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# Coder Radio XPS 13 ML Ubuntu Benchmark

Intel Core i7-10510U testing with a LENOVO 20U9CTO1WW (N2WET24W 1.14 BIOS) and Intel UHD 3GB on Fedora 33 via the Phoronix Test Suite.

**Automated Executive Summary**

*XPS 13 Tiger Lake Ubuntu 20.04 had the most wins, coming in first place for 96% of the tests.*

*Based on the geometric mean of all complete results, the fastest (XPS 13 Tiger Lake Ubuntu 20.04) was 1.488x the speed of the slowest (ThinkPad X1 Fedora Comet Lake).*

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

*oneDNN (Harness: Deconvolution Batch shapes_1d - Data Type: u8s8f32 - Engine: CPU) at 7.436x*
*oneDNN (Harness: IP Shapes 3D - Data Type: f32 - Engine: CPU) at 2.722x*
*oneDNN (Harness: Convolution Batch Shapes Auto - Data Type: u8s8f32 - Engine: CPU) at 2.664x*
*oneDNN (Harness: Deconvolution Batch shapes_3d - Data Type: u8s8f32 - Engine: CPU) at 2.608x*
*oneDNN (Harness: IP Shapes 1D - Data Type: u8s8f32 - Engine: CPU) at 2.419x*
*oneDNN (Harness: Convolution Batch Shapes Auto - Data Type: f32 - Engine: CPU) at 1.904x*
*PlaidML (FP16: No - Mode: Inference - Network: VGG16 - Device: CPU) at 1.73x*
*Mobile Neural Network (Model: resnet-v2-50) at 1.615x*
*NCNN (Target: CPU - Model: vgg16) at 1.587x*

*NCNN (Target: Vulkan GPU - Model: vgg16) at 1.557x.*

# Test Systems:

## XPS 13 Tiger Lake Ubuntu 20.04

Processor: Intel Core i5-1135G7 @ 4.20GHz (4 Cores / 8 Threads), Motherboard: Dell 0THX8P (1.1.1 BIOS), Chipset: Intel Device a0ef, Memory: 16GB, Disk: Micron 2300 NVMe 512GB, Graphics: Intel Xe 3GB (1300MHz), Audio: Realtek ALC289, Network: Intel Device a0f0

OS: Ubuntu 20.04, Kernel: 5.6.0-1036-oem (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 4.6 Mesa 20.0.8, Vulkan: 1.2.131, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1200

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 powersave - CPU Microcode: 0x60 - Thermald 1.9.1
Python Notes: 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

## ThinkPad X1 Fedora Comet Lake

Processor: Intel Core i7-10510U @ 4.90GHz (4 Cores / 8 Threads), Motherboard: LENOVO 20U9CTO1WW (N2WET24W 1.14 BIOS), Chipset: Intel Comet Lake PCH-LP, Memory: 2 x 8 GB LPDDR3-2133MT/s Samsung, Disk: 256GB Western Digital PC SN730 SDBQNTY-256G-1001, Graphics: Intel UHD 3GB (1150MHz), Audio: Realtek ALC285, Network: Intel + Intel Comet Lake PCH-LP CNVi WiFi

OS: Fedora 33, Kernel: 5.9.16-200.fc33.x86_64 (x86_64), Desktop: KDE Plasma 5.20.4, Display Server: X Server 1.20.10, Display Driver: modesetting 1.20.10, OpenGL: 4.6 Mesa 20.2.6, Compiler: GCC 10.2.1 20201125 + Clang 11.0.0, File-System: btrfs, Screen Resolution: 2560x1440

Compiler Notes: --build=x86_64-redhat-linux --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,objc,obj-c++,ada,go,d,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Processor Notes: Scaling Governor: intel_pstate powersave
Python Notes: Python 3.9.1
Security Notes: SELinux + itlb_multihit: KVM: Mitigation of VMX unsupported + 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: Mitigation of TSX disabled + tsx_async_abort: Not affected

# Coder Radio XPS 13 ML Ubuntu Benchmark

| | XPS 13 Tiger Lake Ubuntu 20.04 | ThinkPad X1 Fedora Comet Lake |
|---|---|---|
| **oneDNN - IP Shapes 1D - f32 - CPU (ms)** | **10.2773** | **15.77** |
| **Normalized** | 100% | 65.17% |
| **Standard Deviation** | 1% | 15.2% |
| **oneDNN - IP Shapes 3D - f32 - CPU (ms)** | **6.59350** | **17.95** |
| **Normalized** | 100% | 36.73% |
| **Standard Deviation** | 0.4% | 0.1% |
| **oneDNN - IP Shapes 1D - u8s8f32 - CPU (ms)** | **2.43051** | **5.88** |
| **Normalized** | 100% | 41.34% |
| **Standard Deviation** | 3.6% | 0.8% |
| **oneDNN - IP Shapes 3D - u8s8f32 - CPU (ms)** | **2.62981** | **3.95** |
| **Normalized** | 100% | 66.58% |
| **Standard Deviation** | 0.1% | 2.5% |
| **oneDNN - IP Shapes 1D - bf16bf16bf16 - CPU (ms)** | 25.8282 | |
| **Standard Deviation** | 0.7% | |
| **oneDNN - IP Shapes 3D - bf16bf16bf16 - CPU (ms)** | 6.39979 | |
| **Standard Deviation** | 1.7% | |
| **oneDNN - C.B.S.A - f32 - CPU (ms)** | **11.5632** | **22.02** |
| **Normalized** | 100% | 52.51% |
| **Standard Deviation** | 4.3% | 0.1% |
| **oneDNN - D.B.s - f32 - CPU (ms)** | **14.6326** | **20.71** |
| **Normalized** | 100% | 70.65% |
| **Standard Deviation** | 2.9% | 13.8% |
| **oneDNN - D.B.s - f32 - CPU (ms)** | **13.4125** | **15.85** |
| **Normalized** | 100% | 84.62% |
| **Standard Deviation** | 0.7% | 2.9% |
| **oneDNN - C.B.S.A - u8s8f32 - CPU (ms)** | **7.93450** | **21.14** |
| **Normalized** | 100% | 37.53% |
| **Standard Deviation** | 0.4% | 1.3% |
| **oneDNN - D.B.s - u8s8f32 - CPU (ms)** | **2.94262** | **21.88** |
| **Normalized** | 100% | 13.45% |
| **Standard Deviation** | 3.4% | 0.7% |
| **oneDNN - D.B.s - u8s8f32 - CPU (ms)** | **3.13684** | **8.18** |
| **Normalized** | 100% | 38.35% |
| **Standard Deviation** | 0.2% | 1.9% |
| **oneDNN - R.N.N.T - f32 - CPU (ms)** | **8863** | **15730** |
| **Normalized** | 100% | 56.34% |
| **Standard Deviation** | 0.1% | 6.3% |
| **oneDNN - R.N.N.I - f32 - CPU (ms)** | **5736** | **8215** |
| **Normalized** | 100% | 69.83% |
| **Standard Deviation** | 73.4% | 7.4% |
| **oneDNN - R.N.N.T - u8s8f32 - CPU (ms)** | **8875** | **15829** |
| **Normalized** | 100% | 56.07% |
| **Standard Deviation** | 0.4% | 6.4% |
| **oneDNN - C.B.S.A - bf16bf16bf16 - CPU (ms)** | 52.4284 | |
| **Standard Deviation** | 0.1% | |
| **oneDNN - D.B.s - bf16bf16bf16 - CPU (ms)** | 57.0546 | |
| **Standard Deviation** | 2.8% | |
| **oneDNN - D.B.s - bf16bf16bf16 - CPU (ms)** | 52.6824 | |
| **Standard Deviation** | 0.2% | |
| **oneDNN - R.N.N.I - u8s8f32 - CPU (ms)** | **4528** | **8004** |
| **Normalized** | 100% | 56.57% |
| **Standard Deviation** | 0.4% | 9.7% |

# Coder Radio XPS 13 ML Ubuntu Benchmark

| | | |
|---|---|---|
| **oneDNN - M.M.B.S.T - f32 - CPU (ms)** | **3.93298** | **6.73** |
| **Normalized** | 100% | 58.44% |
| **Standard Deviation** | 0.7% | 9.6% |
| **oneDNN - R.N.N.T - bf16bf16bf16 - CPU (ms)** | **8859** | **15837** |
| **Normalized** | 100% | 55.94% |
| **Standard Deviation** | 0% | 7% |
| **oneDNN - R.N.N.I - bf16bf16bf16 - CPU (ms)** | **4517** | **7969** |
| **Normalized** | 100% | 56.68% |
| **Standard Deviation** | 0.2% | 9.8% |
| **oneDNN - M.M.B.S.T - u8s8f32 - CPU (ms)** | **2.12307** | **11.82** |
| **Normalized** | 100% | 17.96% |
| **Standard Deviation** | 0.6% | 12.1% |
| **oneDNN - M.M.B.S.T - bf16bf16bf16 - CPU (ms)** | 11.8072 | |
| **Standard Deviation** | 3.6% | |
| **Numpy Benchmark (Score)** | **293.18** | **299.99** |
| **Normalized** | 97.73% | 100% |
| **Standard Deviation** | 0.3% | 1.8% |
| **RNNoise (sec)** | 31.947 | |
| **Standard Deviation** | 0% | |
| **TensorFlow Lite - SqueezeNet (us)** | **627487** | **769601** |
| **Normalized** | 100% | 81.53% |
| **Standard Deviation** | 2.8% | 7.9% |
| **TensorFlow Lite - Inception V4 (us)** | **9220230** | **11134467** |
| **Normalized** | 100% | 82.81% |
| **Standard Deviation** | 0.6% | 0.3% |
| **TensorFlow Lite - NASNet Mobile (us)** | **455525** | **597569** |
| **Normalized** | 100% | 76.23% |
| **Standard Deviation** | 1.7% | 6.7% |
| **TensorFlow Lite - Mobilenet Float (us)** | **424309** | **525312** |
| **Normalized** | 100% | 80.77% |
| **Standard Deviation** | 1.2% | 7.5% |
| **TensorFlow Lite - Mobilenet Quant (us)** | **419506** | **535897** |
| **Normalized** | 100% | 78.28% |
| **Standard Deviation** | 2% | 7.6% |
| **TensorFlow Lite - I.R.V (us)** | **8329360** | **10177933** |
| **Normalized** | 100% | 81.84% |
| **Standard Deviation** | 0.7% | 1.1% |
| **Mobile Neural Network - SqueezeNetV1.0 (ms)** | **11.256** | **18.04** |
| **Normalized** | 100% | 62.39% |
| **Standard Deviation** | 7% | 0.9% |
| **Mobile Neural Network - resnet-v2-50 (ms)** | **54.691** | **88.35** |
| **Normalized** | 100% | 61.9% |
| **Standard Deviation** | 1% | 3.3% |
| **Mobile Neural Network - MobileNetV2_224 (ms)** | **6.238** | **9.62** |
| **Normalized** | 100% | 64.84% |
| **Standard Deviation** | 0.7% | 21.1% |
| **Mobile Neural Network - mobilenet-v1-1.0 (ms)** | **8.320** | **13.15** |
| **Normalized** | 100% | 63.27% |
| **Standard Deviation** | 6.8% | 13.8% |
| **Mobile Neural Network - inception-v3 (ms)** | **68.523** | **97.71** |
| **Normalized** | 100% | 70.13% |
| **Standard Deviation** | 1.2% | 8.8% |
| **NCNN - CPU - mobilenet (ms)** | **35.03** | **45.37** |
| **Normalized** | 100% | 77.21% |
| **Standard Deviation** | 2.8% | 7.3% |

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|---|---|---|
| **NCNN - CPU-v2-v2 - mobilenet-v2 (ms)** | **7.78** | **10.67** |
| **Normalized** | 100% | 72.91% |
| **Standard Deviation** | 1.2% | 18.8% |
| **NCNN - CPU-v3-v3 - mobilenet-v3 (ms)** | **6.71** | **9.10** |
| **Normalized** | 100% | 73.74% |
| **Standard Deviation** | 0.5% | 13% |
| **NCNN - CPU - shufflenet-v2 (ms)** | **9.99** | **14.58** |
| **Normalized** | 100% | 68.52% |
| **Standard Deviation** | 10.2% | 15.8% |
| **NCNN - CPU - mnasnet (ms)** | **8.10** | **9.76** |
| **Normalized** | 100% | 82.99% |
| **Standard Deviation** | 10.8% | 13.9% |
| **NCNN - CPU - efficientnet-b0 (ms)** | **12.53** | **15.22** |
| **Normalized** | 100% | 82.33% |
| **Standard Deviation** | 0.5% | 11.7% |
| **NCNN - CPU - blazeface (ms)** | **2.85** | **3.80** |
| **Normalized** | 100% | 75% |
| **Standard Deviation** | 1.4% | 10.3% |
| **NCNN - CPU - googlenet (ms)** | **25.01** | **31.39** |
| **Normalized** | 100% | 79.68% |
| **Standard Deviation** | 0.8% | 9.8% |
| **NCNN - CPU - vgg16 (ms)** | **68.50** | **108.71** |
| **Normalized** | 100% | 63.01% |
| **Standard Deviation** | 0.6% | 4.3% |
| **NCNN - CPU - resnet18 (ms)** | **22.07** | **30.23** |
| **Normalized** | 100% | 73.01% |
| **Standard Deviation** | 0.2% | 9.1% |
| **NCNN - CPU - alexnet (ms)** | **19.06** | **26.55** |
| **Normalized** | 100% | 71.79% |
| **Standard Deviation** | 0.1% | 5.7% |
| **NCNN - CPU - resnet50 (ms)** | **51.01** | **67.20** |
| **Normalized** | 100% | 75.91% |
| **Standard Deviation** | 0.4% | 11% |
| **NCNN - CPU - yolov4-tiny (ms)** | **44.65** | **57.10** |
| **Normalized** | 100% | 78.2% |
| **Standard Deviation** | 2.1% | 7.1% |
| **NCNN - CPU - squeezenet_ssd (ms)** | **39.61** | **45.61** |
| **Normalized** | 100% | 86.84% |
| **Standard Deviation** | 1% | 7.6% |
| **NCNN - CPU - regnety_400m (ms)** | **21.11** | **22.34** |
| **Normalized** | 100% | 94.49% |
| **Standard Deviation** | 1.4% | 9.7% |
| **NCNN - Vulkan GPU - mobilenet (ms)** | **35.11** | **46.41** |
| **Normalized** | 100% | 75.65% |
| **Standard Deviation** | 2.4% | 0.5% |
| **NCNN - Vulkan GPU-v2-v2 - mobilenet-v2 (ms)** | **7.71** | **9.64** |
| **Normalized** | 100% | 79.98% |
| **Standard Deviation** | 0.6% | 24.2% |
| **NCNN - Vulkan GPU-v3-v3 - mobilenet-v3 (ms)** | **6.70** | **8.28** |
| **Normalized** | 100% | 80.92% |
| **Standard Deviation** | 0.2% | 20.2% |
| **NCNN - Vulkan GPU - shufflenet-v2 (ms)** | **10.30** | **12.80** |
| **Normalized** | 100% | 80.47% |
| **Standard Deviation** | 11.2% | 28.3% |
| **NCNN - Vulkan GPU - mnasnet (ms)** | **8.13** | **8.77** |

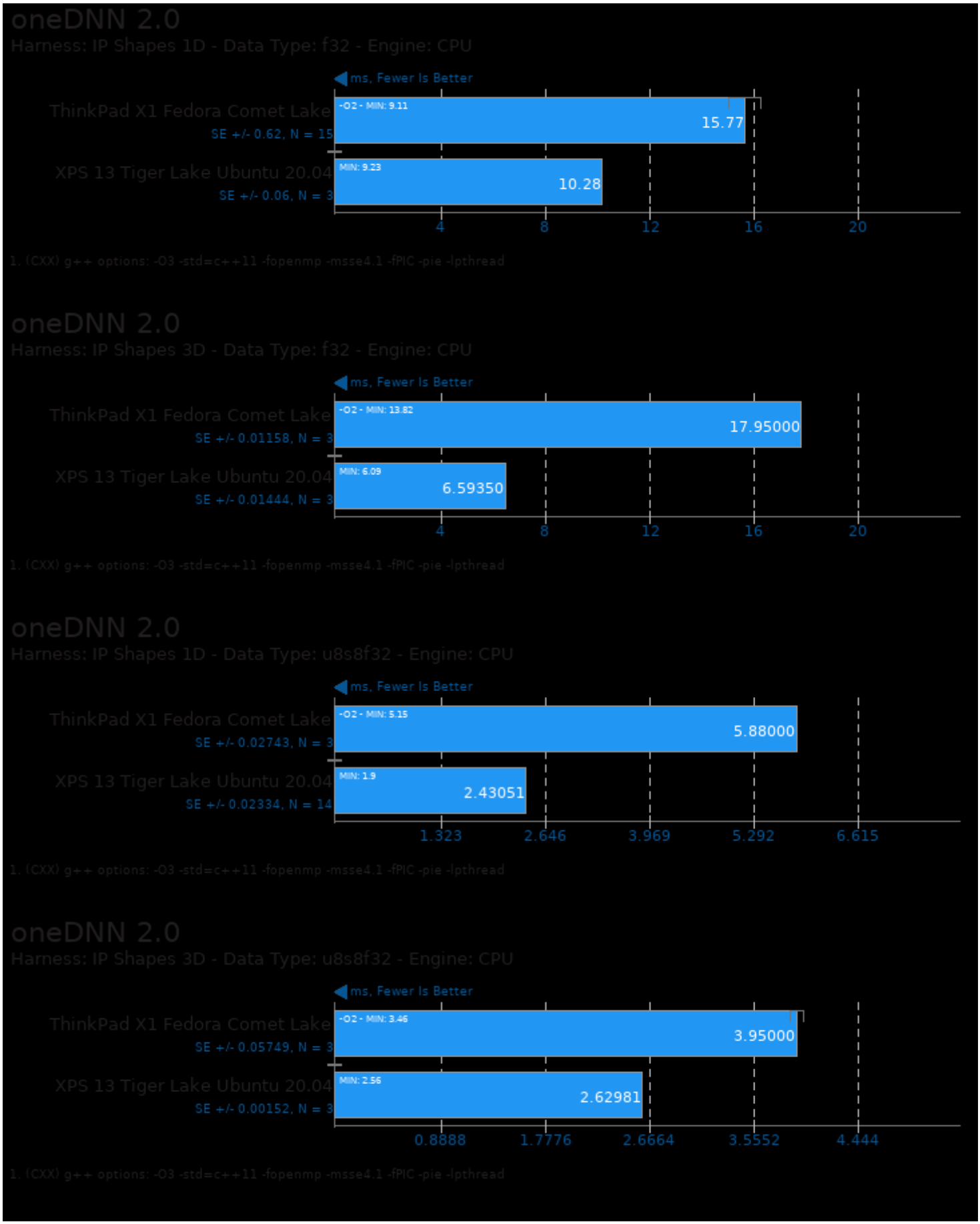
# Coder Radio XPS 13 ML Ubuntu Benchmark

| | | |
|---|---|---|
| Normalized | 100% | 92.7% |
| Standard Deviation | 11.4% | 22.8% |
| **NCNN - Vulkan GPU - efficientnet-b0 (ms)** | **11.83** | **13.74** |
| Normalized | 100% | 86.1% |
| Standard Deviation | 9.7% | 19.8% |
| **NCNN - Vulkan GPU - blazeface (ms)** | **2.80** | **3.24** |
| Normalized | 100% | 86.42% |
| Standard Deviation | 3.8% | 27.7% |
| **NCNN - Vulkan GPU - googlenet (ms)** | **24.58** | **28.85** |
| Normalized | 100% | 85.2% |
| Standard Deviation | 4.2% | 15.1% |
| **NCNN - Vulkan GPU - vgg16 (ms)** | **69.16** | **107.70** |
| Normalized | 100% | 64.22% |
| Standard Deviation | 1.3% | 2.8% |
| **NCNN - Vulkan GPU - resnet18 (ms)** | **22.25** | **28.33** |
| Normalized | 100% | 78.54% |
| Standard Deviation | 1.3% | 10.9% |
| **NCNN - Vulkan GPU - alexnet (ms)** | **19.23** | **25.75** |
| Normalized | 100% | 74.68% |
| Standard Deviation | 1.8% | 6.2% |
| **NCNN - Vulkan GPU - resnet50 (ms)** | **51.13** | **65.59** |
| Normalized | 100% | 77.95% |
| Standard Deviation | 0.4% | 15.4% |
| **NCNN - Vulkan GPU - yolov4-tiny (ms)** | **44.68** | **58.16** |
| Normalized | 100% | 76.82% |
| Standard Deviation | 2.2% | 4.7% |
| **NCNN - Vulkan GPU - squeezenet_ssd (ms)** | **39.53** | **44.71** |
| Normalized | 100% | 88.41% |
| Standard Deviation | 1% | 9.6% |
| **NCNN - Vulkan GPU - regnety_400m (ms)** | **21.01** | **20.14** |
| Normalized | 95.86% | 100% |
| Standard Deviation | 7.4% | 18.7% |
| **PlaidML - No - Inference - VGG16 - CPU (FPS)** | **6.47** | **3.74** |
| Normalized | 100% | 57.81% |
| Standard Deviation | 0.6% | 3% |
| **PlaidML - No - Inference - ResNet 50 - CPU (FPS)** | **3.27** | **2.57** |
| Normalized | 100% | 78.59% |
| Standard Deviation | 0.8% | 0.4% |
| **Numenta Anomaly Benchmark - EXPoSE (sec)** | 1139 | |
| Standard Deviation | 0.4% | |
| **Numenta Anomaly Benchmark - Relative Entropy** | 48.609 | |
| Standard Deviation | 3% | |
| **Numenta Anomaly Benchmark - Windowed Gaussian (sec)** | 27.702 | |
| Standard Deviation | 2.6% | |
| **Numenta Anomaly Benchmark - Earthgecko Skyline** | 333.639 | |
| Standard Deviation | 0.4% | |
| **Numenta Anomaly Benchmark - B.C (sec)** | 81.062 | |
| Standard Deviation | 2.6% | |
| **AI Benchmark Alpha - D.I.S (Score)** | 556 | |
| **AI Benchmark Alpha - D.T.S (Score)** | 630 | |
| **AI Benchmark Alpha - Device AI Score (Score)** | 1186 | |
| **Mlpack Benchmark - scikit_ica (sec)** | 123.23 | |
| Standard Deviation | 2.7% | |

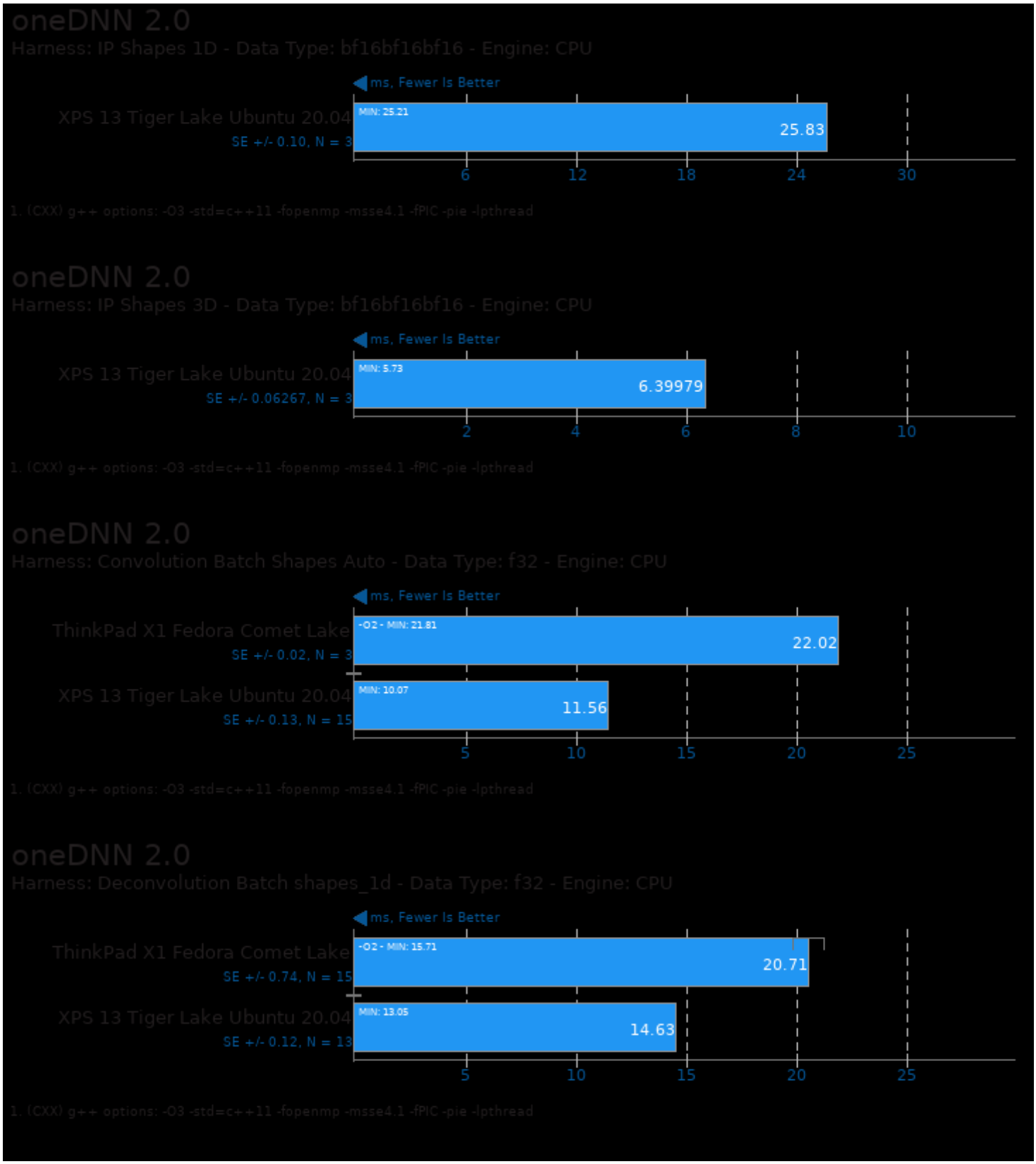
# Coder Radio XPS 13 ML Ubuntu Benchmark

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|---|---|---|
| **Mlpack Benchmark - scikit_qda (sec)** | 138.24 | |
| **Standard Deviation** | 0.1% | |
| **Mlpack Benchmark - scikit_svm (sec)** | 34.66 | |
| **Standard Deviation** | 0.2% | |
| **Mlpack Benchmark - scikit_linearridgeregression** | 13.50 | |
| **Standard Deviation** | 0.3% | |
| **Scikit-Learn (sec)** | 17.900 | |
| **Standard Deviation** | 1.4% | |
| **OpenCV - DNN - D.N.N (ms)** | **5351** | **7968** |
| **Normalized** | 100% | 67.16% |
| **Standard Deviation** | 2.8% | 42.3% |
| **NCNN - CPUv2-yolov3v2-yolov3 - mobilenetv2-yolov3 (ms)** | | 45.37 |
| **Standard Deviation** | | 7.3% |
| **NCNN - V.G.y.y - mobilenetv2-yolov3 (ms)** | | 46.41 |
| **Standard Deviation** | | 0.5% |

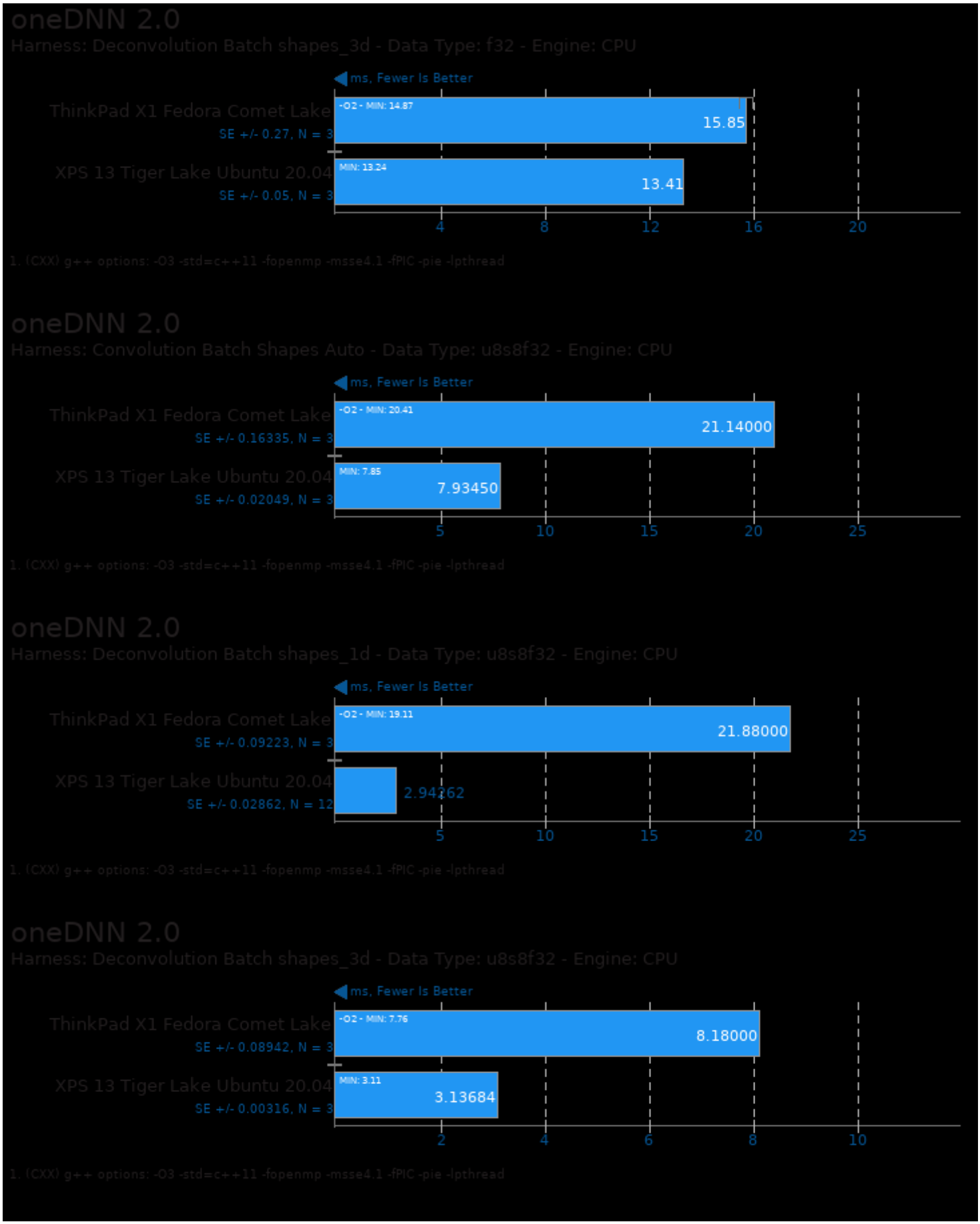
# Coder Radio XPS 13 ML Ubuntu Benchmark



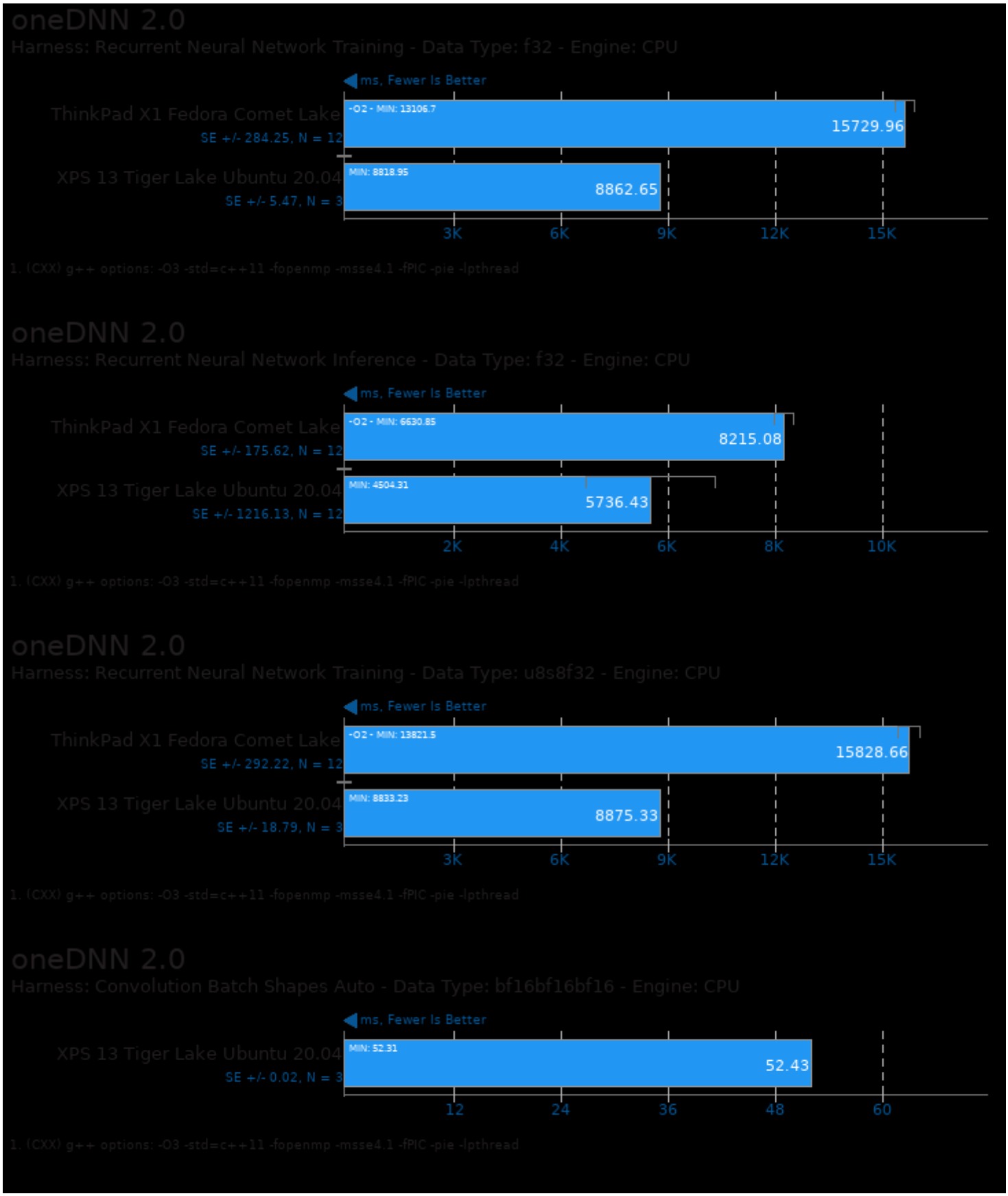
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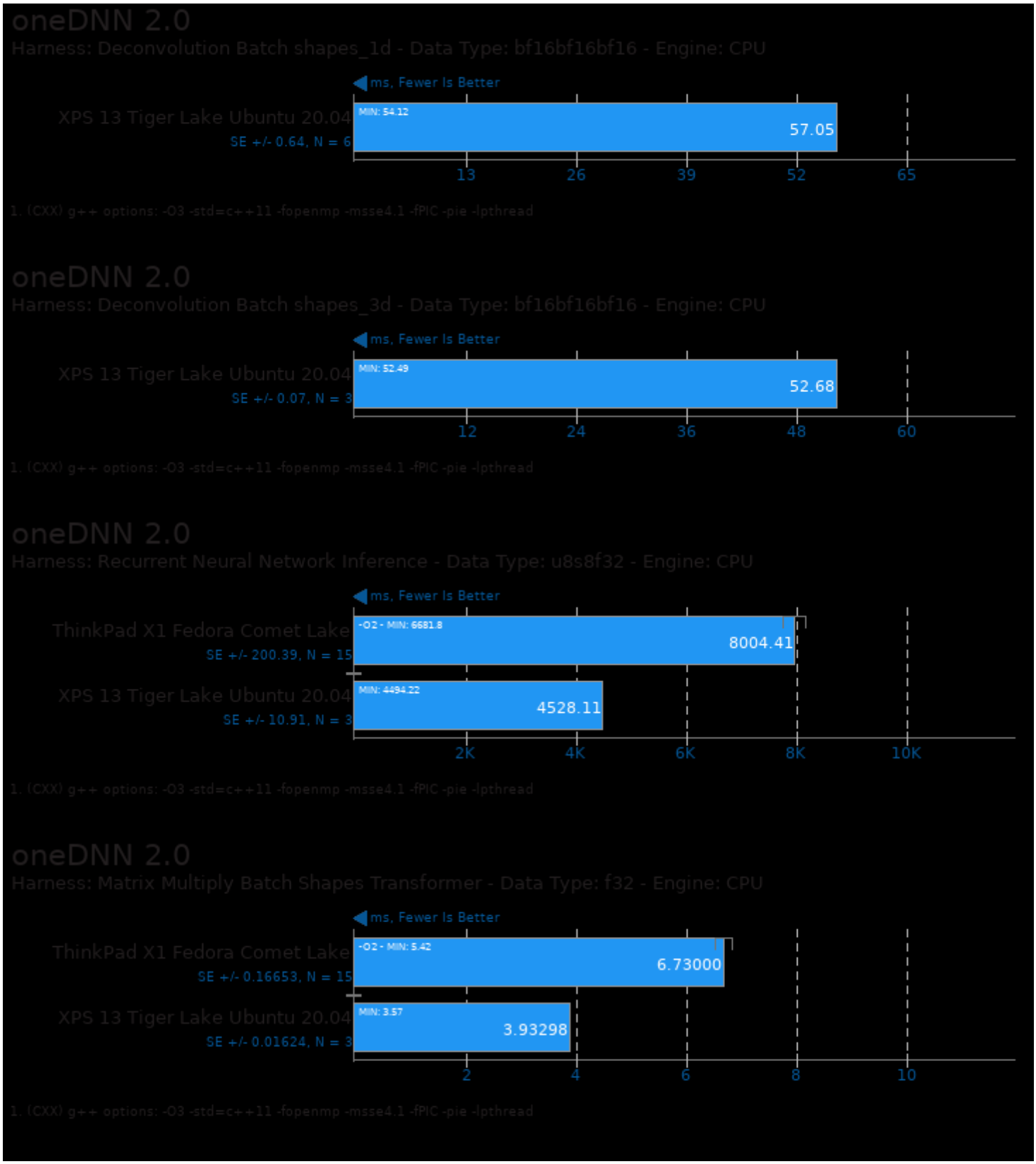
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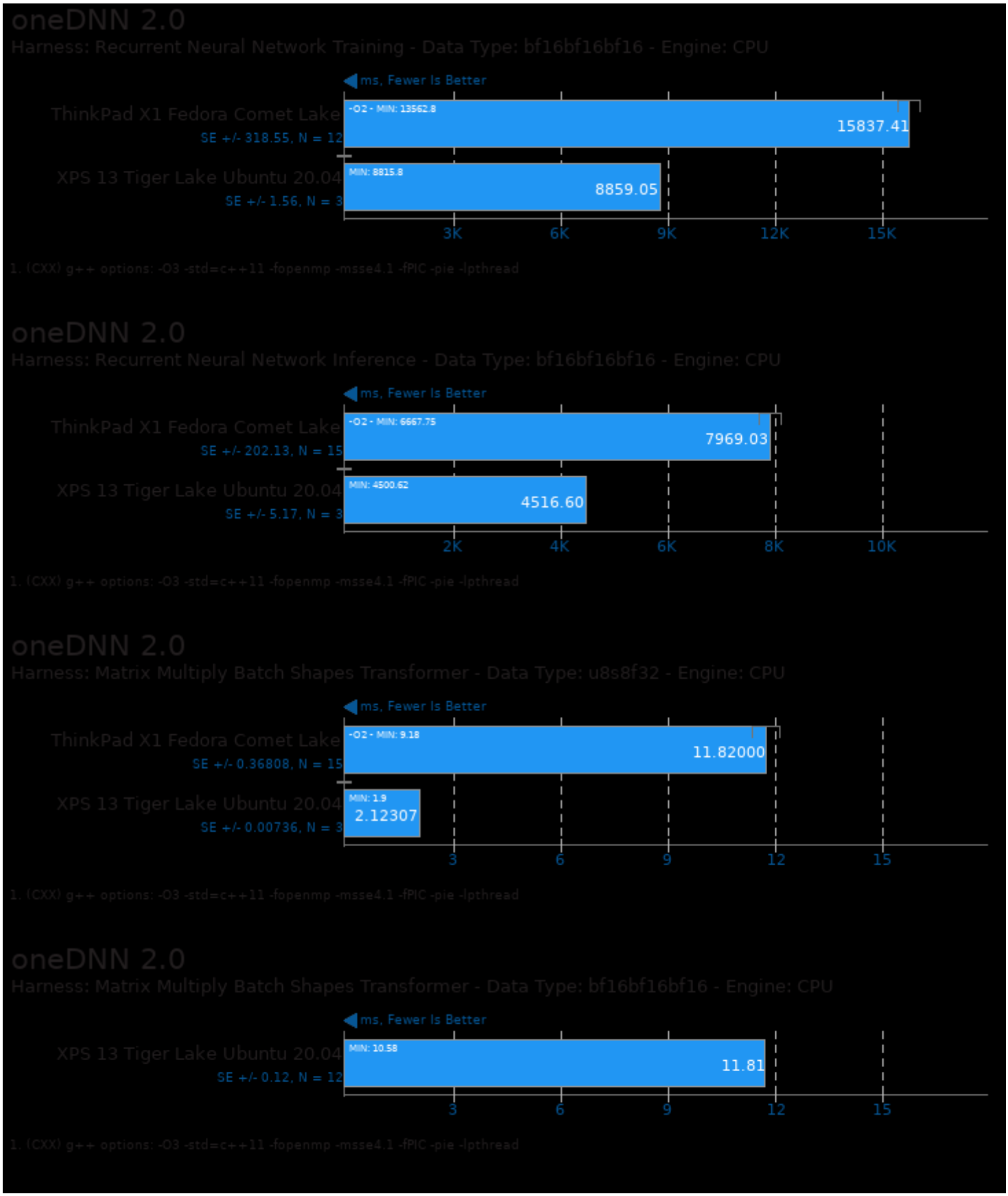
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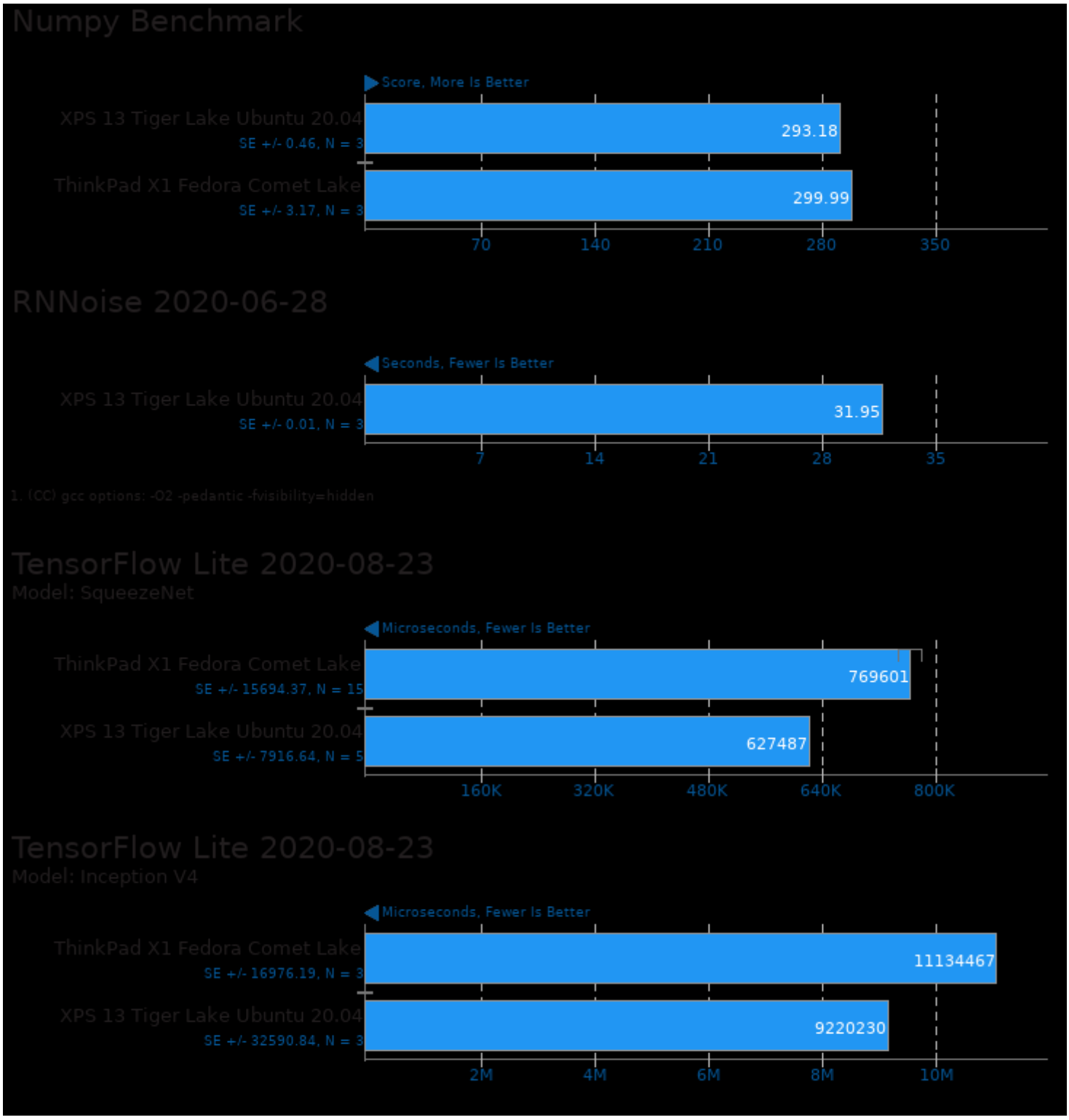
# Coder Radio XPS 13 ML Ubuntu Benchmark



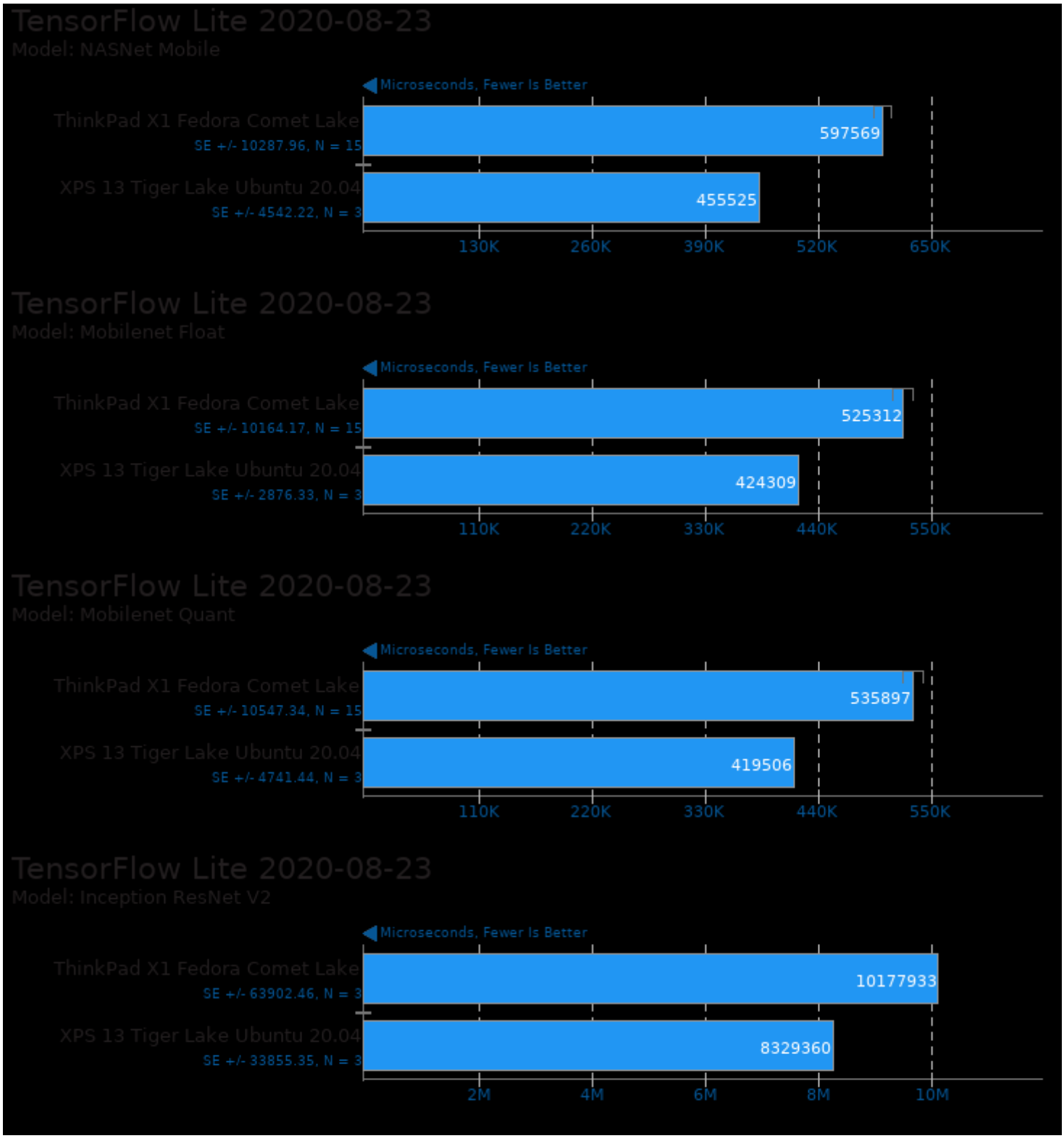
# Coder Radio XPS 13 ML Ubuntu Benchmark



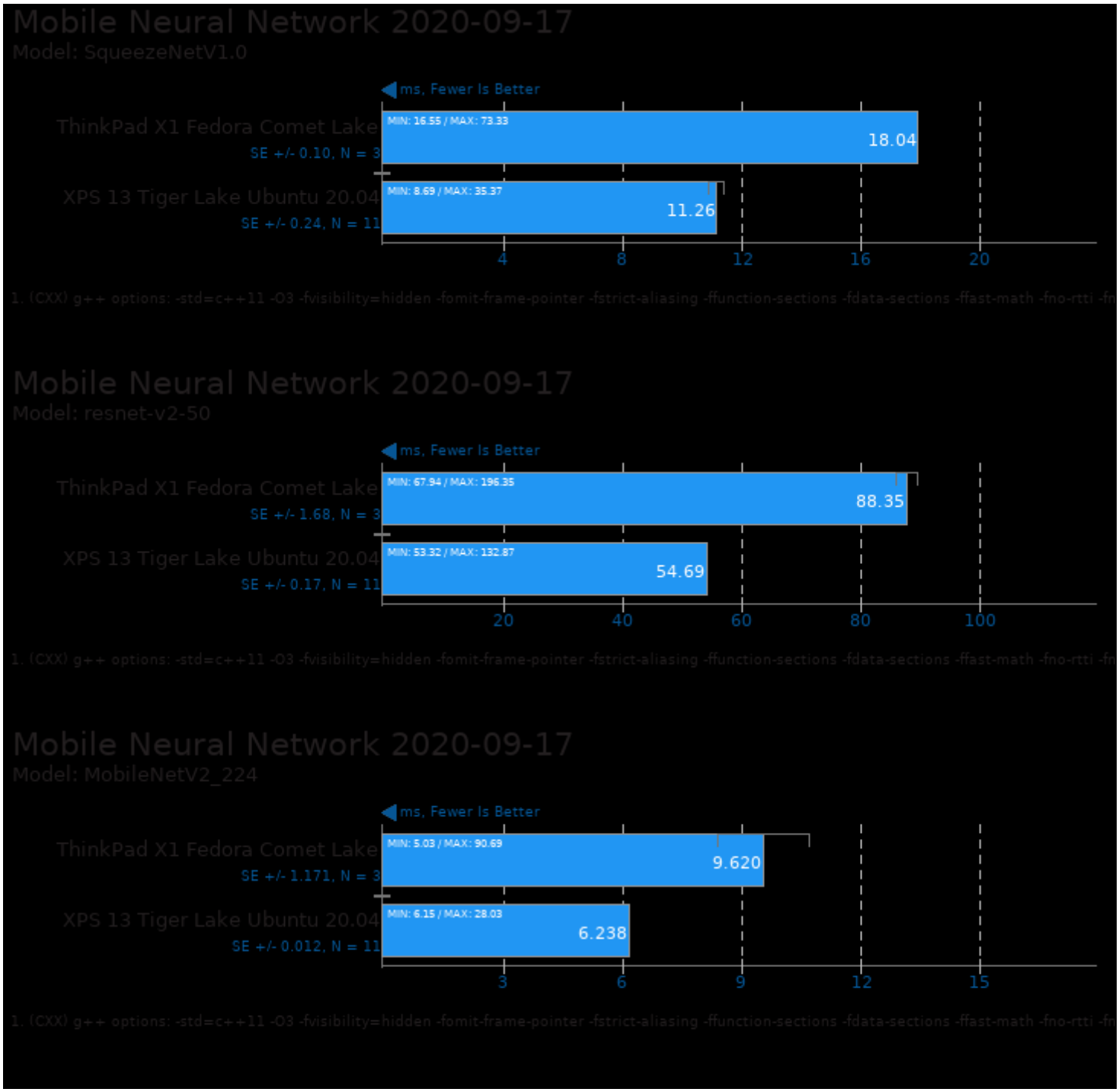
# Coder Radio XPS 13 ML Ubuntu Benchmark



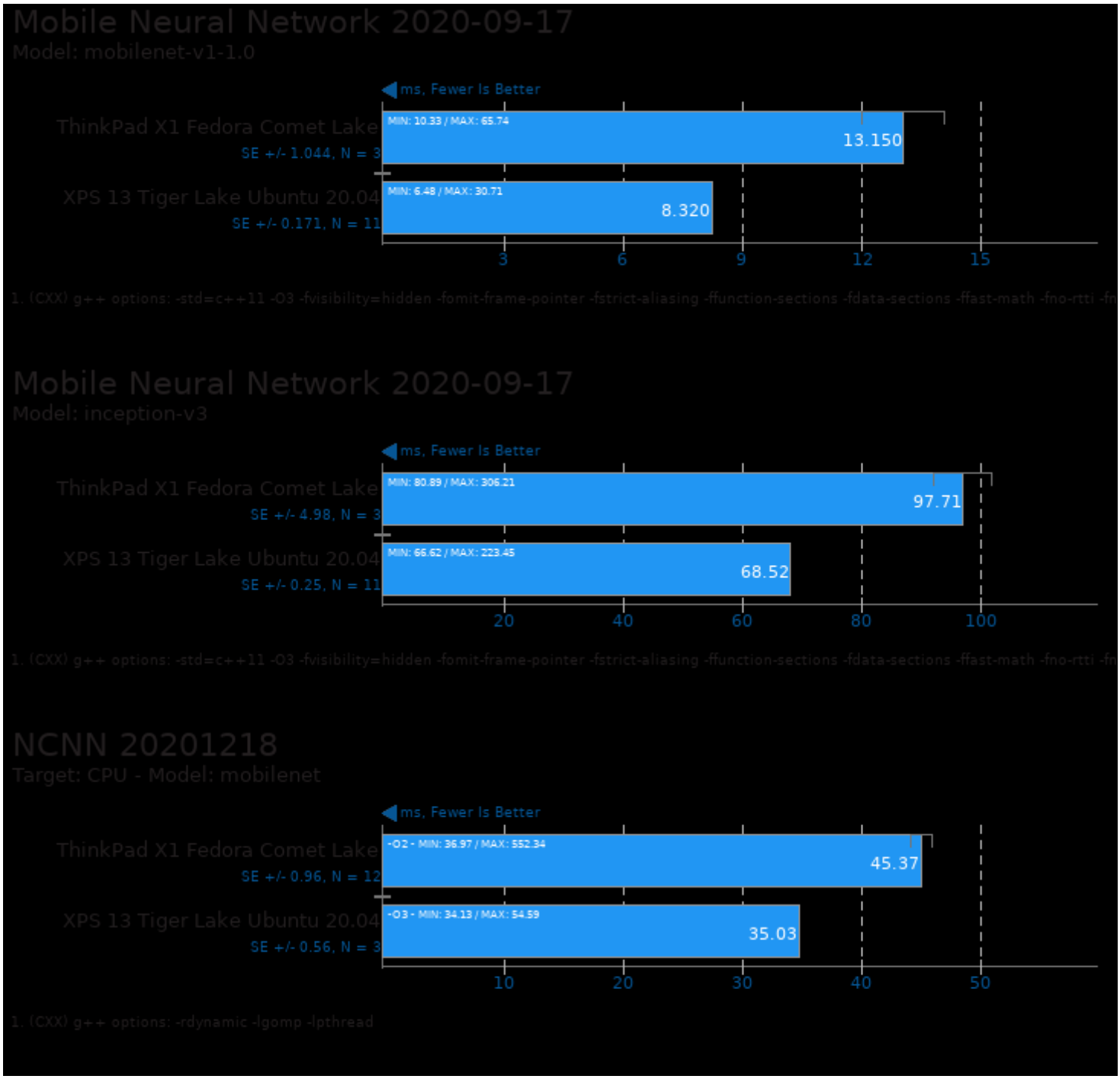
# Coder Radio XPS 13 ML Ubuntu Benchmark



# Coder Radio XPS 13 ML Ubuntu Benchmark



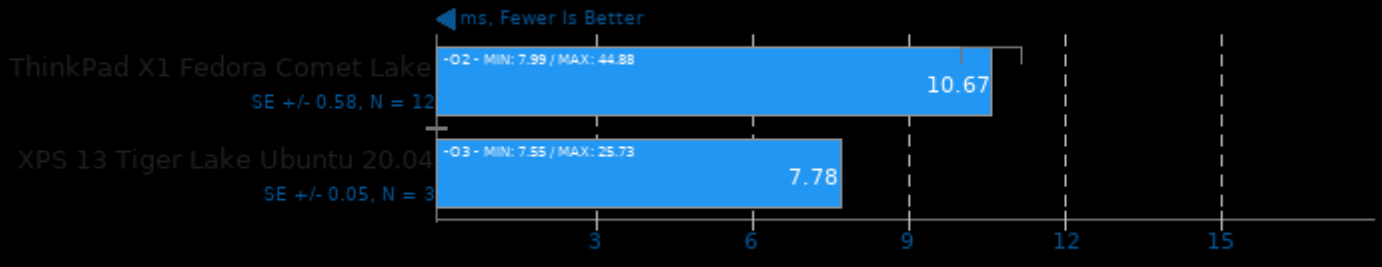
# Coder Radio XPS 13 ML Ubuntu Benchmark



# Coder Radio XPS 13 ML Ubuntu Benchmark

## NCNN 20201218

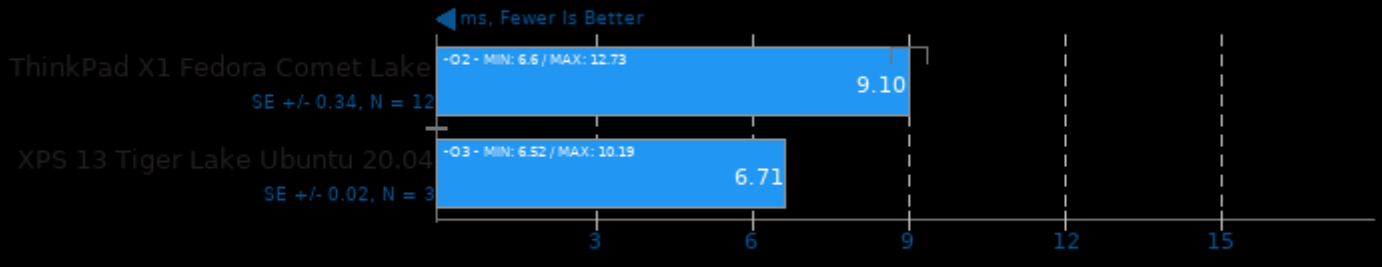
Target: CPU-v2-v2 - Model: mobilenet-v2




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

## NCNN 20201218

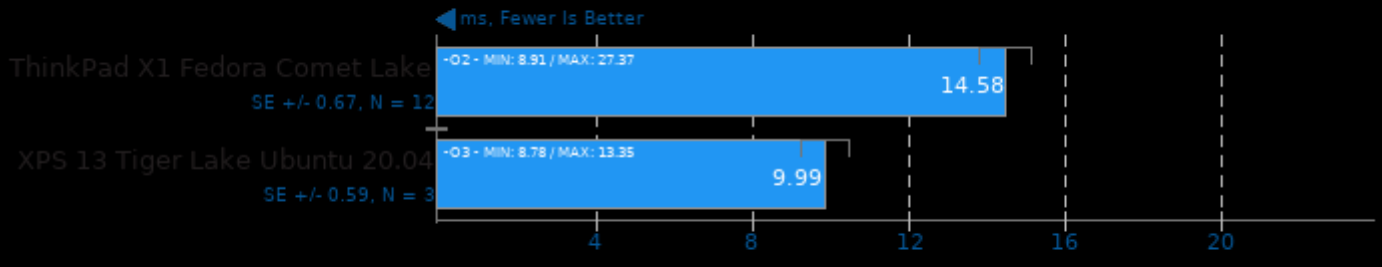
Target: CPU-v3-v3 - Model: mobilenet-v3




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

## NCNN 20201218

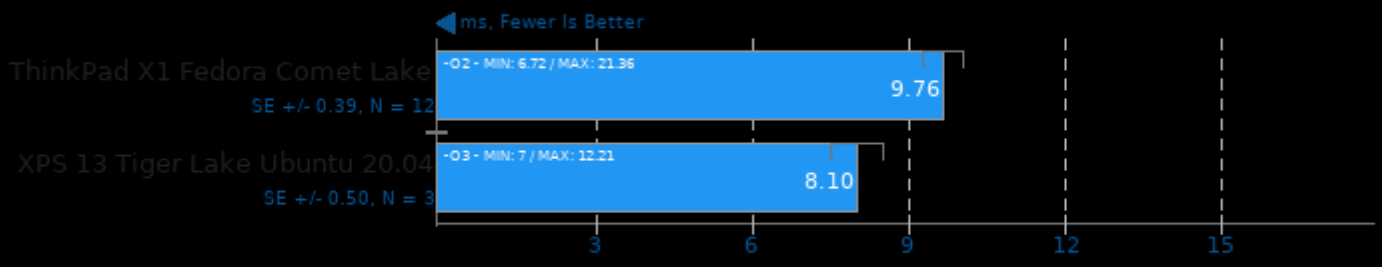
Target: CPU - Model: shufflenet-v2




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

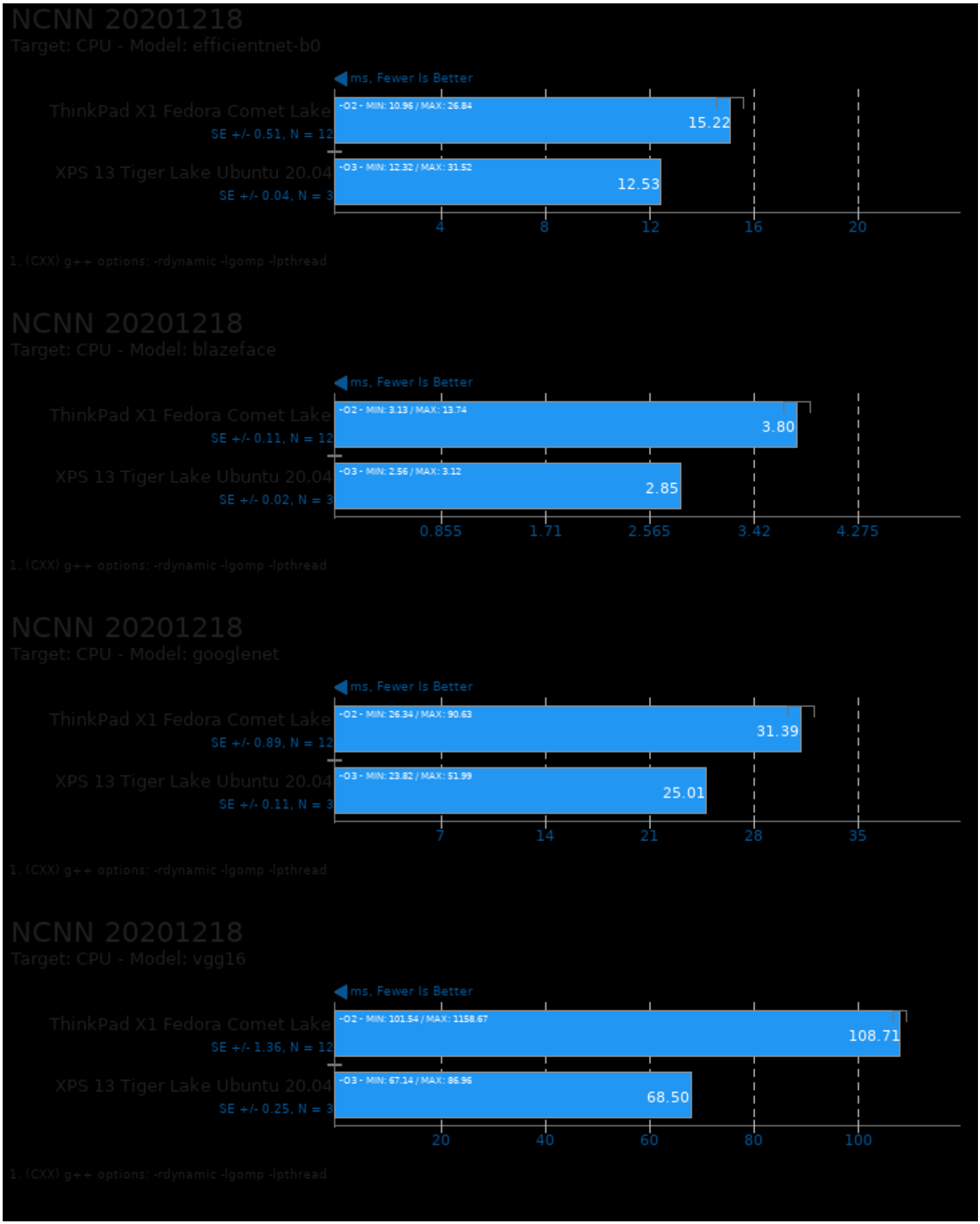
## NCNN 20201218

Target: CPU - Model: mnasnet




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

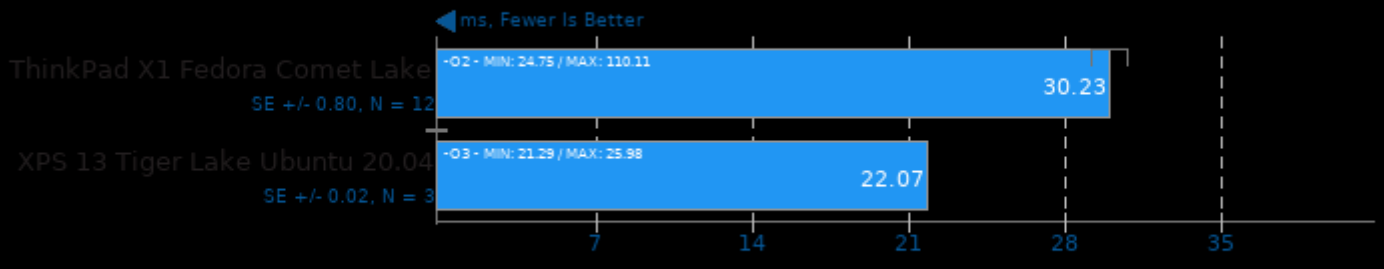
# Coder Radio XPS 13 ML Ubuntu Benchmark



# Coder Radio XPS 13 ML Ubuntu Benchmark

## NCNN 20201218

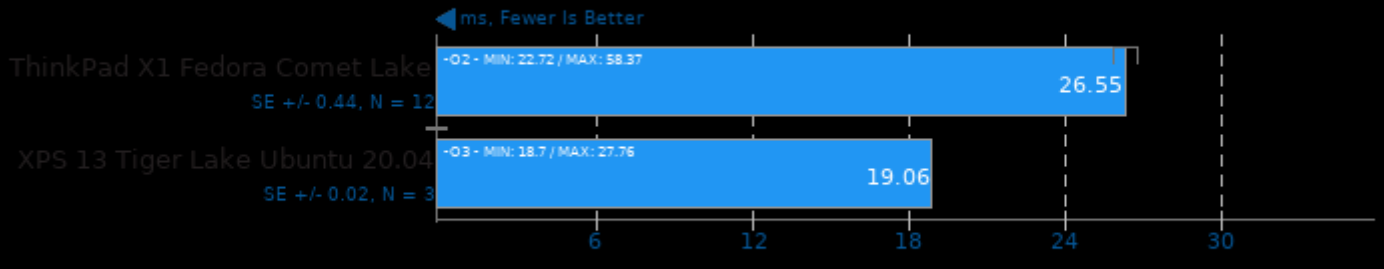
Target: CPU - Model: resnet18




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

## NCNN 20201218

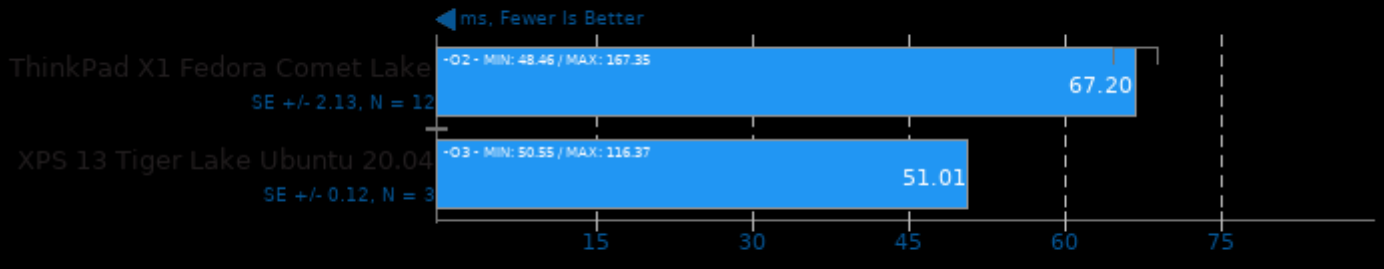
Target: CPU - Model: alexnet




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

## NCNN 20201218

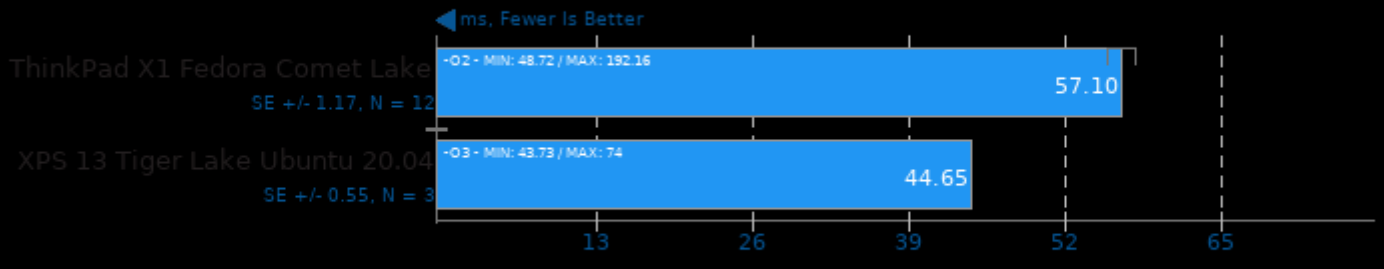
Target: CPU - Model: resnet50




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

## NCNN 20201218

Target: CPU - Model: yolov4-tiny

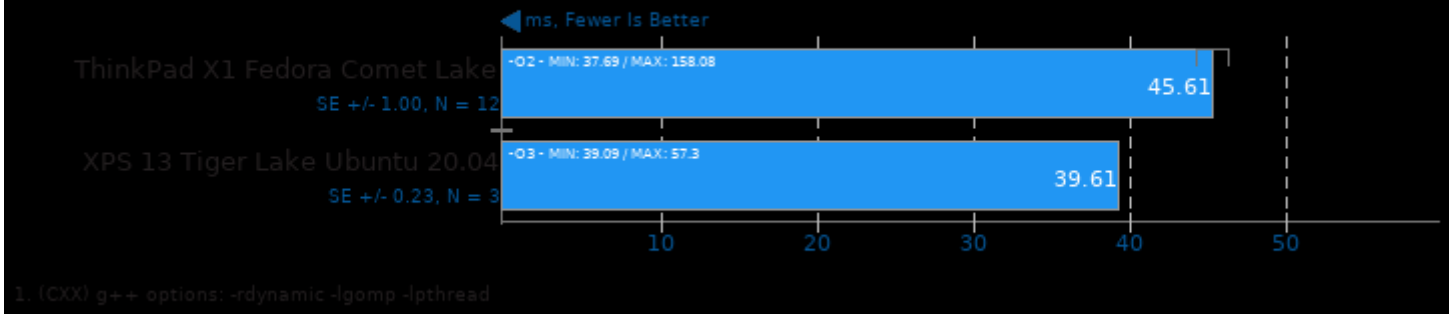



1. (CXX) g++ options: -rdynamic -lgomp -lpthread

# Coder Radio XPS 13 ML Ubuntu Benchmark

## NCNN 20201218

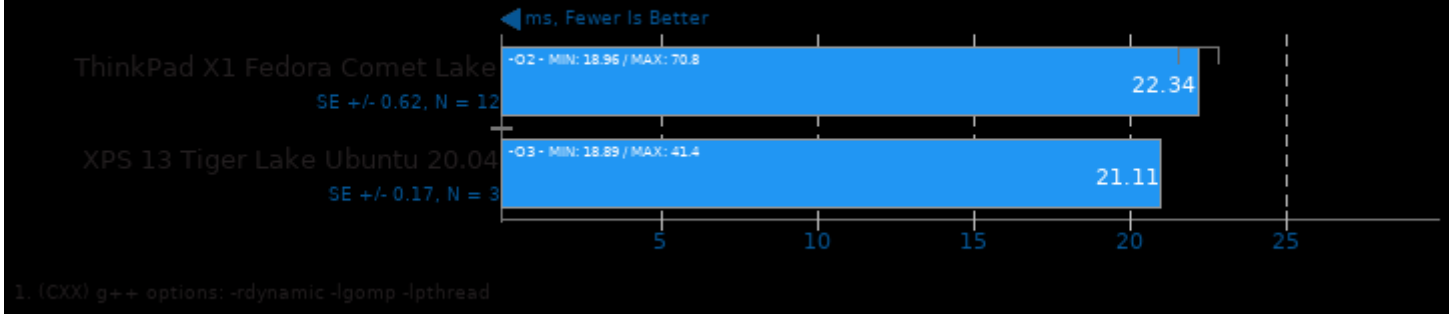
Target: CPU - Model: squeezenet_ssd




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

## NCNN 20201218

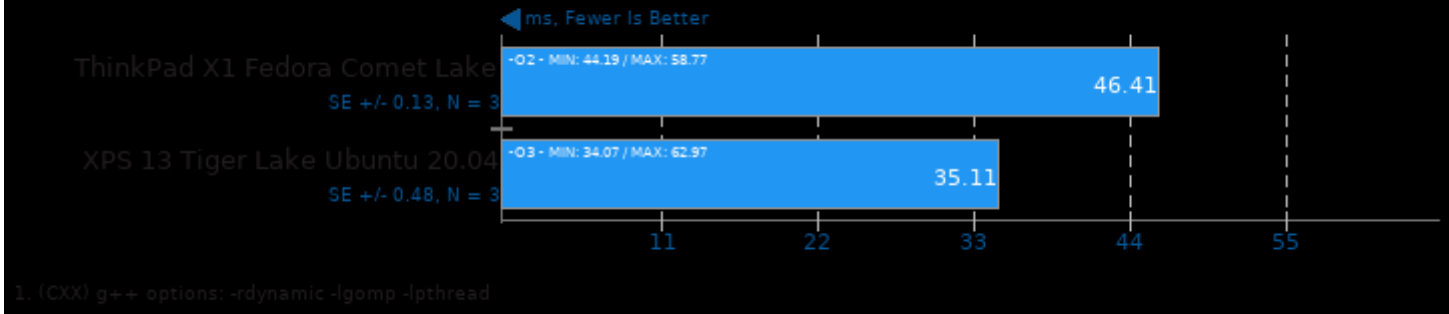
Target: CPU - Model: regnety_400m




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

## NCNN 20201218

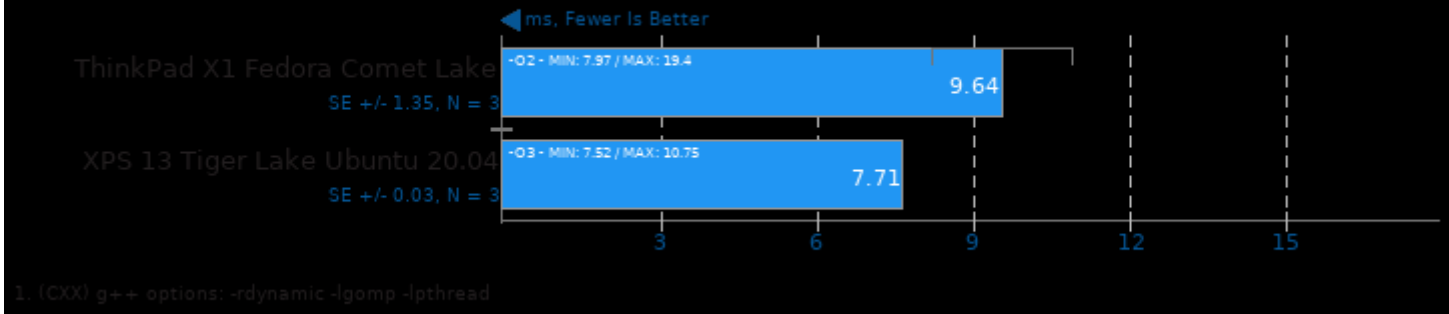
Target: Vulkan GPU - Model: mobilenet




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

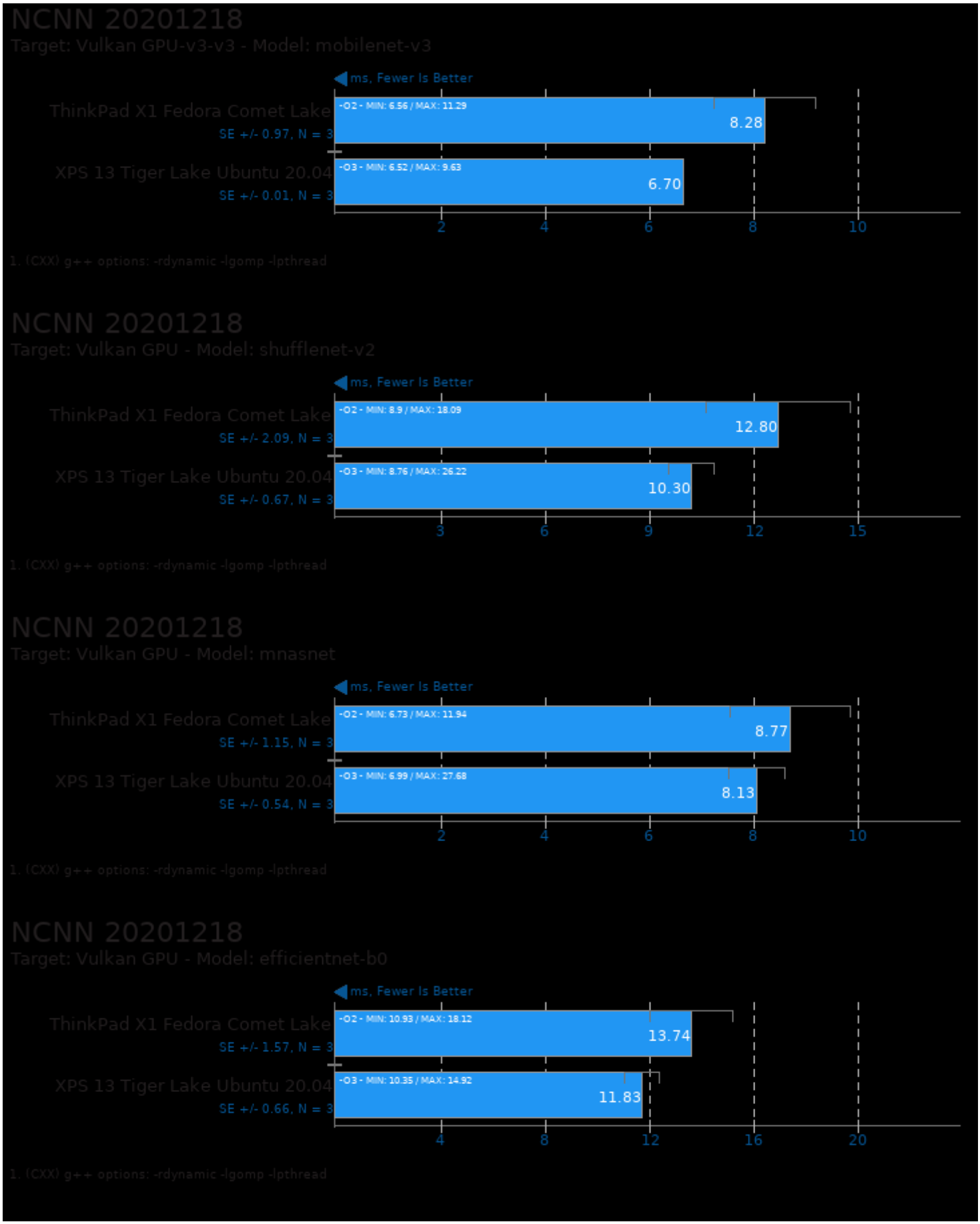
## NCNN 20201218

Target: Vulkan GPU-v2-v2 - Model: mobilenet-v2




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

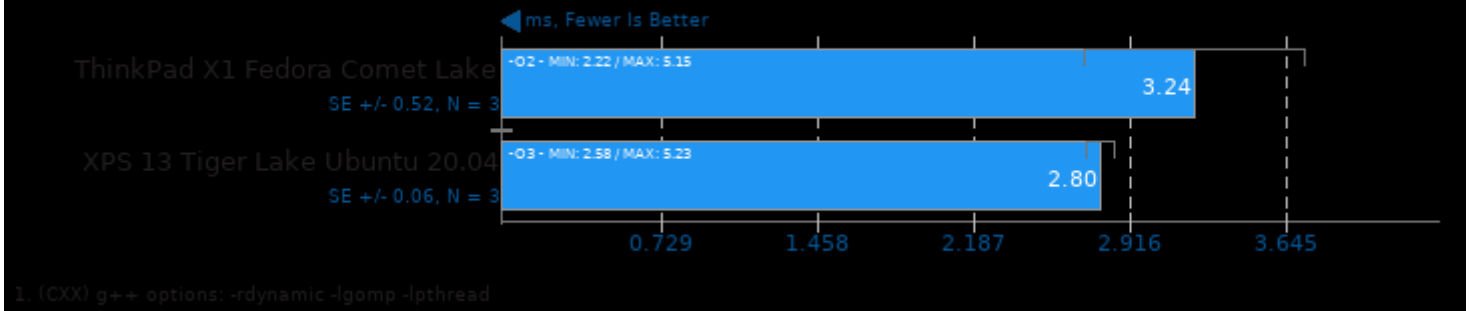
# Coder Radio XPS 13 ML Ubuntu Benchmark



# Coder Radio XPS 13 ML Ubuntu Benchmark

## NCNN 20201218

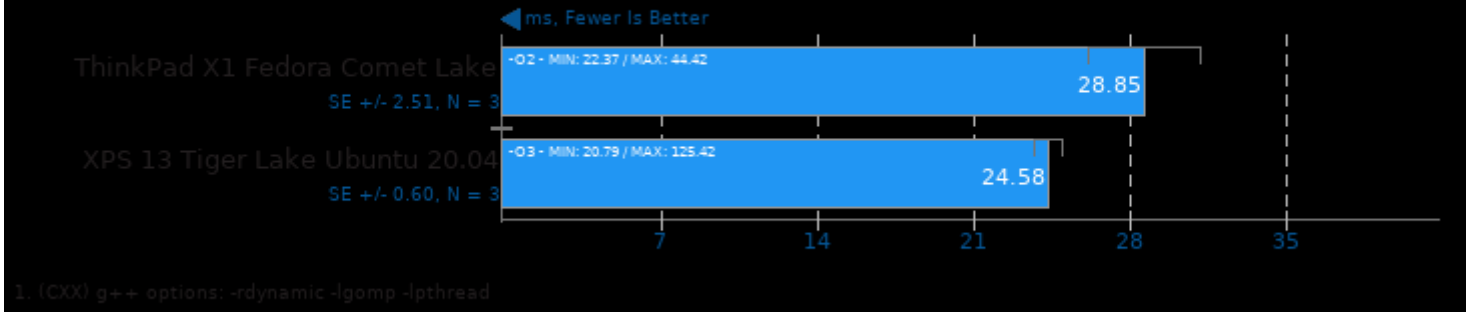
Target: Vulkan GPU - Model: blazeface




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

## NCNN 20201218

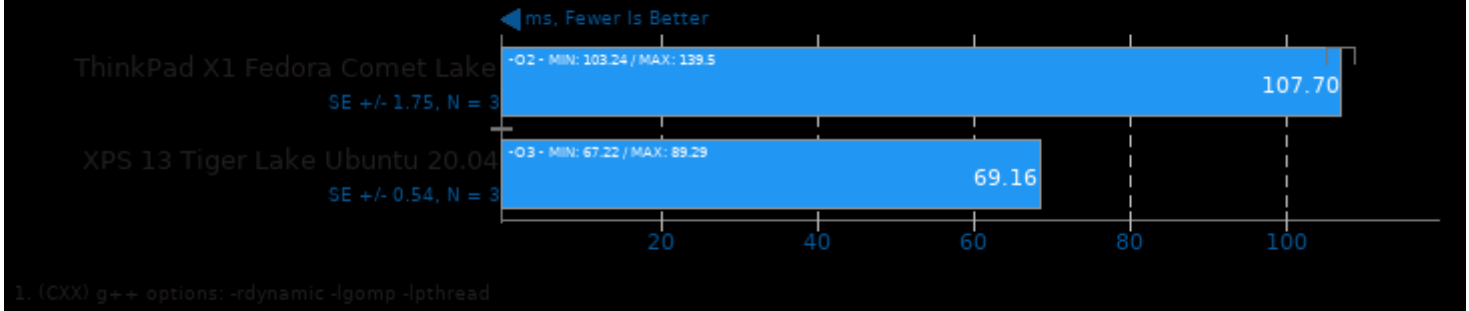
Target: Vulkan GPU - Model: googlenet




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

## NCNN 20201218

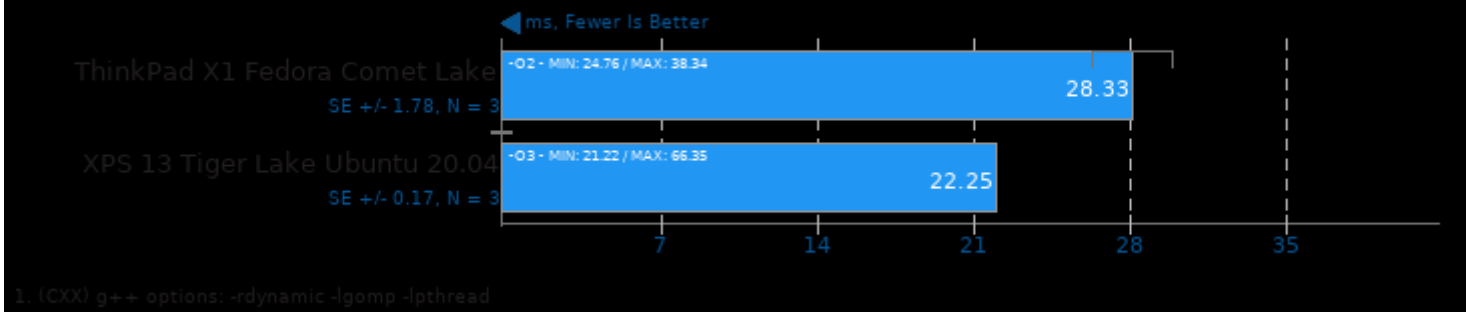
Target: Vulkan GPU - Model: vgg16




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

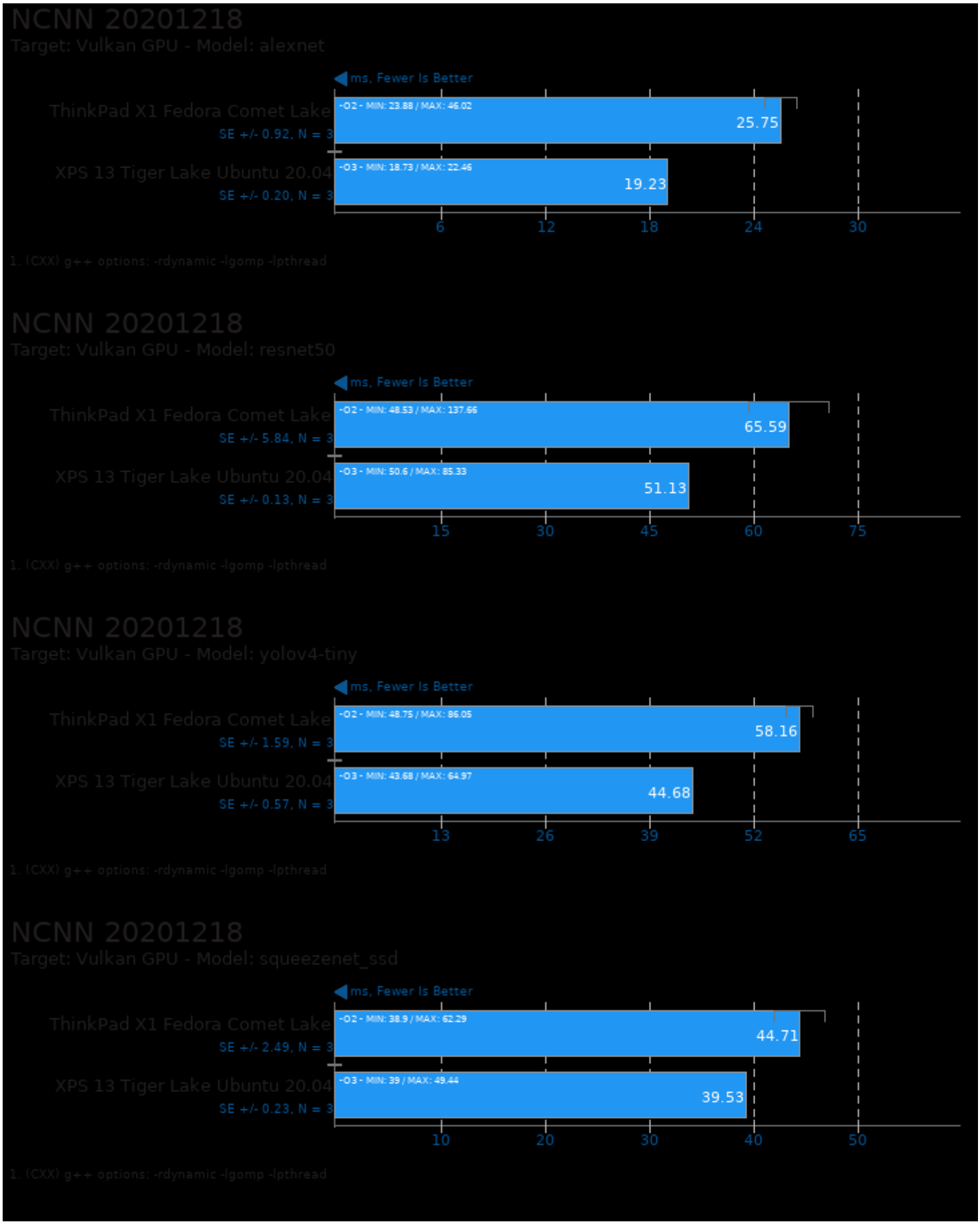
## NCNN 20201218

Target: Vulkan GPU - Model: resnet18




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

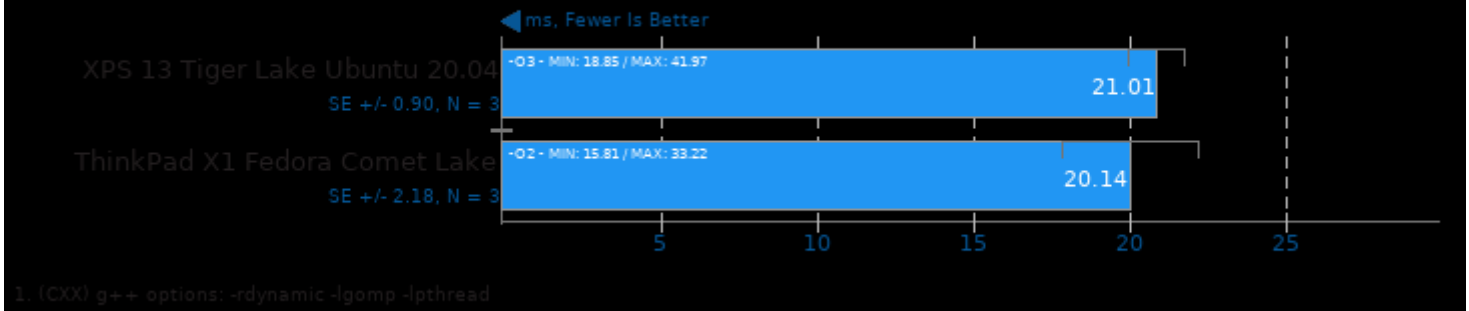
# Coder Radio XPS 13 ML Ubuntu Benchmark



# Coder Radio XPS 13 ML Ubuntu Benchmark

## NCNN 20201218

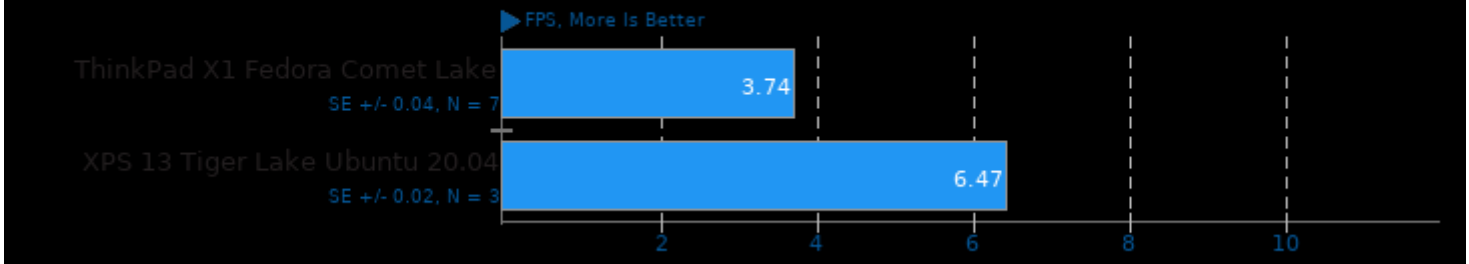
Target: Vulkan GPU - Model: regnety_400m




1. (CXX) g++ options: -rdynamic -lgomp -lpthread

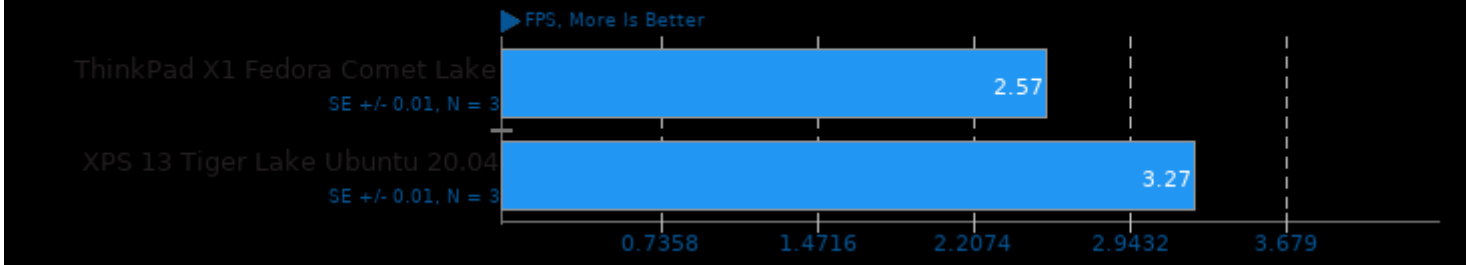
## PlaidML

FP16: No - Mode: Inference - Network: VGG16 - Device: CPU



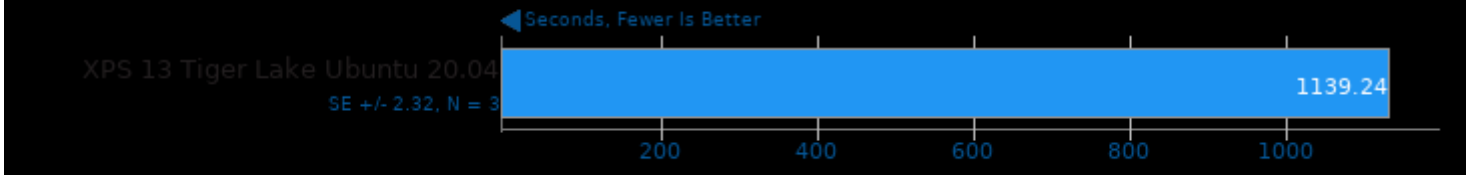

## PlaidML

FP16: No - Mode: Inference - Network: ResNet 50 - Device: CPU



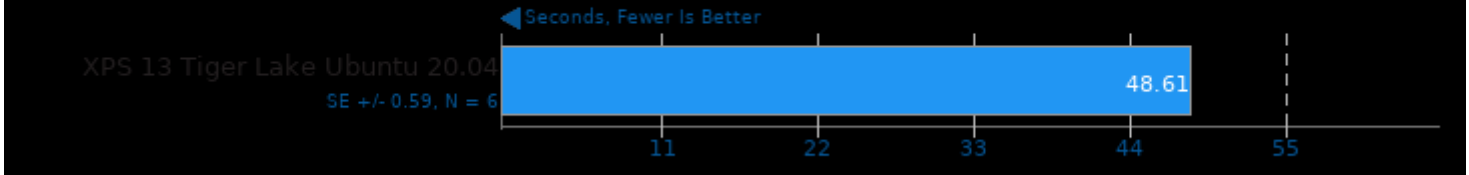

## Numenta Anomaly Benchmark 1.1

Detector: EXPoSE




## Numenta Anomaly Benchmark 1.1

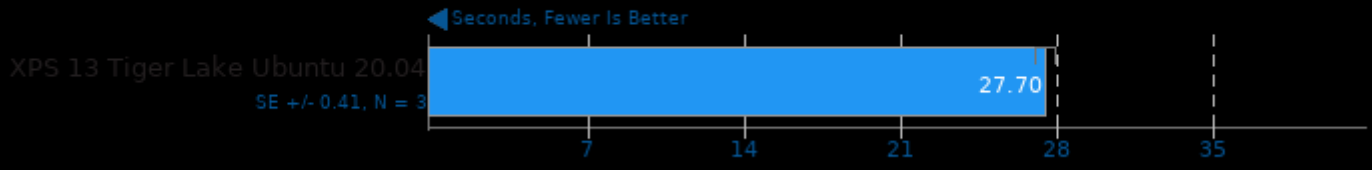
Detector: Relative Entropy



# Coder Radio XPS 13 ML Ubuntu Benchmark

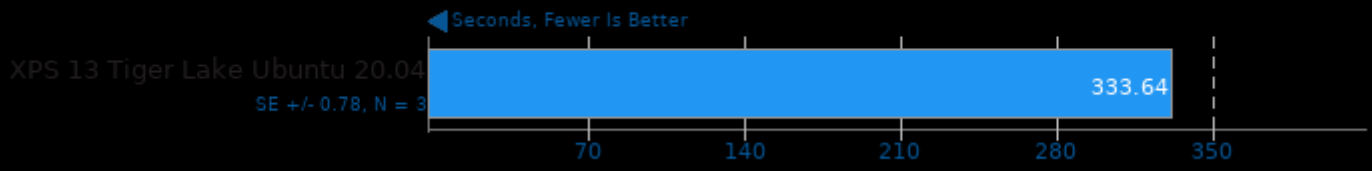
## Numenta Anomaly Benchmark 1.1

Detector: Windowed Gaussian



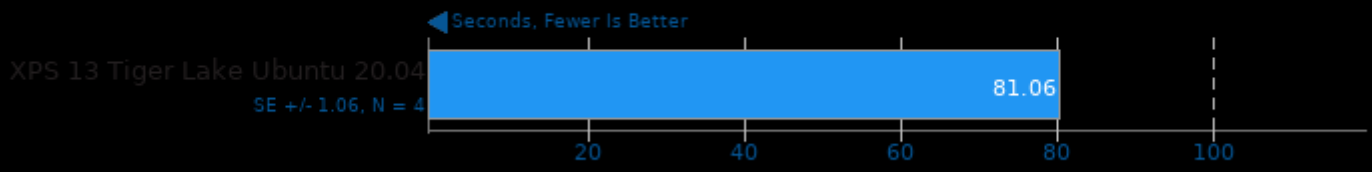

## Numenta Anomaly Benchmark 1.1

Detector: Earthgecko Skyline



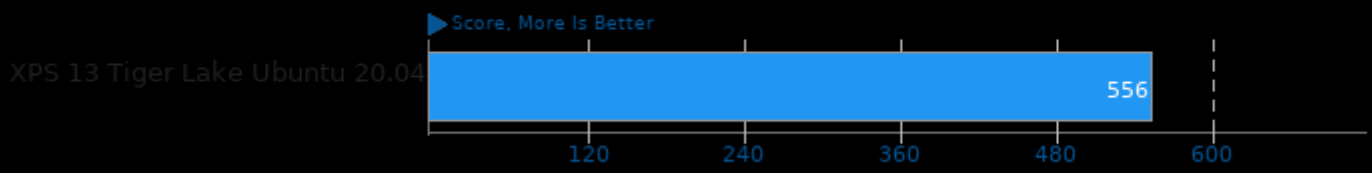

## Numenta Anomaly Benchmark 1.1

Detector: Bayesian Changepoint



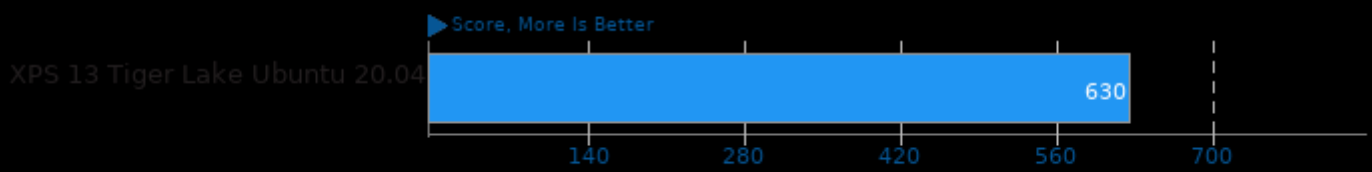

## AI Benchmark Alpha 0.1.2

Device Inference Score



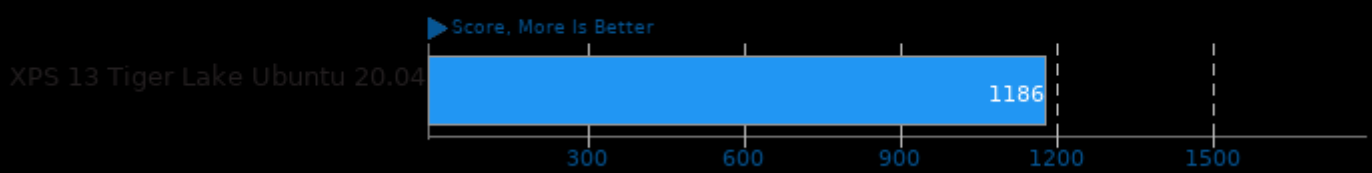

## AI Benchmark Alpha 0.1.2

Device Training Score

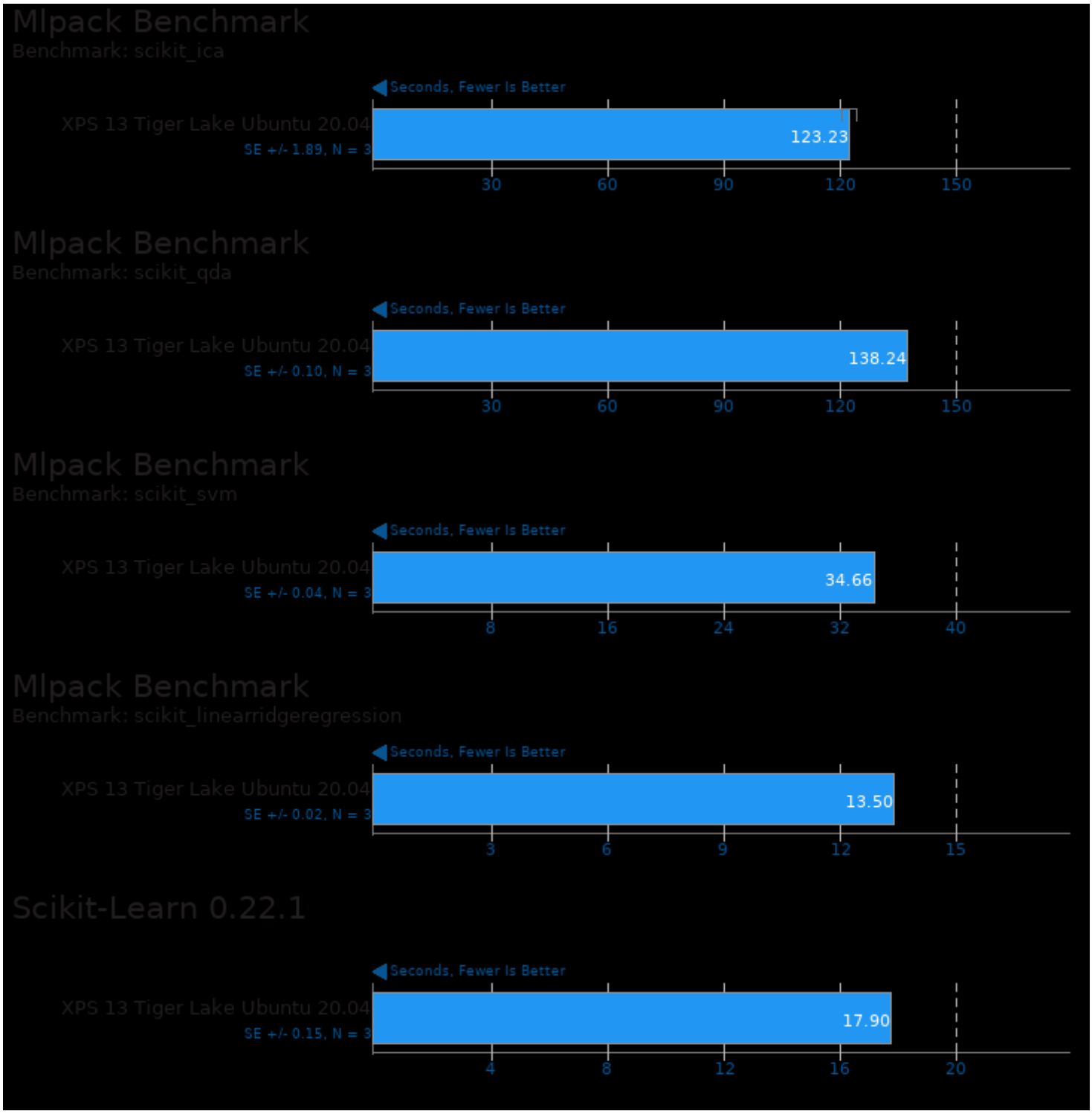



## AI Benchmark Alpha 0.1.2

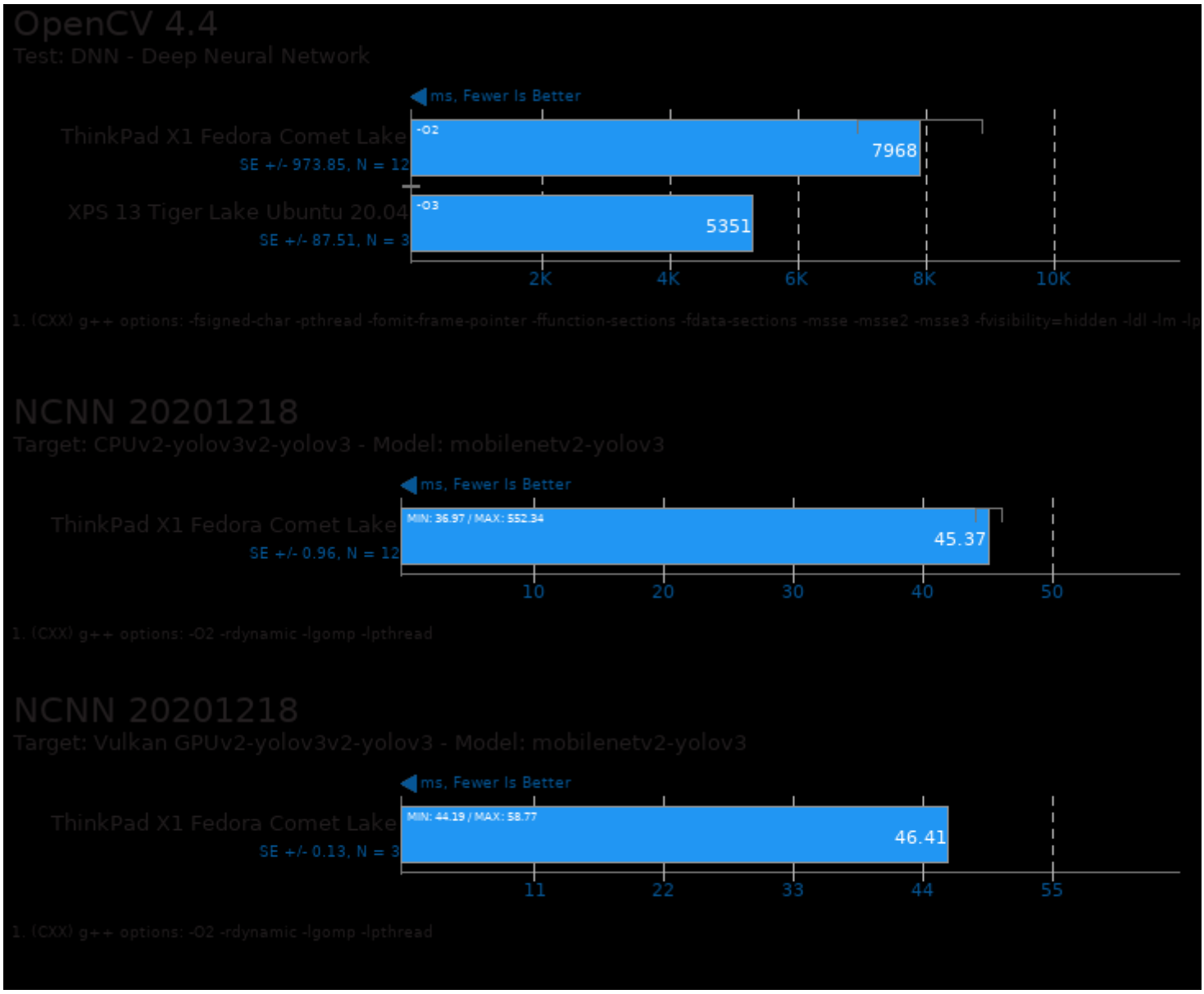
Device AI Score



# Coder Radio XPS 13 ML Ubuntu Benchmark

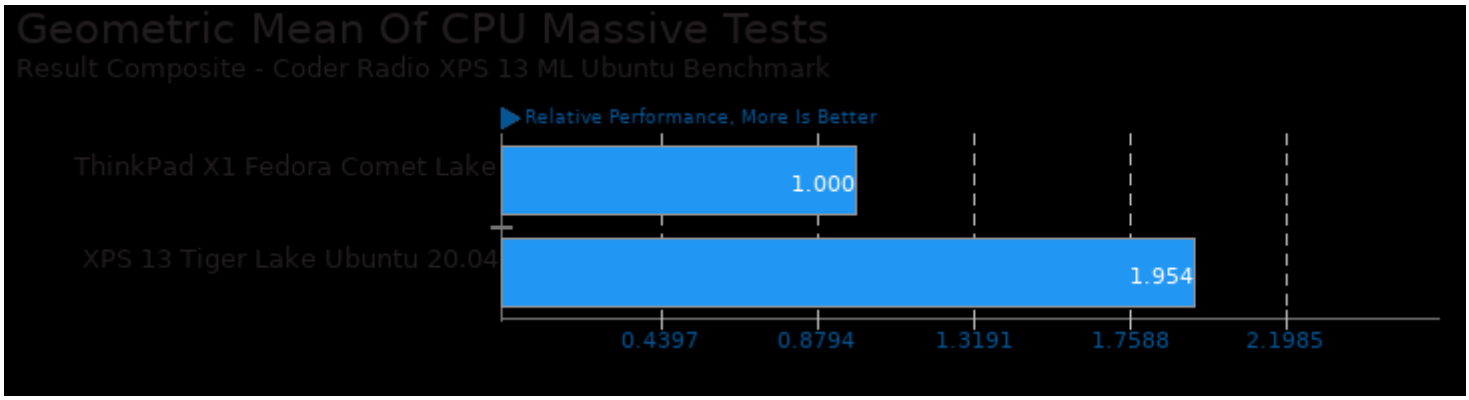


# Coder Radio XPS 13 ML Ubuntu Benchmark

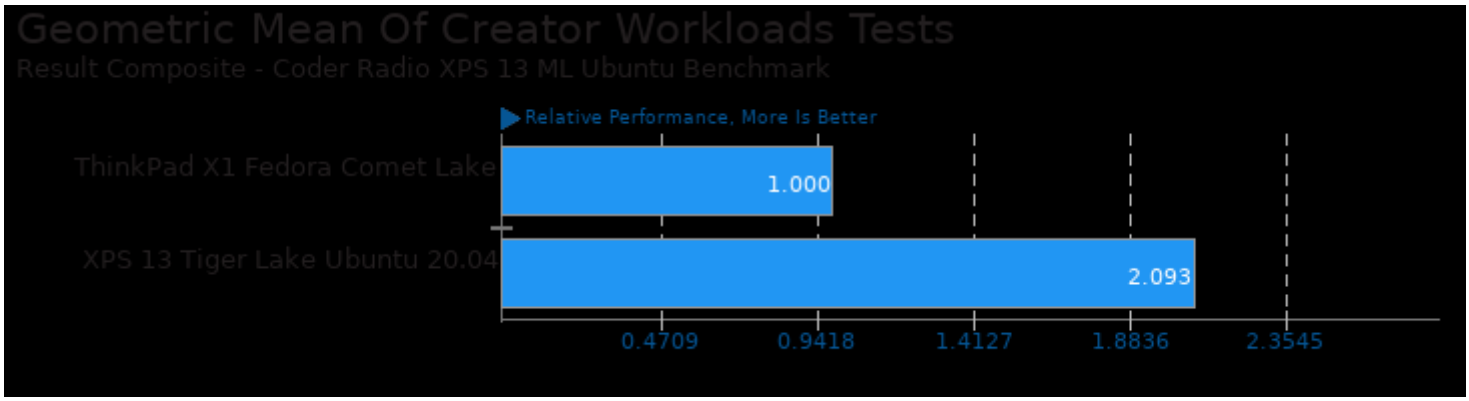


# Coder Radio XPS 13 ML Ubuntu Benchmark

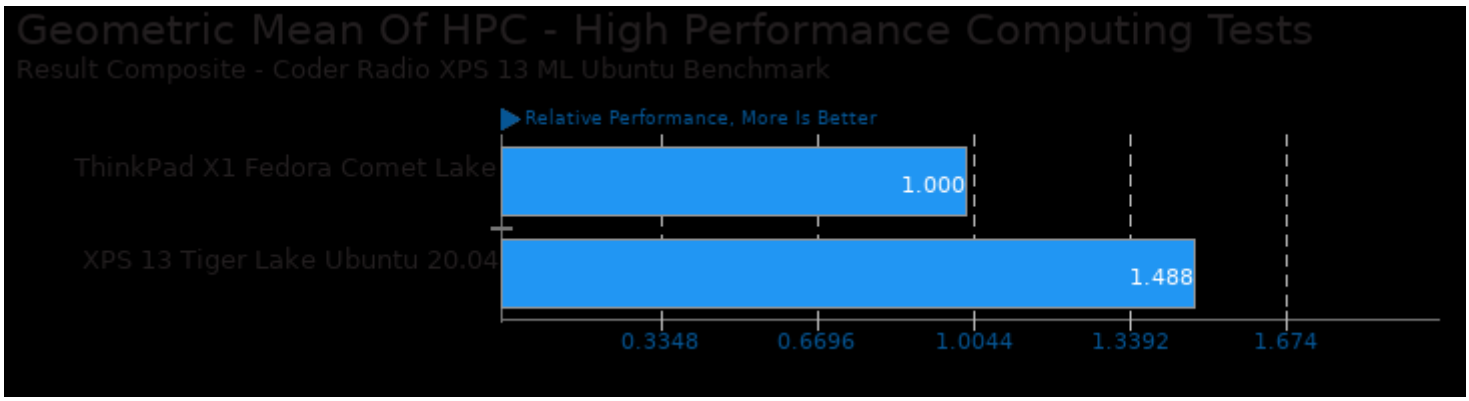
These geometric means are based upon test groupings / test suites for this result file.




Geometric mean based upon tests: pts/onednn, pts/numenta-nab, pts/numpy, pts/plaidml and pts/scikit-learn

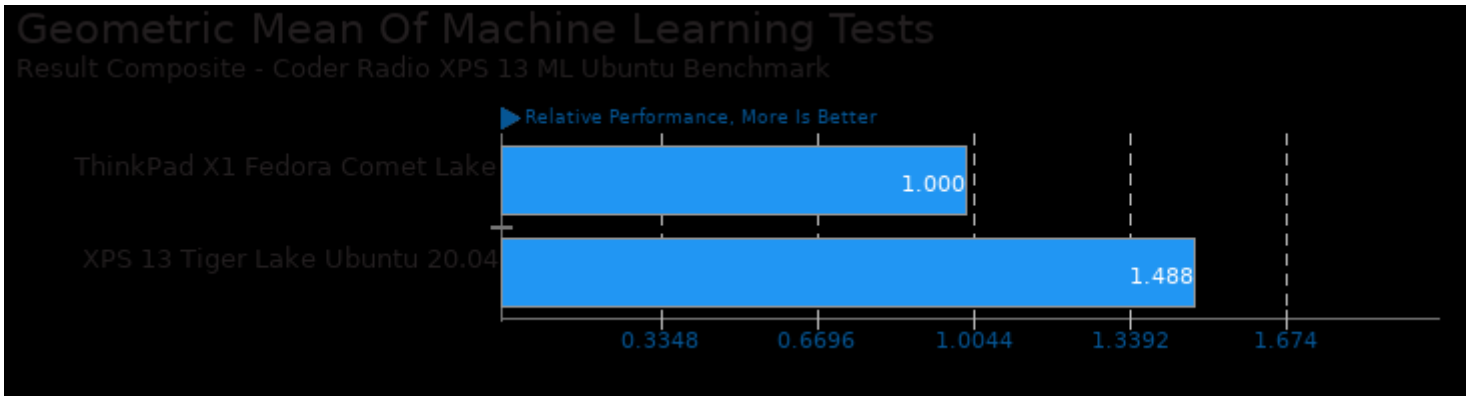



Geometric mean based upon tests: pts/onednn and pts/rnnoise

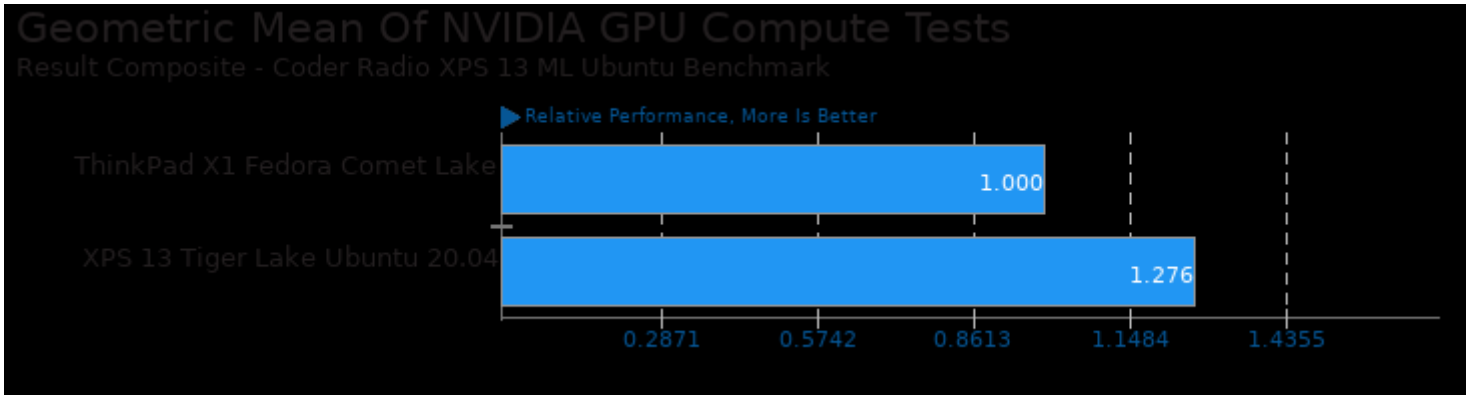



Geometric mean based upon tests: pts/mnn, pts/ncnn, pts/opencv, pts/numpy, pts/ai-benchmark, pts/rnnoise, pts/scikit-learn, pts/mlpack, pts/numenta-nab, pts/tensorflow-lite, pts/onednn and pts/plaidml

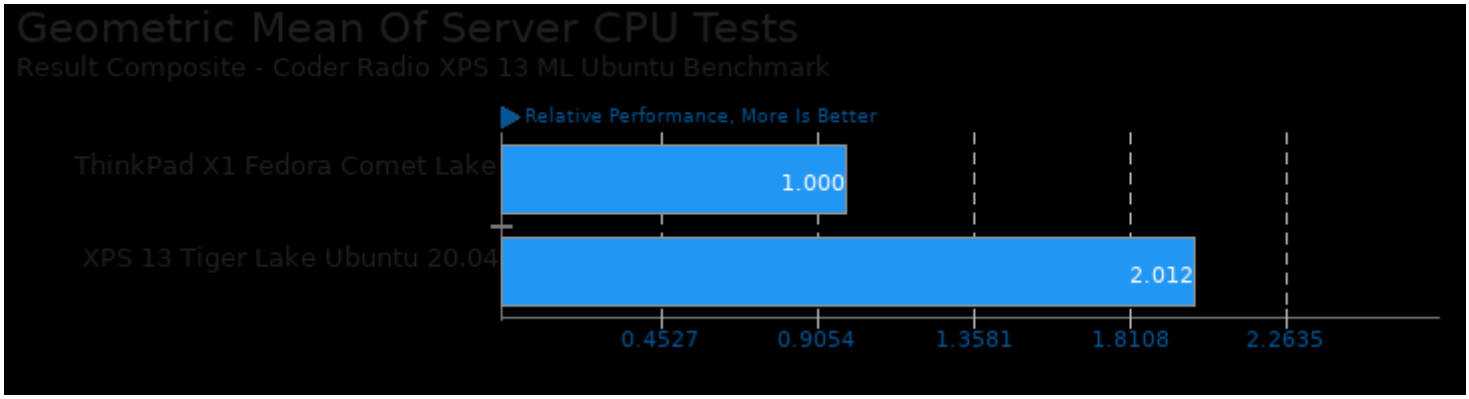
# Coder Radio XPS 13 ML Ubuntu Benchmark




Geometric mean based upon tests: pts/mnn, pts/ncnn, pts/opencv, pts/numpy, pts/ai-benchmark, pts/rnnoise, pts/scikit-learn, pts/mlpack, pts/numenta-nab, pts/tensorflow-lite, pts/onednn and pts/plaidml




Geometric mean based upon tests: pts/plaidml and pts/ncnn




Geometric mean based upon tests: pts/onednn, pts/numpy, pts/numenta-nab and pts/scikit-learn

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 07:16.*