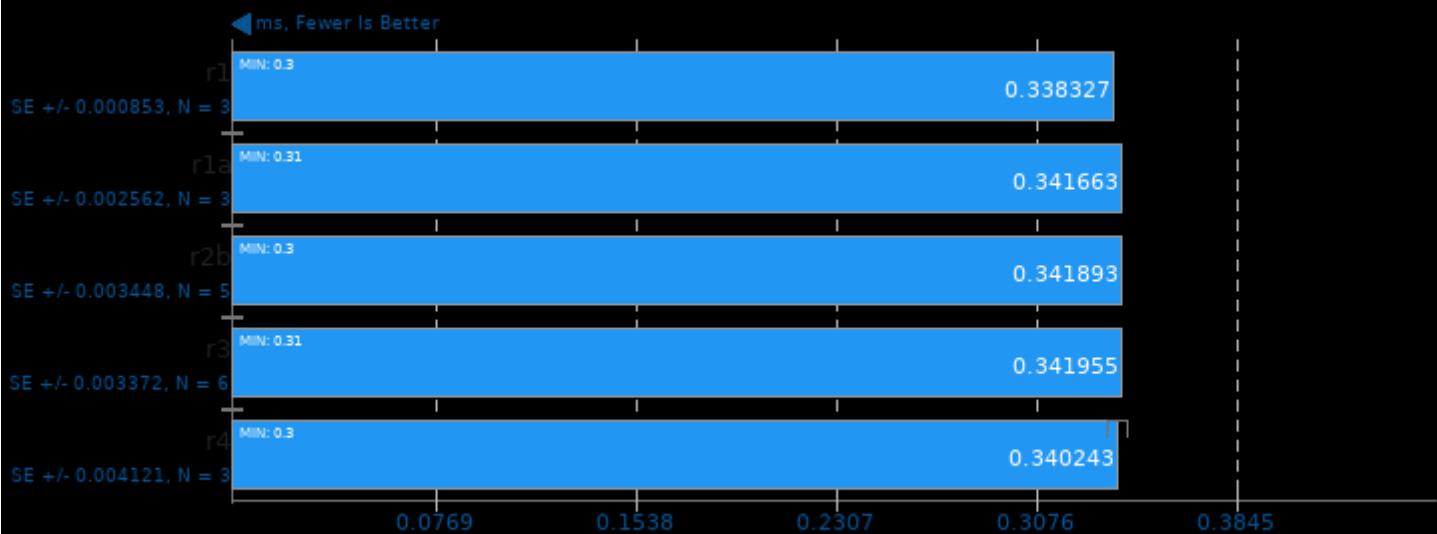
Test: Twofish



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

oneDNN 2.1.2

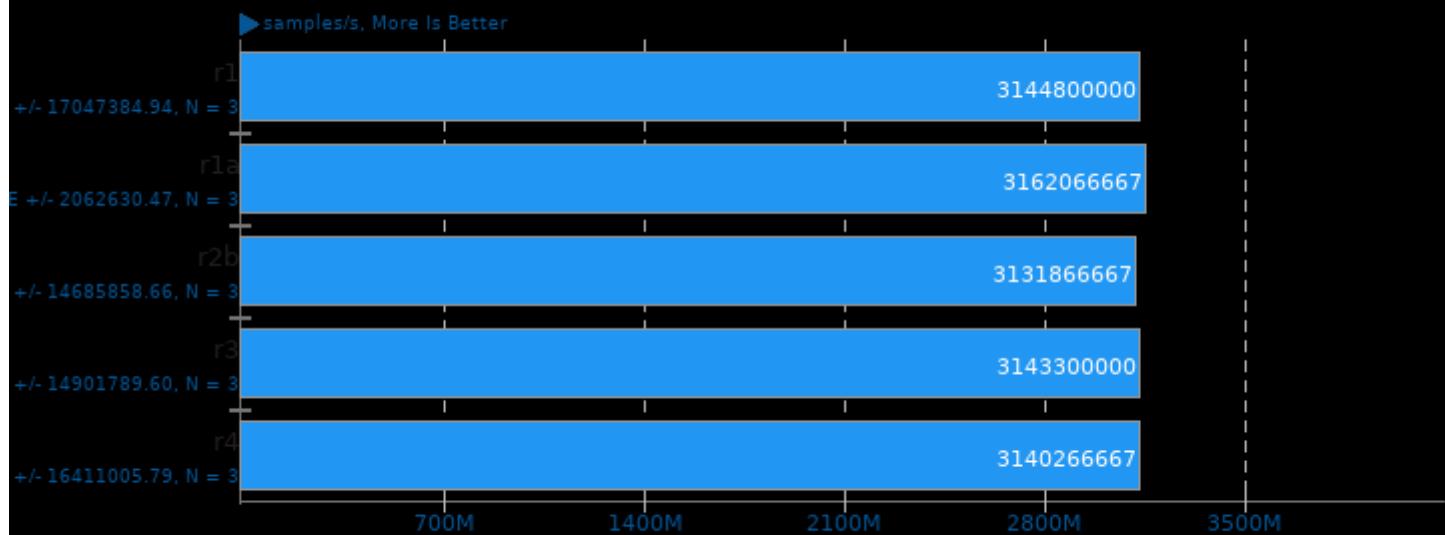
Harness: Deconvolution Batch shapes_1d - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

Liquid-DSP 2021.01.31

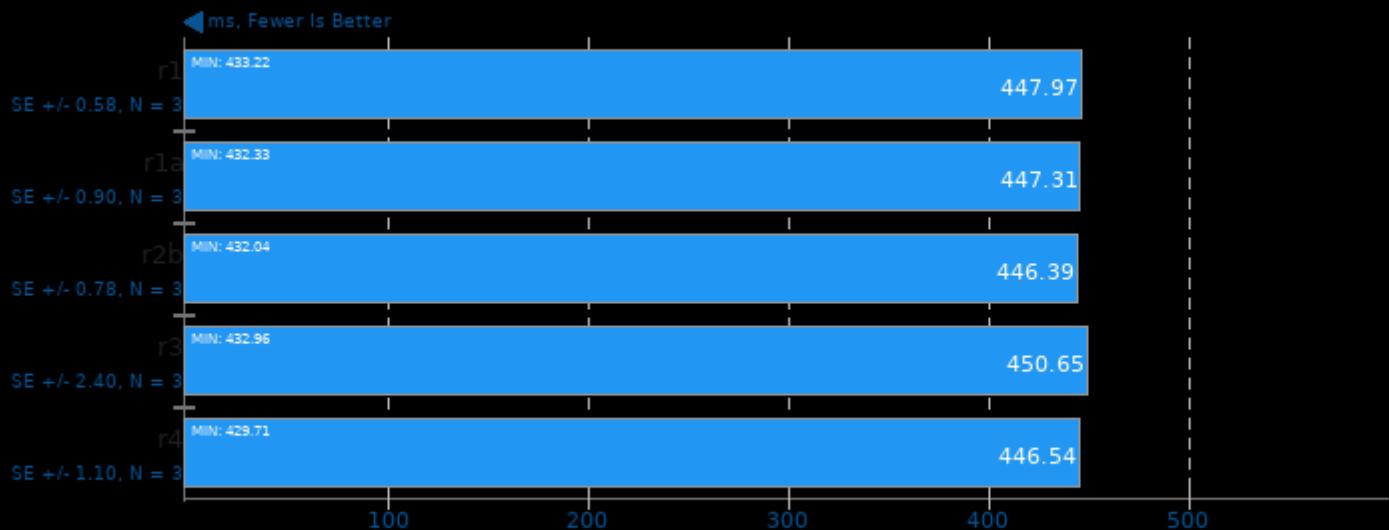
Threads: 160 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

oneDNN 2.1.2

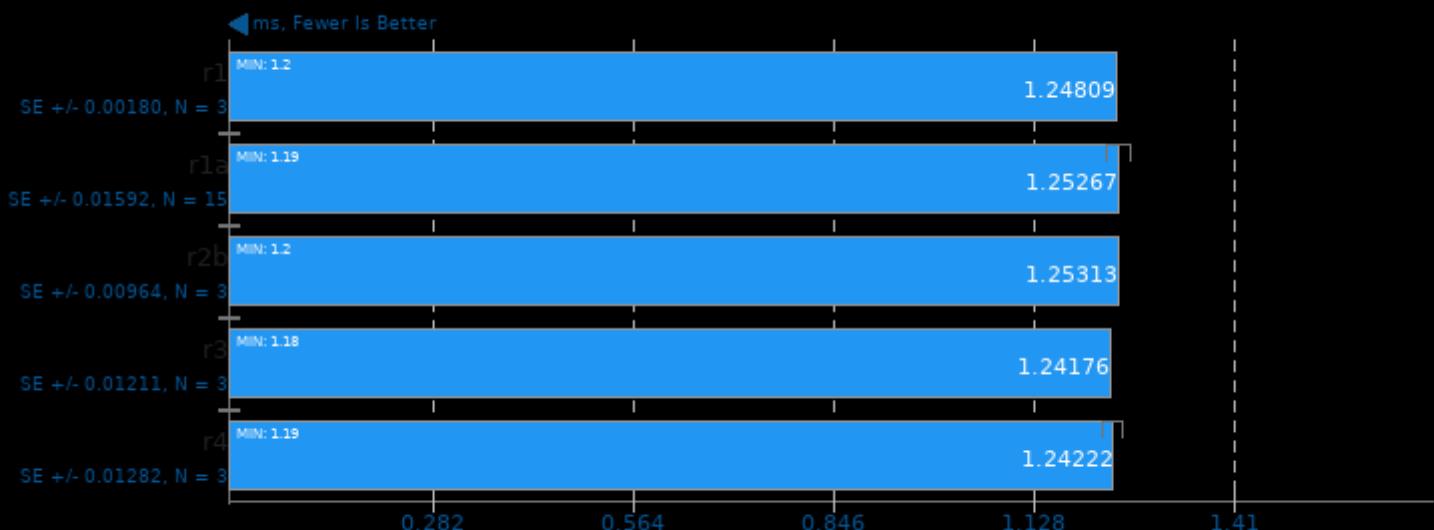
Harness: Recurrent Neural Network Inference - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 2.1.2

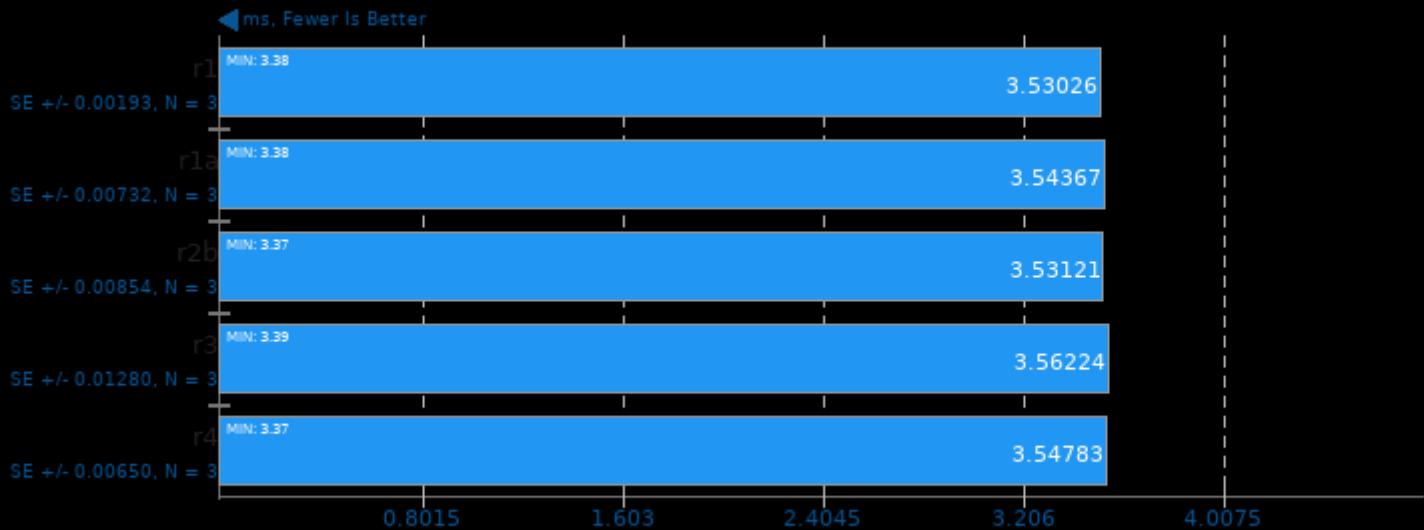
Harness: IP Shapes 3D - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 2.1.2

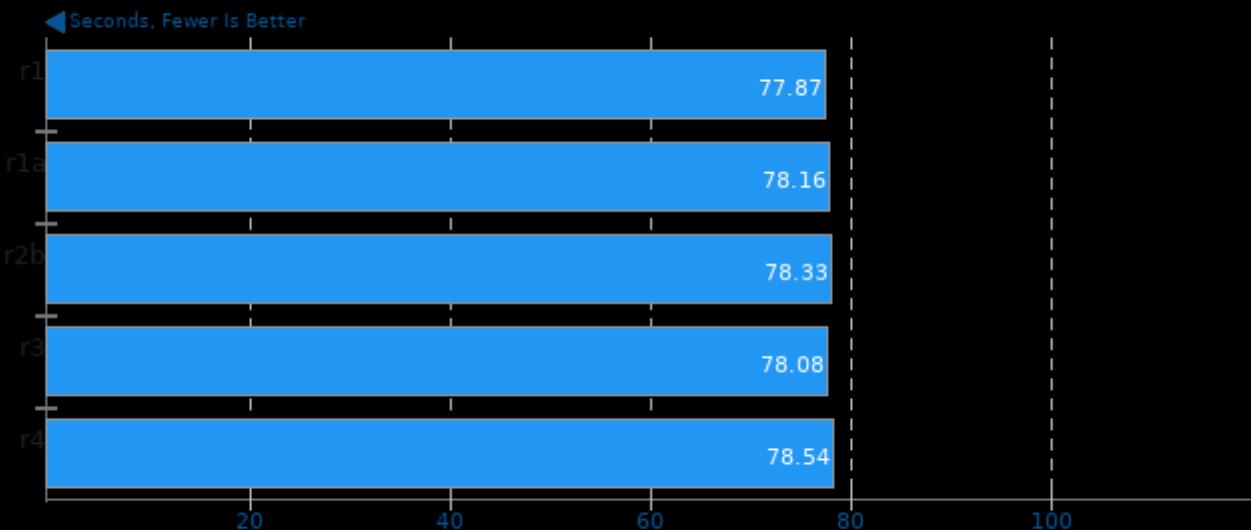
Harness: Deconvolution Batch shapes_1d - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

Helsing 1.0-beta

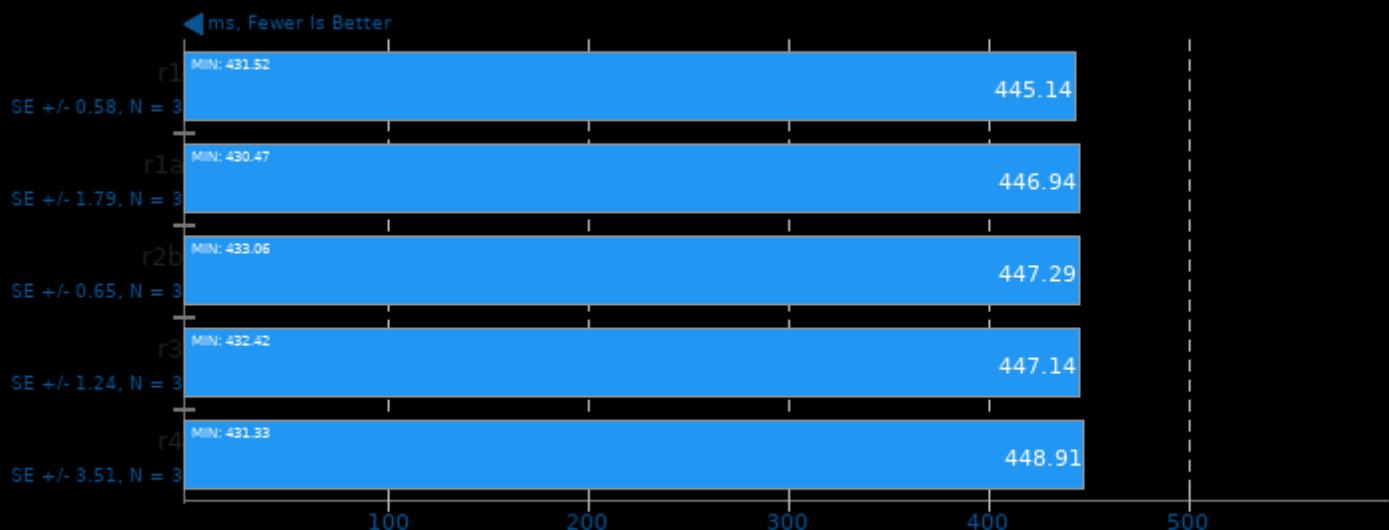
Digit Range: 14 digit



1. (CC) gcc options: -O2 -pthread -lcrypto

oneDNN 2.1.2

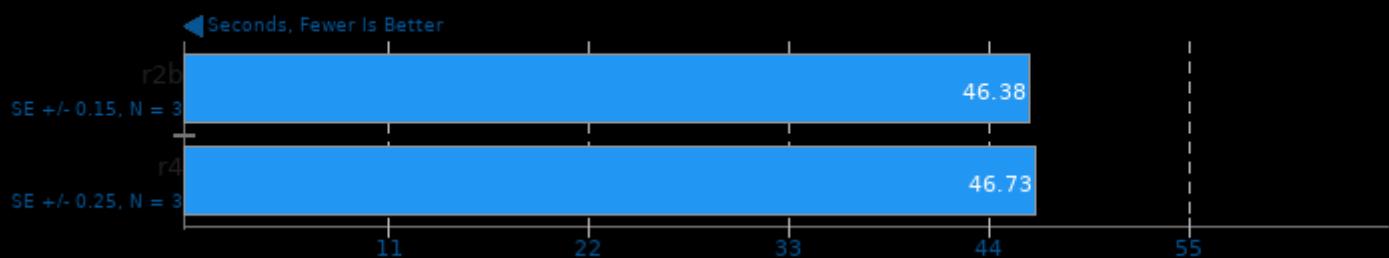
Harness: Recurrent Neural Network Inference - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

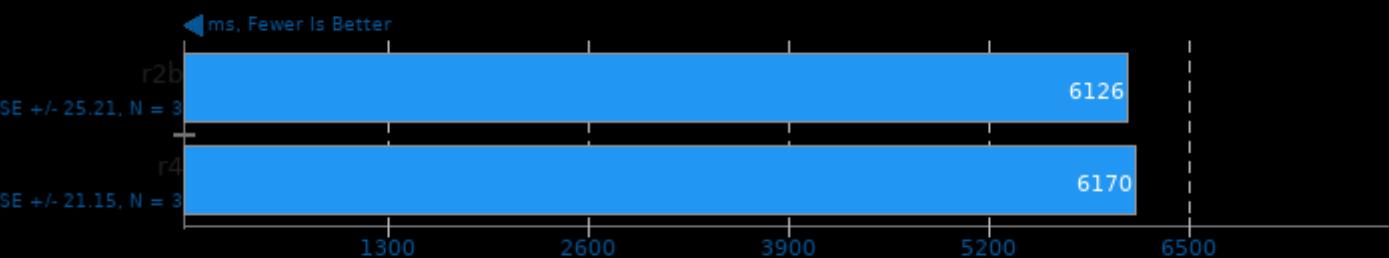
Blender 2.92

Blend File: Fishy Cat - Compute: CPU-Only



Google Draco 1.4.1

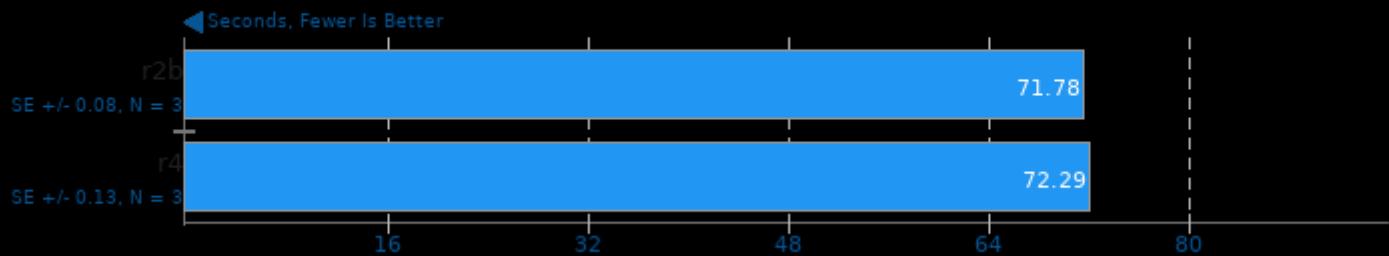
Model: Lion



1. (CXX) g++ options: -O3

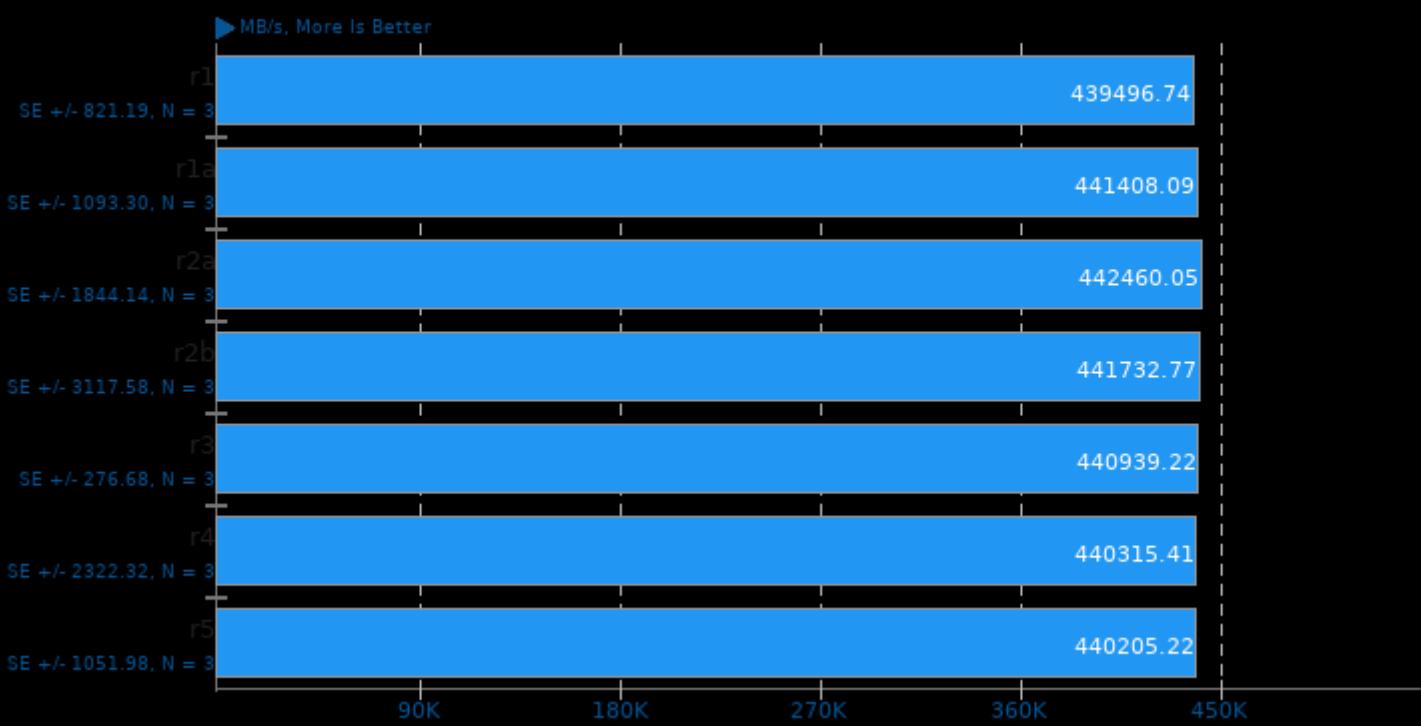
Blender 2.92

Blend File: Classroom - Compute: CPU-Only



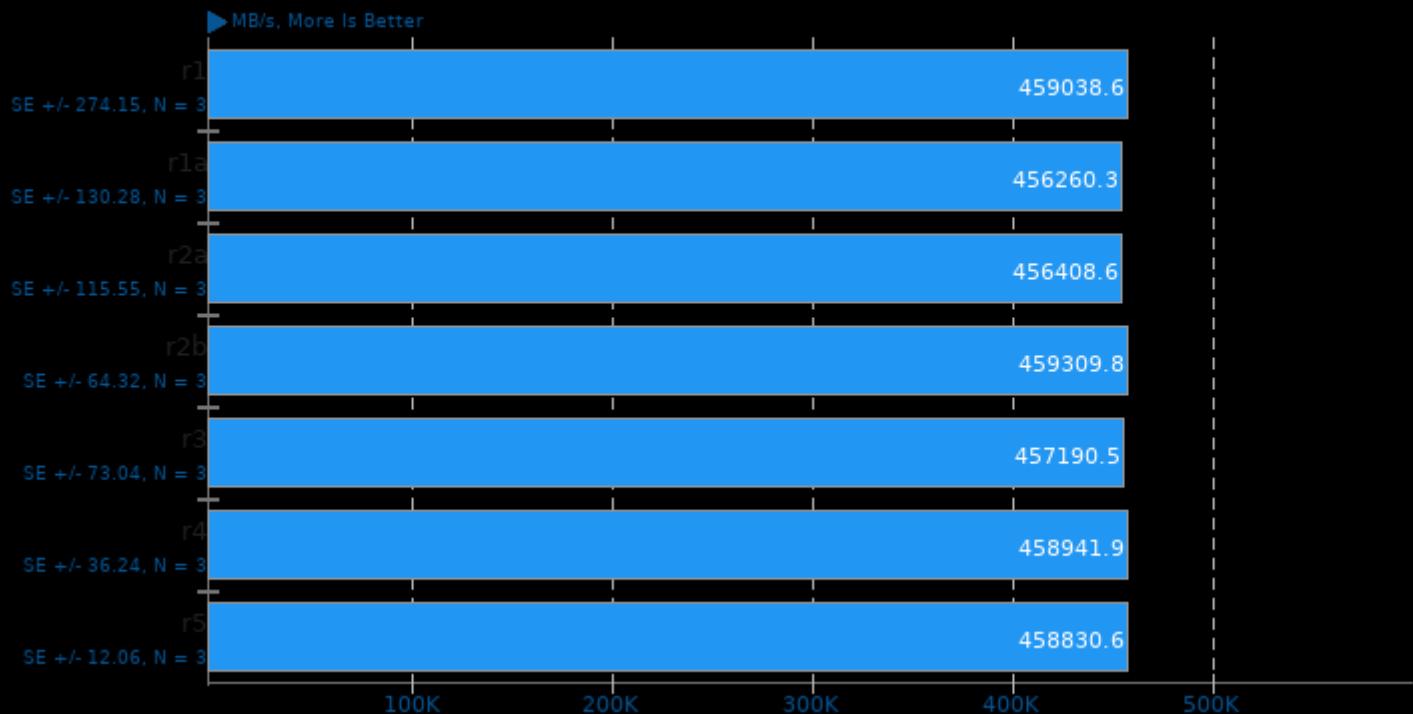
Intel Memory Latency Checker

Test: Max Bandwidth - 1:1 Reads-Writes

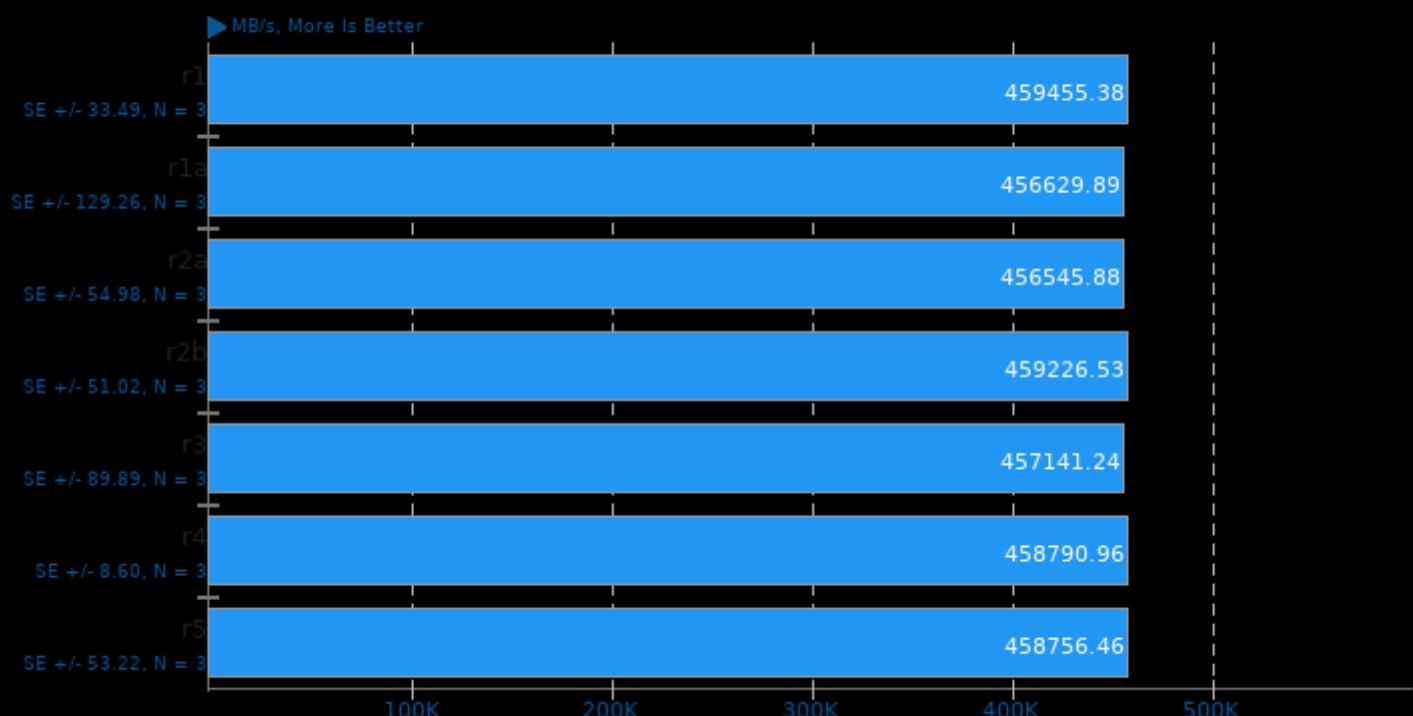


Intel Memory Latency Checker

Test: Peak Injection Bandwidth - 2:1 Reads-Writes

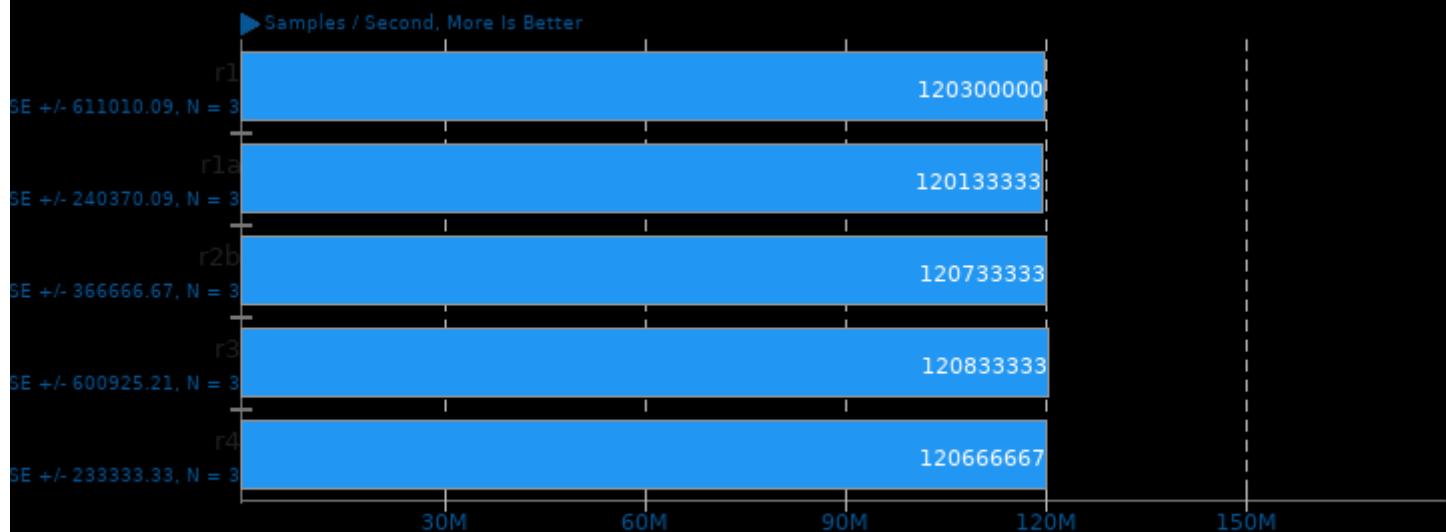
**Intel Memory Latency Checker**

Test: Max Bandwidth - 2:1 Reads-Writes



srsLTE 20.10.1

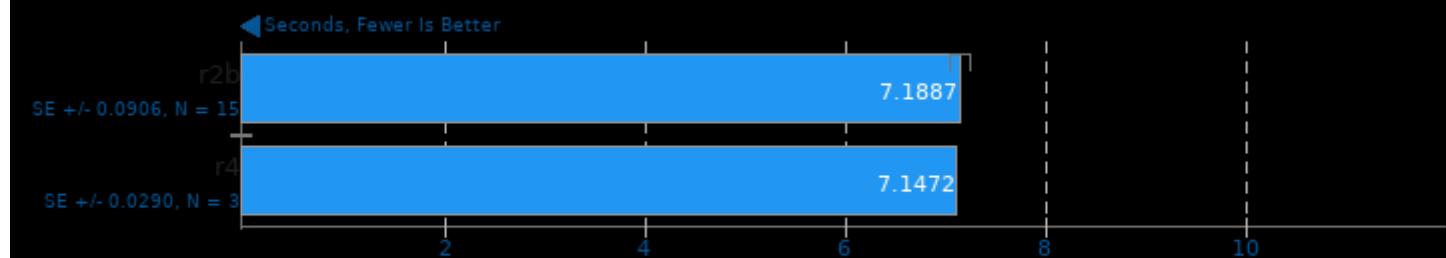
Test: OFDM_Test



1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno

ASTC Encoder 2.4

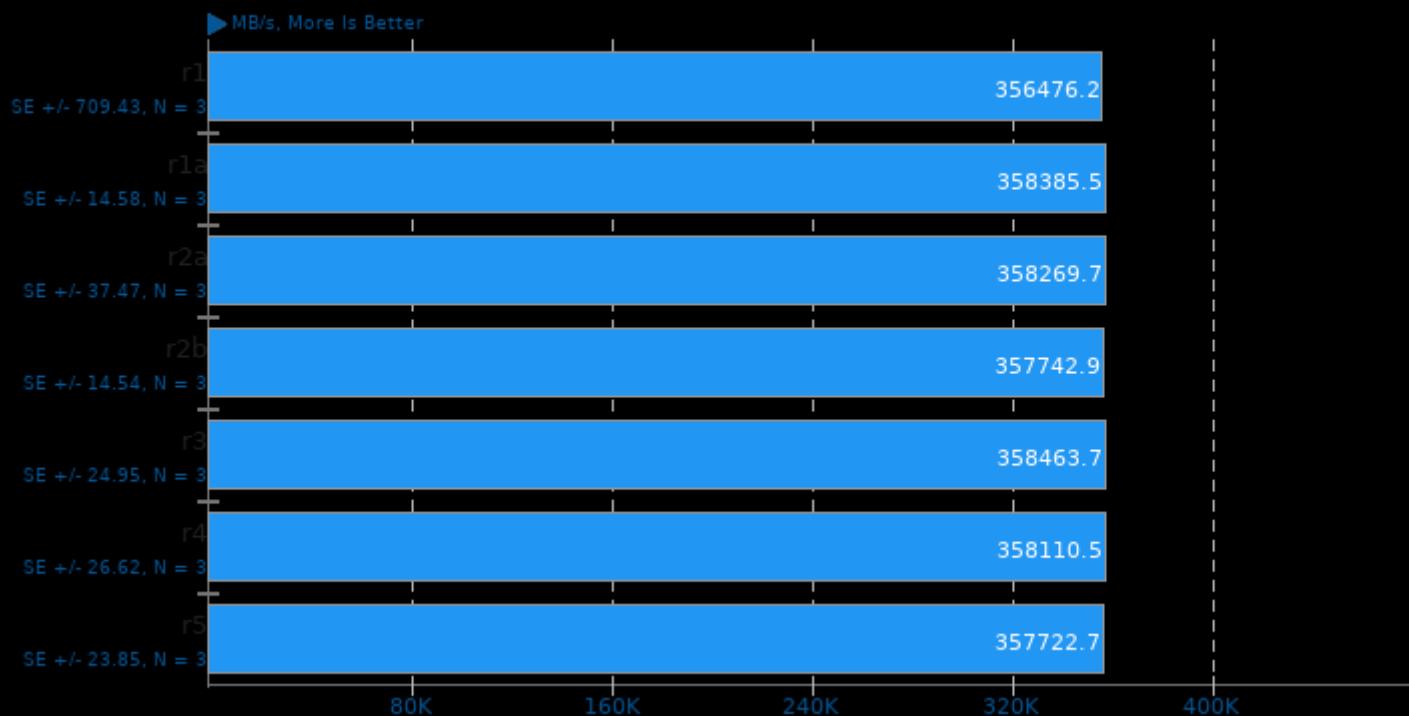
Preset: Medium



1. (CXX) g++ options: -O3 -fno -pthread

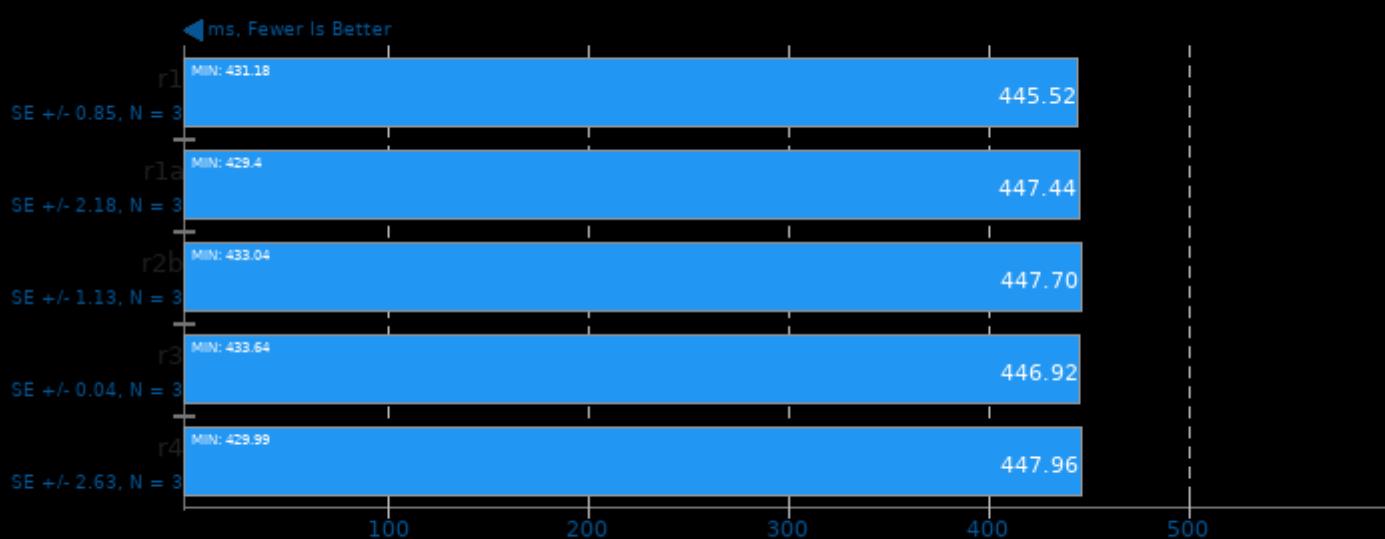
Intel Memory Latency Checker

Test: Peak Injection Bandwidth - All Reads



oneDNN 2.1.2

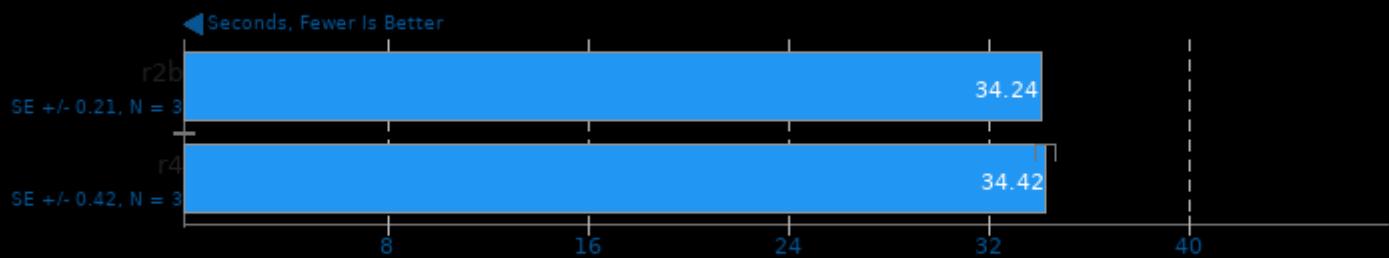
Harness: Recurrent Neural Network Inference - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

Basis Universal 1.13

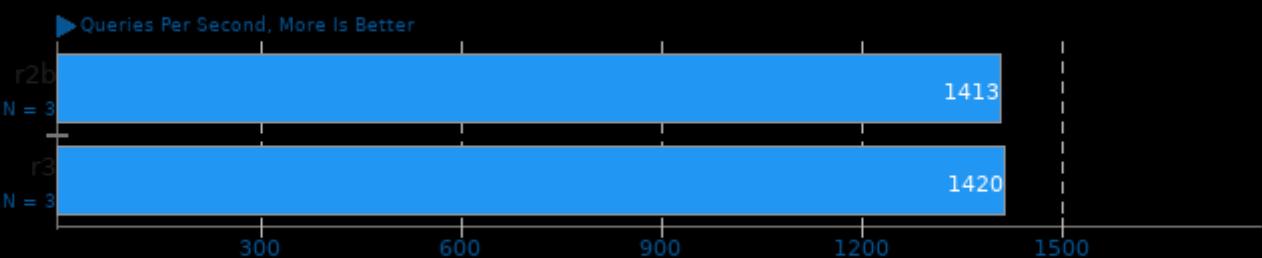
Settings: ETC1S



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

MariaDB 10.5.2

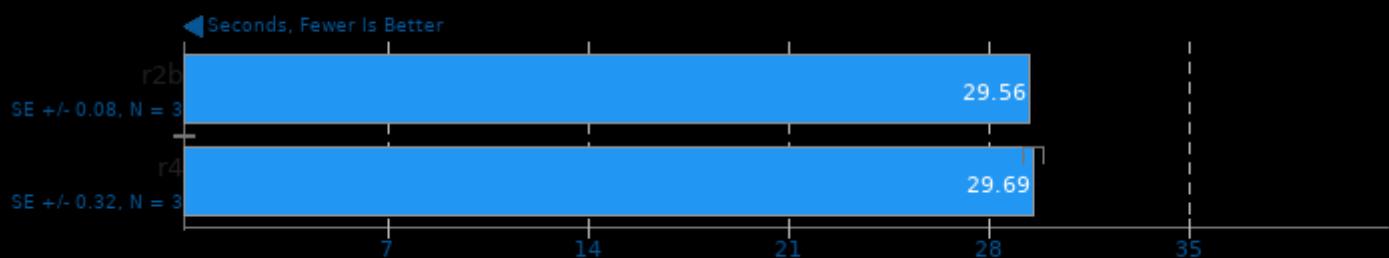
Clients: 8



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lsnappy -ldl -lz -lt

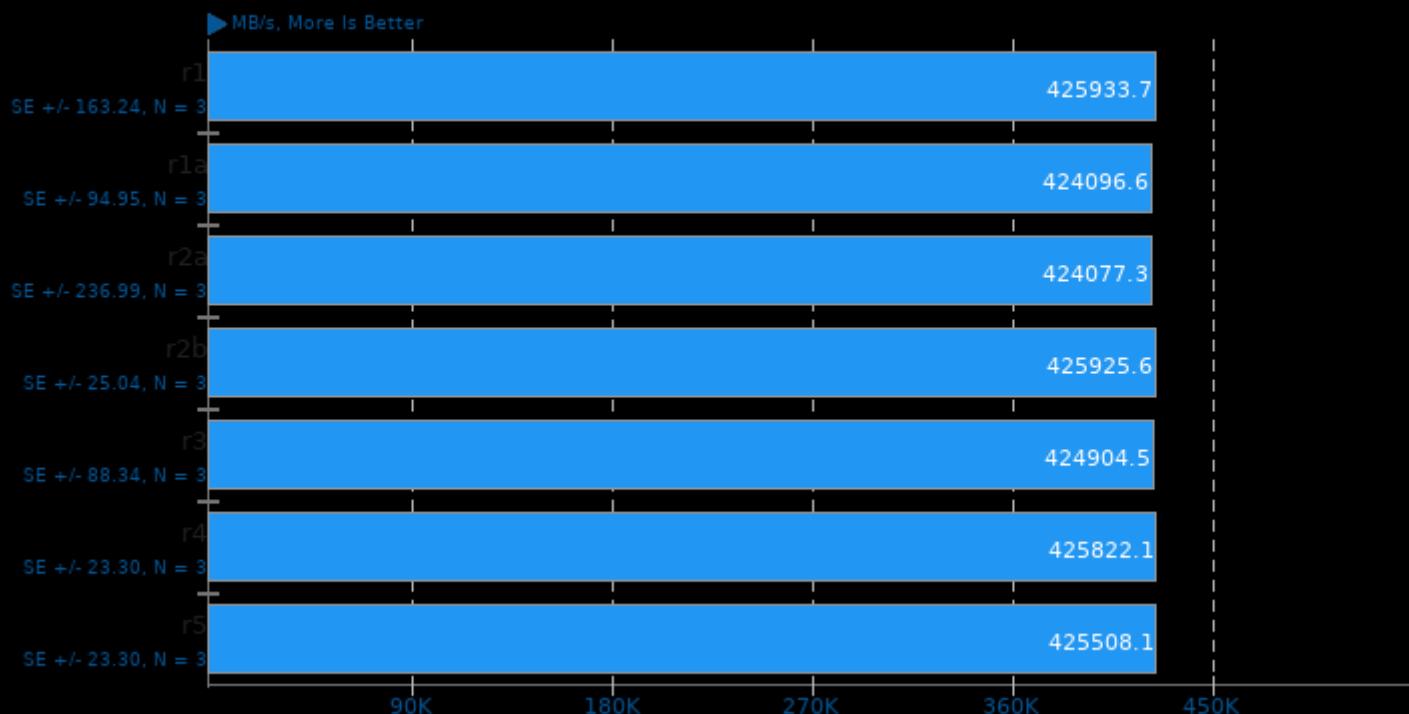
Blender 2.92

Blend File: BMW27 - Compute: CPU-Only



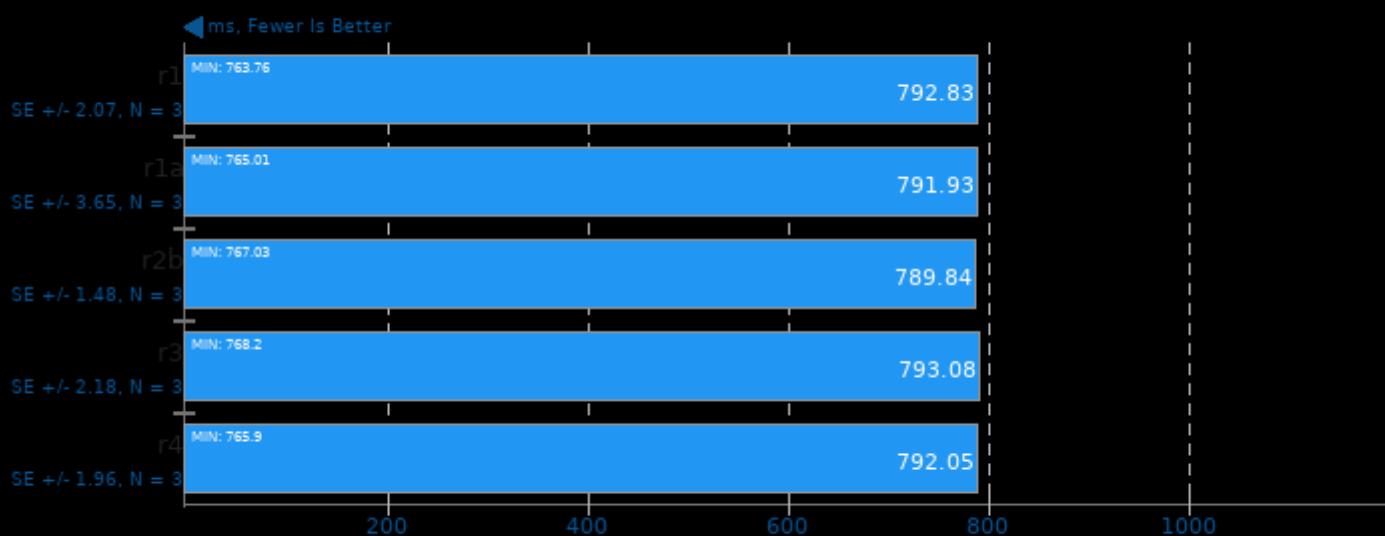
Intel Memory Latency Checker

Test: Peak Injection Bandwidth - 3:1 Reads-Writes



oneDNN 2.1.2

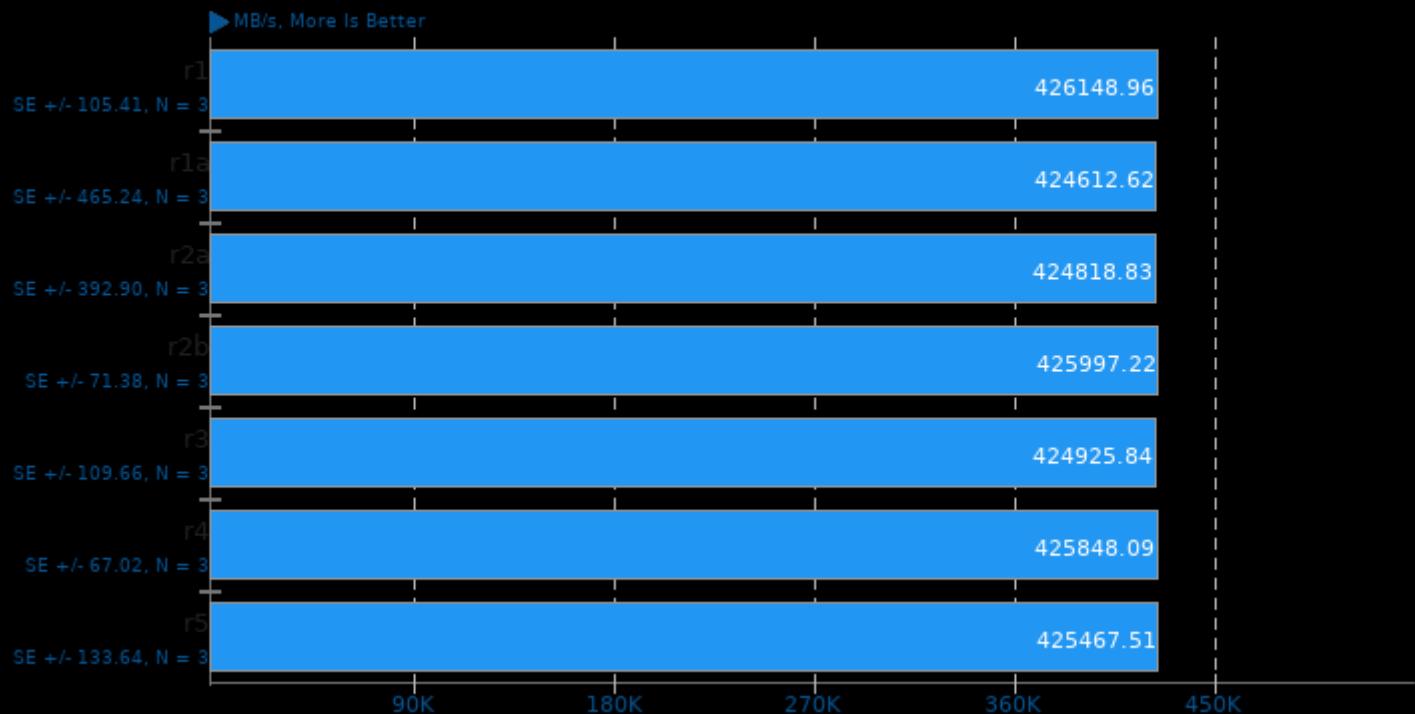
Harness: Recurrent Neural Network Training - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

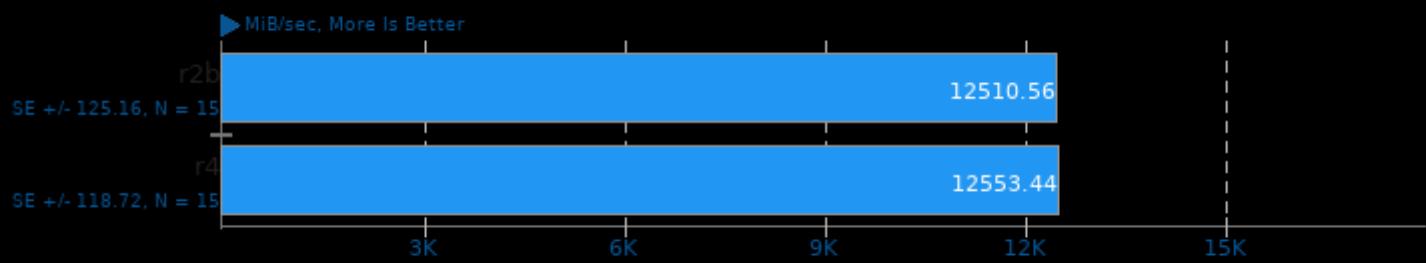
Intel Memory Latency Checker

Test: Max Bandwidth - 3:1 Reads-Writes



Sysbench 1.0.20

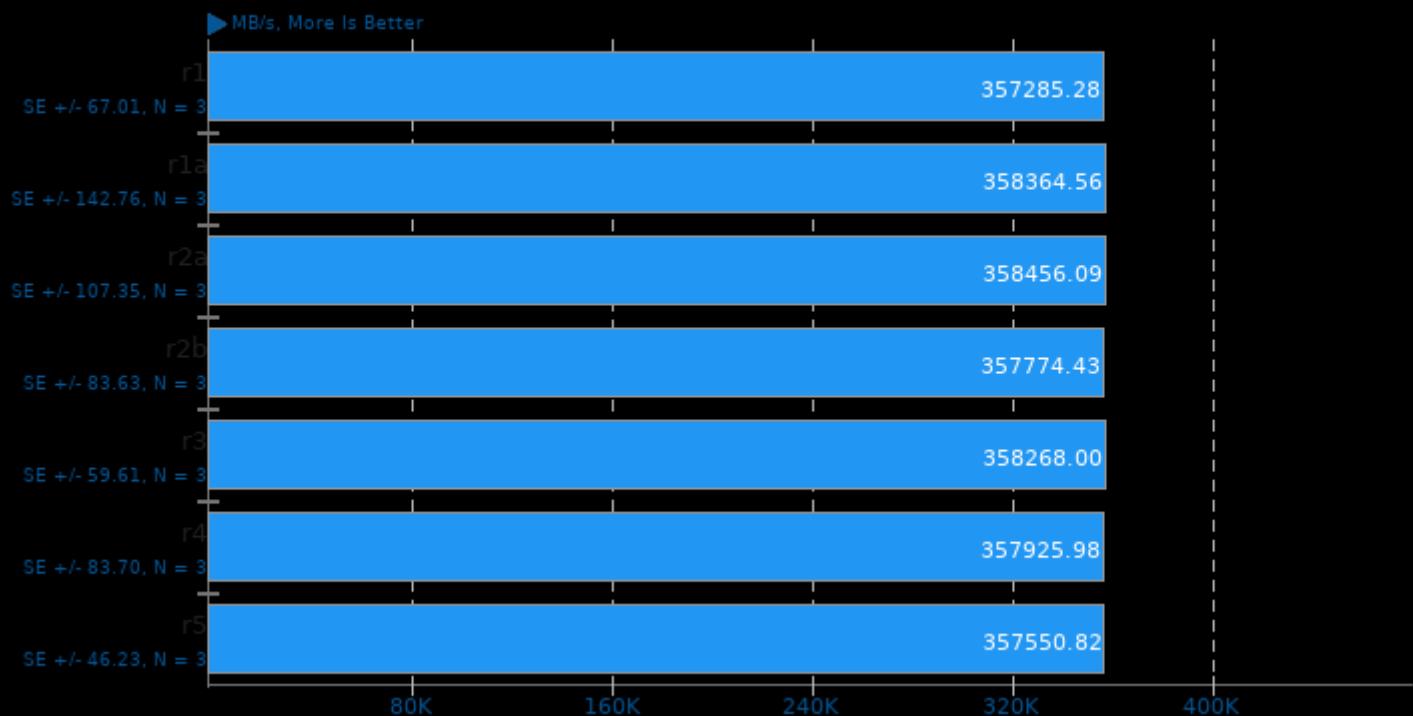
Test: RAM / Memory



1. (CC) gcc options: -pthread -O2 -funroll-loops -rdynamic -ldl -lao -lm

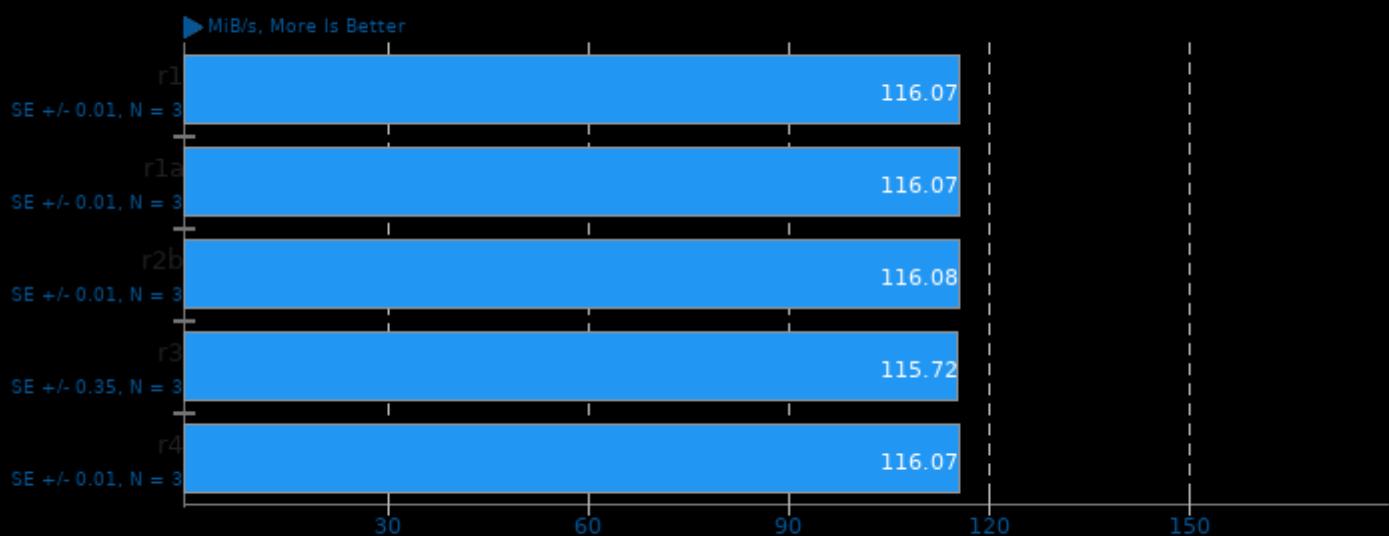
Intel Memory Latency Checker

Test: Max Bandwidth - All Reads



Botan 2.17.3

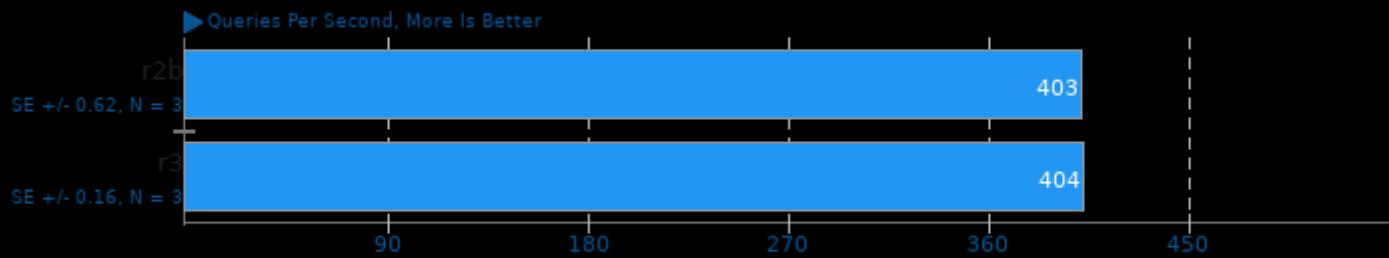
Test: CAST-256 - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

MariaDB 10.5.2

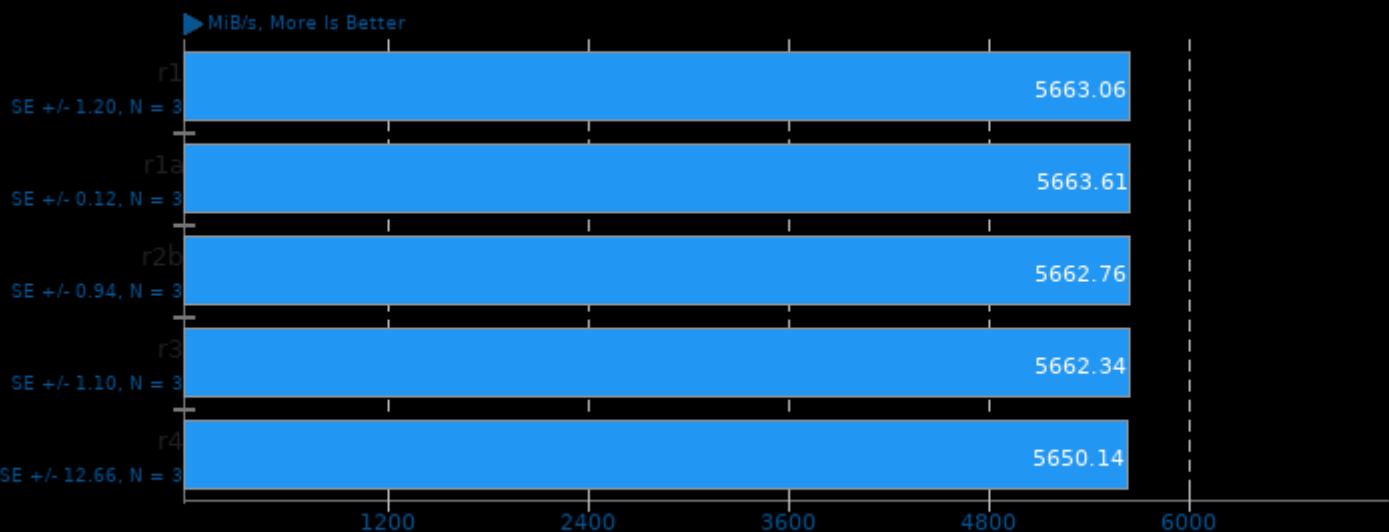
Clients: 64



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lsnappy -ldl -lz -lrt

Botan 2.17.3

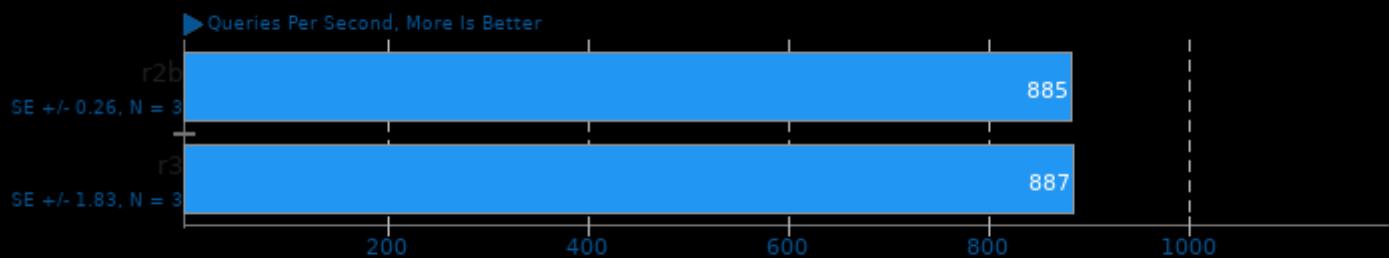
Test: AES-256 - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

MariaDB 10.5.2

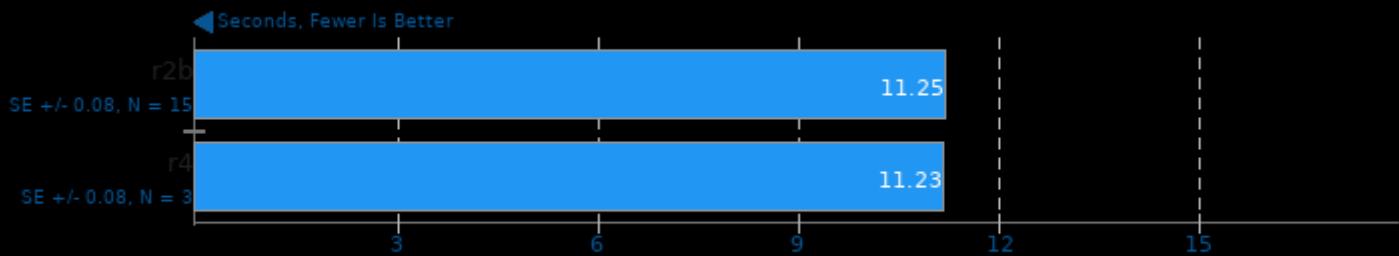
Clients: 32



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lsnappy -ldl -lz -lrt

Basis Universal 1.13

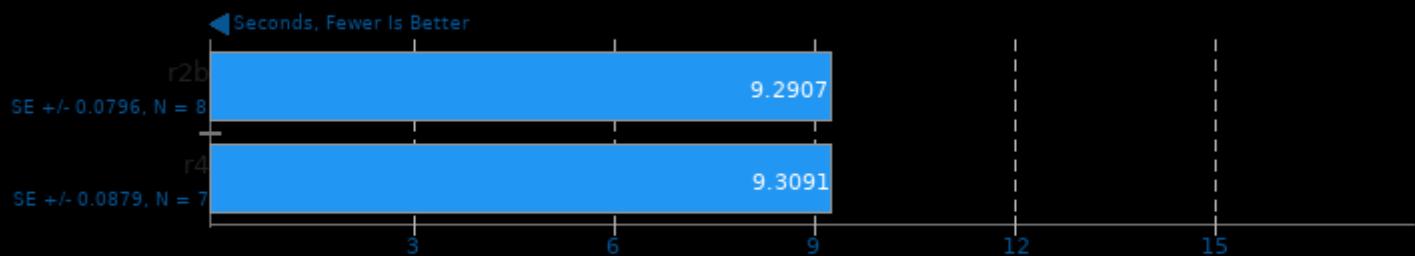
Settings: UASTC Level 0



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

ASTC Encoder 2.4

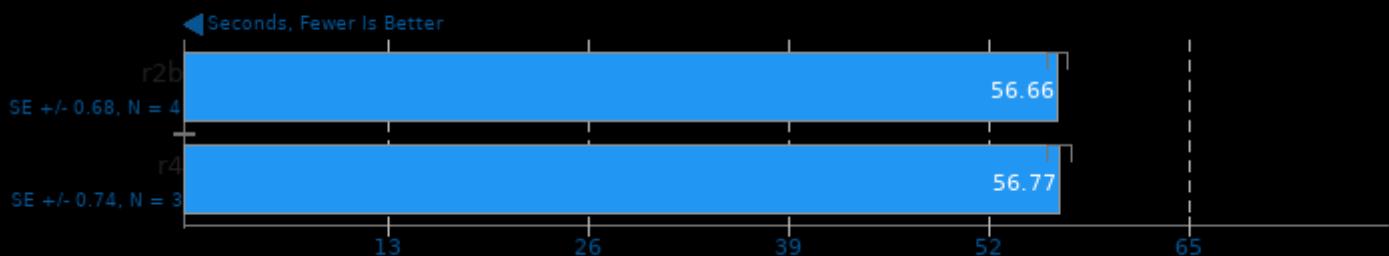
Preset: Thorough



1. (CXX) g++ options: -O3 -fno -pthread

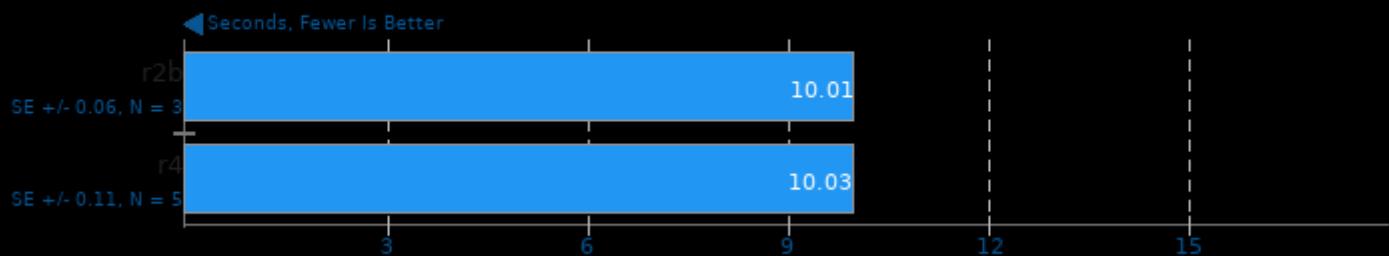
KTX-Software toktx 4.0

Settings: UASTC 4 + Zstd Compression 19



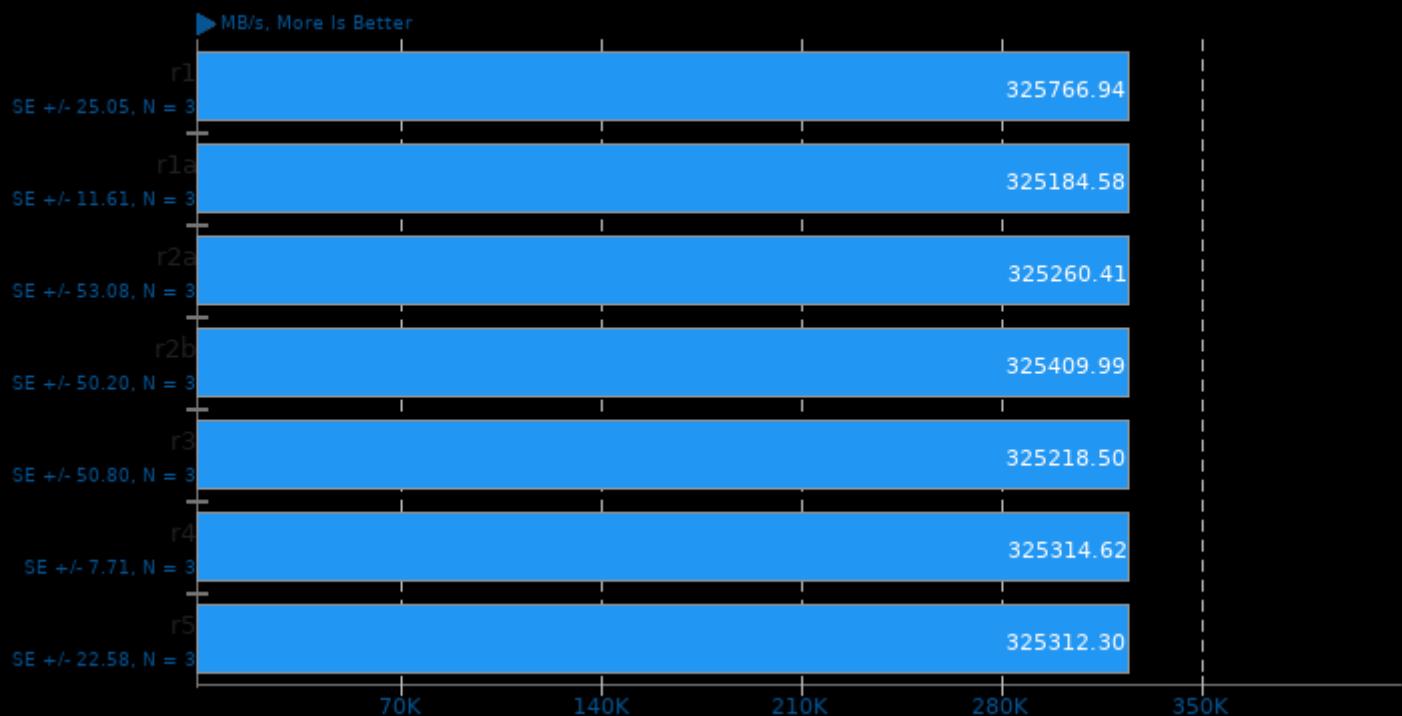
KTX-Software toktx 4.0

Settings: UASTC 3 + Zstd Compression 19



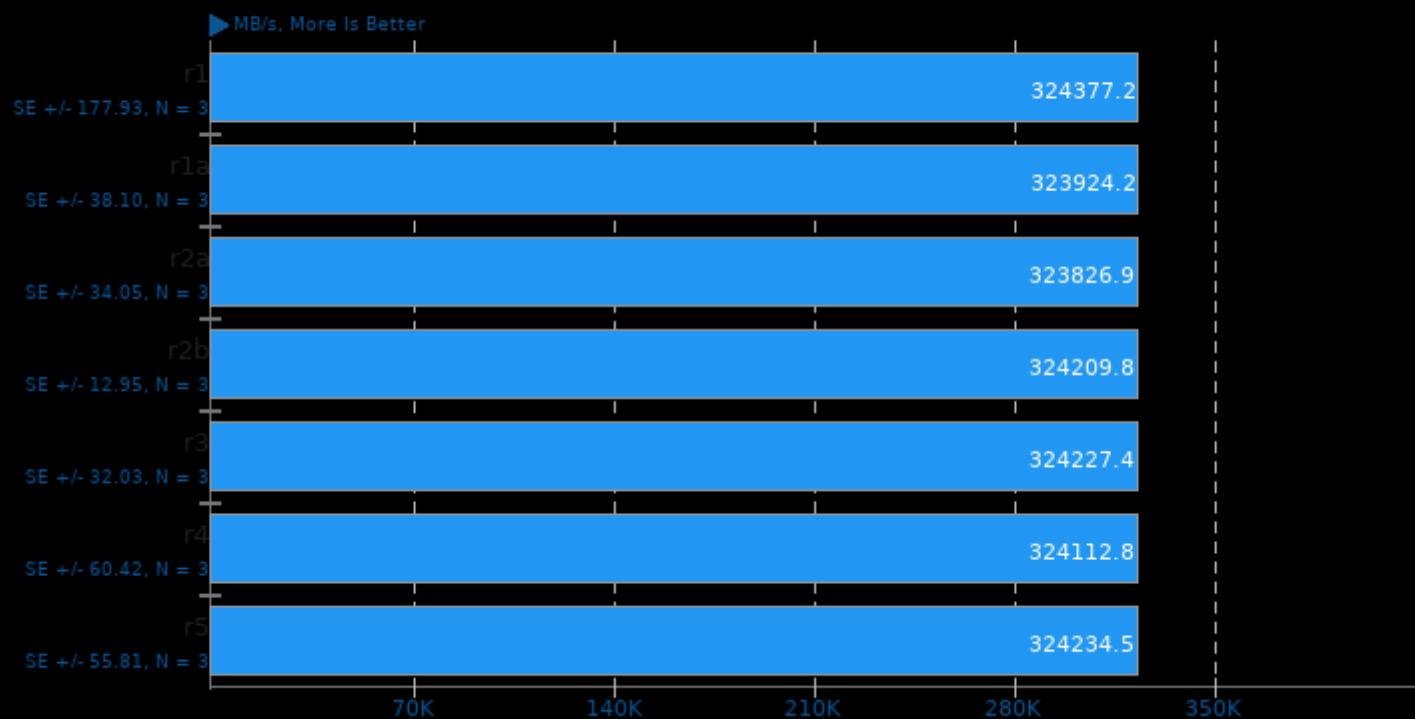
Intel Memory Latency Checker

Test: Max Bandwidth - Stream-Triad Like



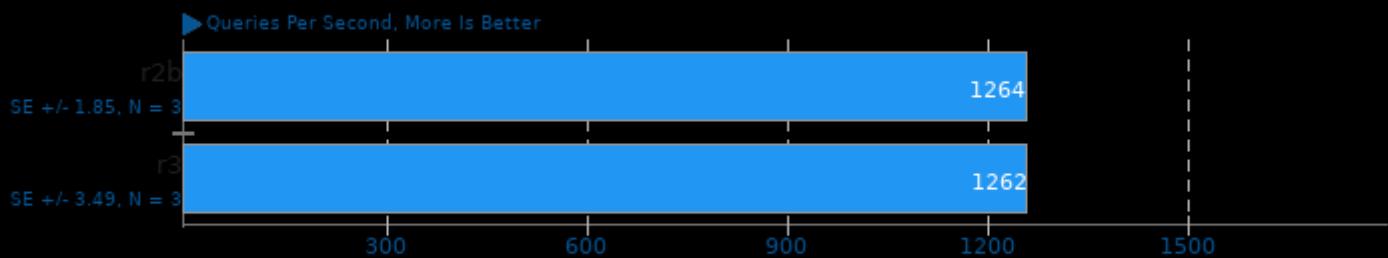
Intel Memory Latency Checker

Test: Peak Injection Bandwidth - Stream-Triad Like



MariaDB 10.5.2

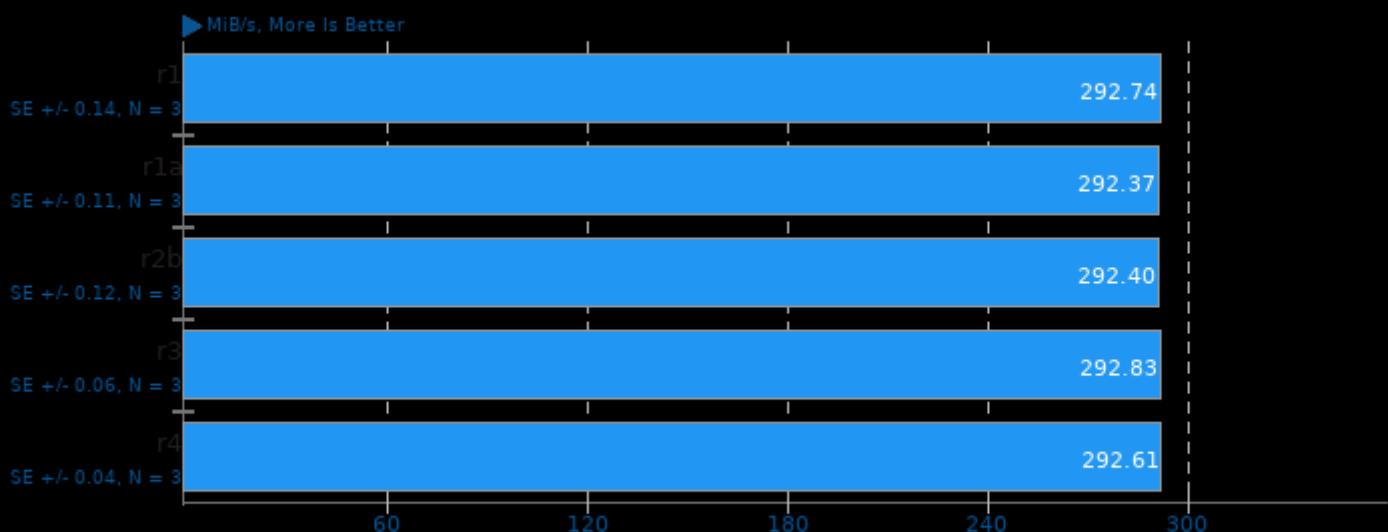
Clients: 16



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lsnappy -ldl -lz -lrt

Botan 2.17.3

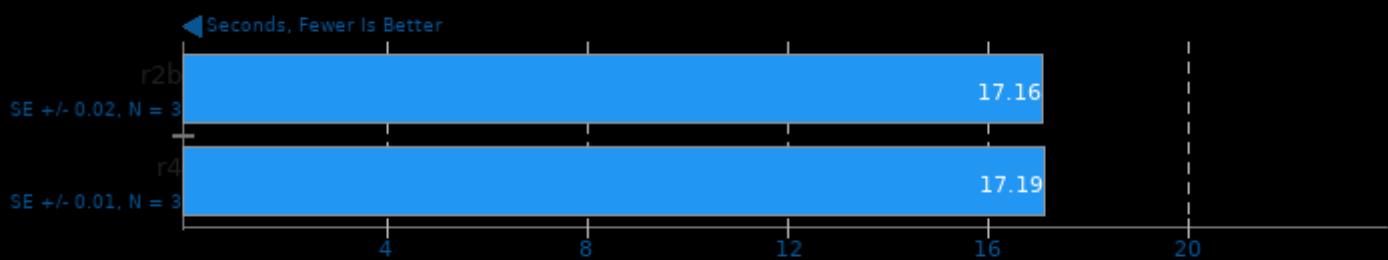
Test: Twofish - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Basis Universal 1.13

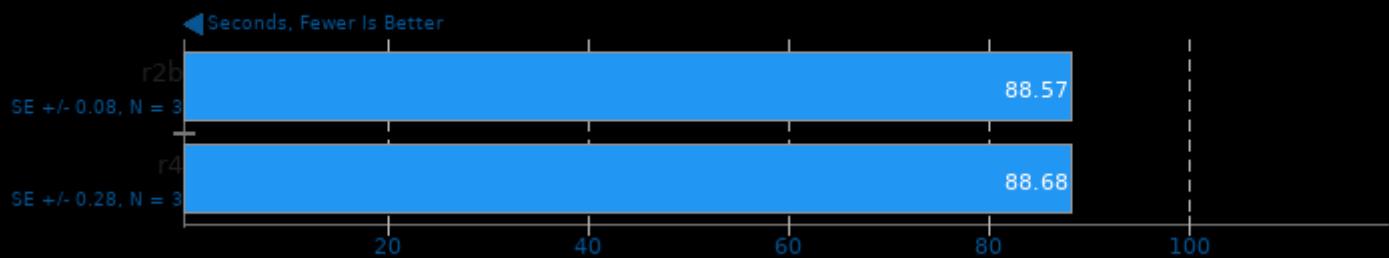
Settings: UASTC Level 3



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

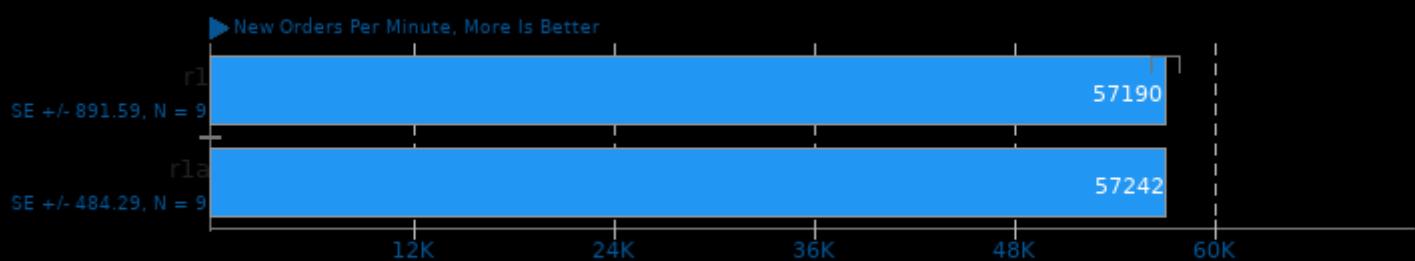
Blender 2.92

Blend File: Pabellon Barcelona - Compute: CPU-Only



HammerDB - MariaDB 10.5.9

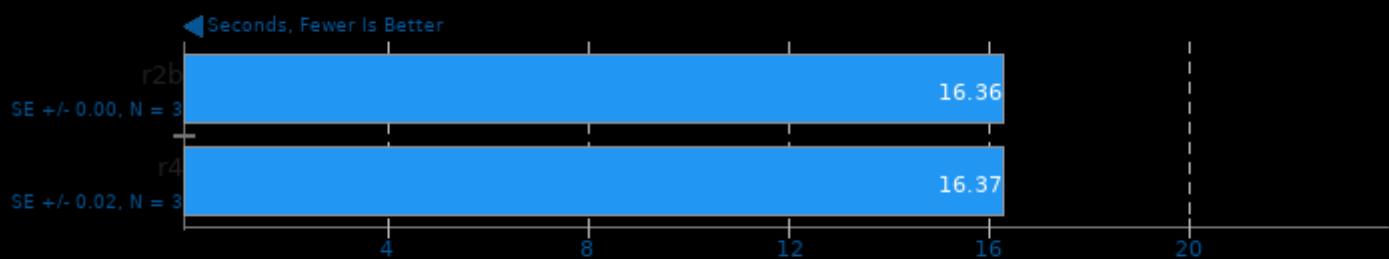
Virtual Users: 128 - Warehouses: 500



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

ASTC Encoder 2.4

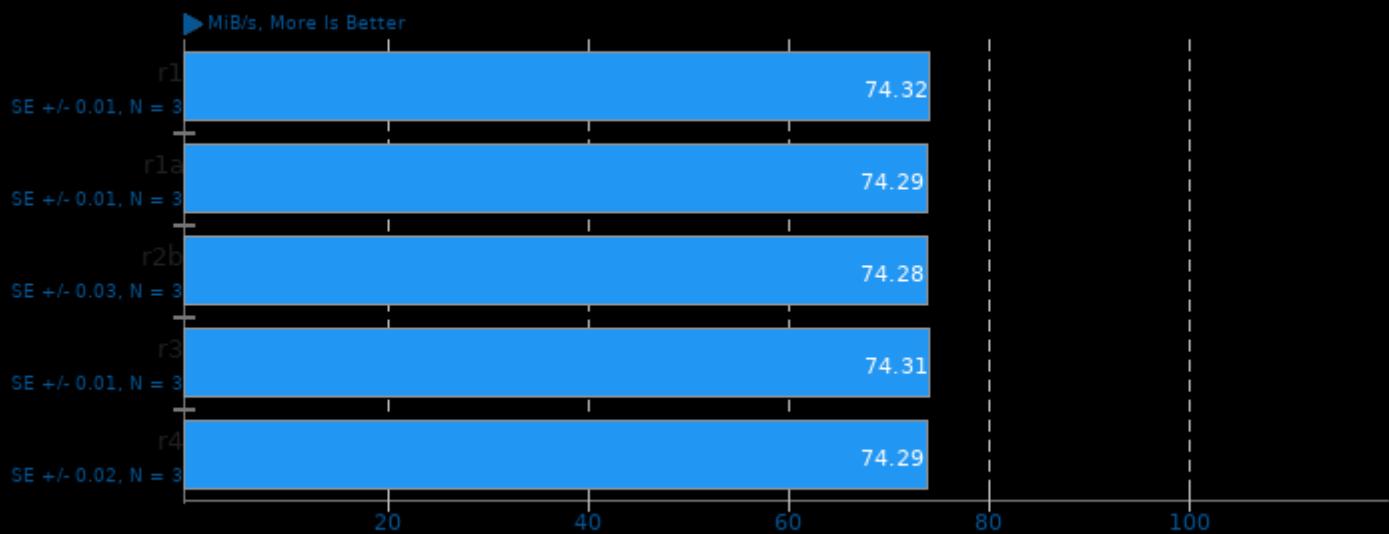
Preset: Exhaustive



1. (CXX) g++ options: -O3 -fno -pthread

Botan 2.17.3

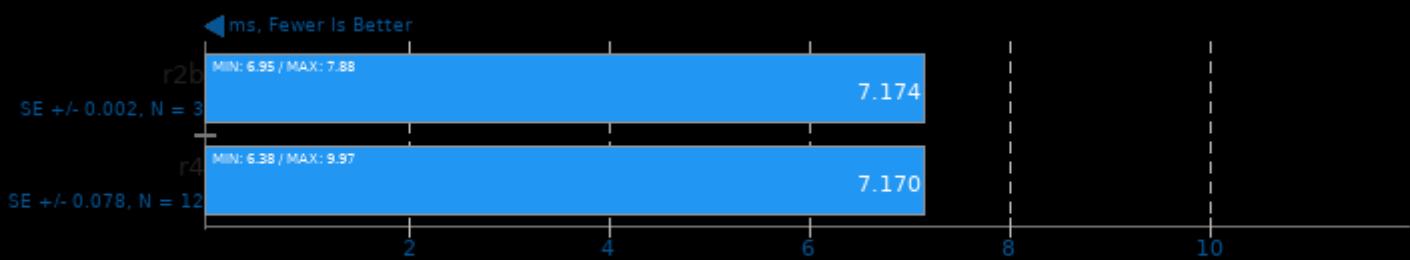
Test: KASUMI - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Mobile Neural Network 1.1.3

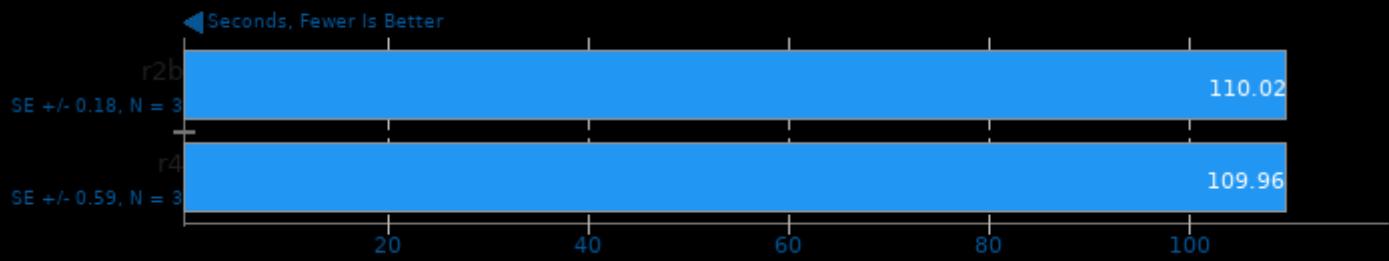
Model: SqueezeNetV1.0



1. (CXX) g++ options: -std=c++11 -O3 -visibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fn

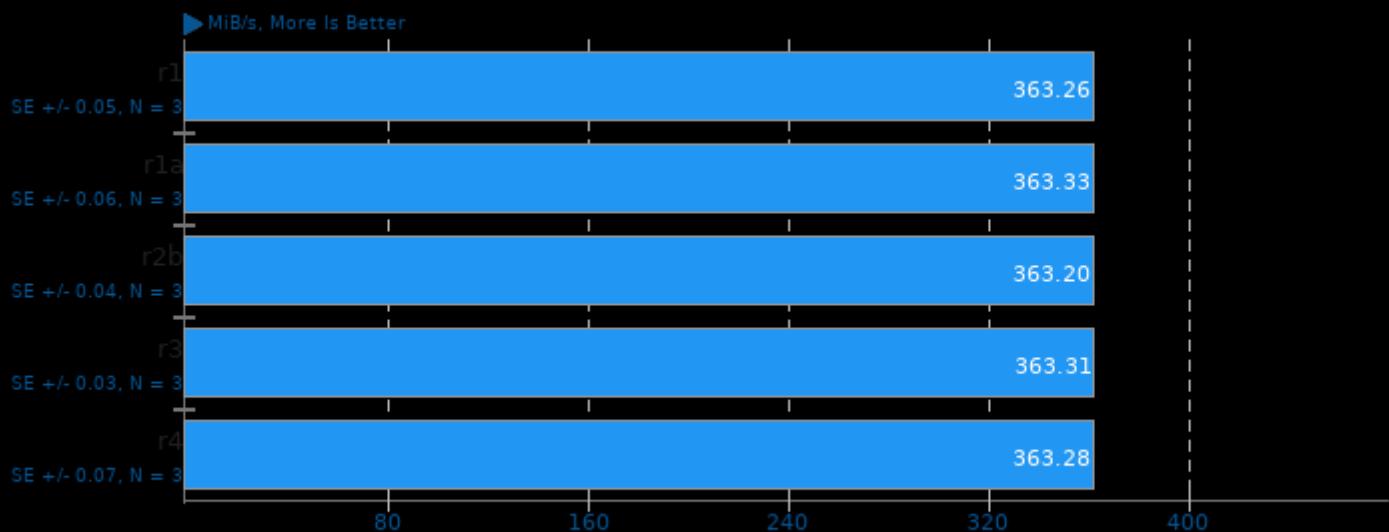
Blender 2.92

Blend File: Barbershop - Compute: CPU-Only



Botan 2.17.3

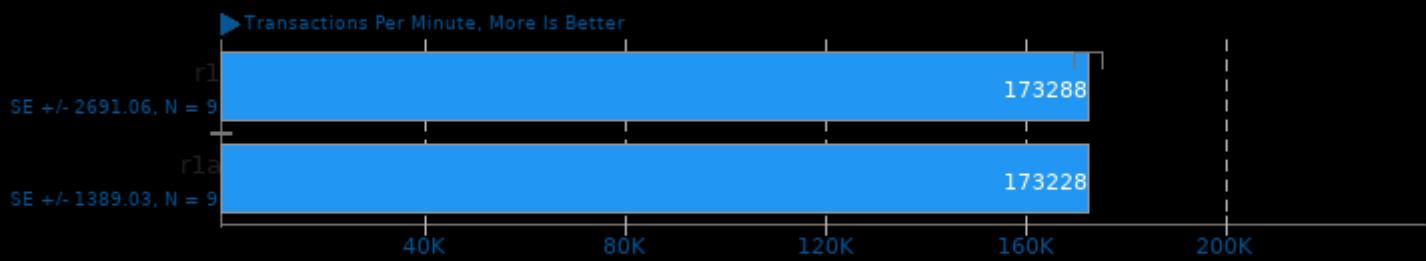
Test: Blowfish - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

HammerDB - MariaDB 10.5.9

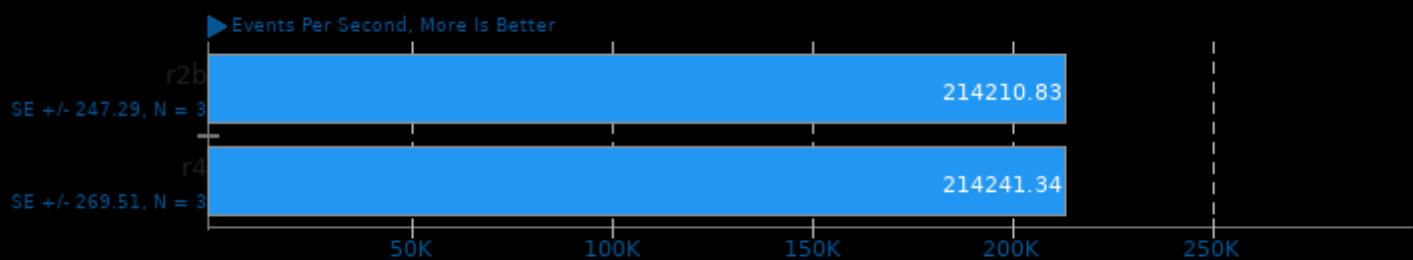
Virtual Users: 128 - Warehouses: 500



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -pthread -lbz2 -lsnappy -ldl -lz -lrt

Sysbench 1.0.20

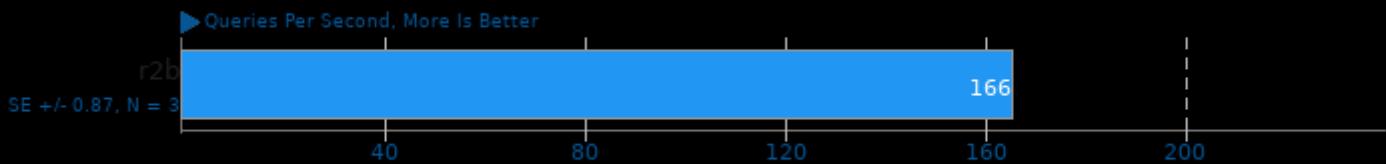
Test: CPU



1. (CC) gcc options: -pthread -O2 -funroll-loops -rdynamic -ldl -lao -lm

MariaDB 10.5.2

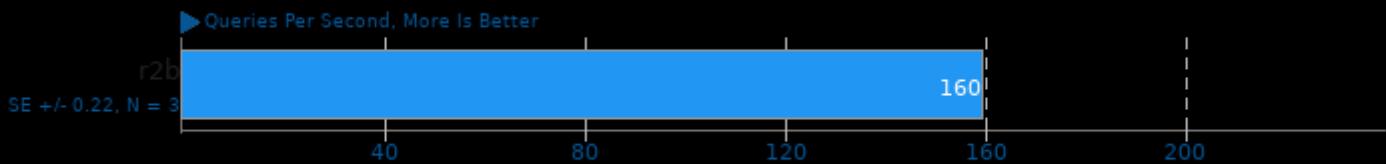
Clients: 512



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lsnappy -ldl -lz -lrt

MariaDB 10.5.2

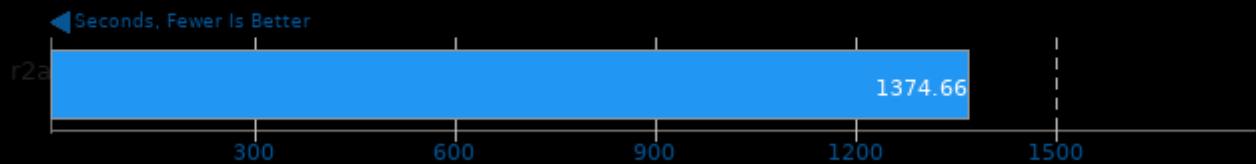
Clients: 256



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lsnappy -ldl -lz -lrt

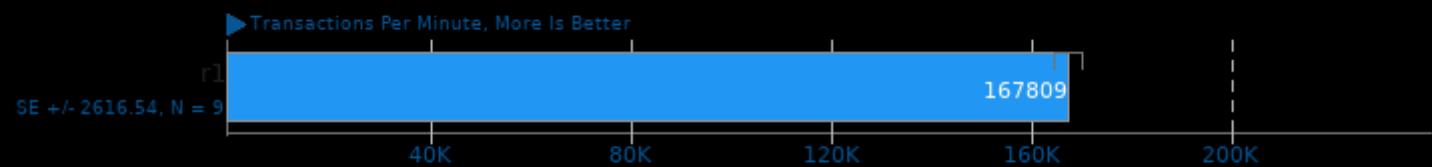
CP2K Molecular Dynamics 8.1

Input: Fayalite-FIST



HammerDB - MariaDB 10.5.9

Virtual Users: 128 - Warehouses: 250



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

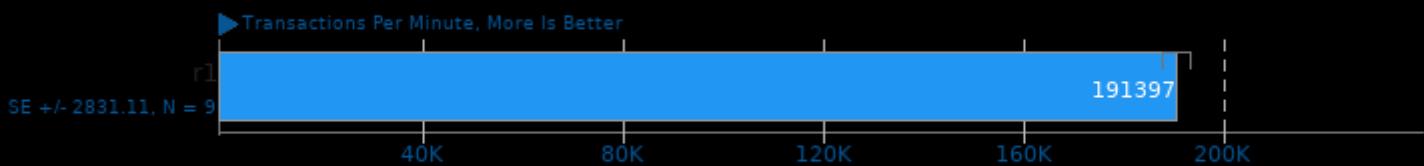
Virtual Users: 128 - Warehouses: 250



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

Virtual Users: 64 - Warehouses: 250



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

Virtual Users: 64 - Warehouses: 250



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

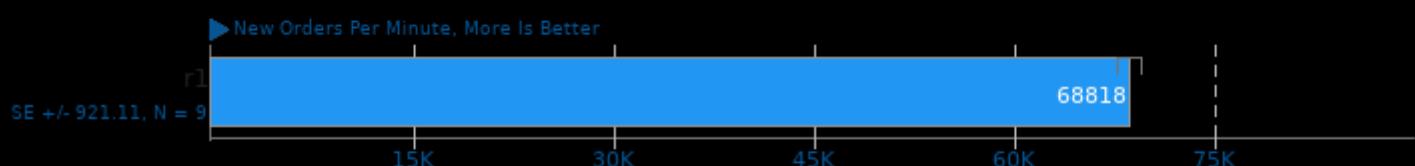
Virtual Users: 32 - Warehouses: 500



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

Virtual Users: 32 - Warehouses: 500



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

Virtual Users: 32 - Warehouses: 250



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

Virtual Users: 32 - Warehouses: 250



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

Virtual Users: 16 - Warehouses: 500



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

Virtual Users: 16 - Warehouses: 500



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

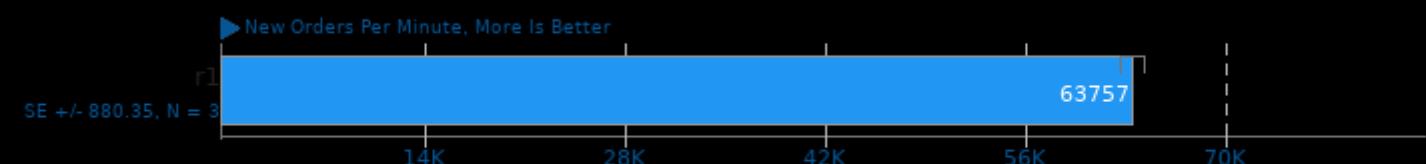
Virtual Users: 16 - Warehouses: 250



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

Virtual Users: 16 - Warehouses: 250



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lbz2 -lsnappy -ldl -lz -lrt

HammerDB - MariaDB 10.5.9

Virtual Users: 8 - Warehouses: 500



HammerDB - MariaDB 10.5.9

Virtual Users: 8 - Warehouses: 500



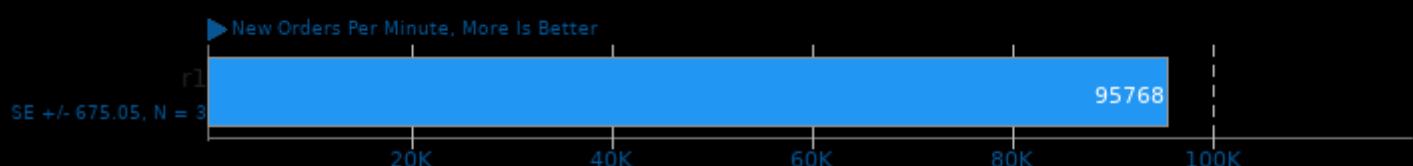
HammerDB - MariaDB 10.5.9

Virtual Users: 8 - Warehouses: 250



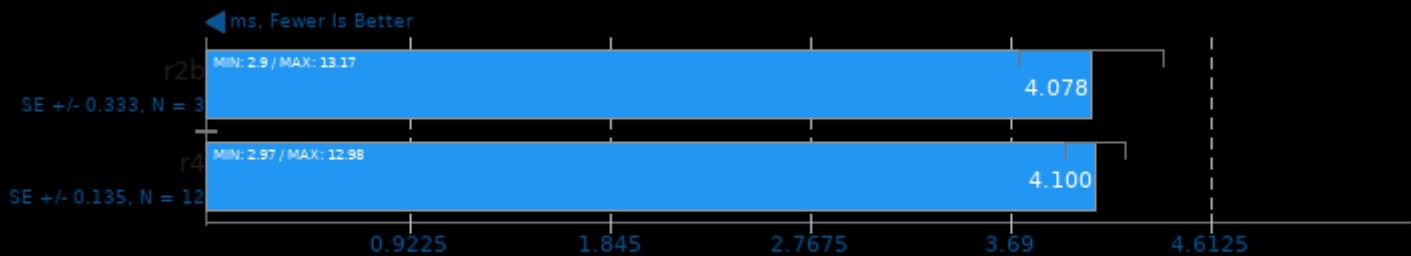
HammerDB - MariaDB 10.5.9

Virtual Users: 8 - Warehouses: 250



Mobile Neural Network 1.1.3

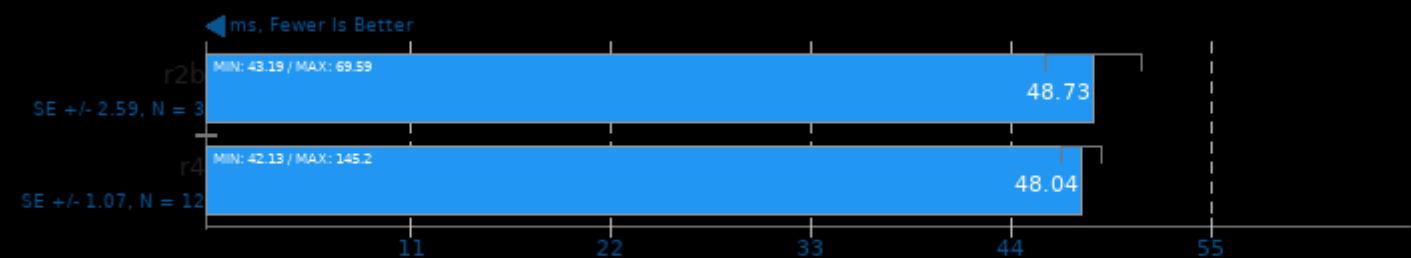
Model: MobileNetV2_224



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fno-threadsafe-statics

Mobile Neural Network 1.1.3

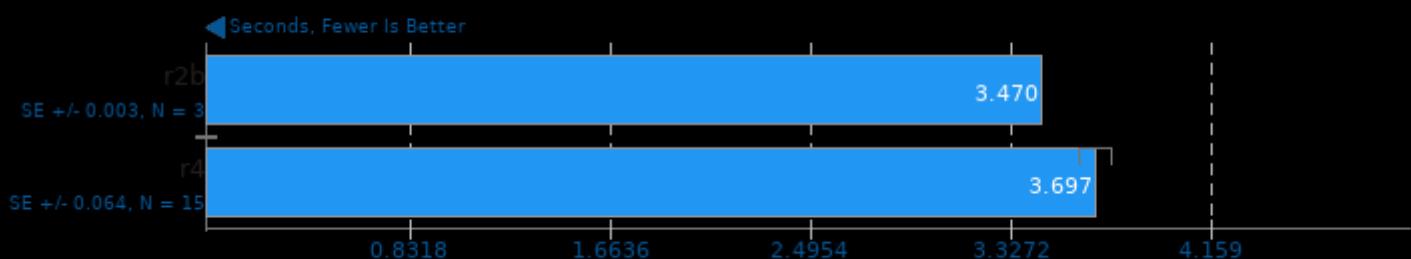
Model: resnet-v2-50



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fno-threadsafe-statics

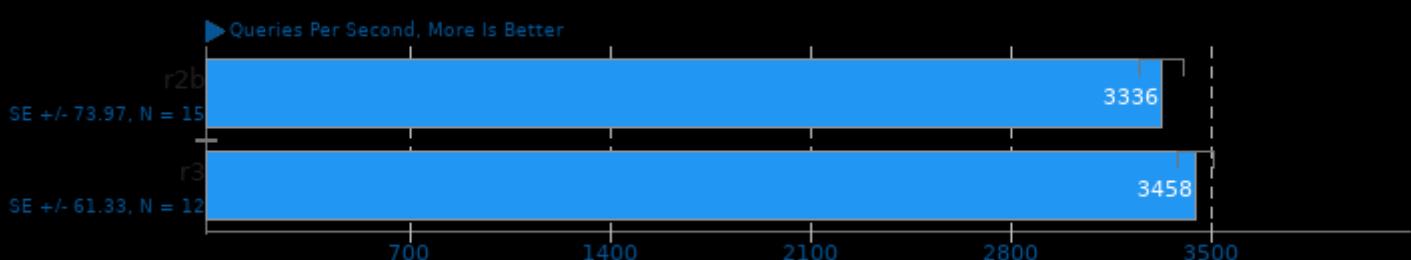
KTX-Software toktx 4.0

Settings: Zstd Compression 9



MariaDB 10.5.2

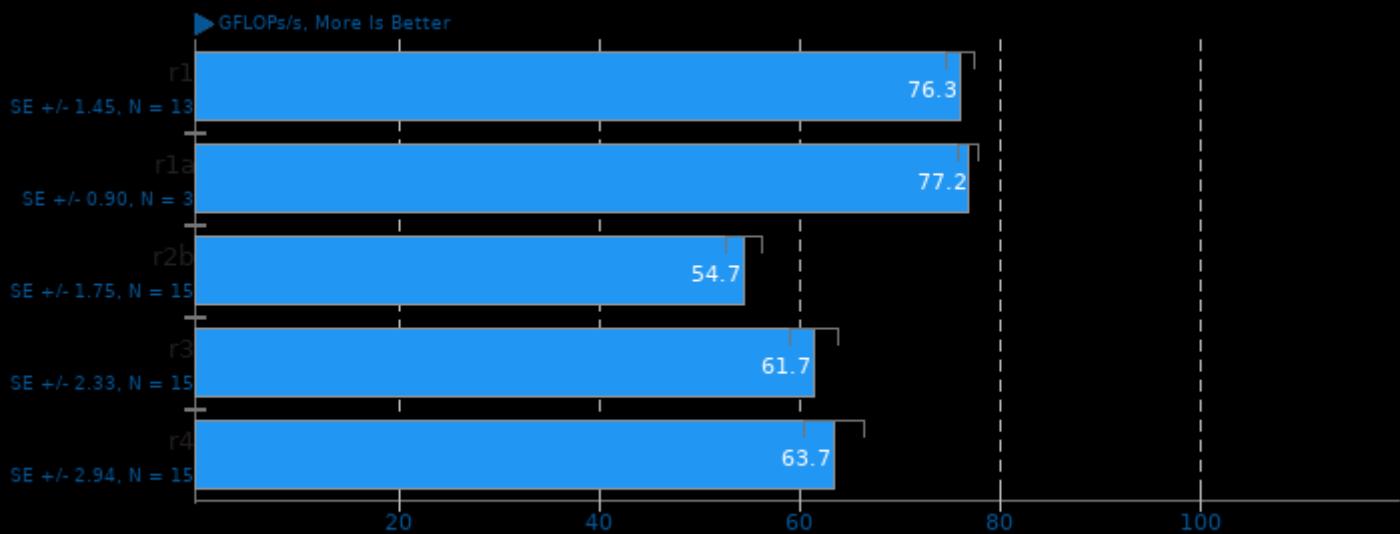
Clients: 1



1. (CXX) g++ options: -fPIC -pie -fstack-protector -O2 -shared -lpthread -lsnappy -ldl -lz -lrt

ViennaCL 1.7.1

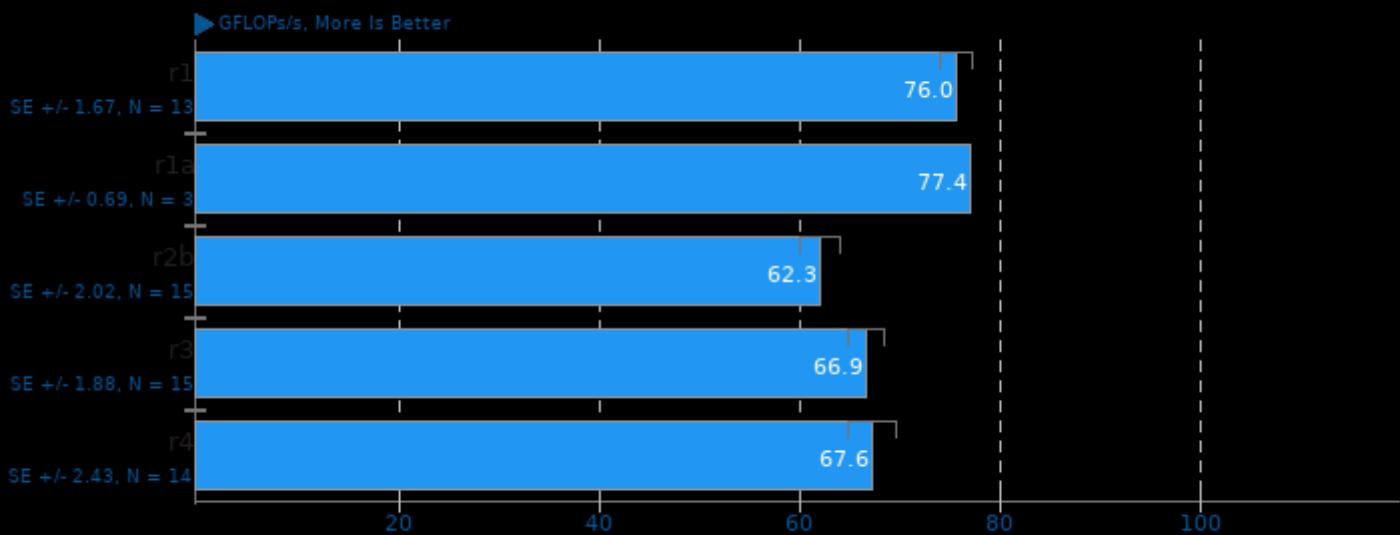
Test: CPU BLAS - dGEMM-TT



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

ViennaCL 1.7.1

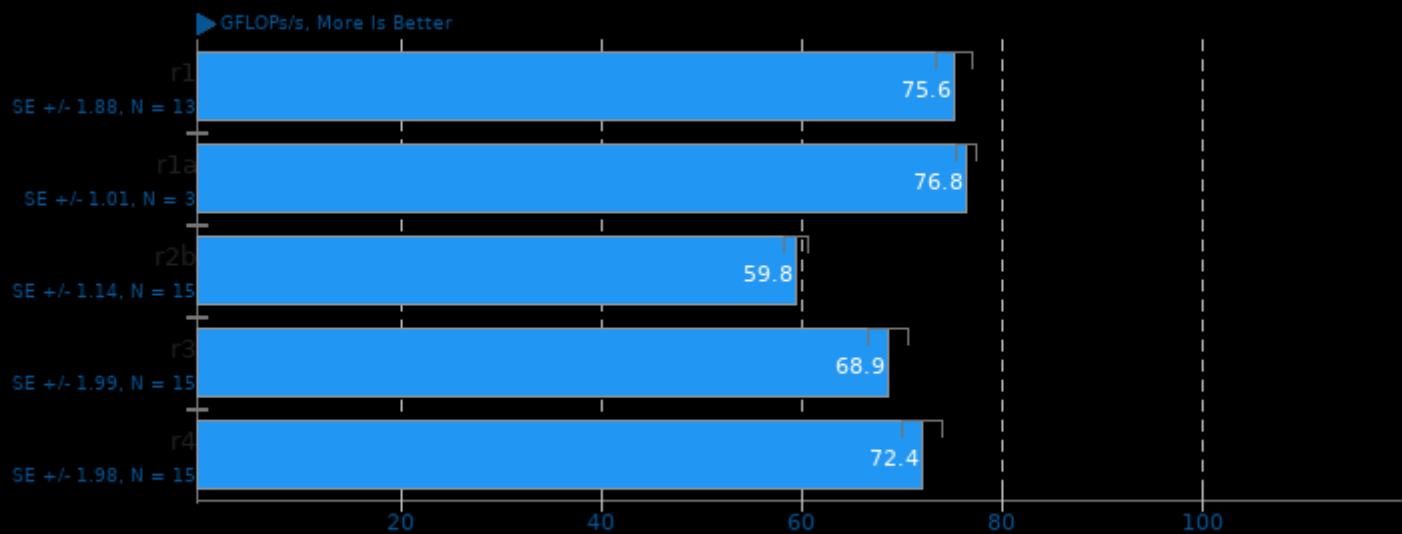
Test: CPU BLAS - dGEMM-TN



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

ViennaCL 1.7.1

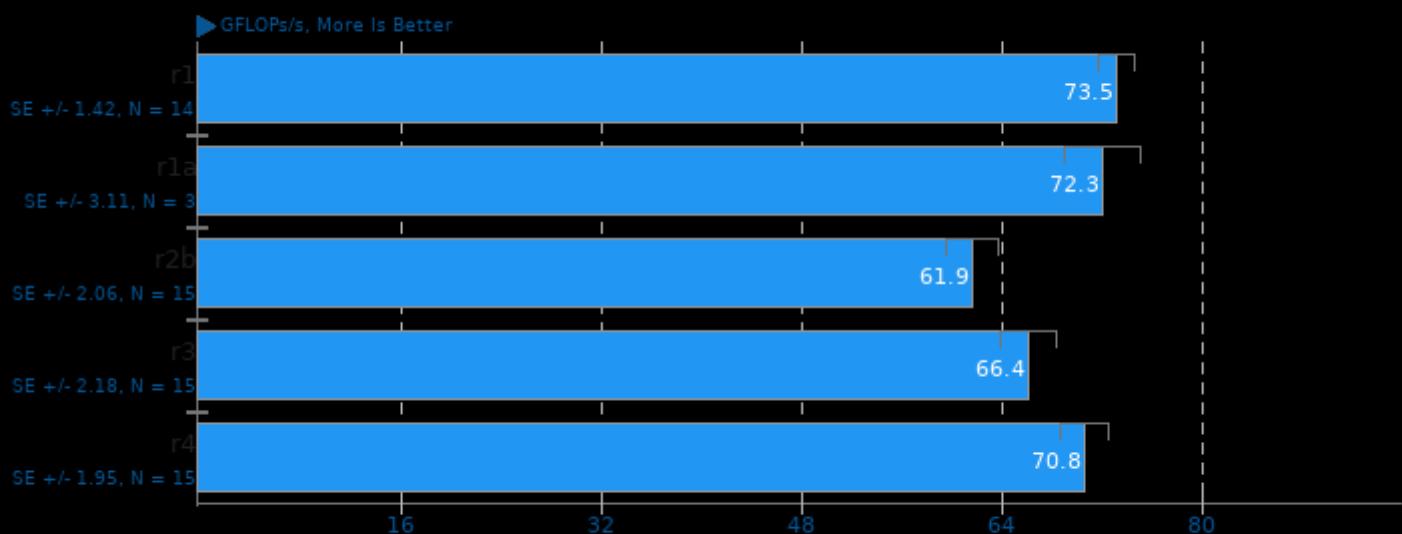
Test: CPU BLAS - dGEMM-NT



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

ViennaCL 1.7.1

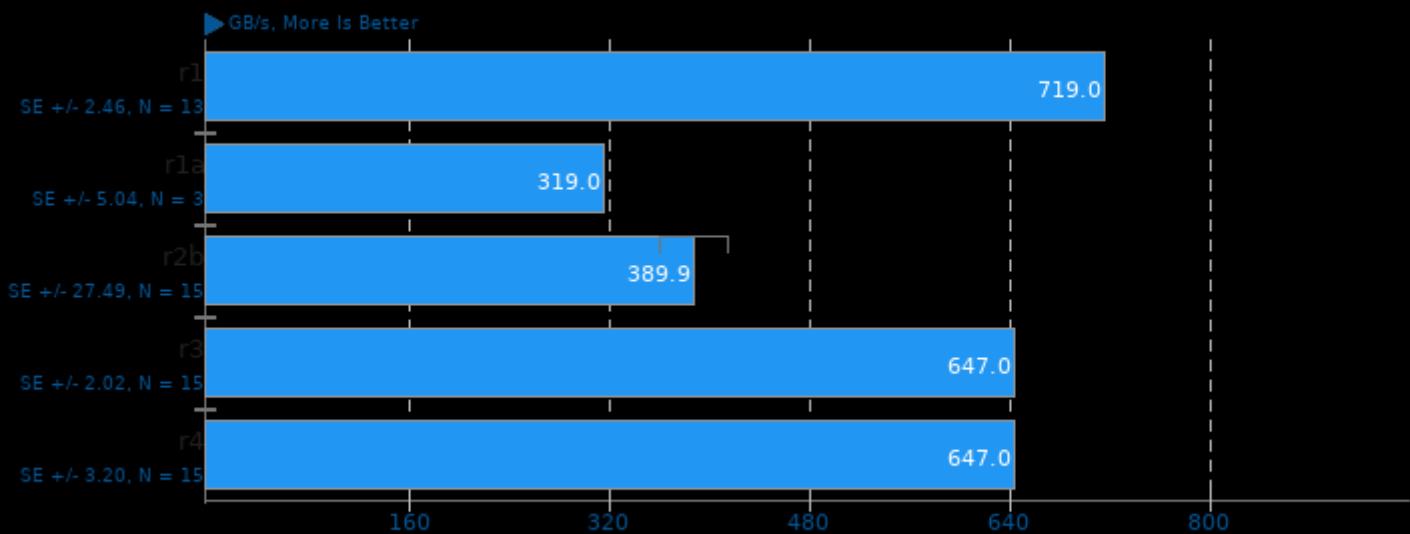
Test: CPU BLAS - dGEMM-NN



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

ViennaCL 1.7.1

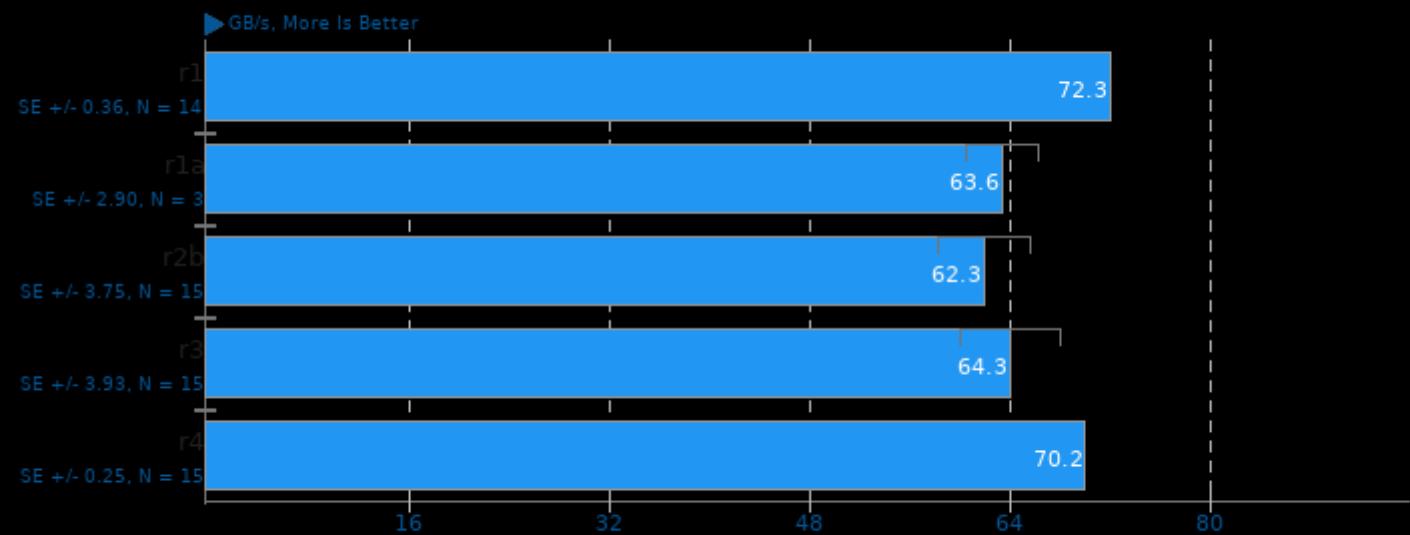
Test: CPU BLAS - dGEMV-T



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

ViennaCL 1.7.1

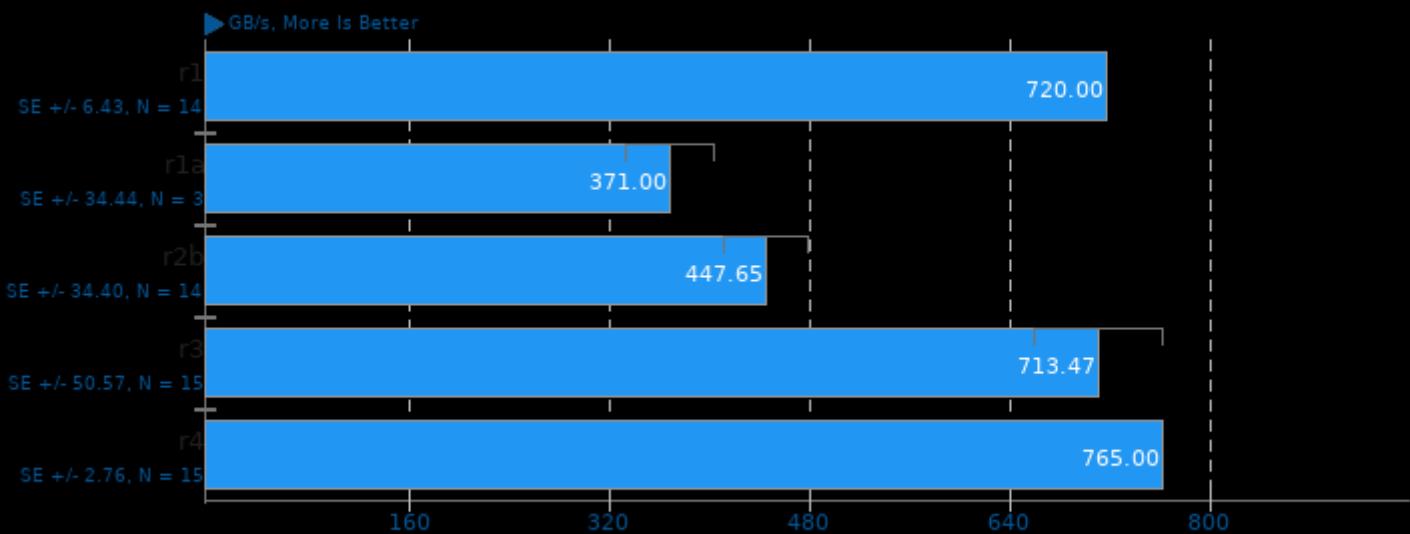
Test: CPU BLAS - dGEMV-N



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

ViennaCL 1.7.1

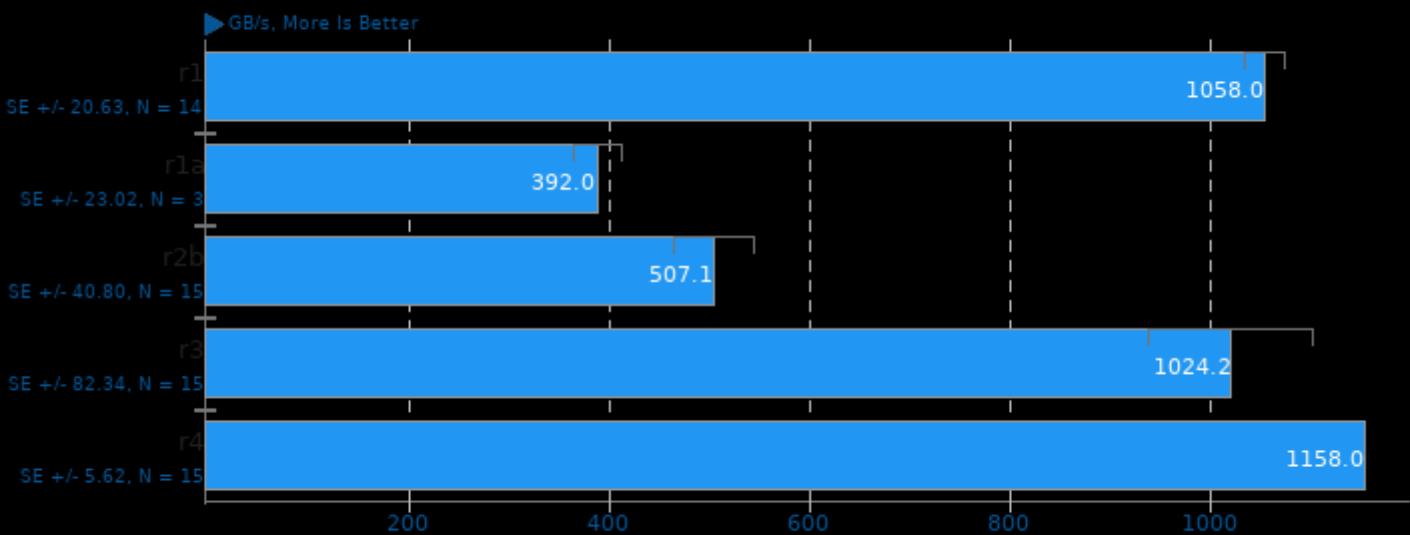
Test: CPU BLAS - dDOT



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

ViennaCL 1.7.1

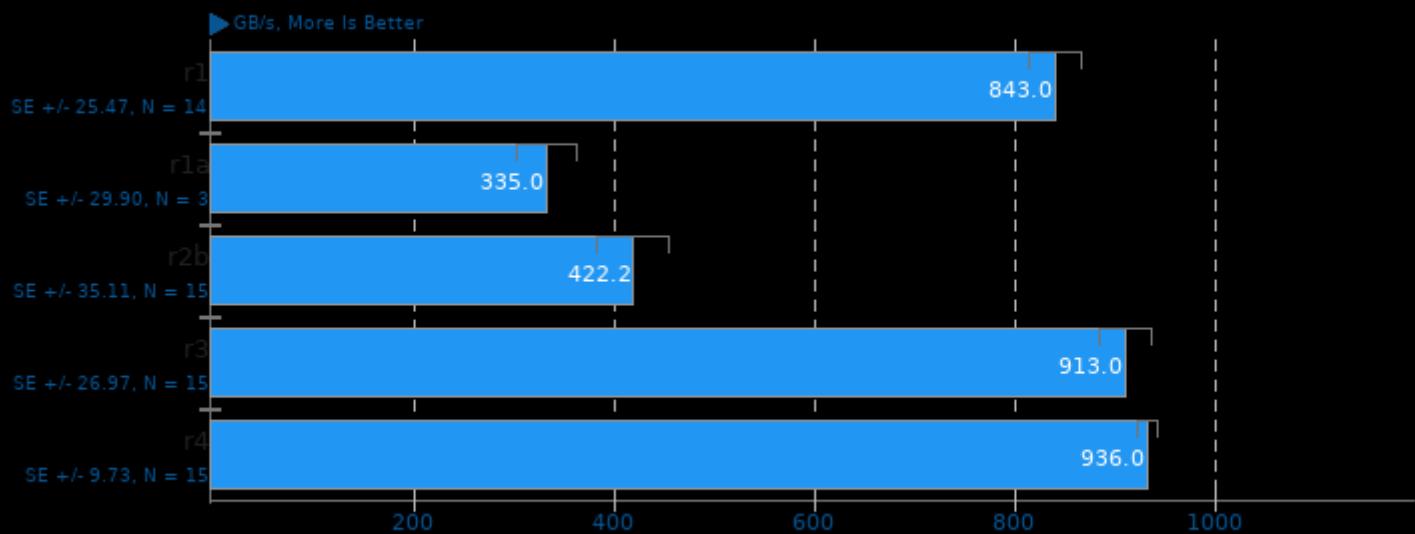
Test: CPU BLAS - dAXPY



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

ViennaCL 1.7.1

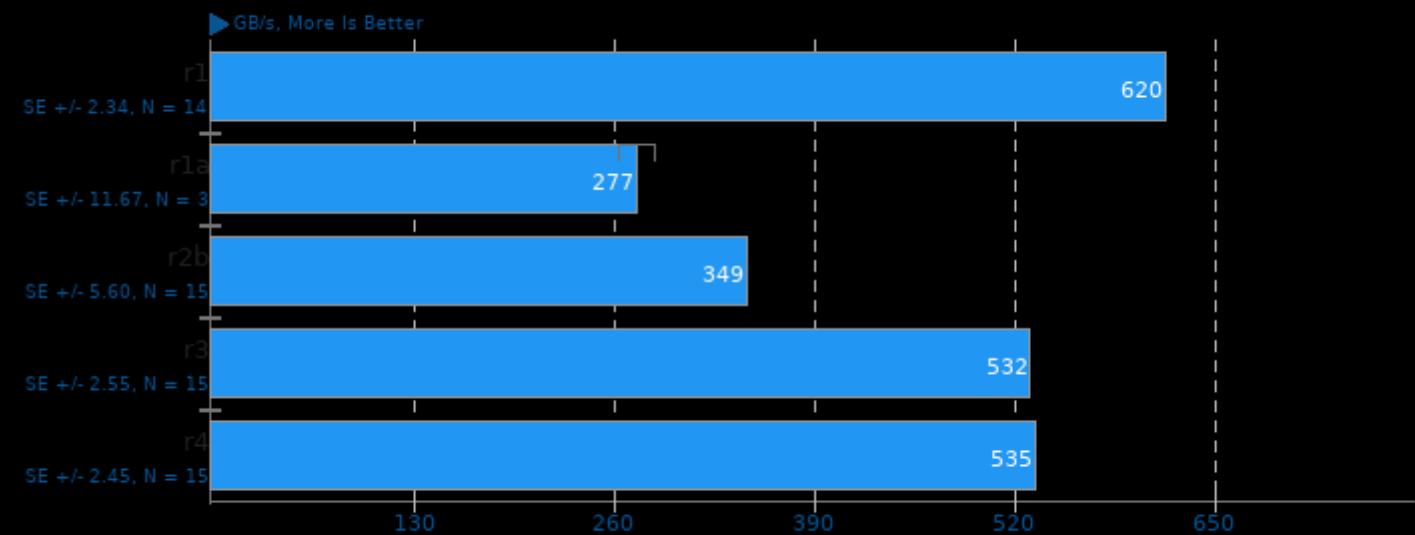
Test: CPU BLAS - dCOPY



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

ViennaCL 1.7.1

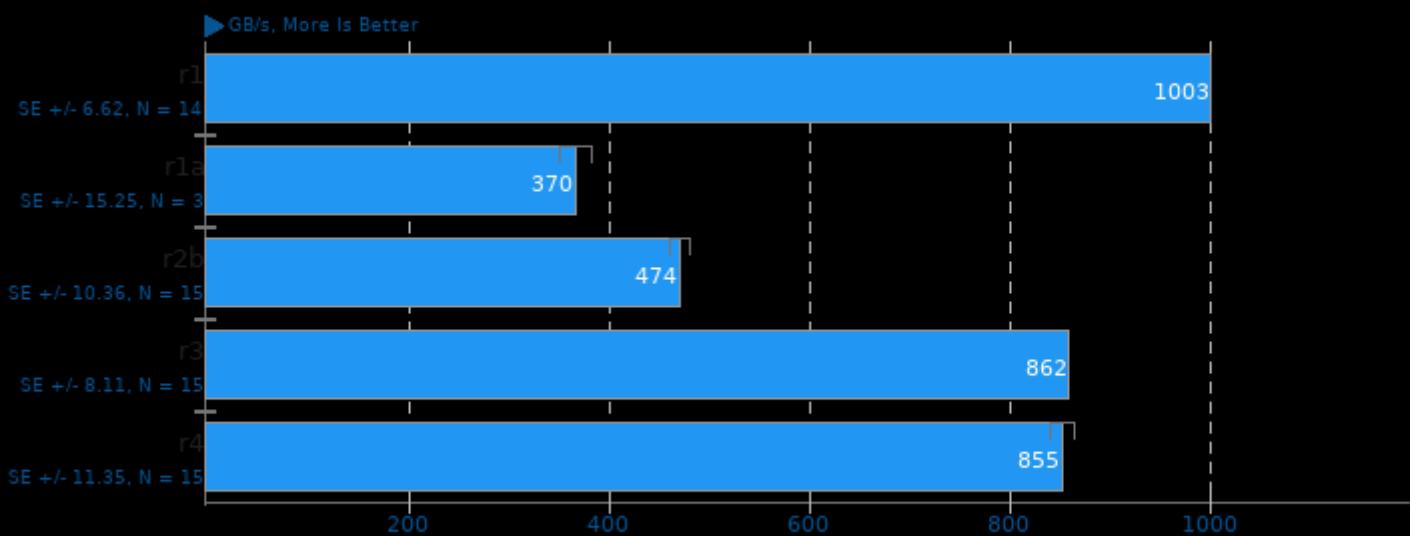
Test: CPU BLAS - sDOT



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

ViennaCL 1.7.1

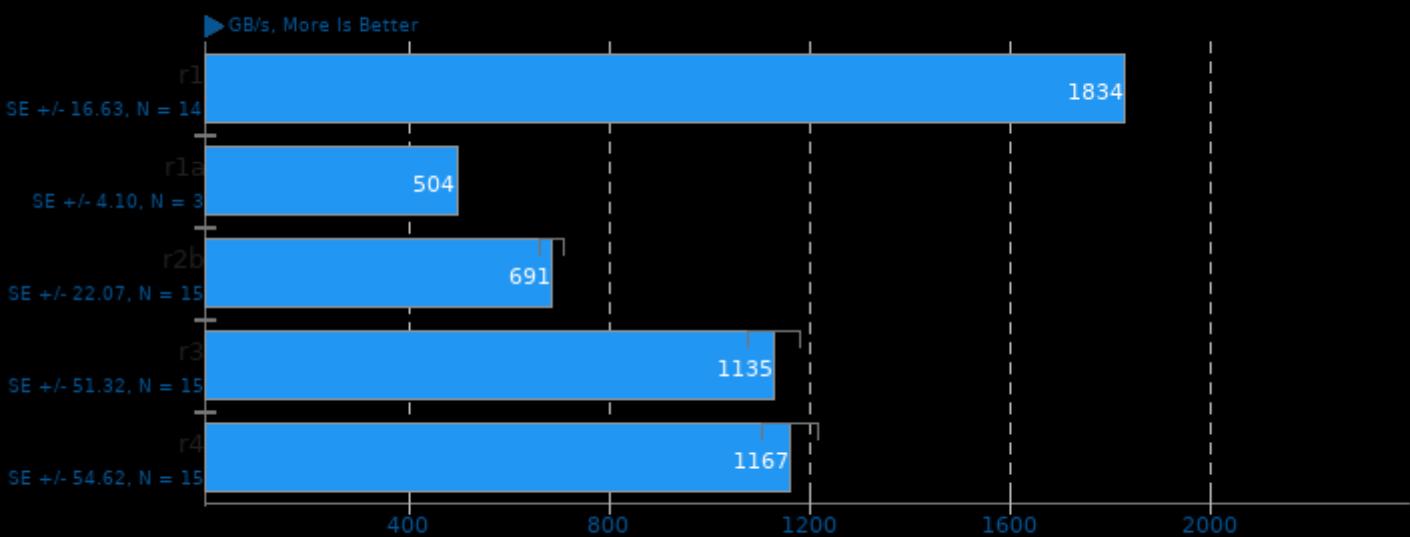
Test: CPU BLAS - sAXPY



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

ViennaCL 1.7.1

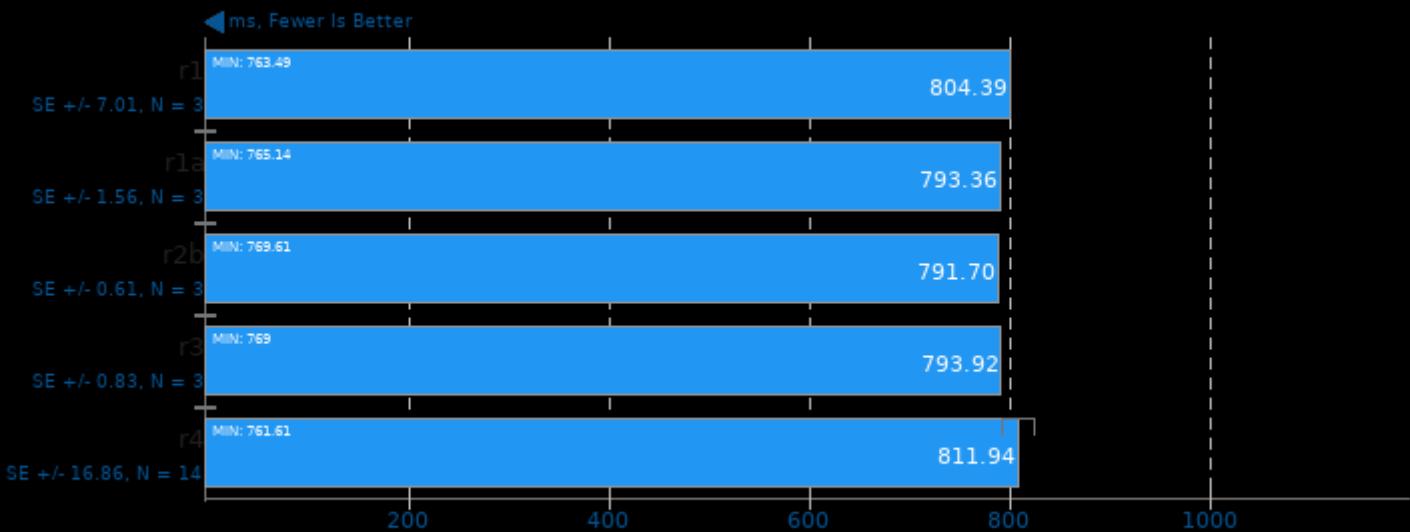
Test: CPU BLAS - sCOPY



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

oneDNN 2.1.2

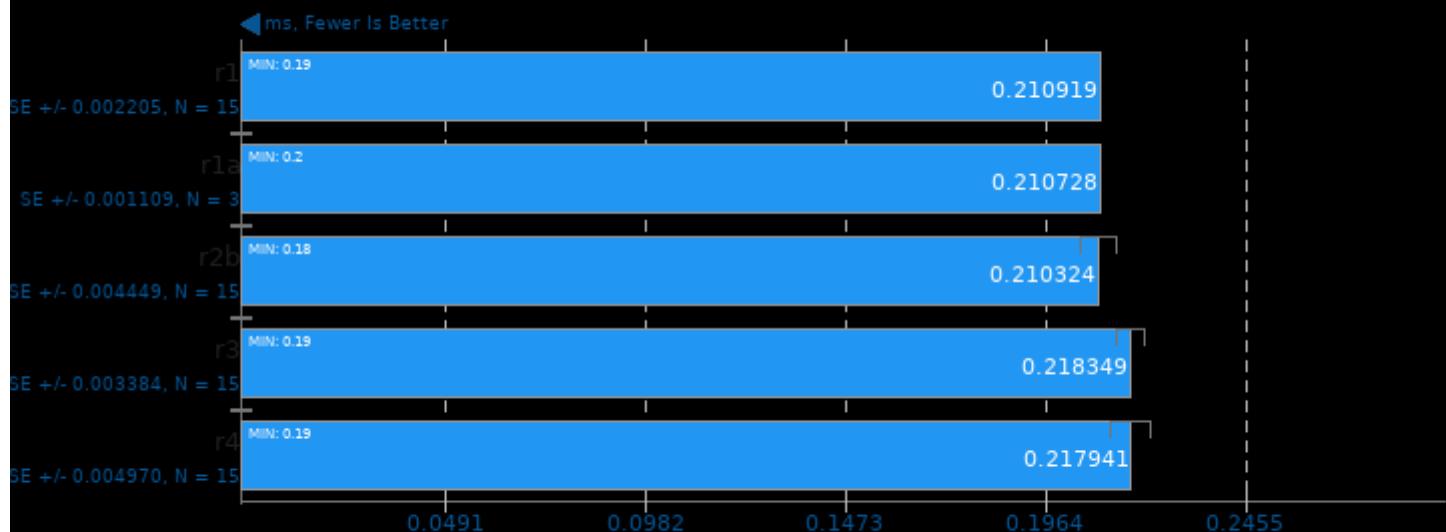
Harness: Recurrent Neural Network Training - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 2.1.2

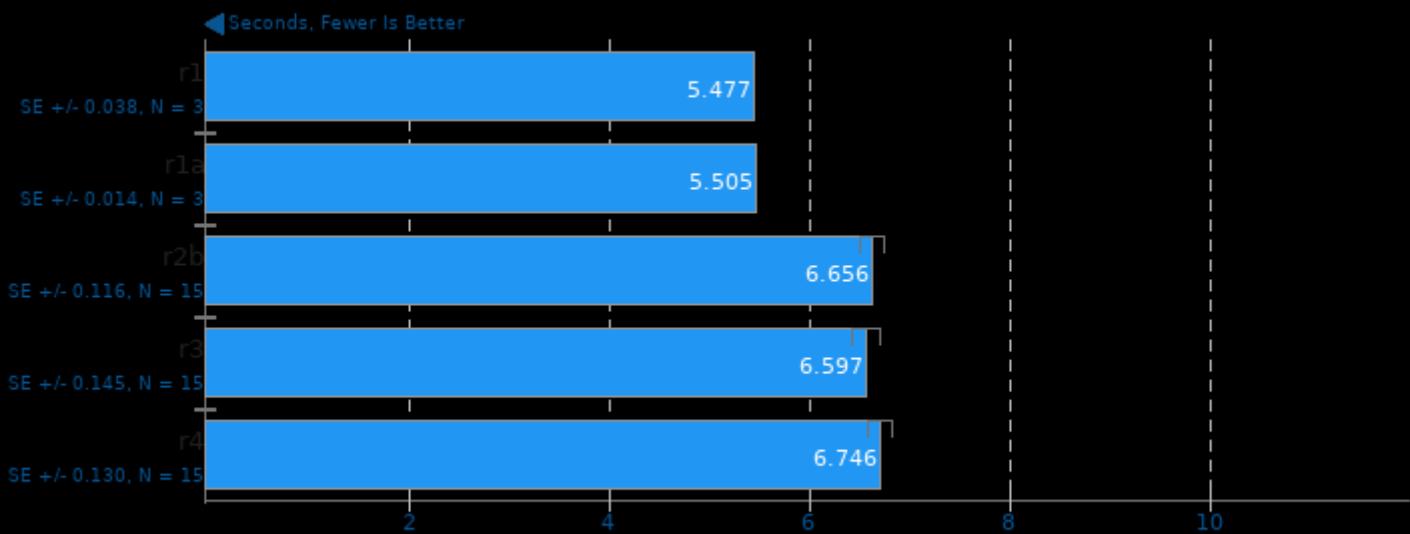
Harness: Deconvolution Batch shapes_3d - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

libavif avifenc 0.9.0

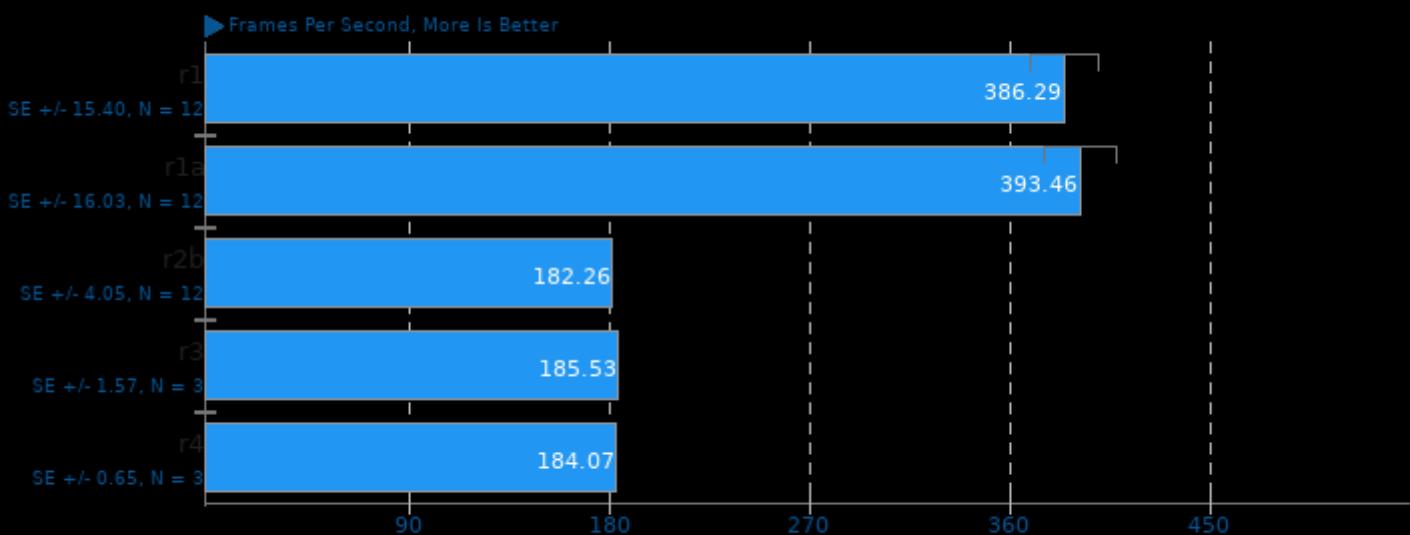
Encoder Speed: 10



1. (CXX) g++ options: -O3 -fPIC -lm

SVT-VP9 0.3

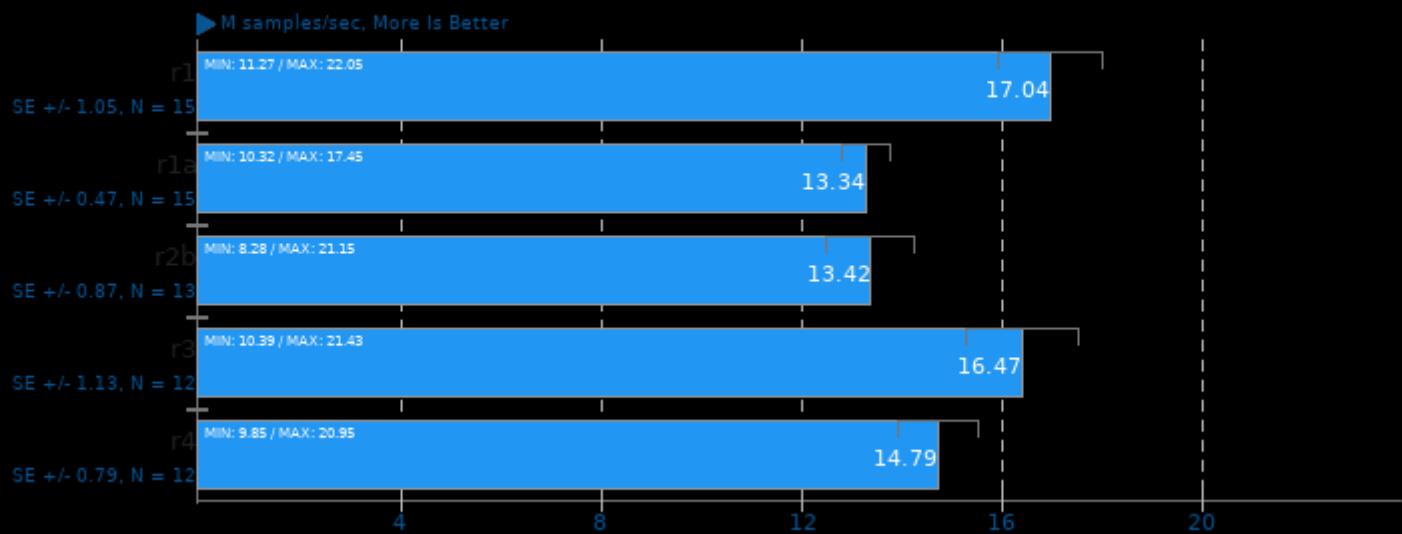
Tuning: VMAF Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

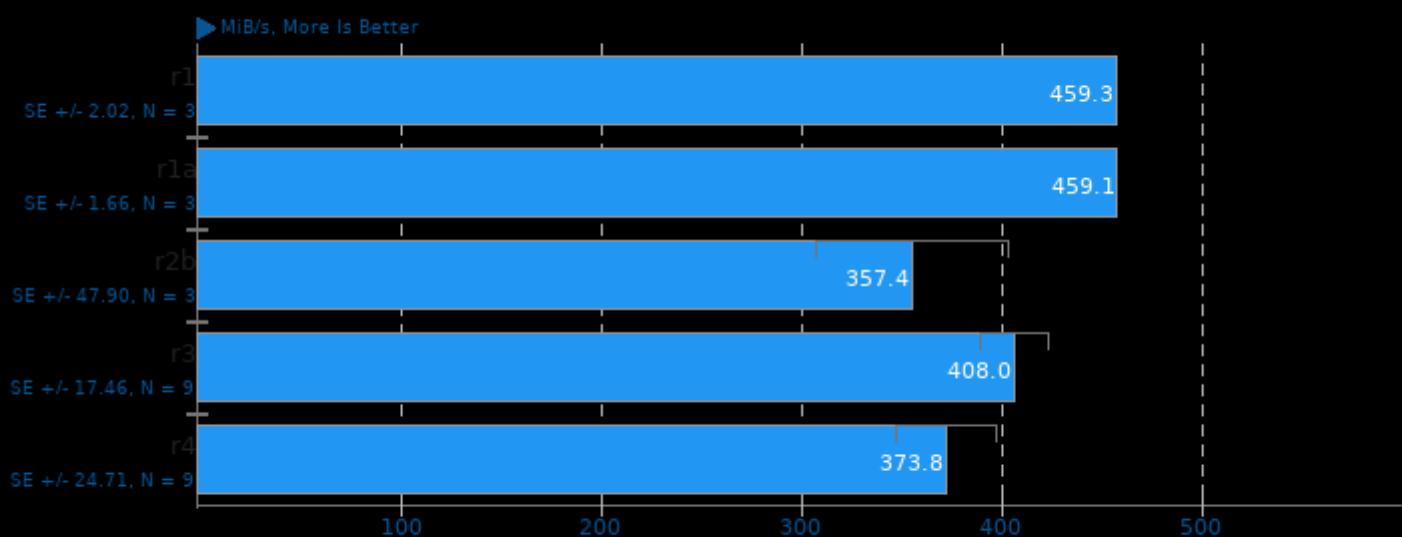
LuxCoreRender 2.5

Scene: Rainbow Colors and Prism - Acceleration: CPU



GNU Radio

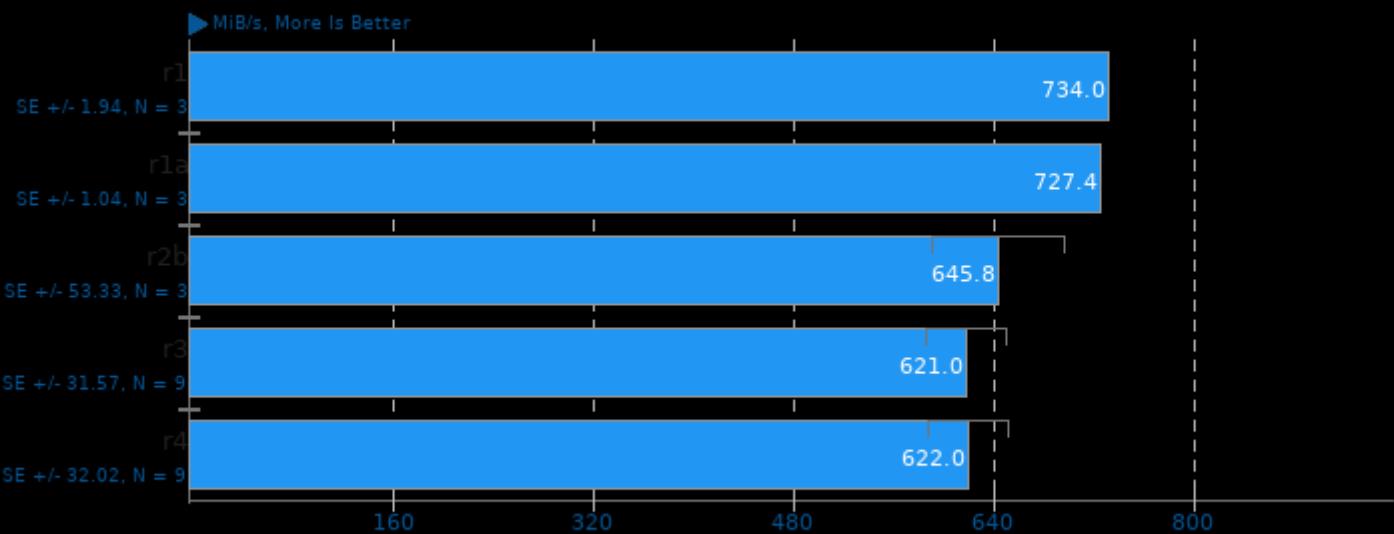
Test: Hilbert Transform



1.3.8.1.0

GNU Radio

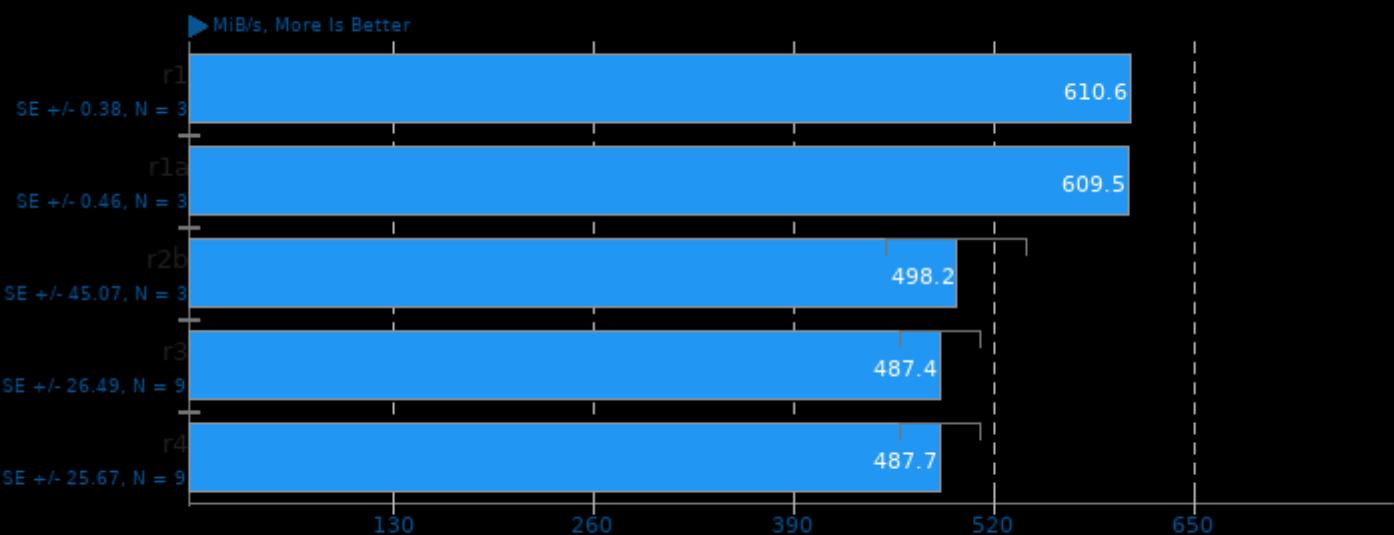
Test: FM Deemphasis Filter



1. 3.8.1.0

GNU Radio

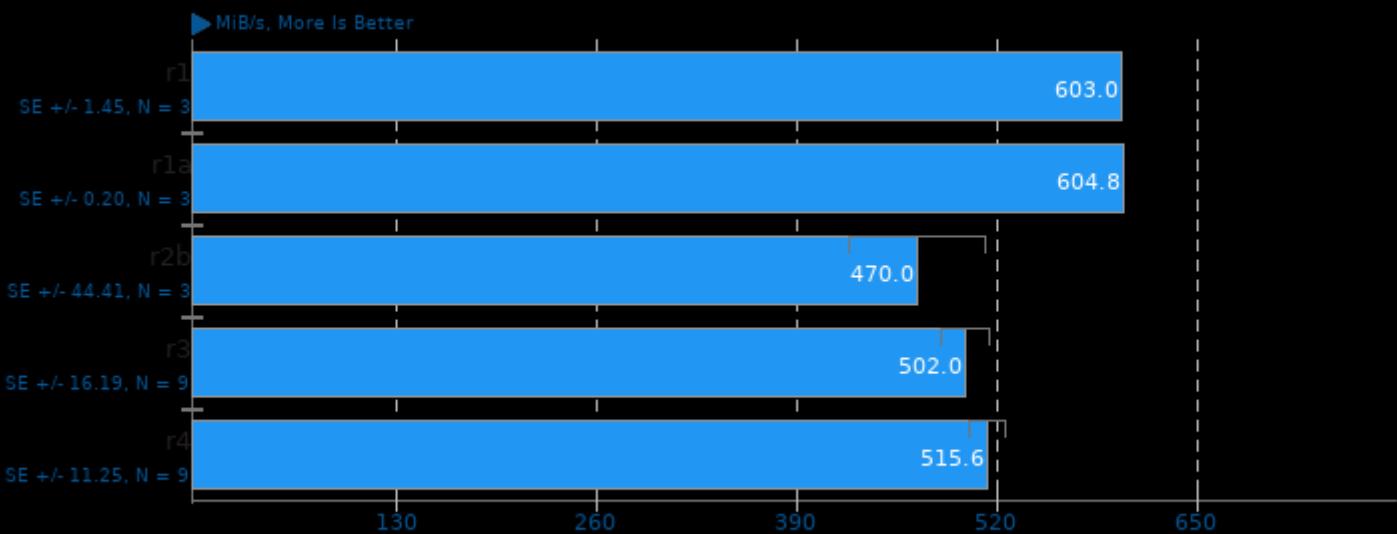
Test: IIR Filter



1. 3.8.1.0

GNU Radio

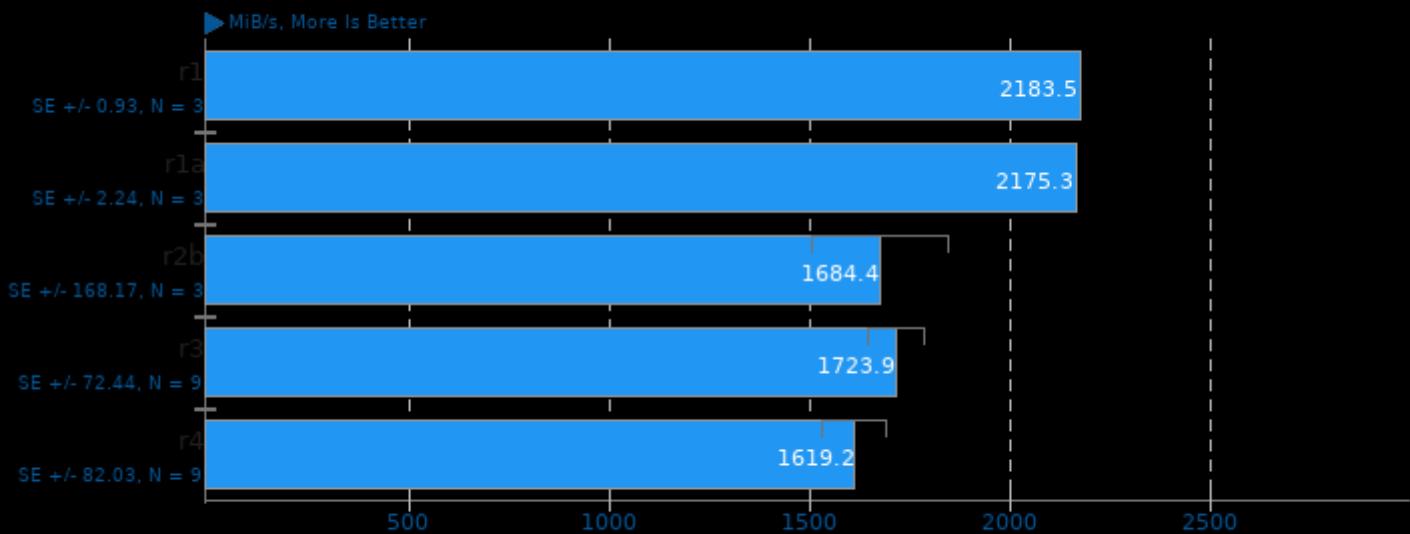
Test: FIR Filter



1. 3.8.1.0

GNU Radio

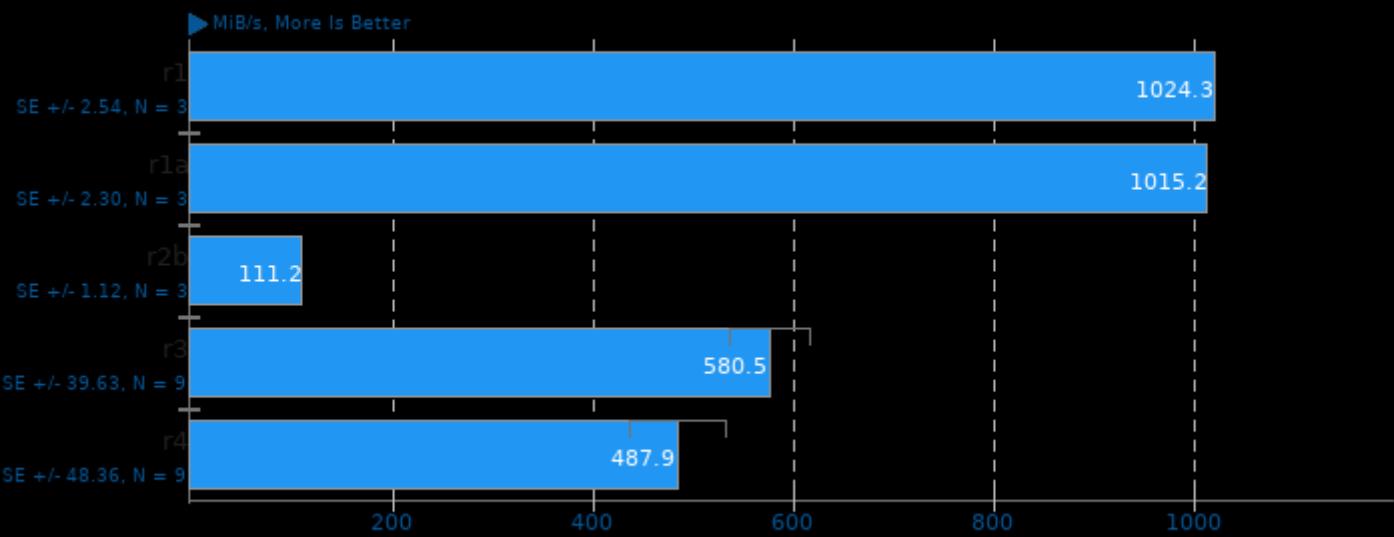
Test: Signal Source (Cosine)



1. 3.8.1.0

GNU Radio

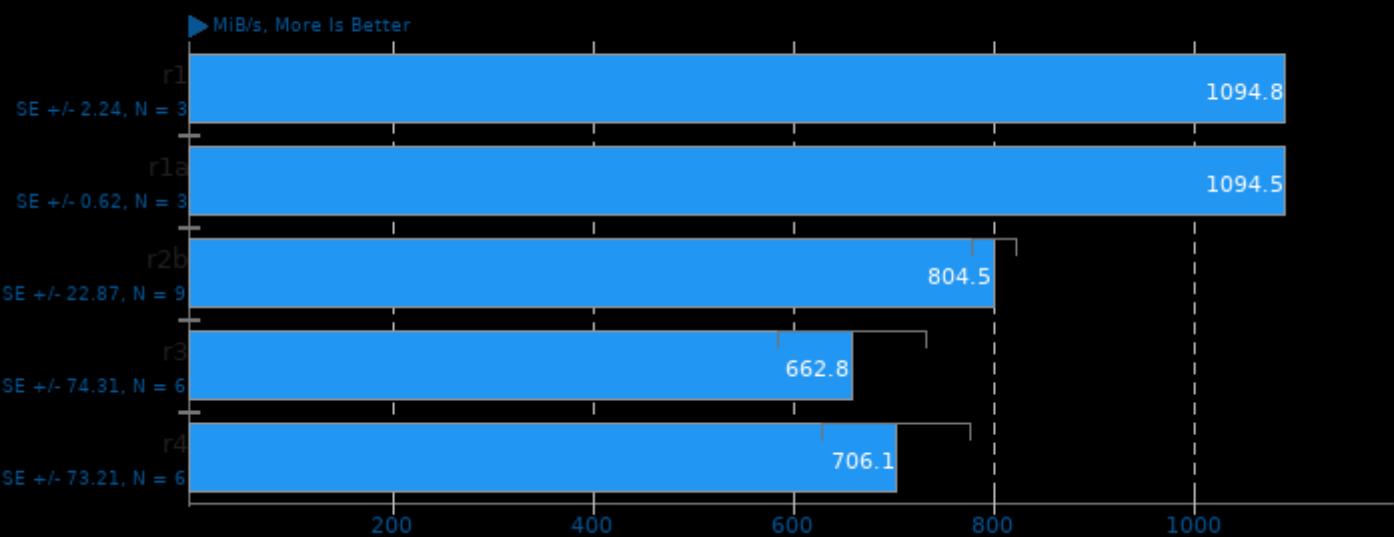
Test: Five Back to Back FIR Filters



1.3.8.1.0

LuaRadio 0.9.1

Test: Five Back to Back FIR Filters



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