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epyc-7702-qe

AMD EPYC 7702 64-Core testing with a ASRockRack EPYCD8 (P2.10 BIOS) and llvmpipe on Ubuntu 20.10 via the Phoronix Test Suite.

Test Systems:

1

2 QE

3 QE

4 QE

5 QE

Processor: AMD EPYC 7702 64-Core @ 2.00GHz (64 Cores / 128 Threads), Motherboard: ASRockRack EPYCD8 (P2.10 BIOS), Chipset: AMD Starship/Matisse, Memory: 126GB, Disk: 280GB INTEL SSDPED1D280GA, Graphics:

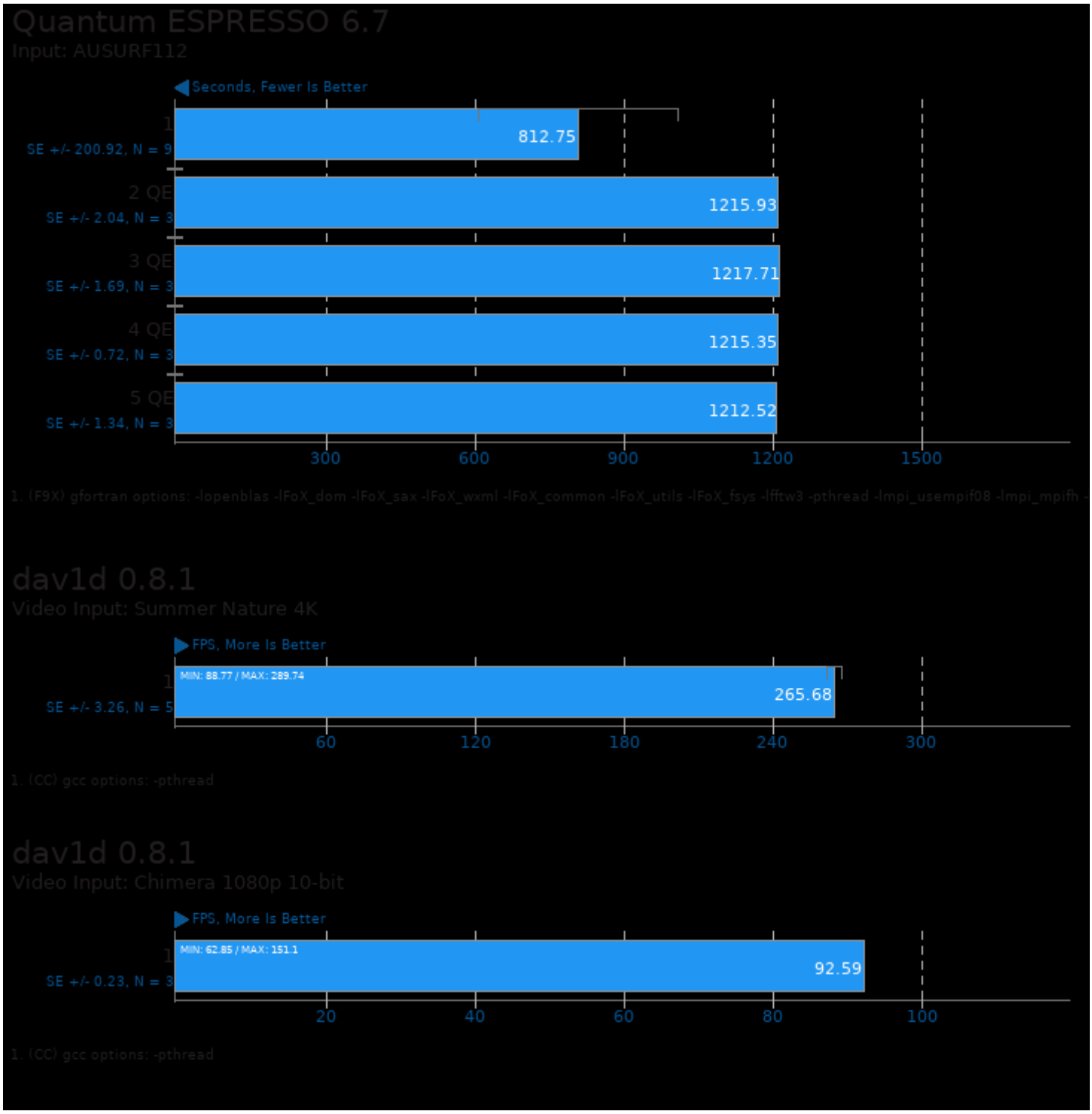
epyc-7702-qe

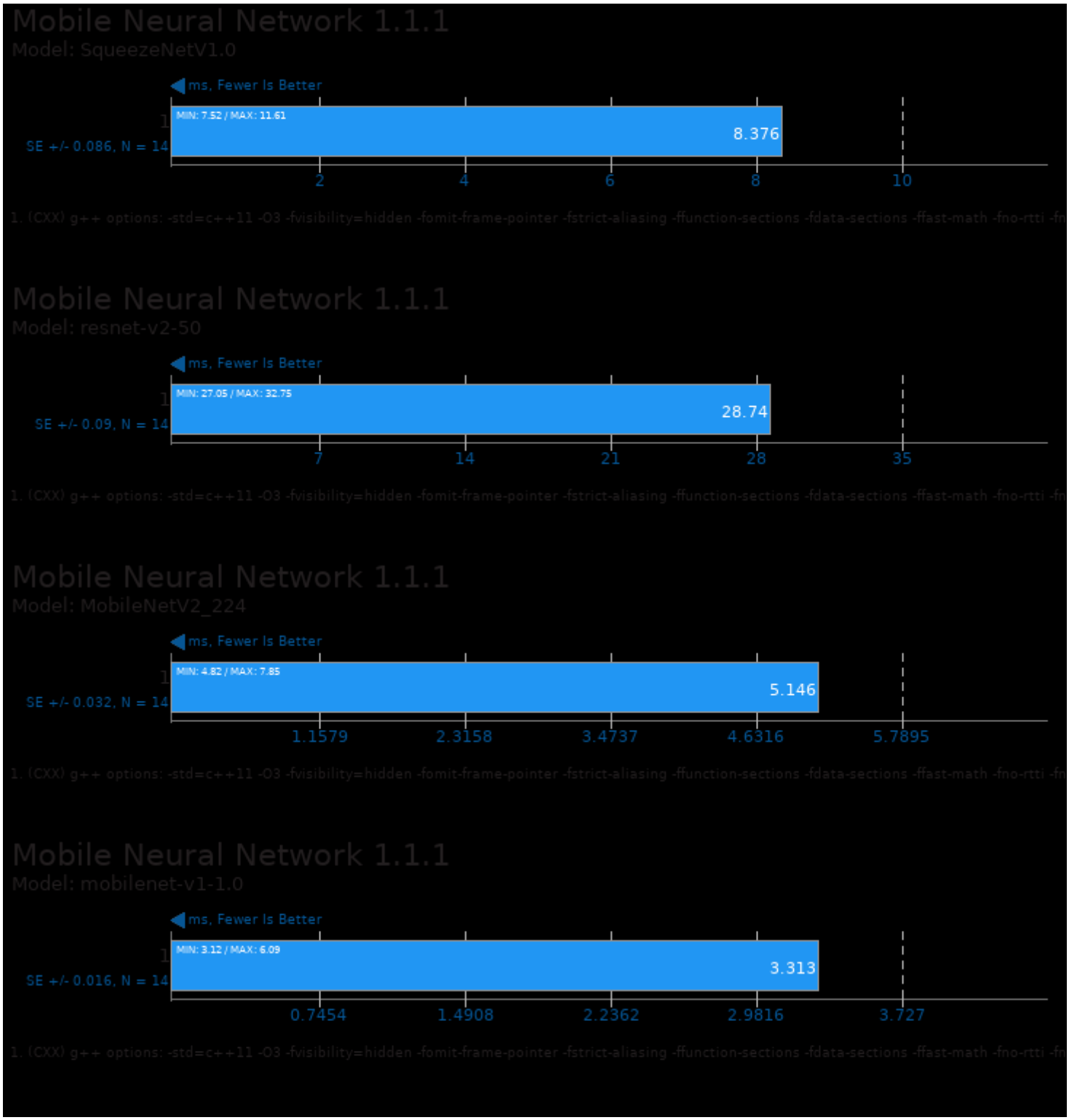
llvmpipe, Audio: AMD Starship/Matisse, Monitor: VE228, Network: 2 x Intel I350

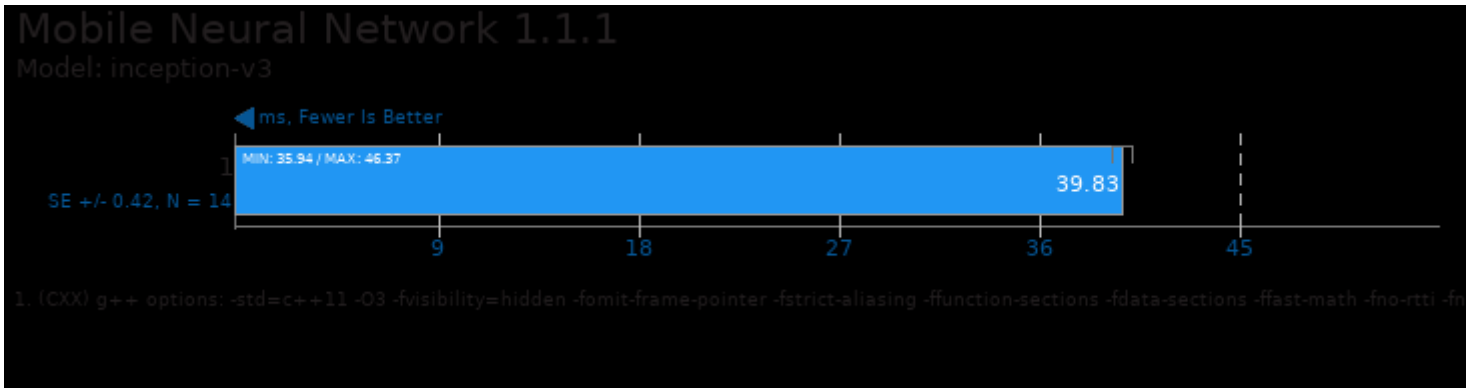
OS: Ubuntu 20.10, Kernel: 5.10.2-051002-generic (x86_64), Desktop: GNOME Shell 3.38.1, Display Server: X Server 1.20.9, Display Driver: modesetting 1.20.9, OpenGL: 4.5 Mesa 20.2.1 (LLVM 11.0.0 256 bits), Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

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++,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
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x830101c
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 IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	1	2 QE	3 QE	4 QE	5 QE
Quantum ESPRESSO - AUSURF112 (sec)	**812.75**	1216	**1218**	1215	1213
Normalized	100%	66.84%	66.74%	66.87%	67.03%
Standard Deviation	74.2%	0.3%	0.2%	0.1%	0.2%
dav1d - Summer Nature 4K (FPS)	265.68				
Standard Deviation	2.7%				
dav1d - C.1.1.b (FPS)	92.59				
Standard Deviation	0.4%				
Mobile Neural Network - SqueezeNetV1.0 (ms)	8.376				
Standard Deviation	3.8%				
Mobile Neural Network - resnet-v2-50 (ms)	28.737				
Standard Deviation	1.2%				
Mobile Neural Network - MobileNetV2_224 (ms)	5.146				
Standard Deviation	2.3%				
Mobile Neural Network - mobilenet-v1-1.0 (ms)	3.313				
Standard Deviation	1.8%				
Mobile Neural Network - inception-v3 (ms)	39.829				
Standard Deviation	4%				


Quantum ESPRESSO 6.7
Input: AUSURF112
Seconds, Fewer Is Better
812.75
SE +/- 200.92, N = 9
2 QE
1215.93
SE +/- 2.04, N = 3
3 QE
1217.71
SE +/- 1.69, N = 3
4 QE
1215.35
SE +/- 0.72, N = 3
5 QE
1212.52
SE +/- 1.34, N = 3
300
600
900
1200
1500
1. (F9X) gfortran options: -lopenblas -lFoX_dom -lFoX_sax -lFoX_wxml -lFoX_common -lFoX_utils -lFoX_fsys -lfftw3 -pthread -lmpi_usempif08 -lmpi_mpifh
dav1d 0.8.1
Video Input: Summer Nature 4K
FPS, More Is Better
MIN: 88.77 / MAX: 289.74
265.68
SE +/- 3.26, N = 5
60
120
180
240
300
1. (CC) gcc options: -pthread
dav1d 0.8.1
Video Input: Chimera 1080p 10-bit
FPS, More Is Better
MIN: 62.85 / MAX: 151.1
92.59
SE +/- 0.23, N = 3
20
40
60
80
100
1. (CC) gcc options: -pthread


Mobile Neural Network 1.1.1
Model: SqueezeNetV1.0
ms, Fewer Is Better
MIN: 7.52 / MAX: 11.61
8.376
SE +/- 0.086, N = 14
2
4
6
8
10
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr
Mobile Neural Network 1.1.1
Model: resnet-v2-50
ms, Fewer Is Better
MIN: 27.05 / MAX: 32.75
28.74
SE +/- 0.09, N = 14
7
14
21
28
35
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr
Mobile Neural Network 1.1.1
Model: MobileNetV2_224
ms, Fewer Is Better
MIN: 4.82 / MAX: 7.85
5.146
SE +/- 0.032, N = 14
1.1579
2.3158
3.4737
4.6316
5.7895
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr
Mobile Neural Network 1.1.1
Model: mobilenet-v1-1.0
ms, Fewer Is Better
MIN: 3.12 / MAX: 6.09
3.313
SE +/- 0.016, N = 14
0.7454
1.4908
2.2362
2.9816
3.727
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 07:52.