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J1900 Multimedia Benchmark

Intel Pentium Silver J5005 testing with a ASRock J5005-ITX (P1.00 BIOS) and Intel UHD 605 3GB on Ubuntu 18.10 via the Phoronix Test Suite.

Test Systems:

J1900 Xubuntu

Processor: Intel Celeron J1900 @ 2.90GHz (4 Cores), Motherboard: ASRock Q1900B-ITX, Chipset: Intel ValleyView SSA-CUnit, Memory: 16384MB, Disk: 120GB GOODRAM C50, Graphics: Intel ValleyView Gen7 (854MHz), Audio: Intel ValleyView HD Audio, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 14.04, Kernel: 3.15.0-031500rc2-generic (x86_64), Desktop: Xfce 4.10, Display Server: X Server 1.15.1, Display Driver: intel 2.99.911, OpenGL: 3.3 Mesa 10.2.0-devel (git-3a2885f trusty-oibaf-ppa), Compiler: GCC 4.8.2, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --disable-libmudflap --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-gtk-cairo --enable-java-awt=gtk --enable-java-home --enable-languages=c,c++,java,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu

--target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-arch-directory=amd64 --with-multilib-list=m32,m64,mx32 --with-tune=generic -v
Processor Notes: Scaling Governor: intel_pstate performance

i7-4700MQ Xubuntu

Processor: Intel Core i7-4700MQ @ 2.40GHz (8 Cores), Motherboard: MSI MS-1758, Chipset: Intel Xeon E3-1200 v3/4th, Memory: 16384MB, Disk: 120GB INTEL SSDSC2CT12 + 1000GB HGST HTS721010A9, Graphics: Intel HD 4600, Audio: Intel Xeon E3-1200 v3/4th, Network: Qualcomm Atheros AR8161 Gigabit + Realtek RTL8723AE PCIe Wireless

OS: Ubuntu 14.04, Kernel: 3.13.0-24-generic (x86_64), Desktop: KDE 4.13.0, Display Server: X Server 1.15.1, Display Driver: modesetting 0.8.1, OpenGL: 3.3 Mesa 10.2.0-devel (git-9339f8a trusty-oibaf-ppa), Compiler: GCC 4.8.2, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --disable-libmudflap --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-gtk-cairo --enable-java-awt=gtk --enable-java-home --enable-languages=c,c++,java,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-arch-directory=amd64 --with-multilib-list=m32,m64,mx32 --with-tune=generic -v
Processor Notes: Scaling Governor: acpi-cpufreq ondemand

Pentium J5005

Processor: Intel Pentium Silver J5005 @ 2.80GHz (4 Cores), Motherboard: ASRock J5005-ITX (P1.00 BIOS), Chipset: Intel Device 31f0, Memory: 8192MB, Disk: 250GB Crucial_CT250MX2, Graphics: Intel UHD 605 3GB (800MHz), Audio: Realtek ALC892, Monitor: IPS224, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.10, Kernel: 4.18.0-12-generic (x86_64), Desktop: Xfce 4.12, Display Server: X Server 1.20.1, Display Driver: modesetting 1.20.1, OpenGL: 4.5 Mesa 18.2.2, Compiler: GCC 8.2.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: KPTI + __user pointer sanitization + Enhanced IBRS IBPB + SSB disabled via prctl and seccomp

	J1900 Xubuntu	i7-4700MQ Xubuntu	Pentium J5005
C-Ray - Total Time (sec)	**136.49**	**27.82**	44.70
Normalized	32.75%	160.68%	100%
Standard Deviation	0.1%	3%	0.1%
dcraw - R.T.P.I.C (sec)	**251.23**	**56.19**	89.65
Normalized	35.68%	159.55%	100%
Standard Deviation	4.3%	1.1%	0.5%
FFmpeg - H.2.H.T.N.D (sec)	**42.61**	**16.63**	
Normalized	39.03%	100%	
Standard Deviation	0.8%	0.5%	
FLAC Audio Encoding - WAV To FLAC (sec)	**22.10**	**5.32**	6.71
Normalized	30.36%	126.13%	100%
Standard Deviation	0.1%	1.4%	0%
GraphicsMagick - Blur (Iterations/min)	**38**	**119**	

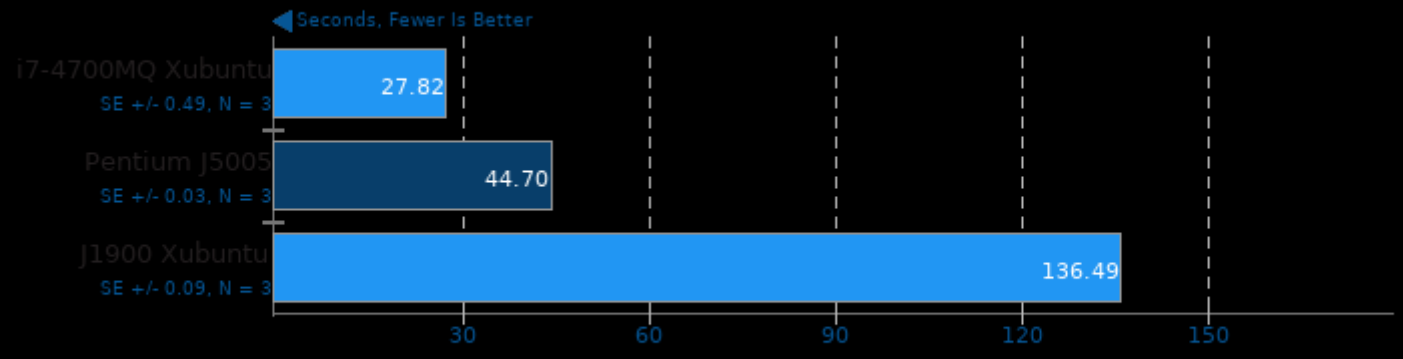
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Normalized	31.93%	100%	
Standard Deviation	3.4%	1.5%	
GraphicsMagick - Sharpen (Iterations/min)	**29**	**73**	
Normalized	39.73%	100%	
Standard Deviation	3.4%	2.1%	
GraphicsMagick - Resizing (Iterations/min)	**58**	**149**	
Normalized	38.93%	100%	
Standard Deviation	4.2%	0.4%	
GraphicsMagick - HWB Color Space (Iterations/min)	**67**	**173**	
Normalized	38.73%	100%	
Standard Deviation	4.9%	1.3%	
GraphicsMagick - L.A.T (Iterations/min)	**30**	**86**	
Normalized	34.88%	100%	
Standard Deviation	0%	0.7%	
LAME MP3 Encoding - WAV To MP3 (sec)	**50.24**	**14.97**	16.62
Normalized	33.08%	111.02%	100%
Standard Deviation	5.5%	1.1%	0.1%
Mencoder - AVI To LAVC (sec)	**80.11**	**23.92**	33.51
Normalized	41.83%	140.09%	100%
Standard Deviation	0.1%	1.5%	0.3%
Ogg Encoding - WAV To Ogg (sec)	**28.51**	**8.42**	11.11
Normalized	38.97%	131.95%	100%
Standard Deviation	0.1%	0.5%	0.1%
Opus Codec Encoding - W.O.E.O.D (sec)	**31.83**	**10.29**	14.69
Normalized	46.15%	142.76%	100%
Standard Deviation	0.1%	2.6%	0.3%
VP8 libvpx Encoding - vpxenc (FPS)	**8.74**	**21.77**	
Normalized	40.15%	100%	
Standard Deviation	1.2%	5%	
x264 - H.2.V.E (FPS)	**30.74**	**154.38**	
Normalized	19.91%	100%	
Standard Deviation	1.6%	1.9%	

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C-Ray 1.1

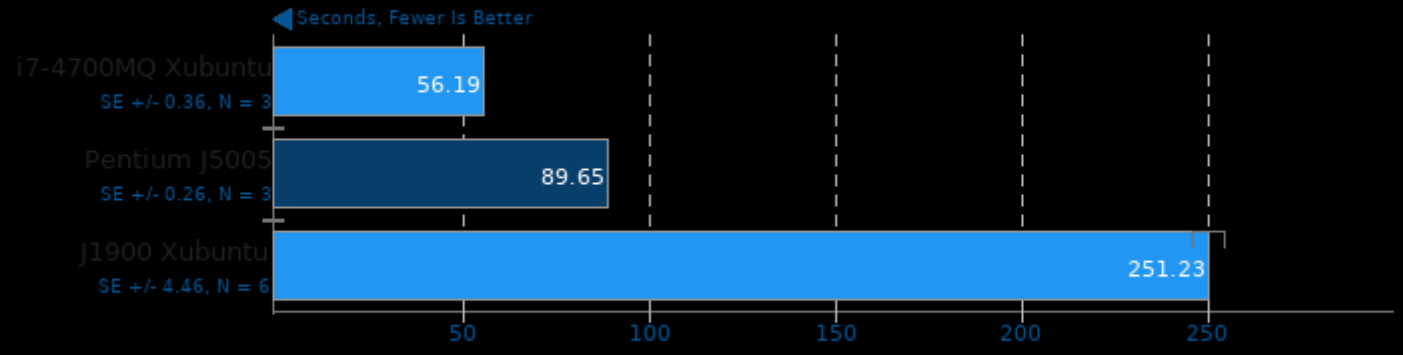
Total Time



1. (CC) gcc options: -lm -lpthread -O3

dcraw

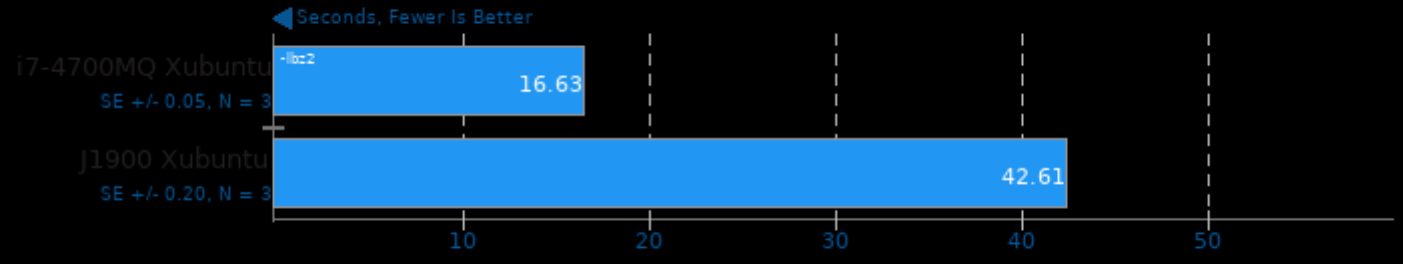
RAW To PPM Image Conversion



1. (CC) gcc options: -lm

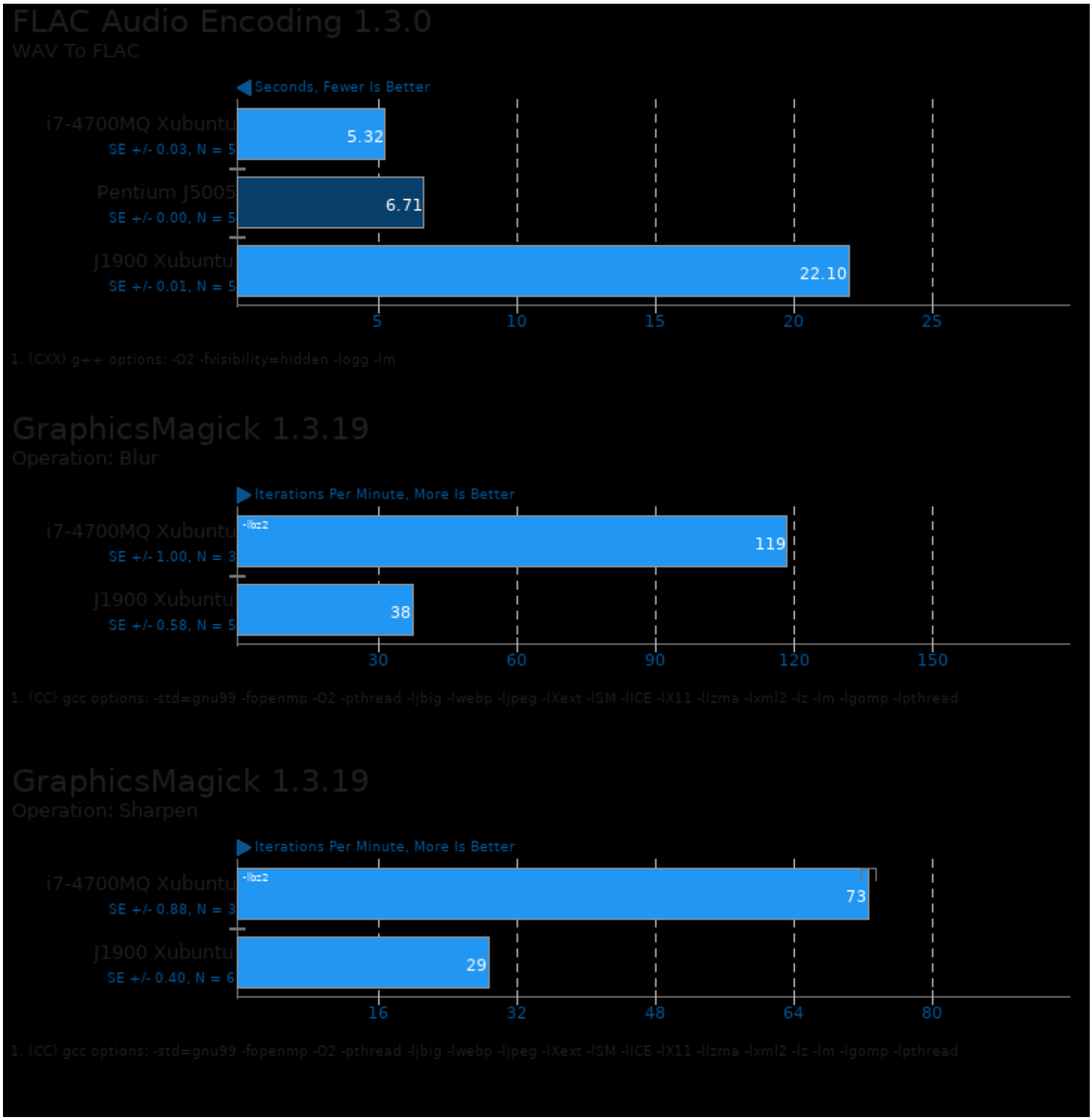
FFmpeg 2.1.1

H.264 HD To NTSC DV

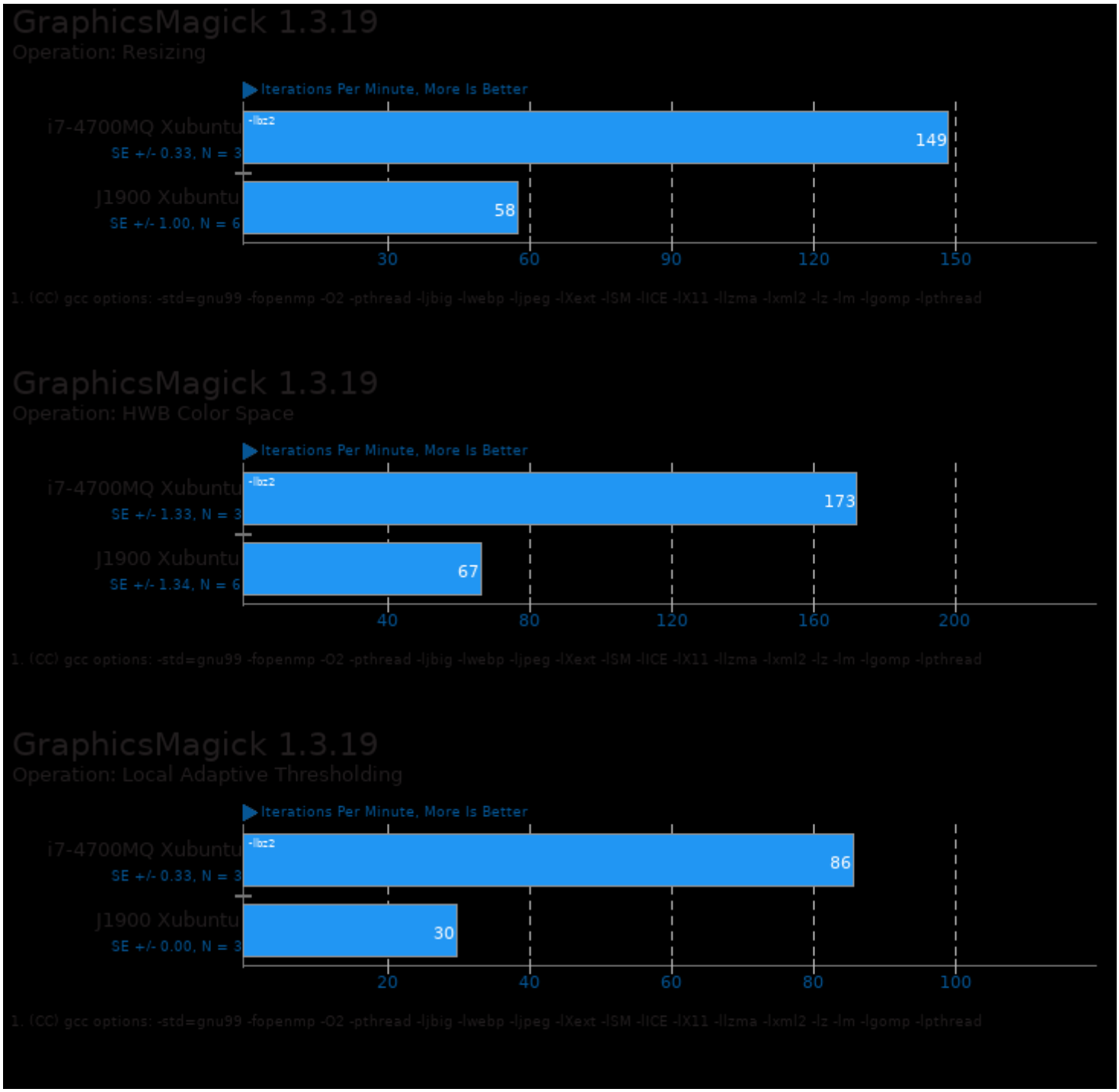


1. (CC) gcc options: -lavdevice -lavfilter -lavformat -lavcodec -lswresample -lswscale -lavutil -ldl -lXv -lX11 -lXext -lasound -lSDL -lm -pthread -std=c99 -fo

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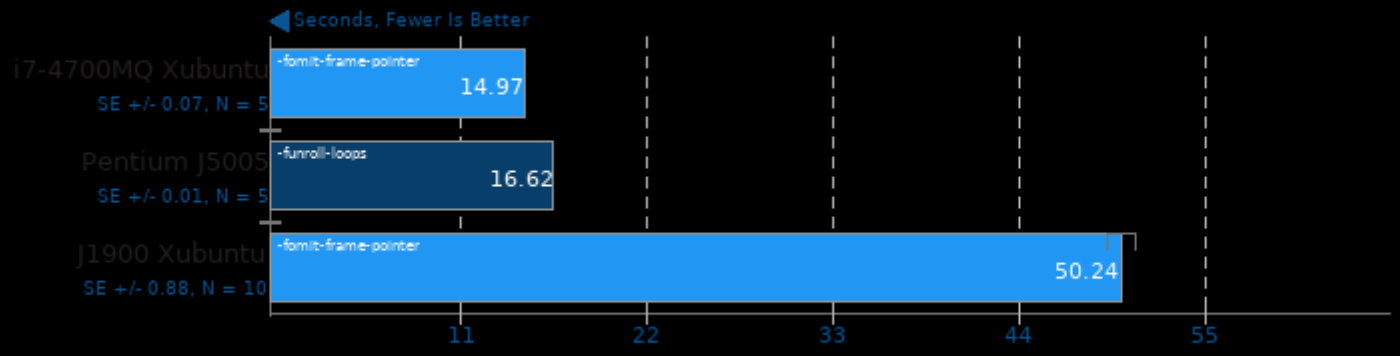
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LAME MP3 Encoding 3.99.3

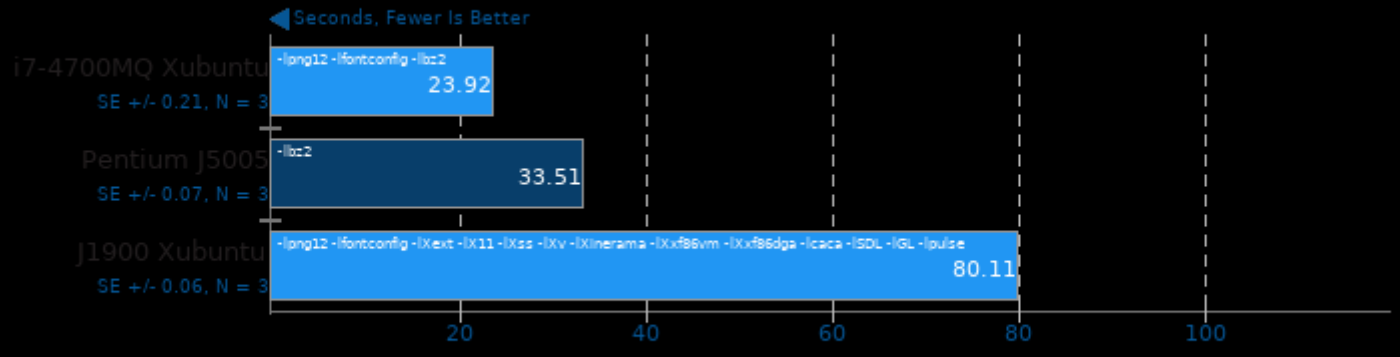
WAV To MP3



1. (CC) gcc options: -O3 -ffast-math -pipe -lm

Mencoder 1.1

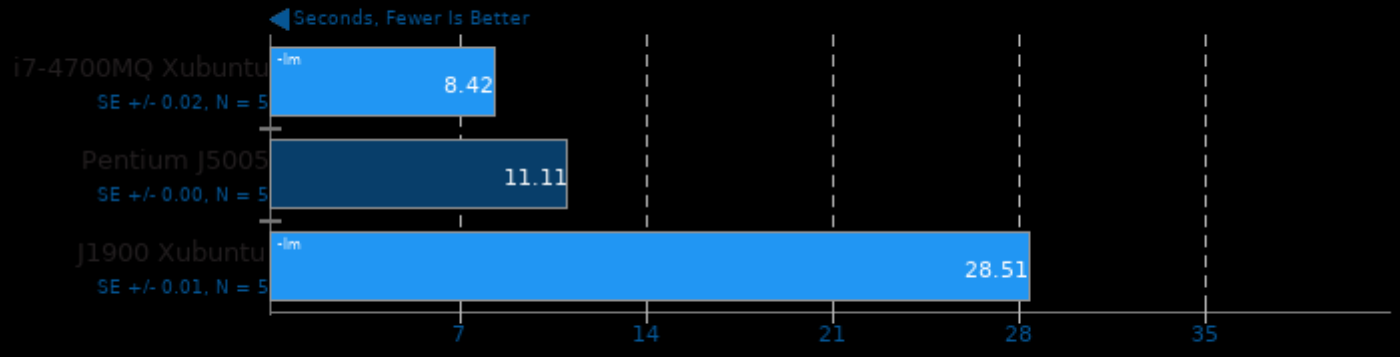
AVI To LAVC



1. (CC) gcc options: -lm -ffast-math -lpng -lz -ljpeg -lasound -ldl -lpthread -lfreetype -lmad -rdynamic

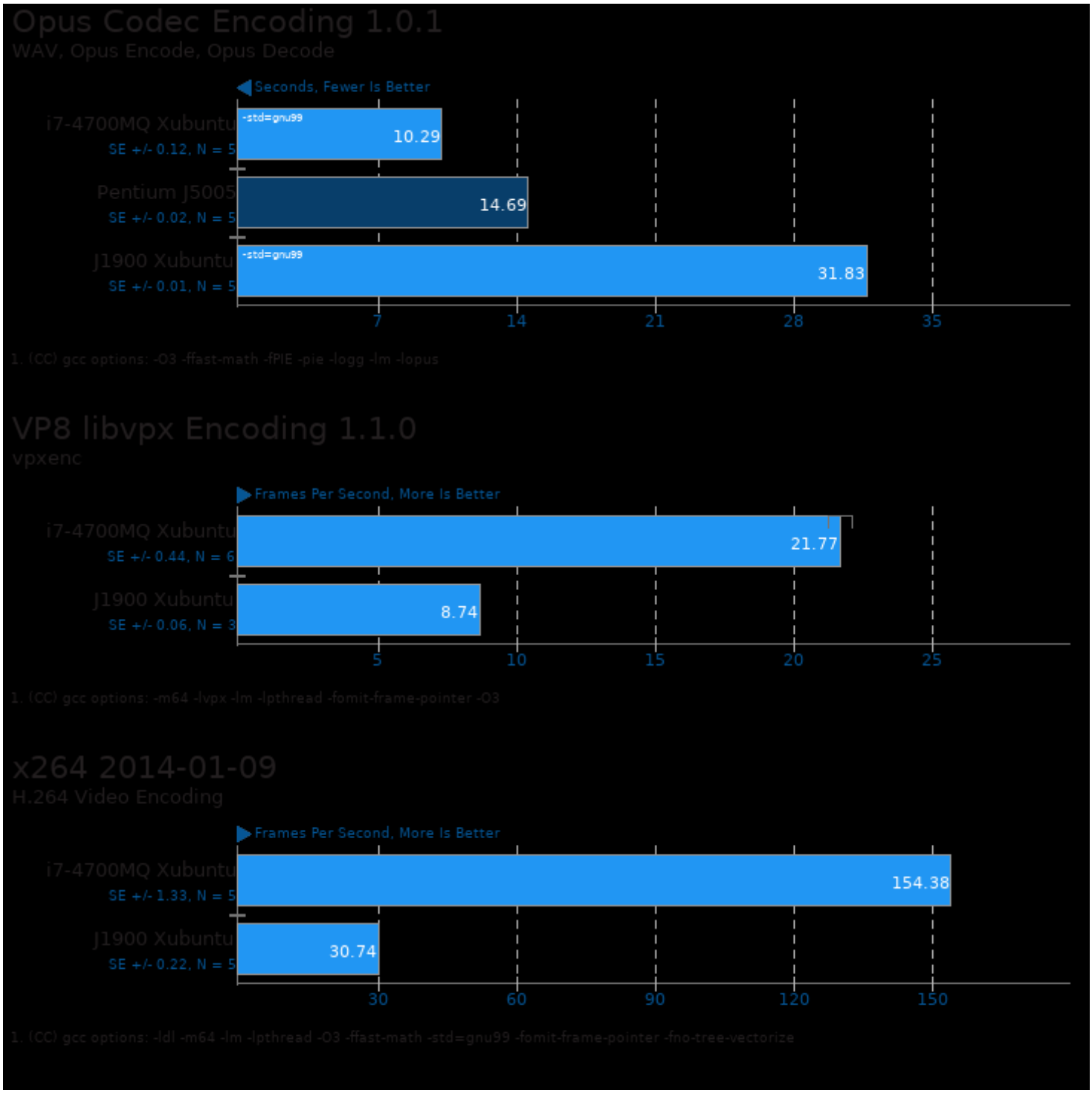
Ogg Encoding 1.3.0

WAV To Ogg

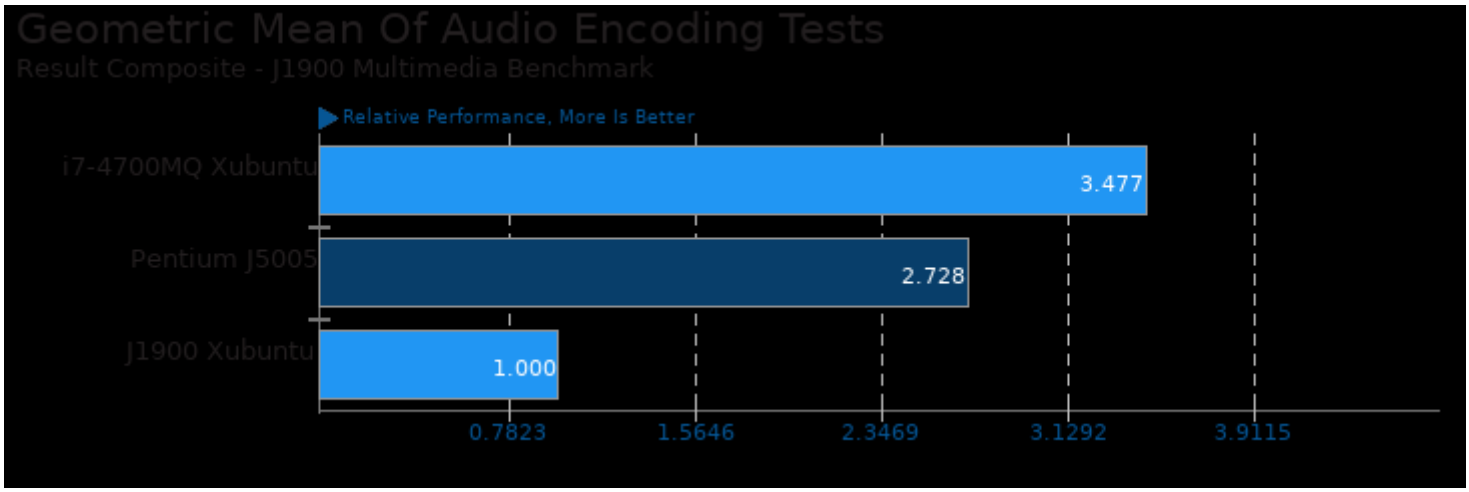


1. (CC) gcc options: -O2 -ffast-math -fsigned-char -logg

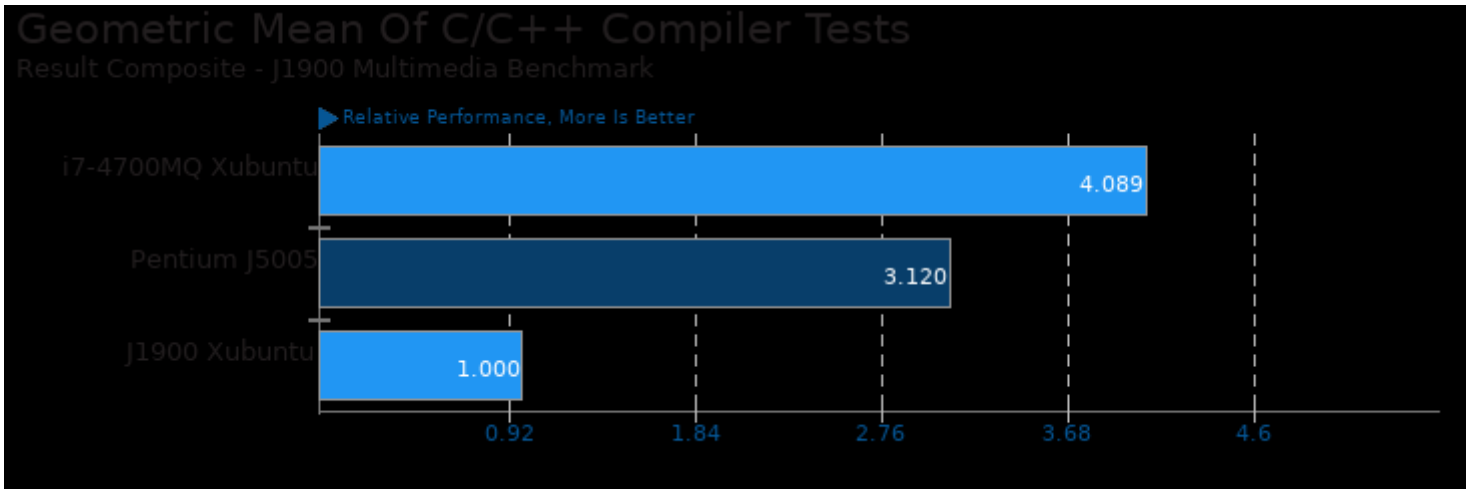
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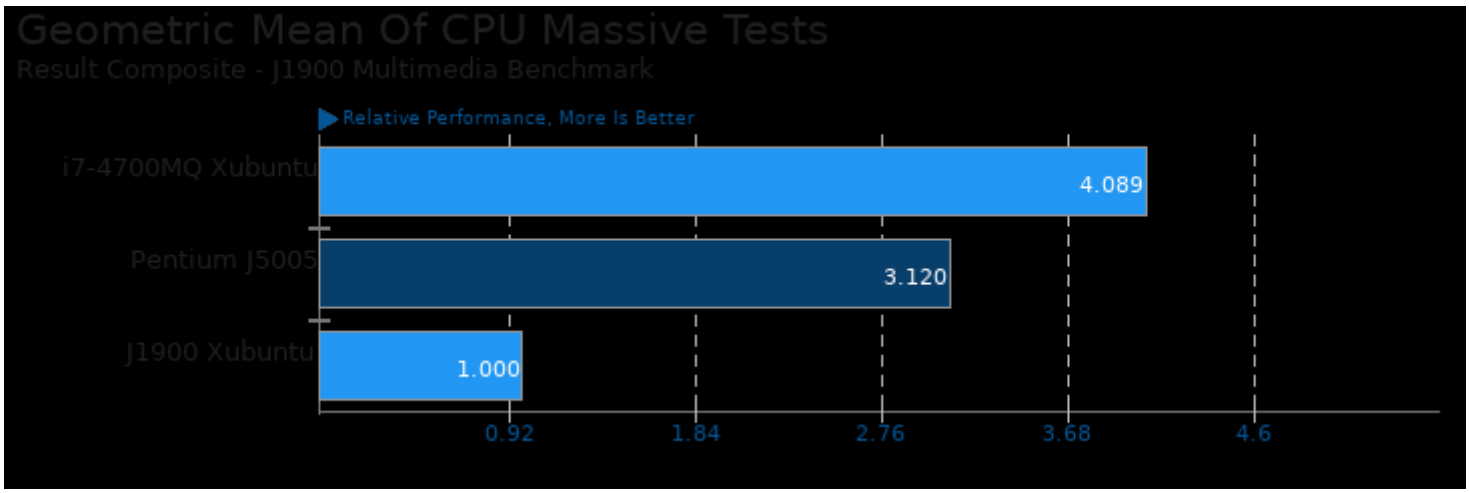
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/encode-mp3, pts/encode-ogg, pts/encode-flac and pts/encode-opus

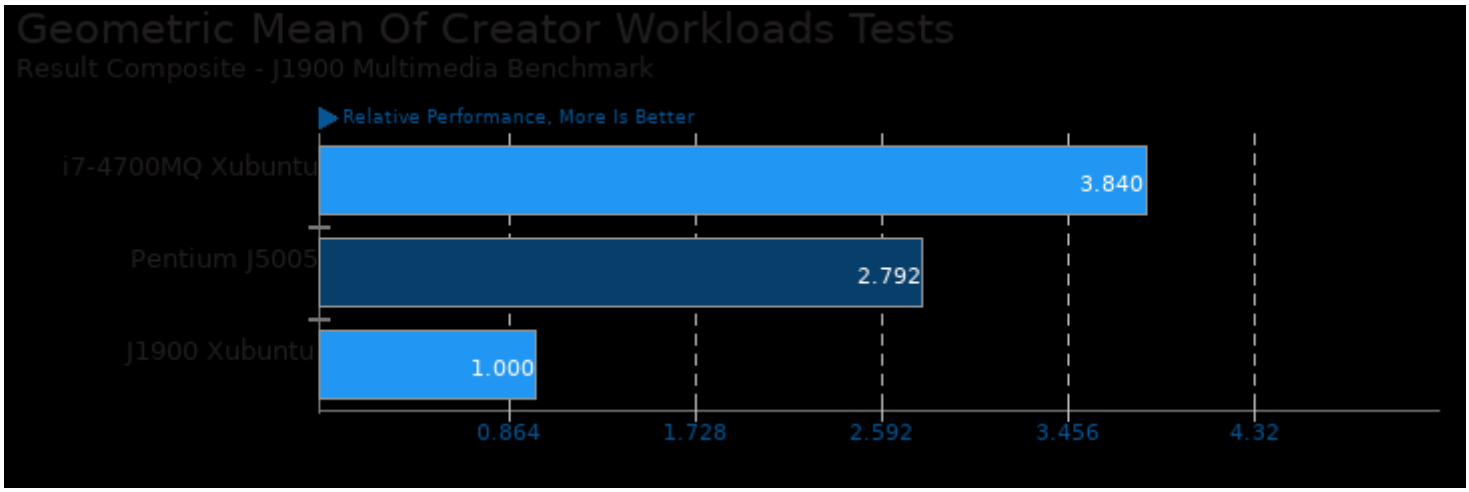


Geometric mean based upon tests: pts/vpxenc, pts/graphics-magick, pts/c-ray, pts/encode-mp3, pts/encode-flac and pts/x264

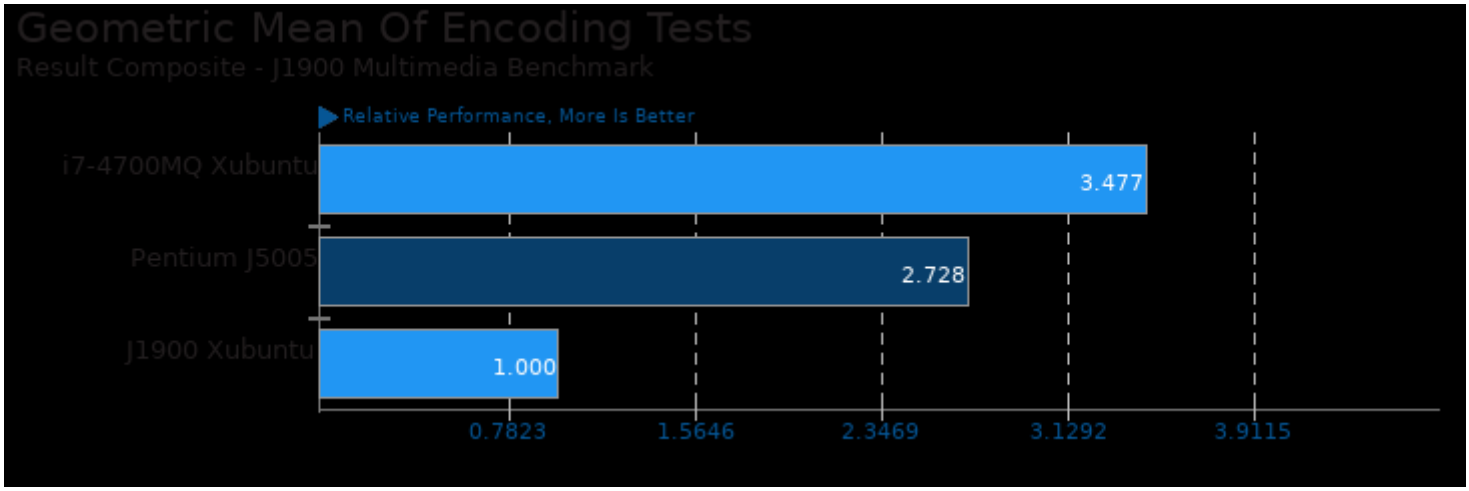


Geometric mean based upon tests: pts/c-ray, pts/vpxenc, pts/x264, pts/encode-flac, pts/encode-mp3 and pts/graphics-magick

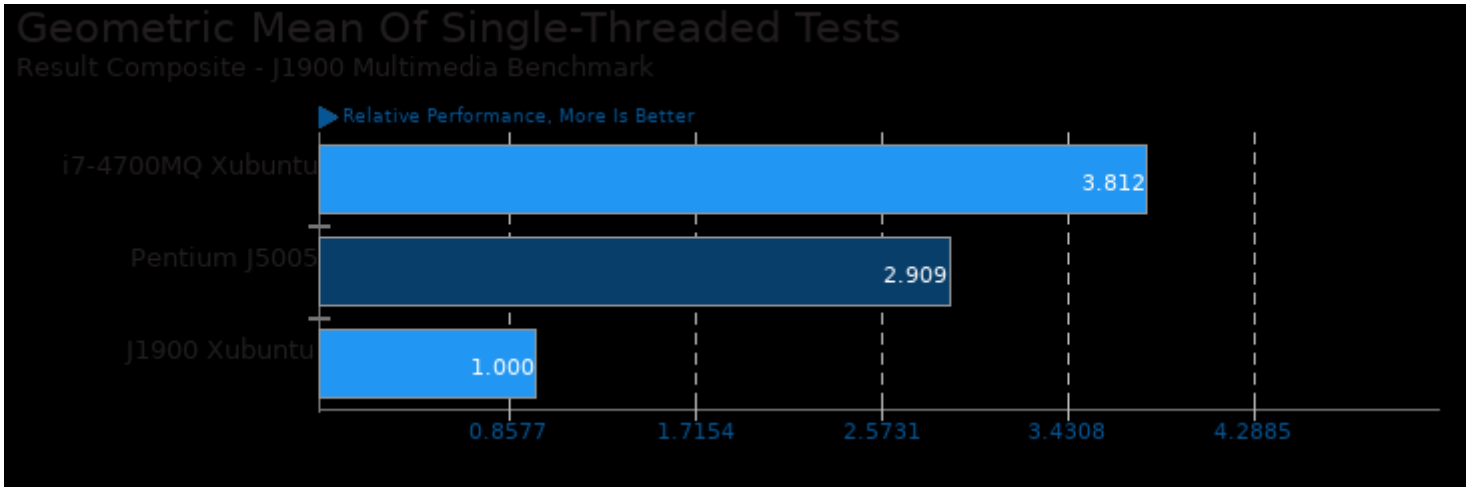
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Geometric mean based upon tests: pts/c-ray, pts/x264, pts/ffmpeg, pts/vpxenc, pts/encode-mp3, pts/encode-ogg, pts/encode-flac, pts/encode-opus, pts/graphics-magick and pts/dcraw



Geometric mean based upon tests: pts/encode-mp3, pts/encode-ogg, pts/encode-flac, pts/encode-opus, pts/x264, pts/ffmpeg and pts/vpxenc



Geometric mean based upon tests: pts/dcraw, pts/encode-flac, pts/encode-mp3 and pts/encode-ogg

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