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3990X sdr

AMD Ryzen Threadripper 3990X 64-Core testing with a System76 Thelio Major (F4c Z5 BIOS) and AMD Radeon RX 5600 OEM/5600 XT / 5700/5700 8GB on Pop 20.10 via the Phoronix Test Suite.

Automated Executive Summary

1 had the most wins, coming in first place for 40% of the tests.

Based on the geometric mean of all complete results, the fastest (2) was 1.004x the speed of the slowest (1). 3 was 0.998x the speed of 2 and 1 was 0.998x the speed of 3.

Test Systems:

1

2

3

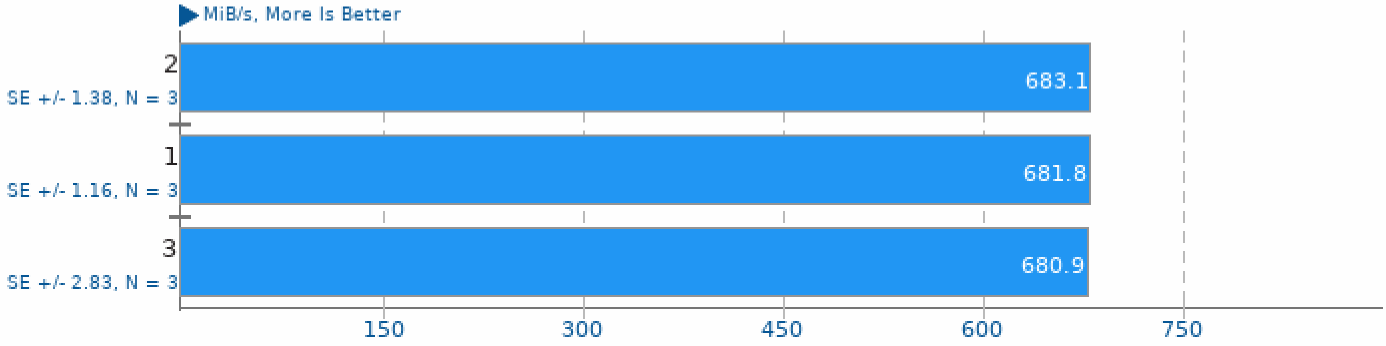
Processor: AMD Ryzen Threadripper 3990X 64-Core @ 2.90GHz (64 Cores / 128 Threads), Motherboard: System76 Thelio Major (F4c Z5 BIOS), Chipset: AMD Starship/Matisse, Memory: 126GB, Disk: Samsung SSD 970 EVO Plus 500GB, Graphics: AMD Radeon RX 5600 OEM/5600 XT / 5700/5700 8GB (1750/875MHz), Audio: AMD Navi 10 HDMI Audio, Monitor: DELL P2415Q, Network: Intel I211 + Intel Wi-Fi 6 AX200

OS: Pop 20.10, Kernel: 5.8.0-7630-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.8, OpenGL: 4.6 Mesa 21.1.0-devel (git-96d7555 2021-01-22 groovy-oibaf-ppa) (LLVM 11.0.1), Vulkan: 1.2.145, Compiler: GCC 10.2.0 + Clang 11.0.1-1~oibaf~g, File-System: ext4, Screen Resolution: 3840x2160

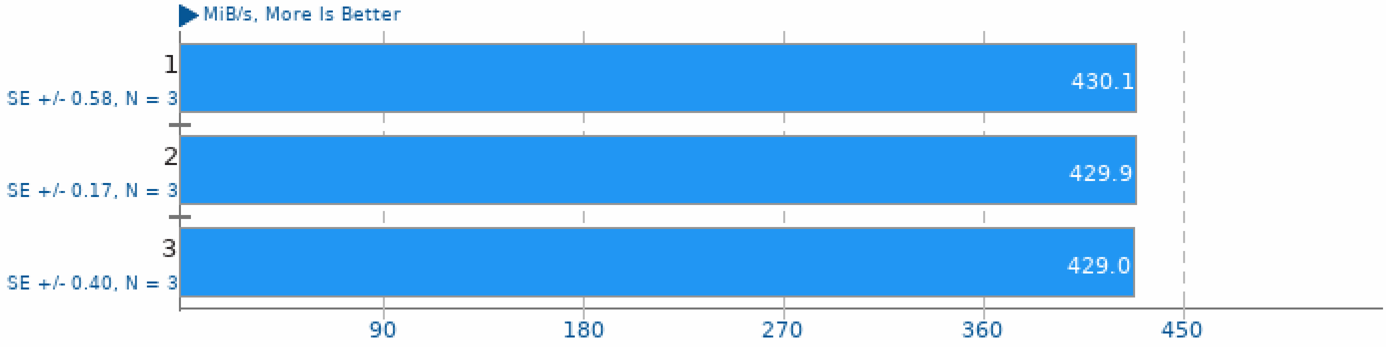
Kernel Notes: snd_usb_audio.ignore_ctl_error=1 - Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0x8301025
Python Notes: Python 3.8.6
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: 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 Full AMD retpoline IBPB: conditional STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	1	2	3
LuaRadio - F.B.t.B.F.F (MiB/s)	681.8	683.1	680.9
Normalized	99.81%	100%	99.68%
Standard Deviation	0.3%	0.3%	0.7%
LuaRadio - F.D.F (MiB/s)	430.1	429.9	429.0
Normalized	100%	99.95%	99.74%
Standard Deviation	0.2%	0.1%	0.2%
LuaRadio - Hilbert Transform (MiB/s)	104.4	104.4	104.3
Normalized	100%	100%	99.9%
Standard Deviation	0.1%	0.2%	0.1%
LuaRadio - Complex Phase (MiB/s)	649.8	648.6	649.3
Normalized	100%	99.82%	99.92%
Standard Deviation	0.1%	0.3%	0.3%
GNU Radio - F.B.t.B.F.F (MiB/s)	406.3	406.5	409.4
Normalized	99.24%	99.29%	100%
Standard Deviation	2.9%	2.5%	
GNU Radio - S.S.C (MiB/s)	3575	3753	3637
Normalized	95.23%	100%	96.9%
Standard Deviation	2%	1.5%	
GNU Radio - FIR Filter (MiB/s)	710.1	710.9	705.7
Normalized	99.89%	100%	99.27%
Standard Deviation	0.9%	0.3%	
GNU Radio - IIR Filter (MiB/s)	625.6	620.0	620.4
Normalized	100%	99.1%	99.17%
Standard Deviation	0.3%	0.9%	
GNU Radio - F.D.F (MiB/s)	921.0	916.6	922.7
Normalized	99.82%	99.34%	100%
Standard Deviation	0.9%	0.4%	
GNU Radio - Hilbert Transform (MiB/s)	528.1	527.9	533
Normalized	99.08%	99.04%	100%
Standard Deviation	1%	0.4%	

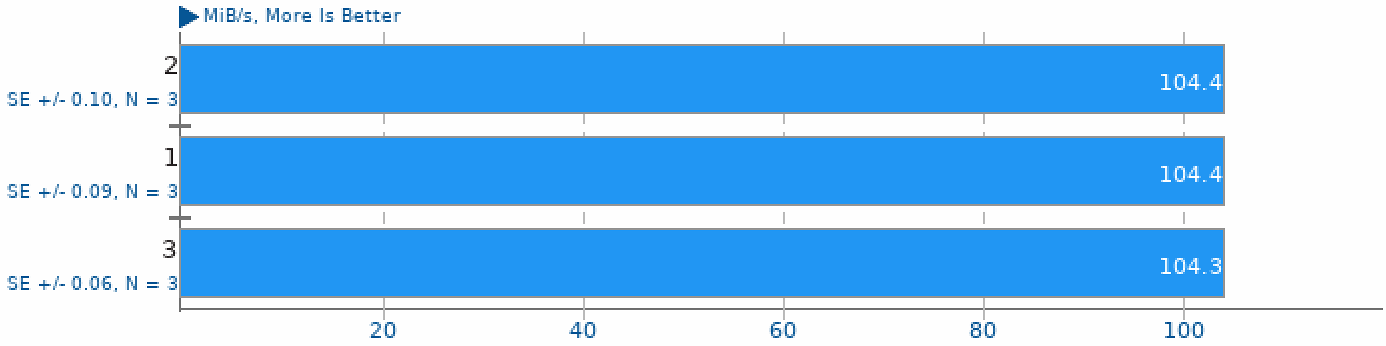
LuaRadio 0.9.1
Test: Five Back to Back FIR Filters



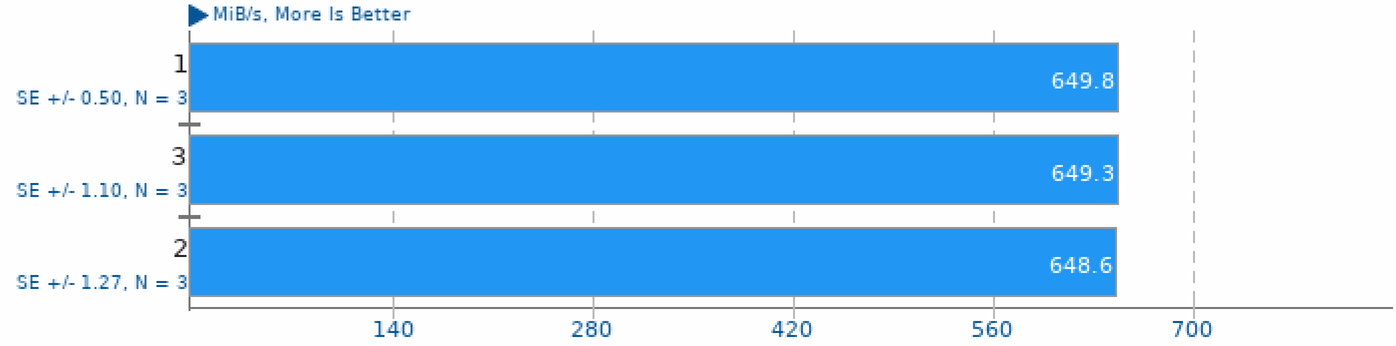
LuaRadio 0.9.1
Test: FM Deemphasis Filter



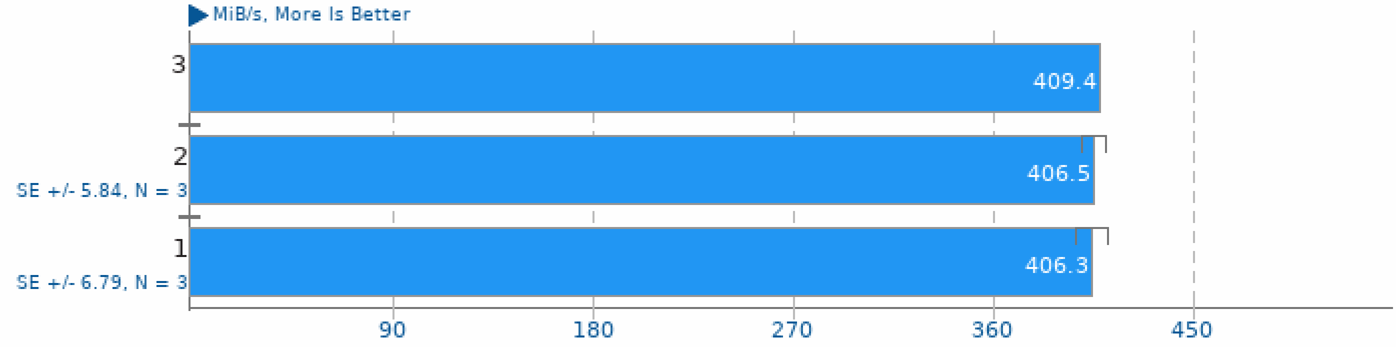
LuaRadio 0.9.1
Test: Hilbert Transform



LuaRadio 0.9.1
Test: Complex Phase

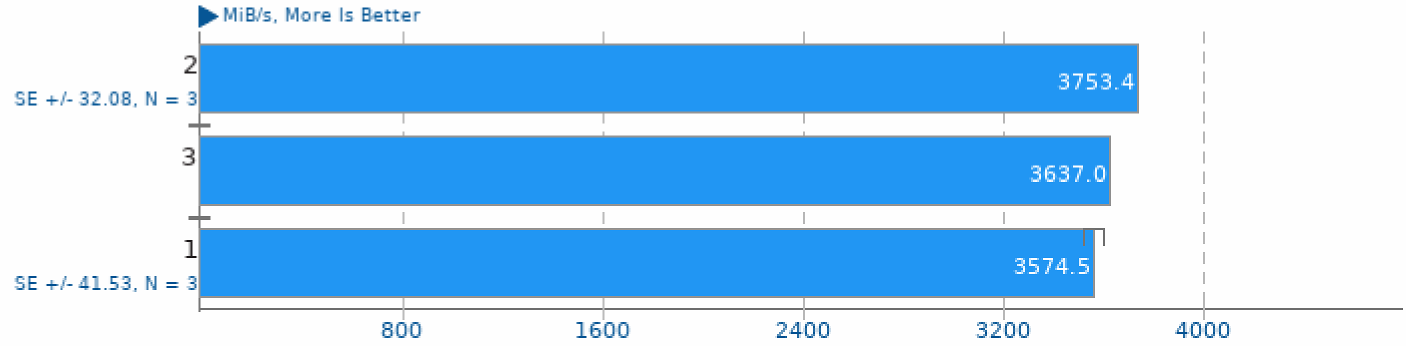


GNU Radio
Test: Five Back to Back FIR Filters



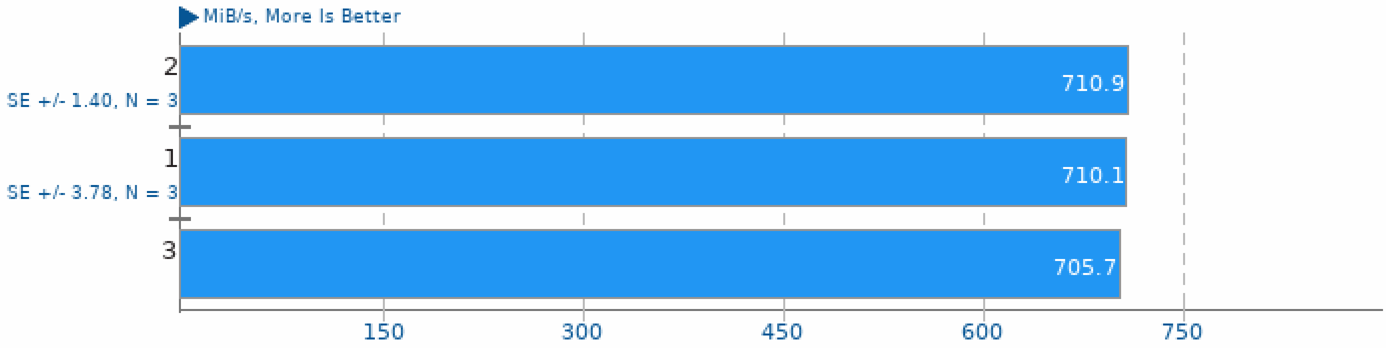
1. 3.8.1.0

GNU Radio
Test: Signal Source (Cosine)



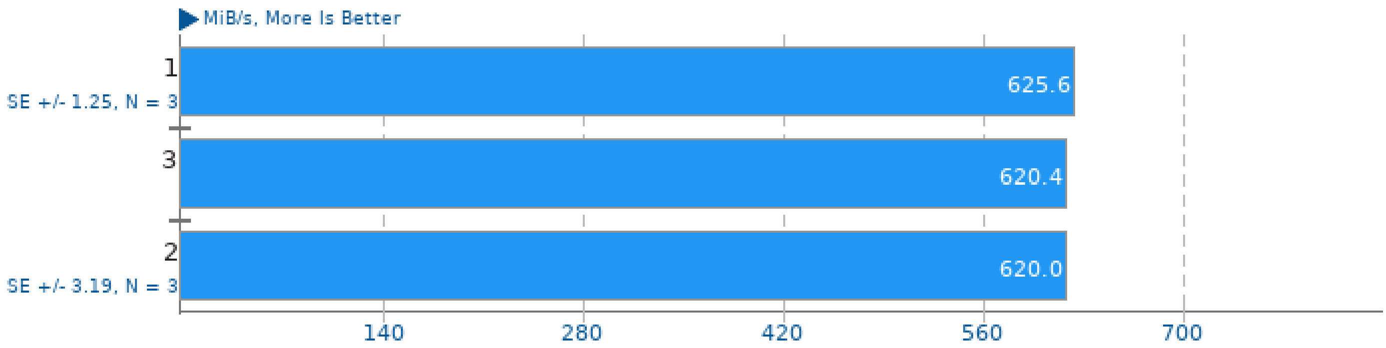
1. 3.8.1.0

GNU Radio
Test: FIR Filter



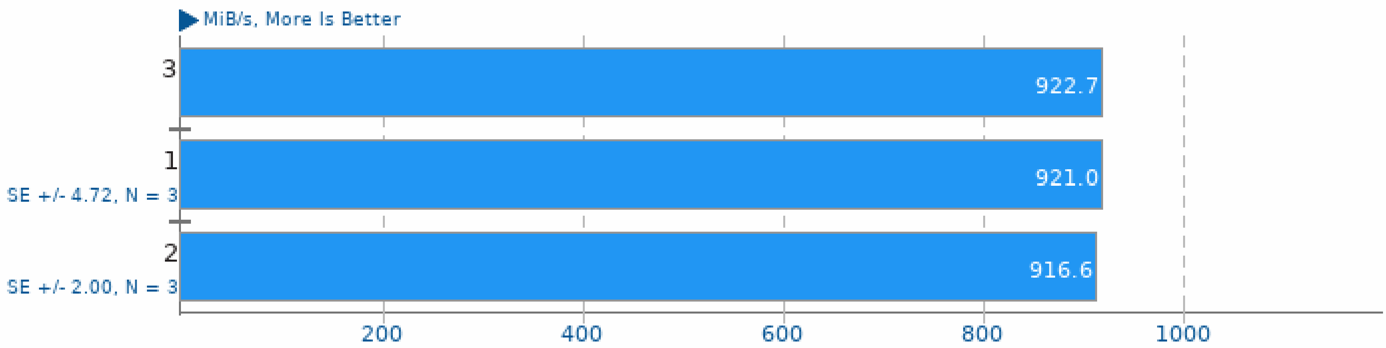
1. 3.8.1.0

GNU Radio
Test: IIR Filter



1. 3.8.1.0

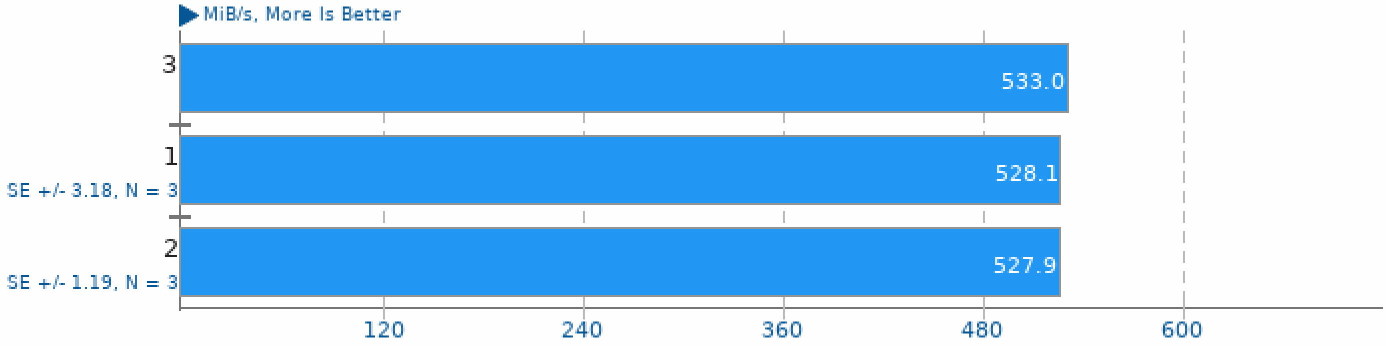
GNU Radio
Test: FM Deemphasis Filter



1. 3.8.1.0

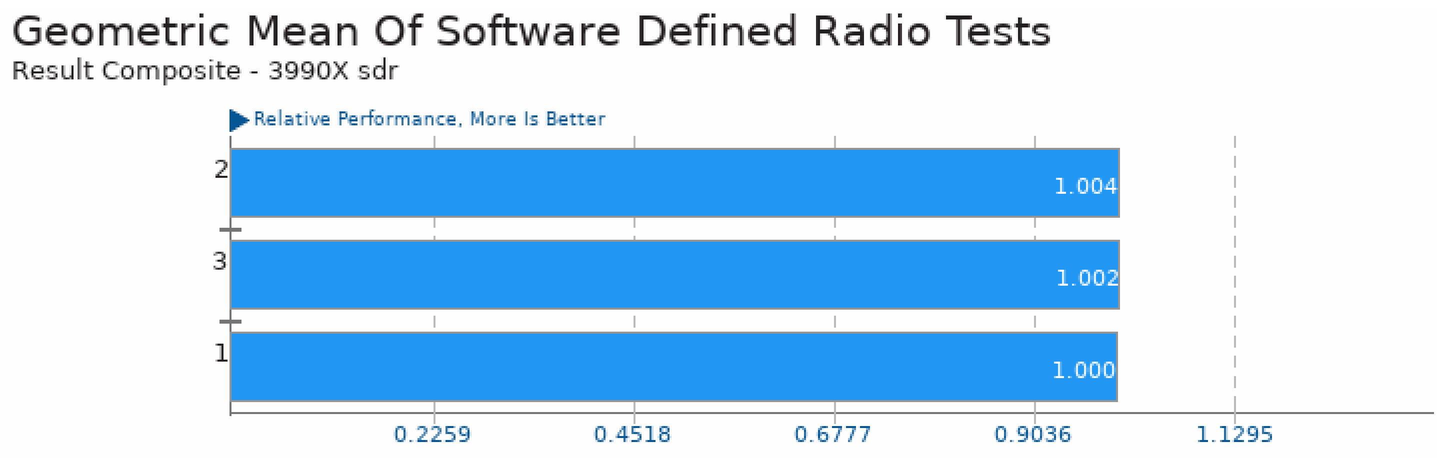
GNU Radio

Test: Hilbert Transform



1. 3.8.1.0

These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/luaradio and system/gnuradio

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