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EPYC 7713 Benchmarks 2P

2 x AMD EPYC 7713 64-Core testing with a AMD DAYTONA_X (RYM1009B BIOS) and ASPEED on Ubuntu 22.04 via the Phoronix Test Suite.

Test Systems:

2 x AMD EPYC 7713 64-Core

Processor: 2 x AMD EPYC 7713 64-Core @ 2.00GHz (128 Cores / 256 Threads), Motherboard: AMD DAYTONA_X (RYM1009B BIOS), Chipset: AMD Starship/Matisse, Memory: 512GB, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: ASPEED, Monitor: VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 22.04, Kernel: 5.15.0-47-generic (x86_64), Desktop: GNOME Shell 42.4, Display Server: X Server 1.21.1.3, Vulkan: 1.2.204, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --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-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-gcn/usr

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--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-build-config=bootstrap-lto-lean --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 performance (Boost: Enabled) - CPU Microcode: 0xa001173
Python Notes: Python 3.10.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: 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 Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

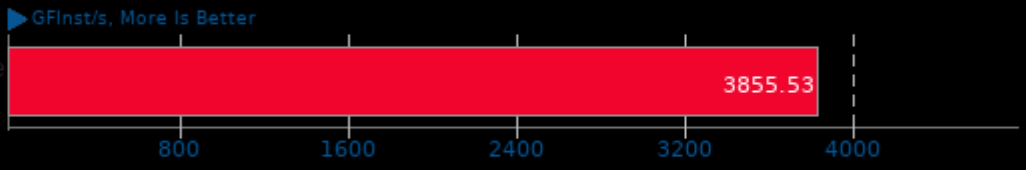
	2 x AMD EPYC 7713 64-Core
miniBUDE - OpenMP - BM1 (GFInst/s)	3856
miniBUDE - OpenMP - BM1 (Billion Interactions/s)	154.221
miniBUDE - OpenMP - BM2 (GFInst/s)	3748
miniBUDE - OpenMP - BM2 (Billion Interactions/s)	149.927
nekRS - TurboPipe Periodic (FLOP/s)	327074000000
OpenRadioss - Bumper Beam (sec)	116.11
OpenRadioss - C.P.D.T (sec)	29.58
OpenRadioss - B.S.o.W (sec)	233.96
OpenRadioss - R.O.R.S.I (sec)	137.98
OpenRadioss - I.a.F.S.I.D.C (sec)	139.77
Xmrig - Monero - 1M (H/s)	50546
Xmrig - Wownero - 1M (H/s)	41831
Neural Magic DeepSparse - N.D.C.o.b.u.o.I - A.M.S (items/sec)	62.1701
Neural Magic DeepSparse - N.D.C.o.b.u.o.I - A.M.S (ms/batch)	1015
Neural Magic DeepSparse - N.D.C.o.b.u.o.I - S.S.S (items/sec)	18.6212
Neural Magic DeepSparse - N.D.C.o.b.u.o.I - S.S.S (ms/batch)	53.6857
Neural Magic DeepSparse - N.Q.A.B.b.u.S.1.P - A.M.S (items/sec)	247.4809
Neural Magic DeepSparse - N.Q.A.B.b.u.S.1.P - A.M.S (ms/batch)	257.6563
Neural Magic DeepSparse - N.Q.A.B.b.u.S.1.P - S.S.S (items/sec)	37.7595
Neural Magic DeepSparse - N.Q.A.B.b.u.S.1.P - S.S.S (ms/batch)	26.4659
Neural Magic DeepSparse - C.D.Y.C - A.M.S (items/sec)	350.8742
Neural Magic DeepSparse - C.D.Y.C - A.M.S (ms/batch)	181.9659
Neural Magic DeepSparse - C.D.Y.C - S.S.S (items/sec)	100.3089
Neural Magic DeepSparse - C.D.Y.C - S.S.S (ms/batch)	9.9627
Neural Magic DeepSparse - C.C.R.5.I - A.M.S (items/sec)	736.3561
Neural Magic DeepSparse - C.C.R.5.I - A.M.S (ms/batch)	86.5954
Neural Magic DeepSparse - C.C.R.5.I - S.S.S (items/sec)	134.0599
Neural Magic DeepSparse - C.C.R.5.I - S.S.S (ms/batch)	7.4562
Neural Magic DeepSparse - N.T.C.D.m - A.M.S (items/sec)	537.1182
Neural Magic DeepSparse - N.T.C.D.m - A.M.S (ms/batch)	118.8706
Neural Magic DeepSparse - N.T.C.D.m - S.S.S (items/sec)	92.7521
Neural Magic DeepSparse - N.T.C.D.m - S.S.S (ms/batch)	10.7714
Neural Magic DeepSparse - N.T.C.B.b.u.S - A.M.S (items/sec)	269.7647
Neural Magic DeepSparse - N.T.C.B.b.u.S - A.M.S (ms/batch)	236.4604
Neural Magic DeepSparse - N.T.C.B.b.u.S - S.S.S (items/sec)	53.0977
Neural Magic DeepSparse - N.T.C.B.b.u.S - S.S.S (ms/batch)	18.8216
Neural Magic DeepSparse - N.T.C.B.b.u.c - A.M.S (items/sec)	62.3663

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Neural Magic DeepSparse - N.T.C.B.b.u.c - A.M.S (ms/batch)	1013
Neural Magic DeepSparse - N.T.C.B.b.u.c - S.S.S (items/sec)	18.4361
Neural Magic DeepSparse - N.T.C.B.b.u.c - S.S.S (ms/batch)	54.2291
Stress-NG - MMAP (Bogo Ops/s)	4691
Stress-NG - NUMA (Bogo Ops/s)	132.13
Stress-NG - Futex (Bogo Ops/s)	1208593
Stress-NG - MEMFD (Bogo Ops/s)	2109
Stress-NG - Mutex (Bogo Ops/s)	78890383
Stress-NG - Atomic (Bogo Ops/s)	114095
Stress-NG - Crypto (Bogo Ops/s)	160263
Stress-NG - Malloc (Bogo Ops/s)	381843140
Stress-NG - Forking (Bogo Ops/s)	44106
Stress-NG - IO_uring (Bogo Ops/s)	37946
Stress-NG - SENDFILE (Bogo Ops/s)	1836002
Stress-NG - CPU Cache (Bogo Ops/s)	27.58
Stress-NG - CPU Stress (Bogo Ops/s)	234827
Stress-NG - Semaphores (Bogo Ops/s)	14268029
Stress-NG - Matrix Math (Bogo Ops/s)	413443
Stress-NG - Vector Math (Bogo Ops/s)	633681
Stress-NG - Memory Copying (Bogo Ops/s)	10230
Stress-NG - Socket Activity (Bogo Ops/s)	55195
Stress-NG - Context Switching (Bogo Ops/s)	5329963
Stress-NG - G.C.S.F (Bogo Ops/s)	13794634
Stress-NG - G.Q.D.S (Bogo Ops/s)	1264
Stress-NG - S.V.M.P (Bogo Ops/s)	7044465

miniBUDE 20210901

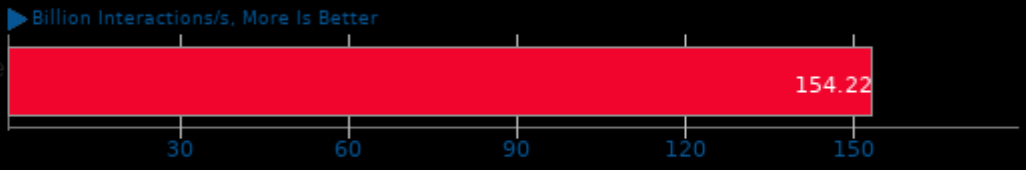
Implementation: OpenMP - Input Deck: BM1



1. (CC) gcc options: -std=c99 -Ofast -ffast-math -fopenmp -march=native -lm

miniBUDE 20210901

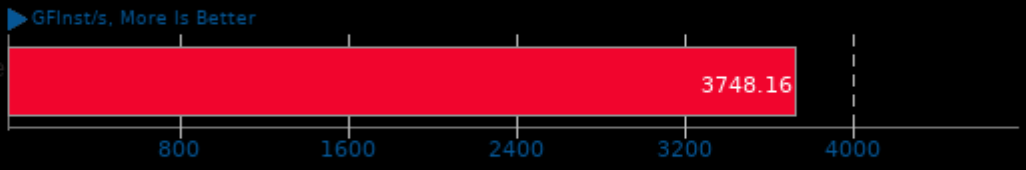
Implementation: OpenMP - Input Deck: BM1



1. (CC) gcc options: -std=c99 -Ofast -ffast-math -fopenmp -march=native -lm

miniBUDE 20210901

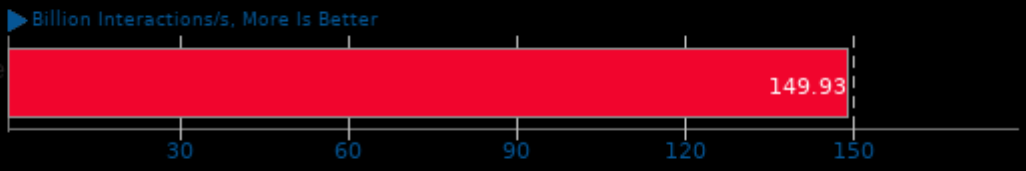
Implementation: OpenMP - Input Deck: BM2



1. (CC) gcc options: -std=c99 -Ofast -ffast-math -fopenmp -march=native -lm

miniBUDE 20210901

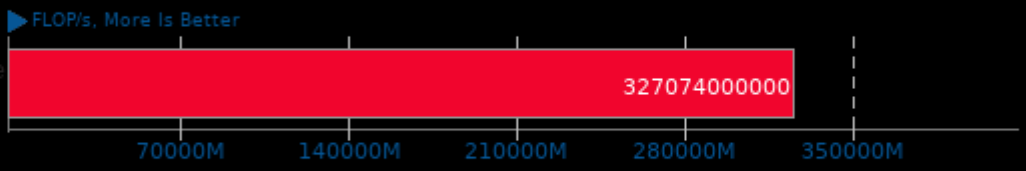
Implementation: OpenMP - Input Deck: BM2



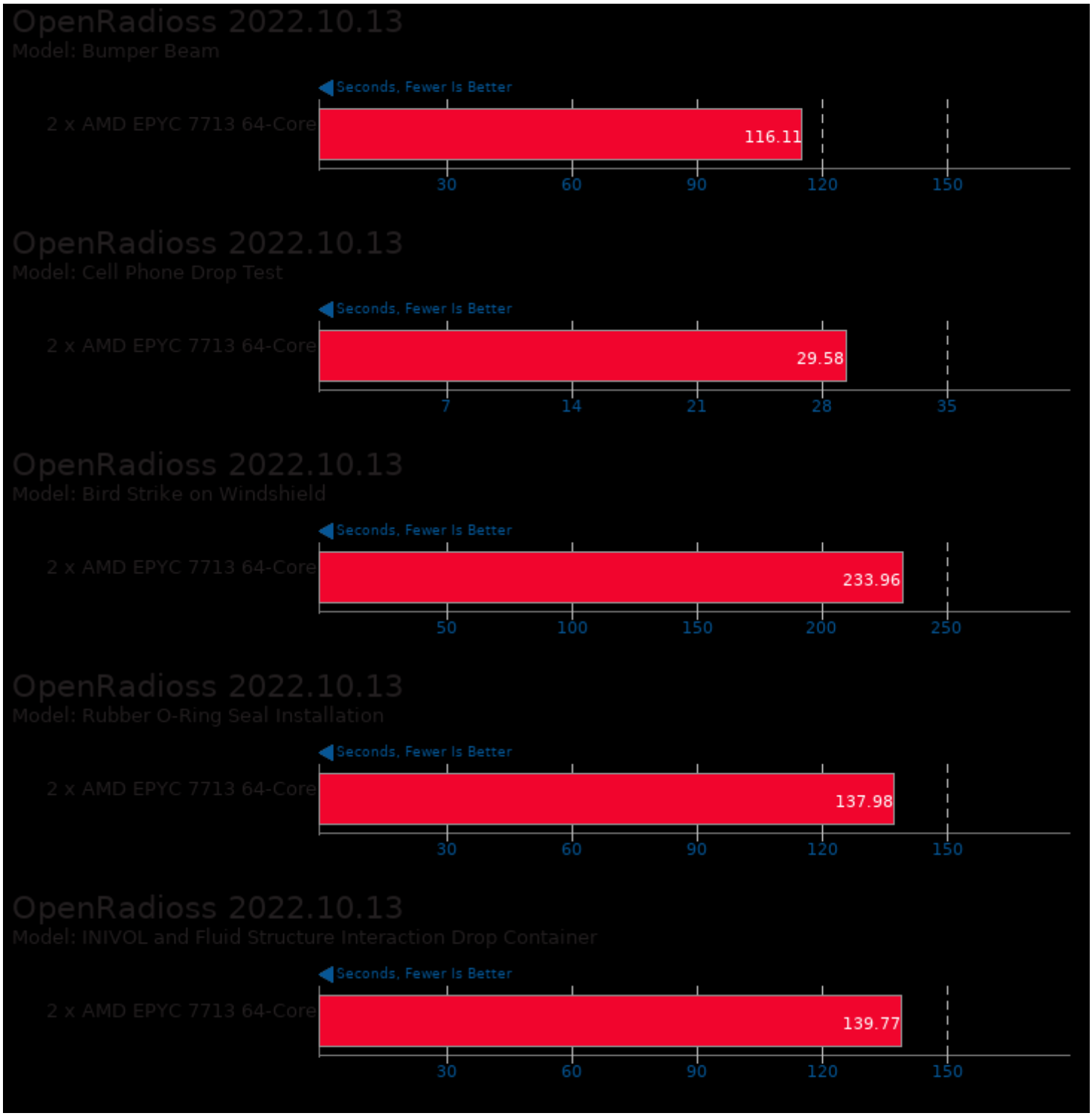
1. (CC) gcc options: -std=c99 -Ofast -ffast-math -fopenmp -march=native -lm

nekRS 22.0

Input: TurboPipe Periodic

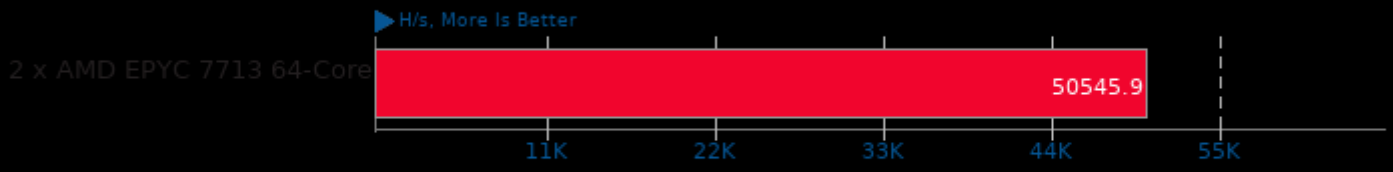


1. (CXX) g++ options: -fopenmp -O2 -march=native -mtune=native -ftree-vectorize -lmpi_cxx -lmpi


OpenRadioss 2022.10.13
Model: Bumper Beam
Seconds, Fewer Is Better
2 x AMD EPYC 7713 64-Core
116.11
30
60
90
120
150
OpenRadioss 2022.10.13
Model: Cell Phone Drop Test
Seconds, Fewer Is Better
2 x AMD EPYC 7713 64-Core
29.58
7
14
21
28
35
OpenRadioss 2022.10.13
Model: Bird Strike on Windshield
Seconds, Fewer Is Better
2 x AMD EPYC 7713 64-Core
233.96
50
100
150
200
250
OpenRadioss 2022.10.13
Model: Rubber O-Ring Seal Installation
Seconds, Fewer Is Better
2 x AMD EPYC 7713 64-Core
137.98
30
60
90
120
150
OpenRadioss 2022.10.13
Model: INIVOL and Fluid Structure Interaction Drop Container
Seconds, Fewer Is Better
2 x AMD EPYC 7713 64-Core
139.77
30
60
90
120
150

Xmrig 6.18.1

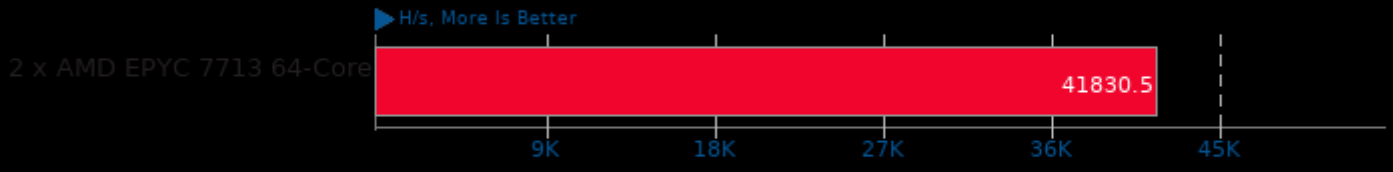
Variant: Monero - Hash Count: 1M



1. (CXX) g++ options: -fexceptions -fno-rtti -maes -O3 -Ofast -static-libgcc -static-libstdc++ -rdynamic -lssl -lcrypto -luv -lpthread -lrt -ldl -lhwloc

Xmrig 6.18.1

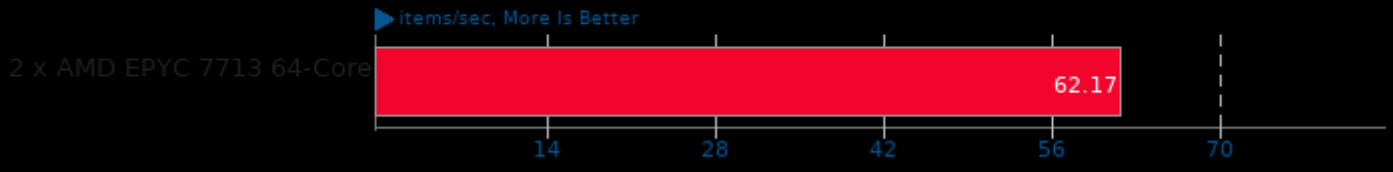
Variant: Wownero - Hash Count: 1M



1. (CXX) g++ options: -fexceptions -fno-rtti -maes -O3 -Ofast -static-libgcc -static-libstdc++ -rdynamic -lssl -lcrypto -luv -lpthread -lrt -ldl -lhwloc

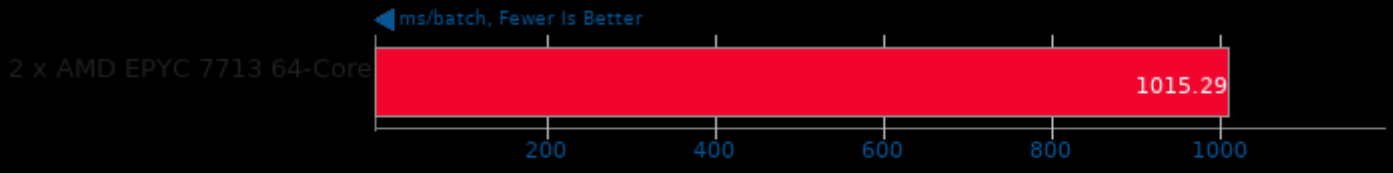
Neural Magic DeepSparse 1.1

Model: NLP Document Classification, oBERT base uncased on IMDB - Scenario: Asynchronous Multi-Stream



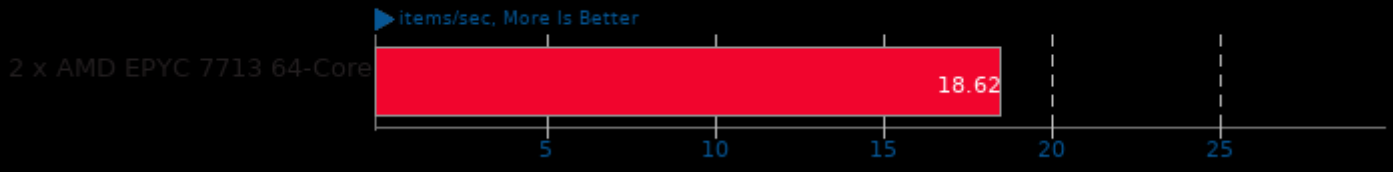
Neural Magic DeepSparse 1.1

Model: NLP Document Classification, oBERT base uncased on IMDB - Scenario: Asynchronous Multi-Stream



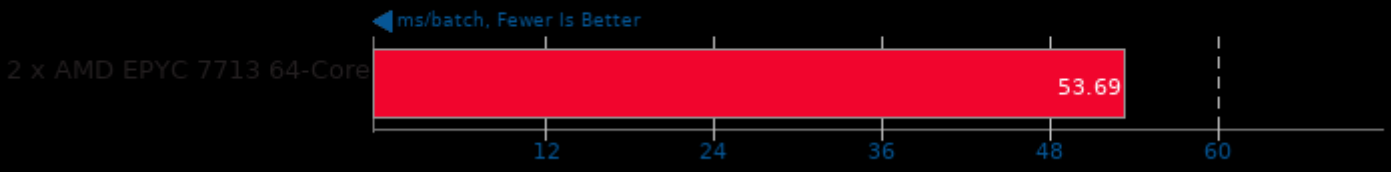
Neural Magic DeepSparse 1.1

Model: NLP Document Classification, oBERT base uncased on IMDB - Scenario: Synchronous Single-Stream



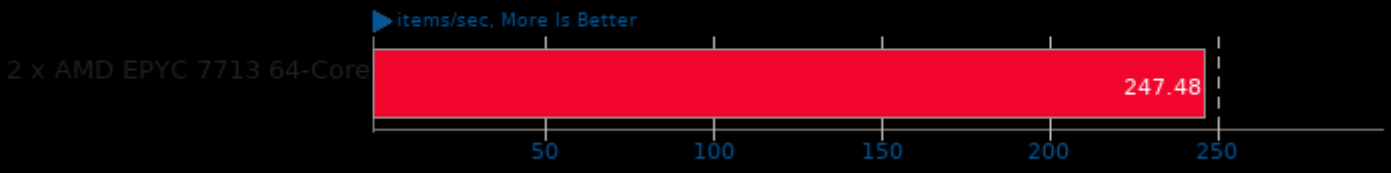
Neural Magic DeepSparse 1.1

Model: NLP Document Classification, oBERT base uncased on IMDB - Scenario: Synchronous Single-Stream



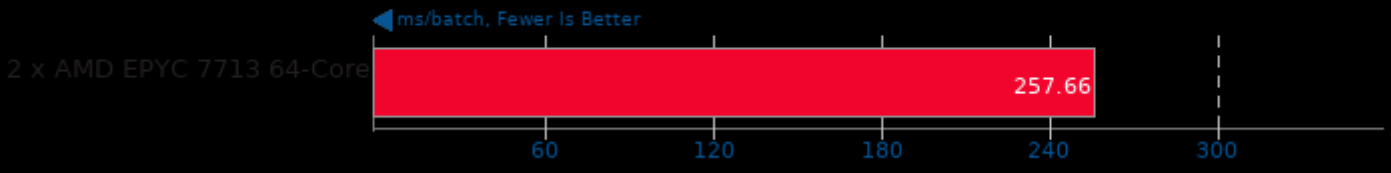
Neural Magic DeepSparse 1.1

Model: NLP Question Answering, BERT base uncased SQuaD 12layer Pruned90 - Scenario: Asynchronous Multi-Stream



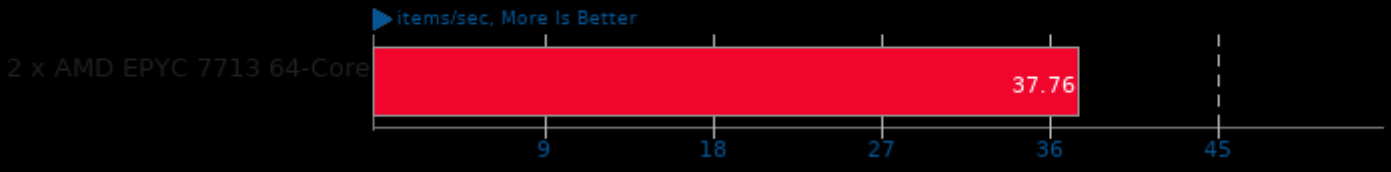
Neural Magic DeepSparse 1.1

Model: NLP Question Answering, BERT base uncased SQuaD 12layer Pruned90 - Scenario: Asynchronous Multi-Stream



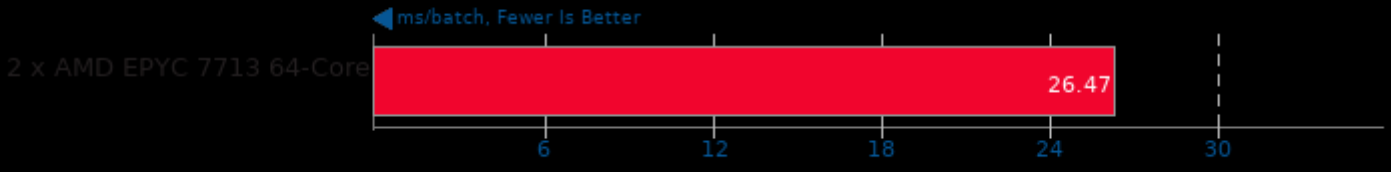
Neural Magic DeepSparse 1.1

Model: NLP Question Answering, BERT base uncased SQuaD 12layer Pruned90 - Scenario: Synchronous Single-Stream



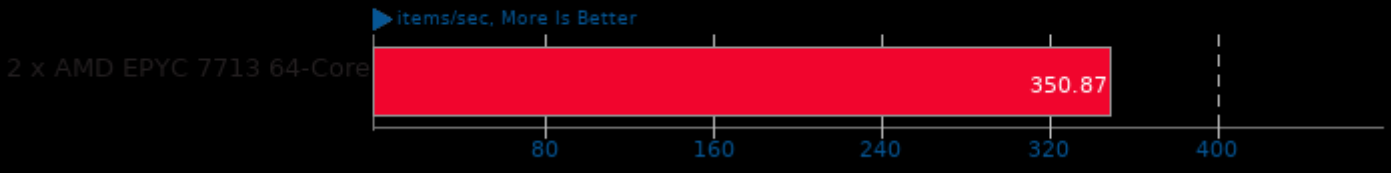
Neural Magic DeepSparse 1.1

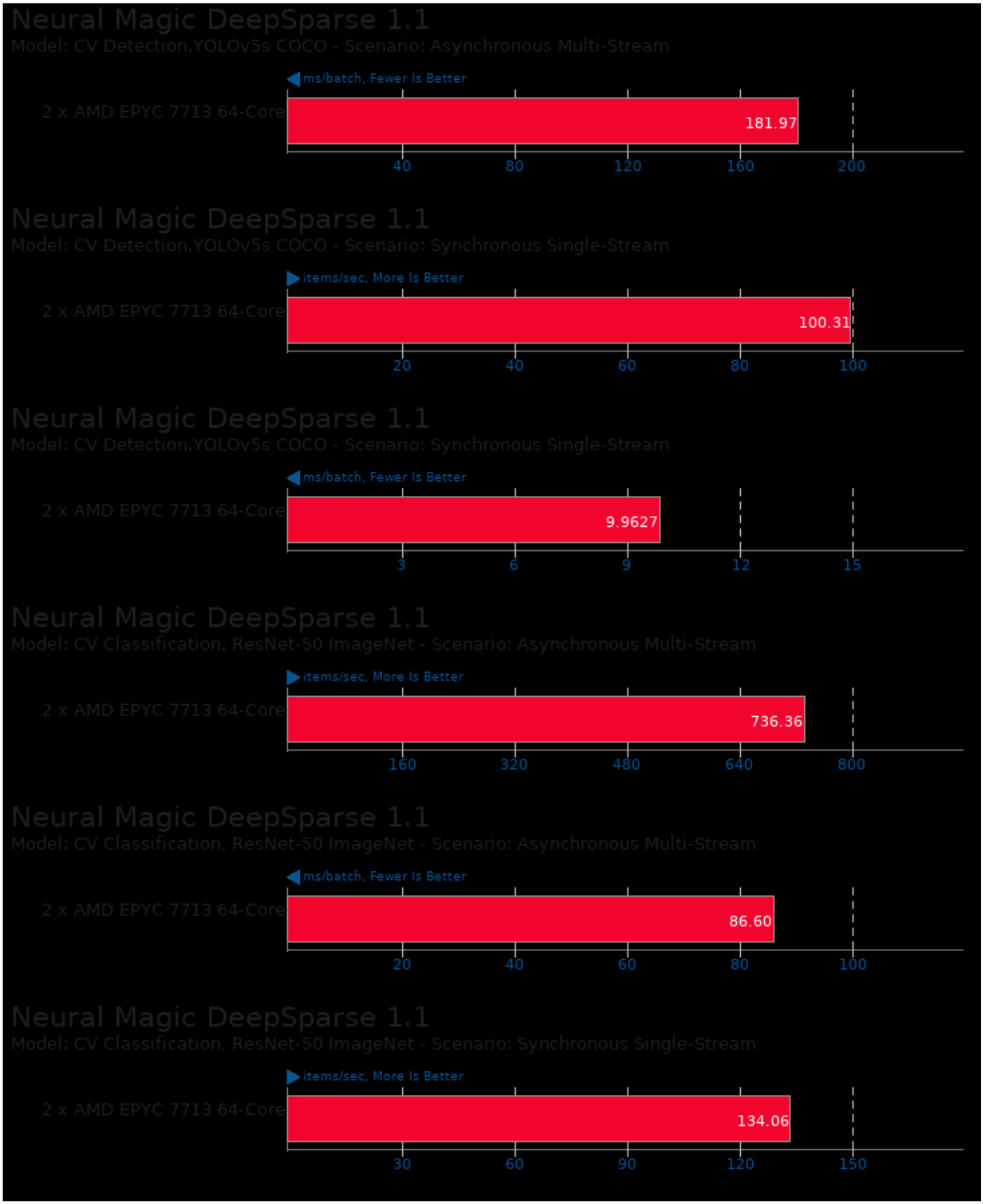
Model: NLP Question Answering, BERT base uncased SQuaD 12layer Pruned90 - Scenario: Synchronous Single-Stream



Neural Magic DeepSparse 1.1

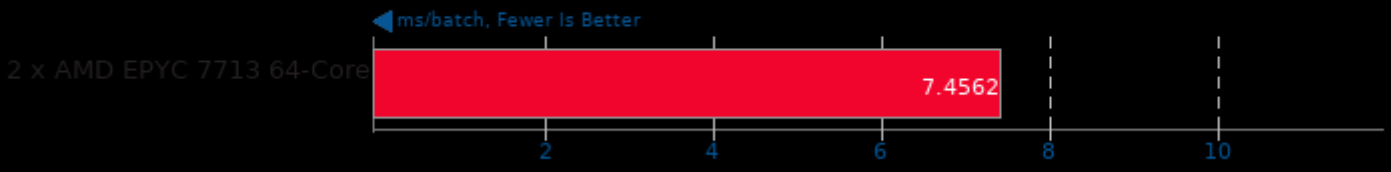
Model: CV Detection,YOLOv5s COCO - Scenario: Asynchronous Multi-Stream




Neural Magic DeepSparse 1.1
Model: CV Detection,YOLOv5s COCO - Scenario: Asynchronous Multi-Stream
ms/batch, Fewer Is Better
2 x AMD EPYC 7713 64-Core
181.97
40
80
120
160
200
Neural Magic DeepSparse 1.1
Model: CV Detection,YOLOv5s COCO - Scenario: Synchronous Single-Stream
items/sec, More Is Better
2 x AMD EPYC 7713 64-Core
100.31
20
40
60
80
100
Neural Magic DeepSparse 1.1
Model: CV Detection,YOLOv5s COCO - Scenario: Synchronous Single-Stream
ms/batch, Fewer Is Better
2 x AMD EPYC 7713 64-Core
9.9627
3
6
9
12
15
Neural Magic DeepSparse 1.1
Model: CV Classification, ResNet-50 ImageNet - Scenario: Asynchronous Multi-Stream
items/sec, More Is Better
2 x AMD EPYC 7713 64-Core
736.36
160
320
480
640
800
Neural Magic DeepSparse 1.1
Model: CV Classification, ResNet-50 ImageNet - Scenario: Asynchronous Multi-Stream
ms/batch, Fewer Is Better
2 x AMD EPYC 7713 64-Core
86.60
20
40
60
80
100
Neural Magic DeepSparse 1.1
Model: CV Classification, ResNet-50 ImageNet - Scenario: Synchronous Single-Stream
items/sec, More Is Better
2 x AMD EPYC 7713 64-Core
134.06
30
60
90
120
150

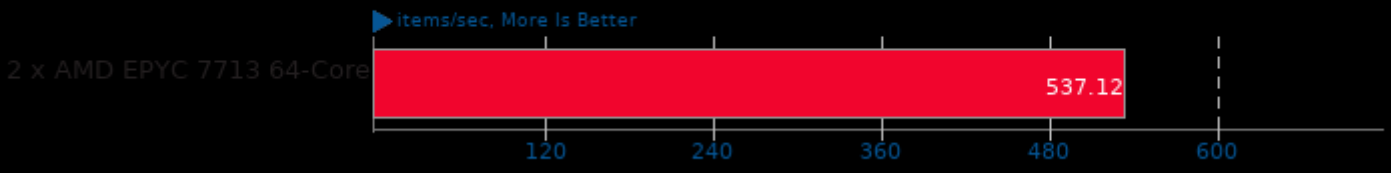
Neural Magic DeepSparse 1.1

Model: CV Classification, ResNet-50 ImageNet - Scenario: Synchronous Single-Stream



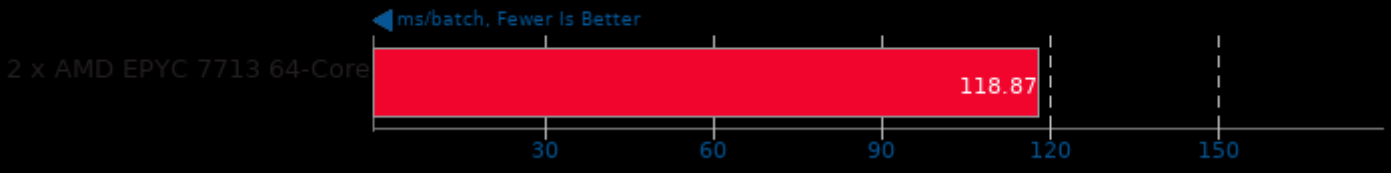
Neural Magic DeepSparse 1.1

Model: NLP Text Classification, DistilBERT mnli - Scenario: Asynchronous Multi-Stream



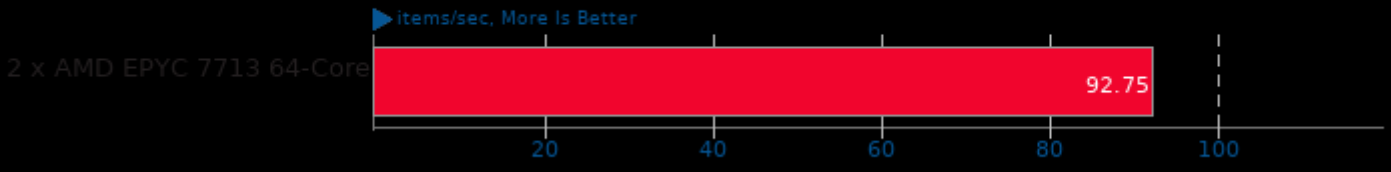
Neural Magic DeepSparse 1.1

Model: NLP Text Classification, DistilBERT mnli - Scenario: Asynchronous Multi-Stream



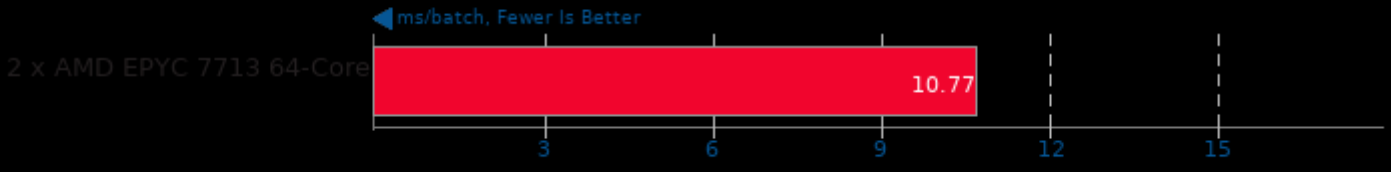
Neural Magic DeepSparse 1.1

Model: NLP Text Classification, DistilBERT mnli - Scenario: Synchronous Single-Stream



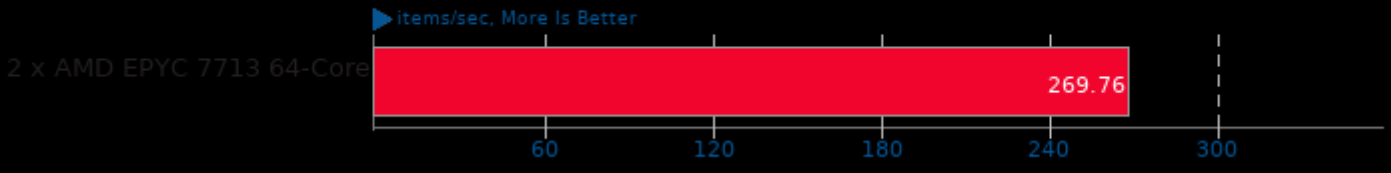
Neural Magic DeepSparse 1.1

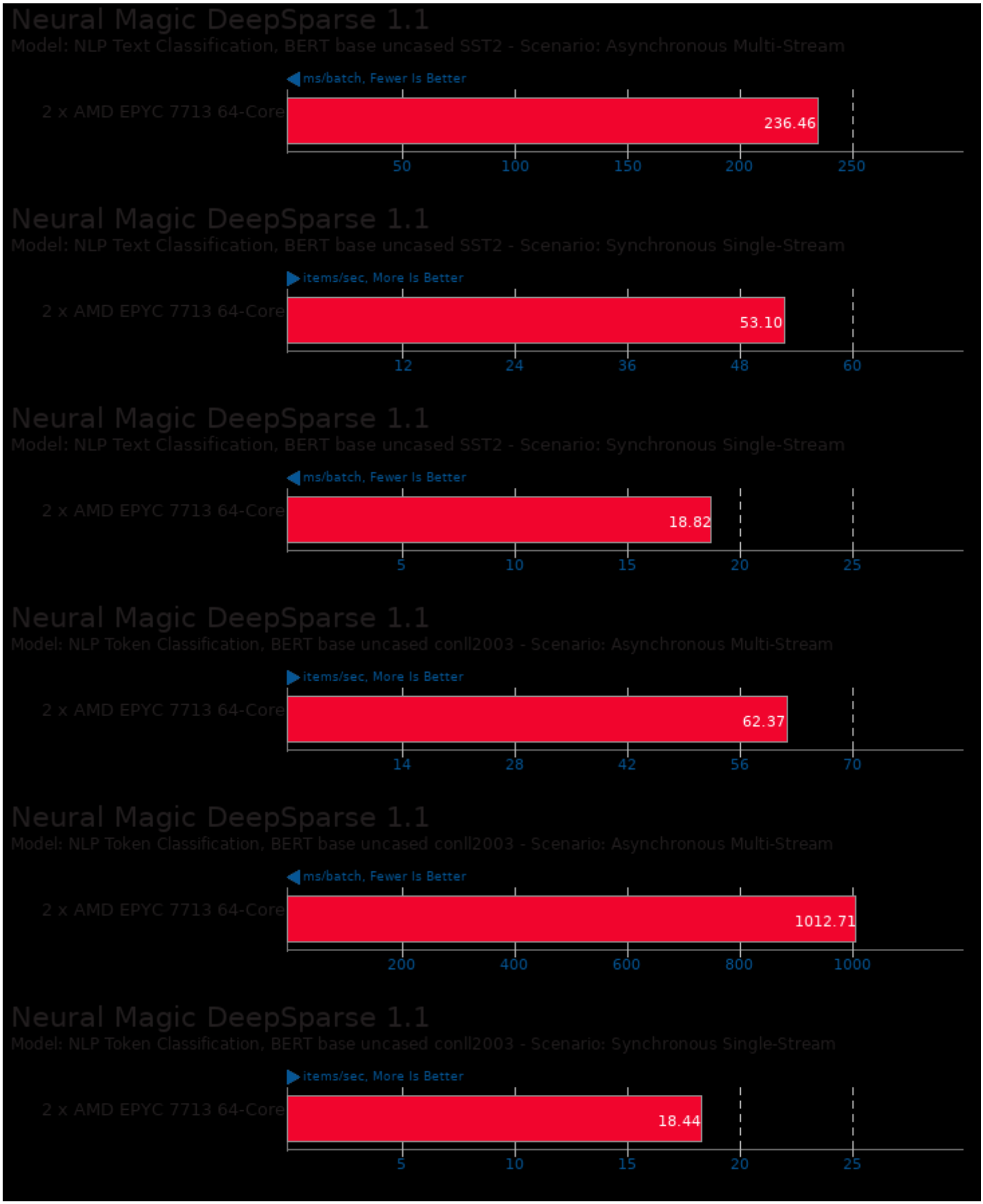
Model: NLP Text Classification, DistilBERT mnli - Scenario: Synchronous Single-Stream



Neural Magic DeepSparse 1.1

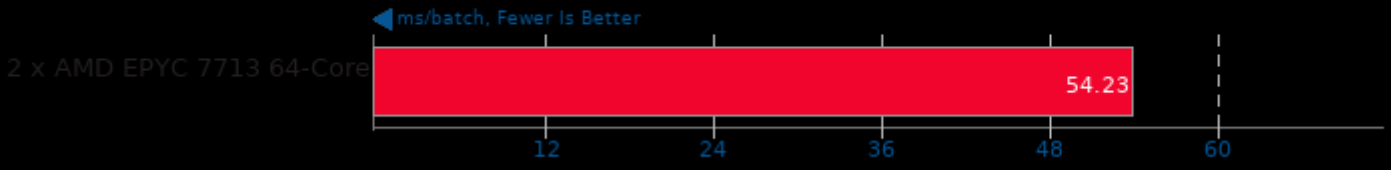
Model: NLP Text Classification, BERT base uncased SST2 - Scenario: Asynchronous Multi-Stream




Neural Magic DeepSparse 1.1
Model: NLP Text Classification, BERT base uncased SST2 - Scenario: Asynchronous Multi-Stream
ms/batch, Fewer Is Better
2 x AMD EPYC 7713 64-Core
236.46
50
100
150
200
250
Neural Magic DeepSparse 1.1
Model: NLP Text Classification, BERT base uncased SST2 - Scenario: Synchronous Single-Stream
items/sec, More Is Better
2 x AMD EPYC 7713 64-Core
53.10
12
24
36
48
60
Neural Magic DeepSparse 1.1
Model: NLP Text Classification, BERT base uncased SST2 - Scenario: Synchronous Single-Stream
ms/batch, Fewer Is Better
2 x AMD EPYC 7713 64-Core
18.82
5
10
15
20
25
Neural Magic DeepSparse 1.1
Model: NLP Token Classification, BERT base uncased conll2003 - Scenario: Asynchronous Multi-Stream
items/sec, More Is Better
2 x AMD EPYC 7713 64-Core
62.37
14
28
42
56
70
Neural Magic DeepSparse 1.1
Model: NLP Token Classification, BERT base uncased conll2003 - Scenario: Asynchronous Multi-Stream
ms/batch, Fewer Is Better
2 x AMD EPYC 7713 64-Core
1012.71
200
400
600
800
1000
Neural Magic DeepSparse 1.1
Model: NLP Token Classification, BERT base uncased conll2003 - Scenario: Synchronous Single-Stream
items/sec, More Is Better
2 x AMD EPYC 7713 64-Core
18.44
5
10
15
20
25

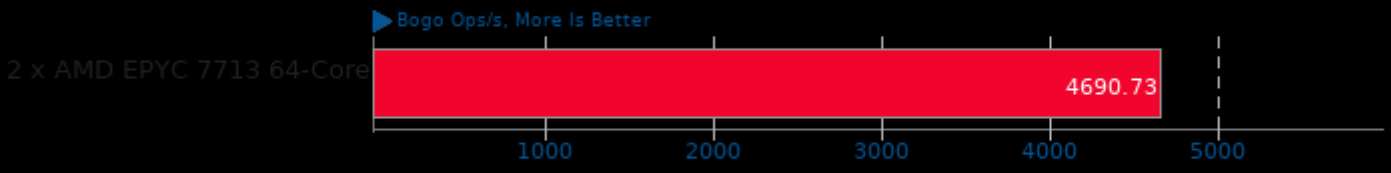
Neural Magic DeepSparse 1.1

Model: NLP Token Classification, BERT base uncased conll2003 - Scenario: Synchronous Single-Stream



Stress-NG 0.14.06

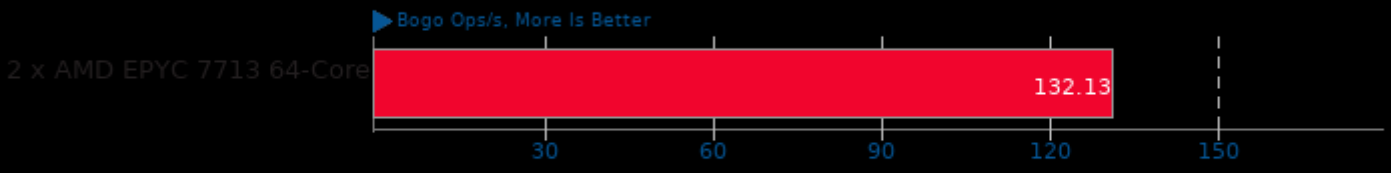
Test: MMAP



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

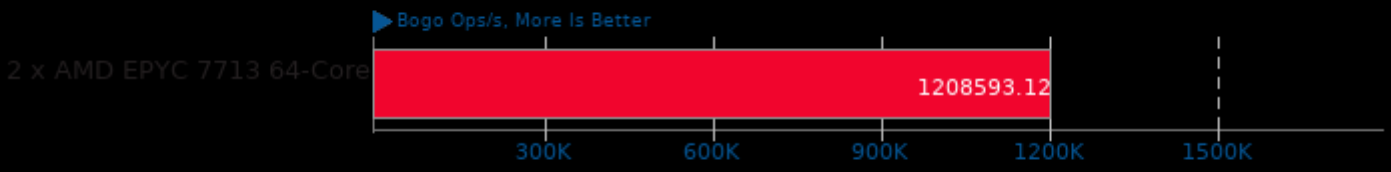
Test: NUMA



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

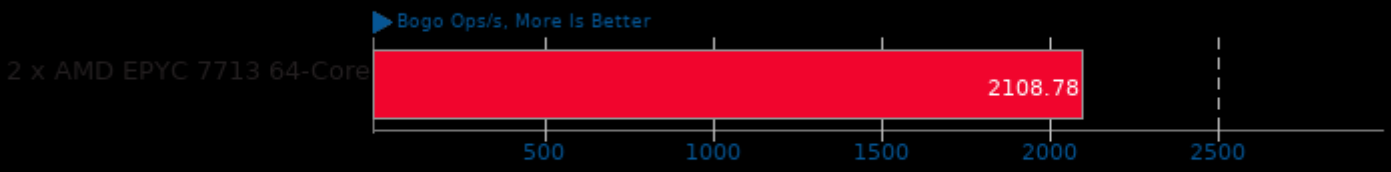
Test: Futex



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

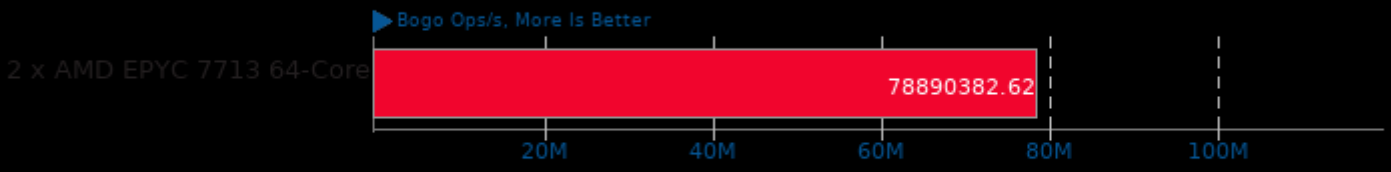
Test: MEMFD



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

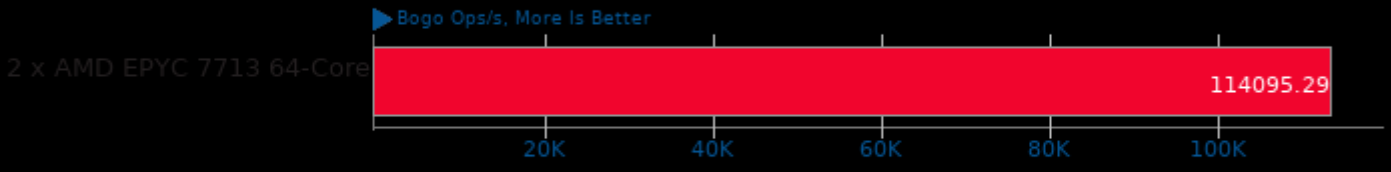
Test: Mutex



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

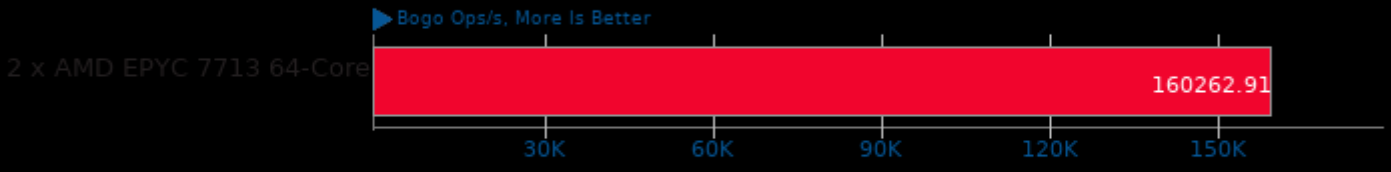
Test: Atomic



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

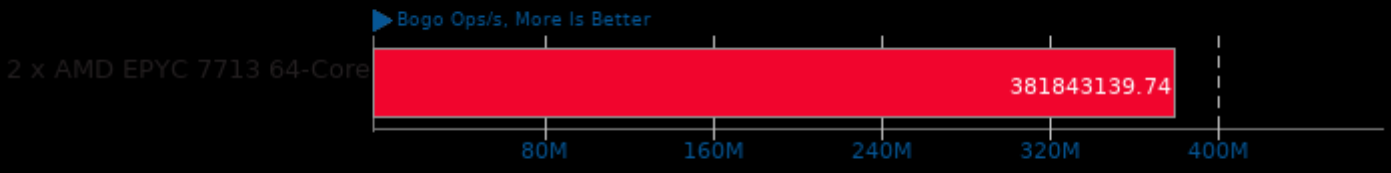
Test: Crypto



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

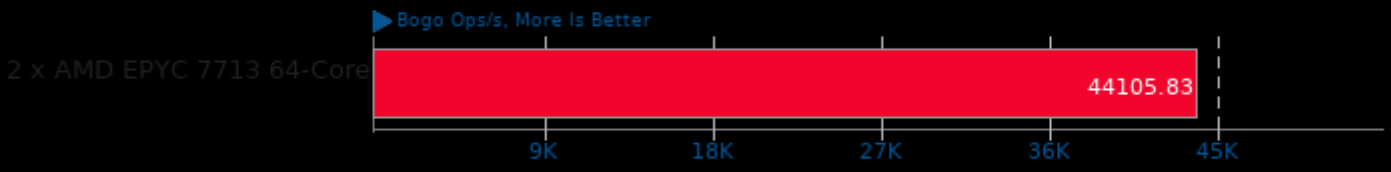
Test: Malloc



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

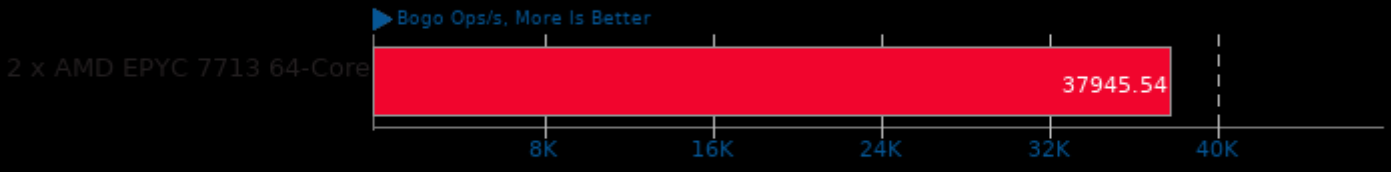
Test: Forking



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

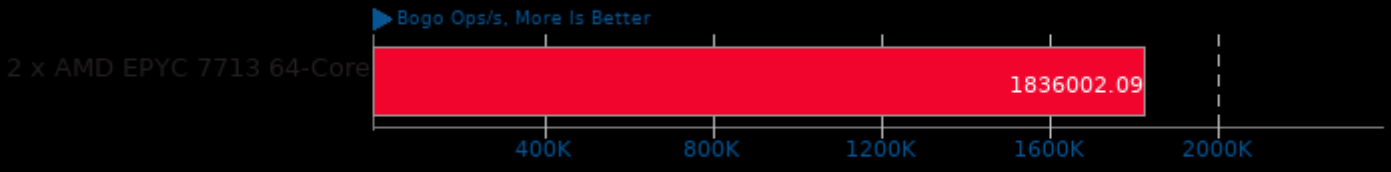
Test: IO_uring



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

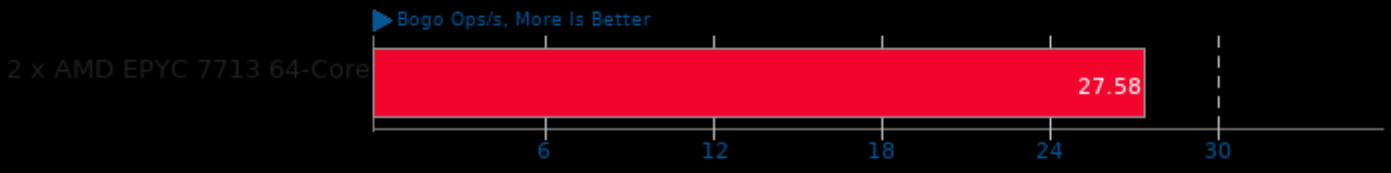
Test: SENDFILE



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

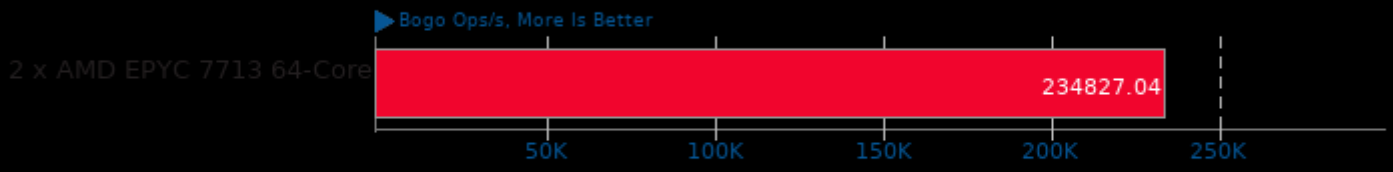
Test: CPU Cache



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

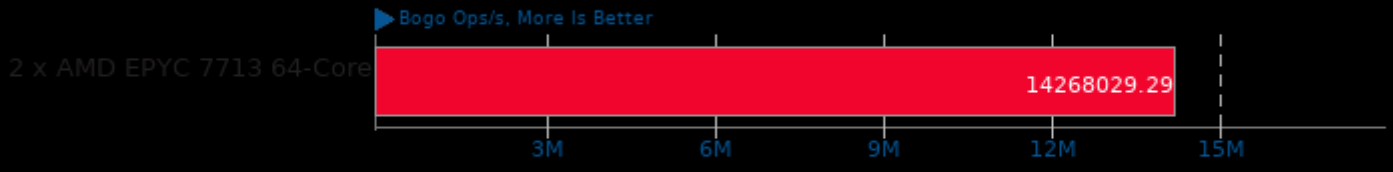
Test: CPU Stress



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

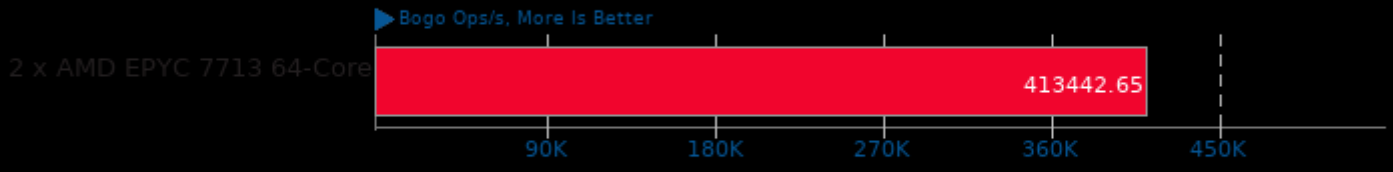
Test: Semaphores



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

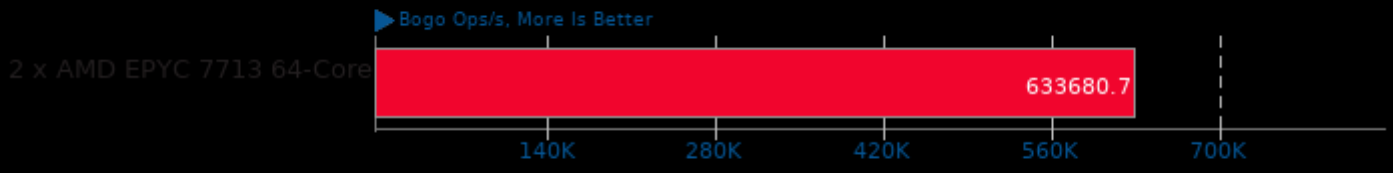
Test: Matrix Math



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

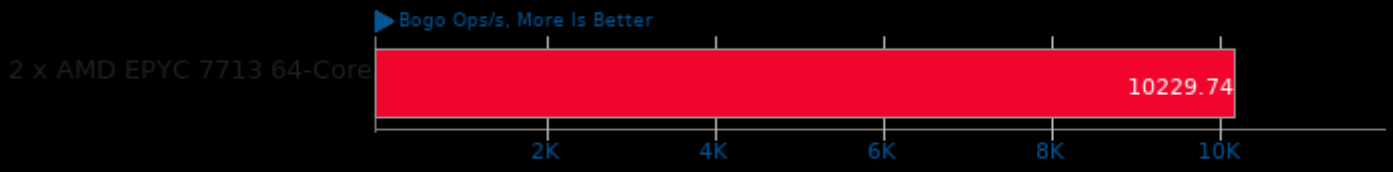
Test: Vector Math



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

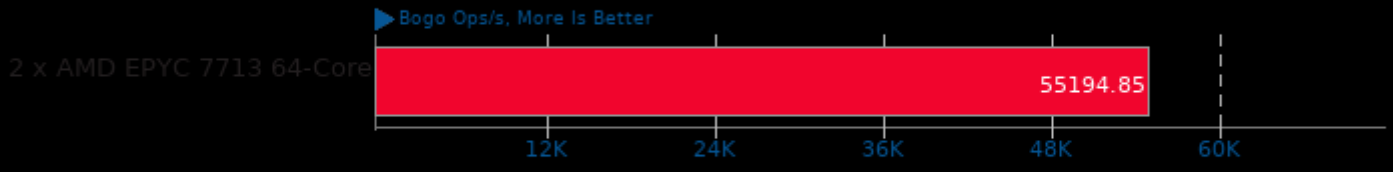
Test: Memory Copying



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

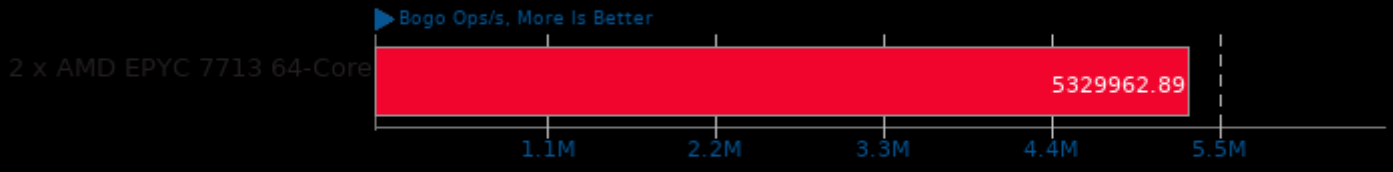
Test: Socket Activity



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

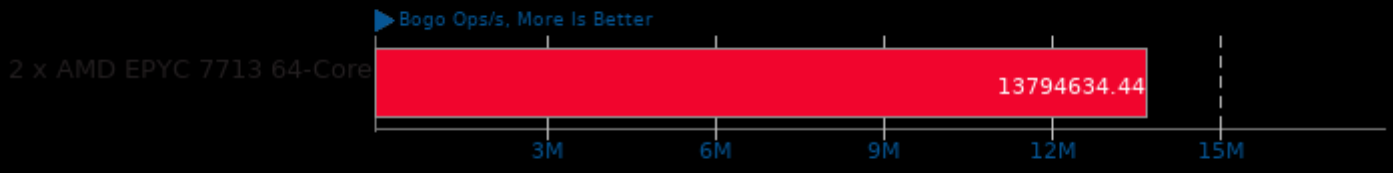
Test: Context Switching



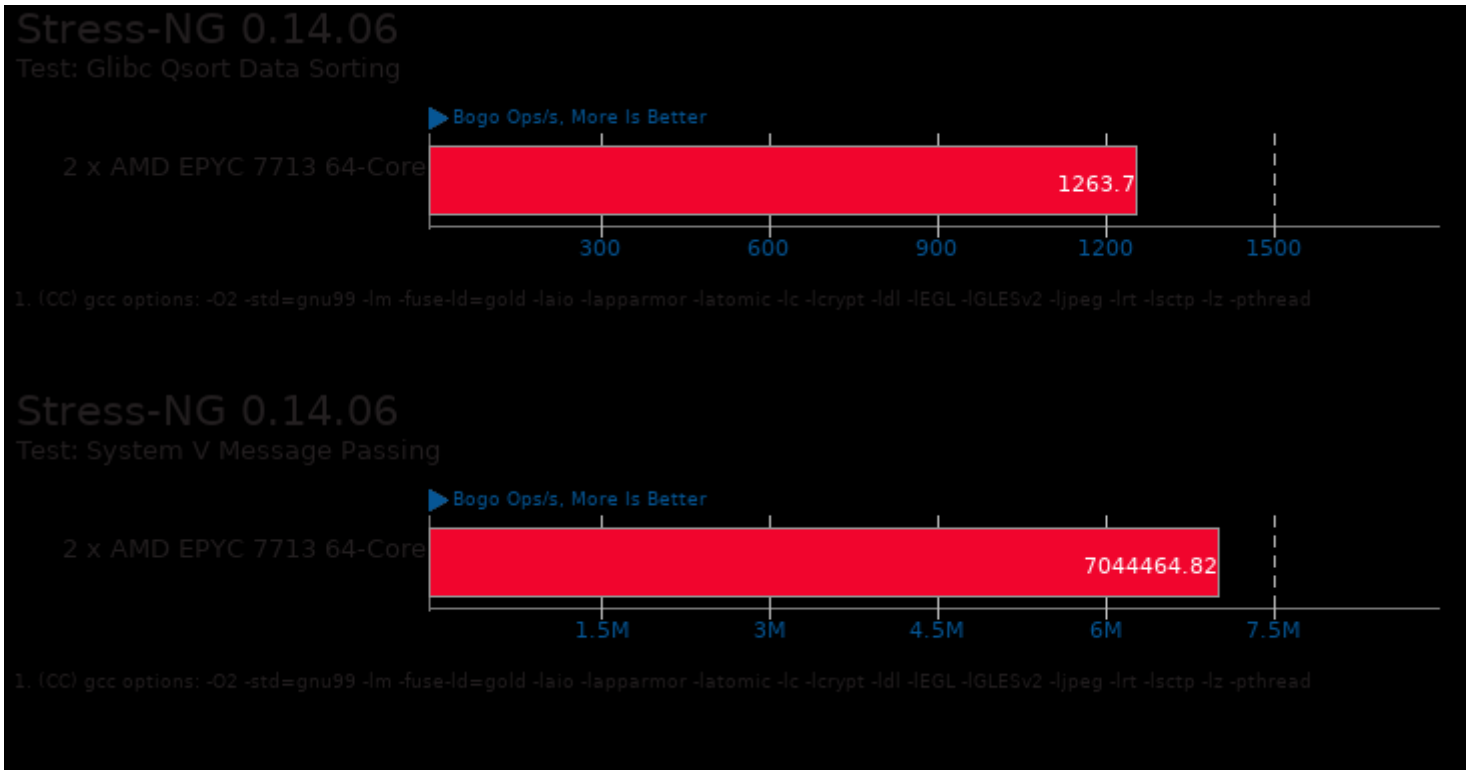
1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14.06

Test: Glibc C String Functions



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-ld=gold -laio -lapparmor -latomic -lc -lcrypt -ldl -lEGL -lGLESv2 -ljpeg -lrt -lsctp -lz -pthread



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 06:17.