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etcpak-ior-tr-3990x

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 63% of the tests.

Test Systems:

1

1a

2

3

etcpak-ior-tr-3990x

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

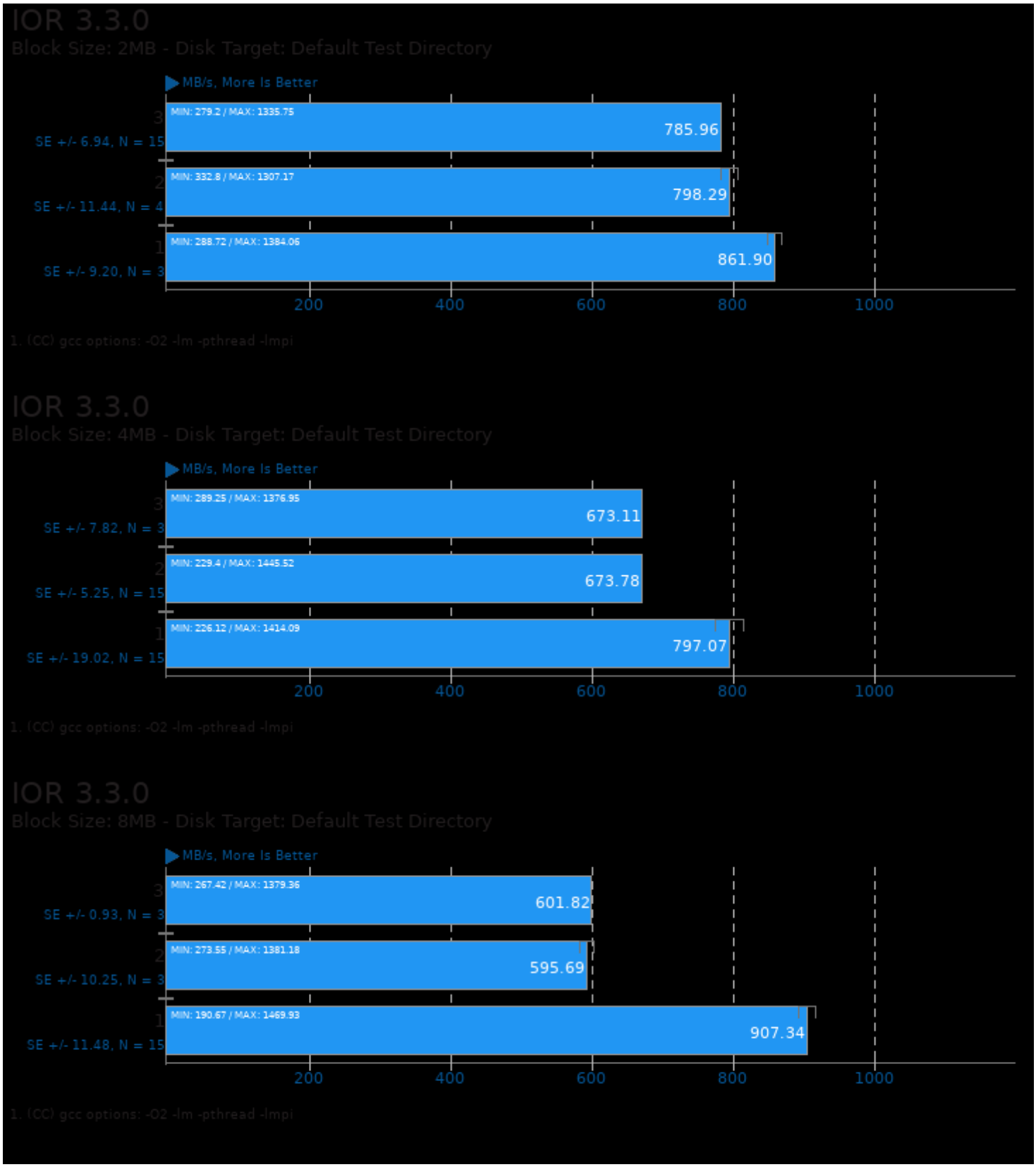
OS: Pop 20.10, Kernel: 5.8.0-7625-generic (x86_64), Desktop: GNOME Shell 3.38.1, Display Server: X Server 1.20.8, Display Driver: amdgpu 19.1.0, OpenGL: 4.6 Mesa 20.2.1 (LLVM 11.0.0), Vulkan: 1.2.131, Compiler: GCC 10.2.0 + Clang 11.0.0-2, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: snd_usb_audio.ignore_ctl_error=1
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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/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
Disk Notes: NONE / errors=remount-ro,noatime,rw / Block Size: 4096
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0x8301025
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

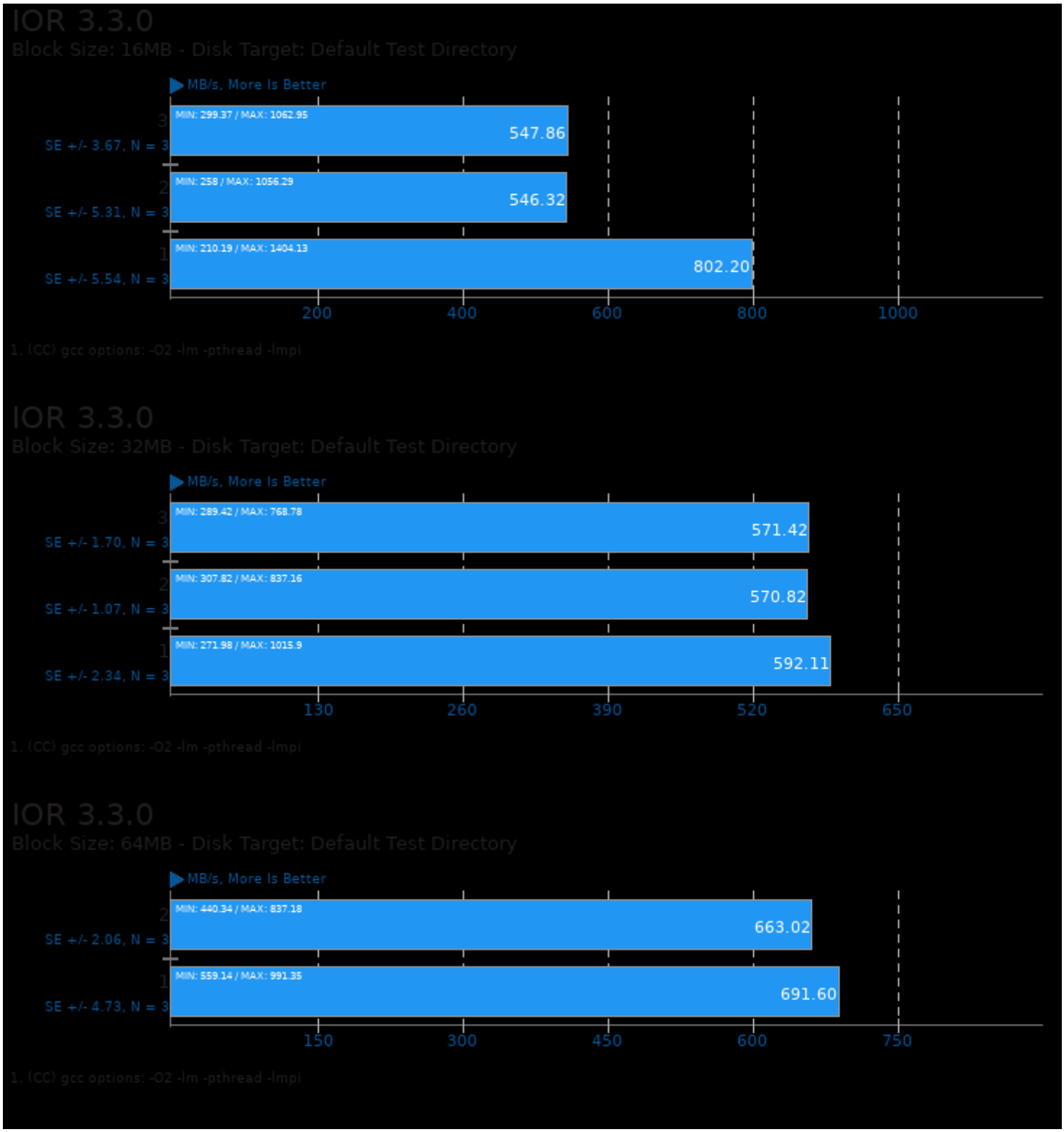
	1	1a	2	3
IOR - 2MB (MB/s)	**861.90**		798.29	**785.96**
Normalized	100%		92.62%	91.19%
Standard Deviation	1.8%		2.9%	3.4%
IOR - 4MB (MB/s)	**797.07**		673.78	**673.11**
Normalized	100%		84.53%	84.45%
Standard Deviation	9.2%		3%	2%
IOR - 8MB (MB/s)	**907.34**		**595.69**	601.82
Normalized	100%		65.65%	66.33%
Standard Deviation	4.9%		3%	0.3%
IOR - 16MB (MB/s)	**802.20**		**546.32**	547.86
Normalized	100%		68.1%	68.29%
Standard Deviation	1.2%		1.7%	1.2%
IOR - 32MB (MB/s)	**592.11**		**570.82**	571.42
Normalized	100%		96.4%	96.51%
Standard Deviation	0.7%		0.3%	0.5%
IOR - 64MB (MB/s)	**691.60**		**663.02**	
Normalized	100%		95.87%	
Standard Deviation	1.2%		0.5%	
IOR - 256MB (MB/s)	**731.92**		**725.77**	
Normalized	100%		99.16%	
Standard Deviation	0.3%		0.2%	
Etcpak - DXT1 (Mpx/s)		**1291**	**1261**	
Normalized		100%	97.69%	
Standard Deviation		1%	2.9%	
Etcpak - ETC1 (Mpx/s)		**301.420**	**302.808**	
Normalized		99.54%	100%	
Standard Deviation		0.7%	0.8%	
Etcpak - ETC2 (Mpx/s)		**176.276**	**177.558**	
Normalized		99.28%	100%	

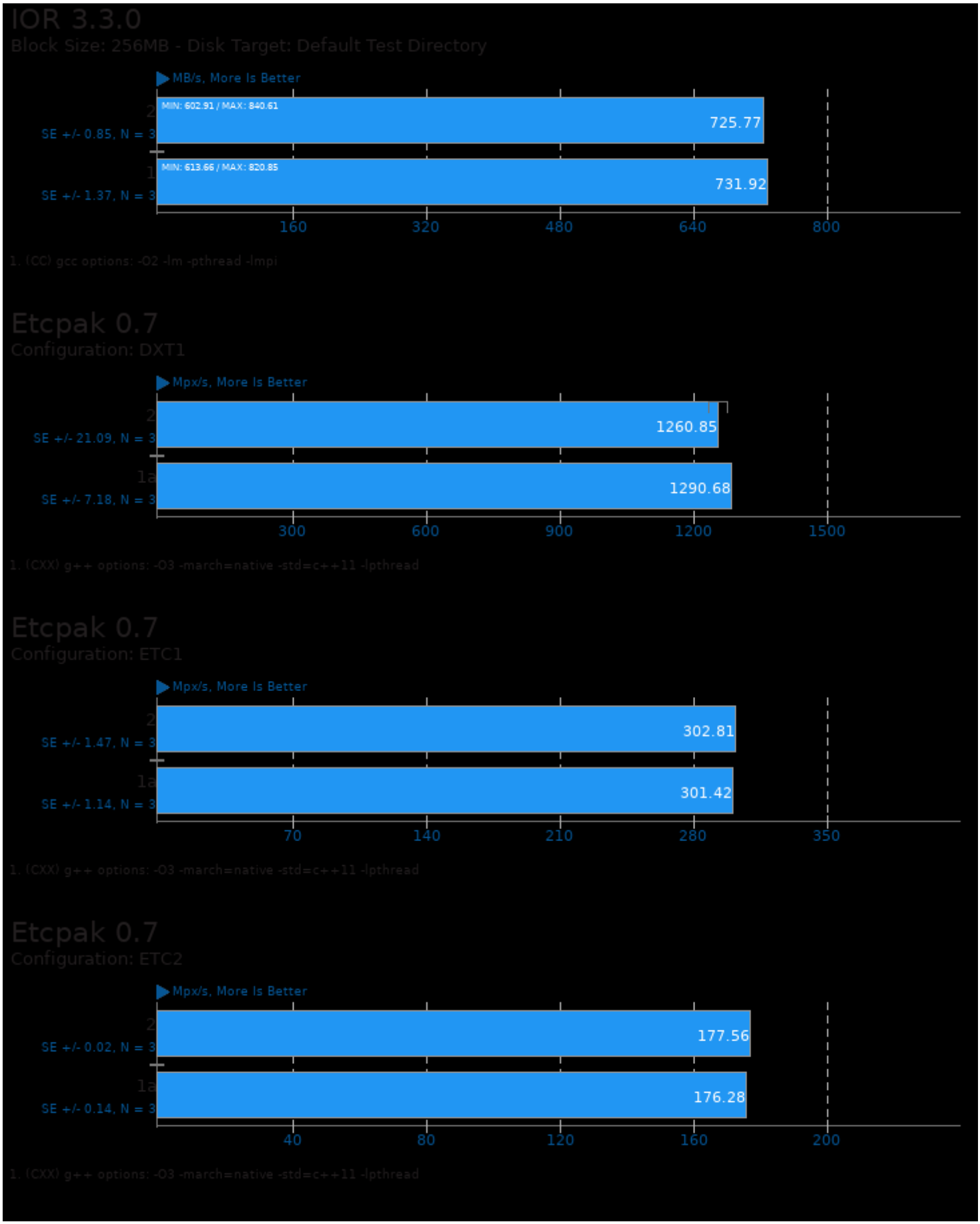
etcpak-ior-tr-3990x

Standard Deviation	0.1%	0%
Etcpak - ETC1 + Dithering (Mpx/s)	**277.437**	**277.239**
Normalized	100%	99.93%
Standard Deviation	0.4%	0.1%

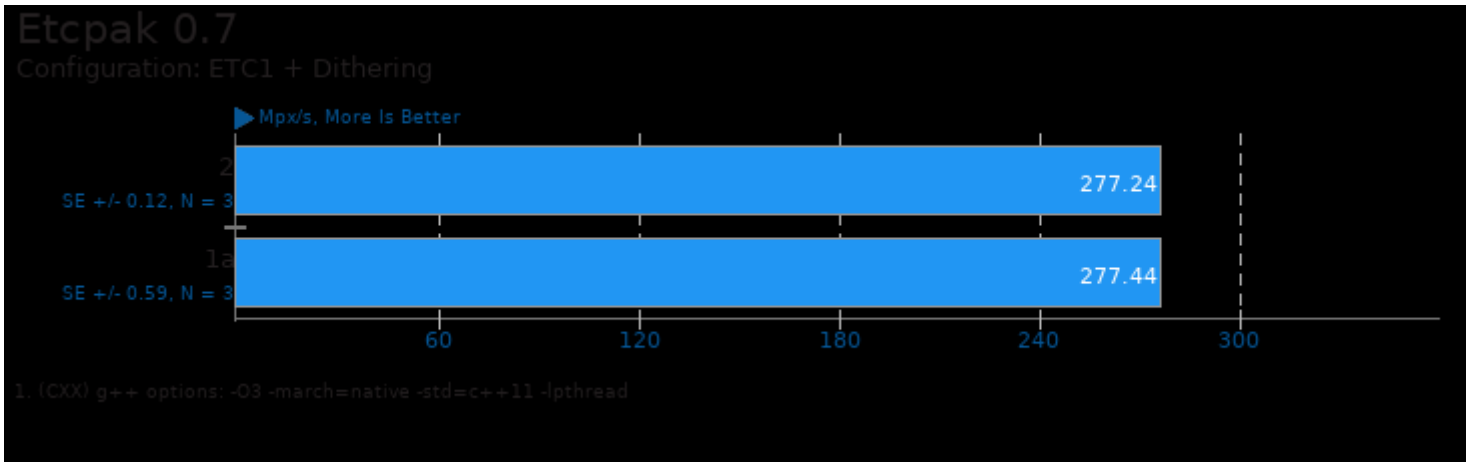

IOR 3.3.0
Block Size: 2MB - Disk Target: Default Test Directory
MB/s, More Is Better
MIN: 279.2 / MAX: 1335.75
785.96
SE +/- 6.94, N = 15
MIN: 332.8 / MAX: 1307.17
798.29
SE +/- 11.44, N = 4
MIN: 288.72 / MAX: 1384.06
861.90
SE +/- 9.20, N = 3
200
400
600
800
1000
1. (CC) gcc options: -O2 -lm -pthread -lmpi
IOR 3.3.0
Block Size: 4MB - Disk Target: Default Test Directory
MB/s, More Is Better
MIN: 289.25 / MAX: 1376.95
673.11
SE +/- 7.82, N = 3
MIN: 229.4 / MAX: 1445.52
673.78
SE +/- 5.25, N = 15
MIN: 226.12 / MAX: 1414.09
797.07
SE +/- 19.02, N = 15
200
400
600
800
1000
1. (CC) gcc options: -O2 -lm -pthread -lmpi
IOR 3.3.0
Block Size: 8MB - Disk Target: Default Test Directory
MB/s, More Is Better
MIN: 267.42 / MAX: 1379.36
601.82
SE +/- 0.93, N = 3
MIN: 273.55 / MAX: 1381.18
595.69
SE +/- 10.25, N = 3
MIN: 190.67 / MAX: 1469.93
907.34
SE +/- 11.48, N = 15
200
400
600
800
1000
1. (CC) gcc options: -O2 -lm -pthread -lmpi

etcpak-ior-tr-3990x




IOR 3.3.0
Block Size: 256MB - Disk Target: Default Test Directory
MB/s, More Is Better
MIN: 602.91 / MAX: 840.61
725.77
SE +/- 0.85, N = 3
MIN: 613.66 / MAX: 820.85
731.92
SE +/- 1.37, N = 3
160
320
480
640
800
1. (CC) gcc options: -O2 -lm -pthread -lmpi
Etcpak 0.7
Configuration: DXT1
Mpx/s, More Is Better
1260.85
SE +/- 21.09, N = 3
1290.68
SE +/- 7.18, N = 3
300
600
900
1200
1500
1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread
Etcpak 0.7
Configuration: ETC1
Mpx/s, More Is Better
302.81
SE +/- 1.47, N = 3
301.42
SE +/- 1.14, N = 3
70
140
210
280
350
1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread
Etcpak 0.7
Configuration: ETC2
Mpx/s, More Is Better
177.56
SE +/- 0.02, N = 3
176.28
SE +/- 0.14, N = 3
40
80
120
160
200
1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread

etcpak-ior-tr-3990x



This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 05:52.