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stressng_waters

ARMv8 Cortex-A72 testing with a Freescale i.MX8QM MEK and imx-drmdrmfb on waters-orion-xwayland 5.4-zeus via the Phoronix Test Suite.

Automated Executive Summary

mekstressng had the most wins, coming in first place for 57% of the tests.

Based on the geometric mean of all complete results, the fastest (ARMv8 Cortex-A72 - imx-drmdrmfb - Waters IGX8QM Orion) was 1.016x the speed of the slowest (mekstressng).

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

Stress-NG (Test: Semaphores) at 1.192x
Stress-NG (Test: Forking) at 1.141x
Stress-NG (Test: Socket Activity) at 1.077x
Stress-NG (Test: System V Message Passing) at 1.064x
Stress-NG (Test: Context Switching) at 1.04x
Stress-NG (Test: Glibc Qsort Data Sorting) at 1.024x
Stress-NG (Test: MEMFD) at 1.019x
Stress-NG (Test: SENDFILE) at 1.018x
Stress-NG (Test: Matrix Math) at 1.015x

Stress-NG (Test: Atomic) at 1.014x.

Test Systems:

ARMv8 Cortex-A72 - imx-drmdrmfb - Waters IGX8QM Orion

Processor: ARMv8 Cortex-A72 @ 1.20GHz (6 Cores), Motherboard: Waters IGX8QM Orion, Memory: 6144MB, Disk: 32GB G1J37E + 2 x 31GB SD32G, Graphics: imx-drmdrmfb

OS: waters-orion-xwayland 5.4-zeus, Kernel: 5.4.70-2.3.0+g4f2631b022d8 (aarch64), Display Server: Wayland Weston 9.0.0 + X Server, Vulkan: 1.1.82, Compiler: GCC 9.2.0, File-System: ext4, Screen Resolution: 1280x800

Compiler Notes: --bindir=/usr/bin --build=x86_64-linux --datadir=/usr/share --disable-bootstrap --disable-dependency-tracking --disable-libmudflap --disable-libssp --disable-silent-rules --disable-static --enable-__cxa_atexit --enable-c99 --enable-cheaders=c_global --enable-checking=release --enable-default-pie --enable-initfini-array --enable-languages=c,c++ --enable-libitm --enable-libstdcxx-pch --enable-long-long --enable-lto --enable-multilib --enable-nls --enable-shared --enable-symvers=gnu --enable-threads=posix --exec_prefix=/usr --host=aarch64-poky-linux --includedir=/usr/include --localstatedir=/var --mandir=/usr/share/man --oldincludedir=/usr/include --program-prefix=aarch64-poky-linux- --sbindir=/usr/sbin --sharedstatedir=/com --sysconfdir=/etc --target=aarch64-poky-linux --with-build-sysroot=/ --with-glibc-version=2.28 --with-gnu-ld --with-libtool-sysroot=/ --with-linker-hash-style=gnu --with-ppl=no --without-isl --without-local-prefix
Processor Notes: Scaling Governor: cpufreq-dt schedutil
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Mitigation of Branch predictor hardening + srbds: Not affected + tsx_async_abort: Not affected

mekstressng

Processor: ARMv8 Cortex-A72 @ 1.20GHz (6 Cores), Motherboard: Freescale i.MX8QM MEK, Memory: 6144MB, Disk: 512GB MTFDHBK512TDP + 31GB R1J57L + 31GB SD32G, Graphics: imx-drmdrmfb, Monitor: ELO ET1002L

OS: waters-orion-xwayland 5.4-zeus, Kernel: 5.4.70-2.3.0+g4f2631b022d8 (aarch64), Display Server: Wayland Weston 9.0.0 + X Server, Vulkan: 1.1.82, Compiler: GCC 9.2.0, File-System: ext4, Screen Resolution: 1280x800

Compiler Notes: --bindir=/usr/bin --build=x86_64-linux --datadir=/usr/share --disable-bootstrap --disable-dependency-tracking --disable-libmudflap --disable-libssp --disable-silent-rules --disable-static --enable-__cxa_atexit --enable-c99 --enable-cheaders=c_global --enable-checking=release --enable-default-pie --enable-initfini-array --enable-languages=c,c++ --enable-libitm --enable-libstdcxx-pch --enable-long-long --enable-lto --enable-multilib --enable-nls --enable-shared --enable-symvers=gnu --enable-threads=posix --exec_prefix=/usr --host=aarch64-poky-linux --includedir=/usr/include --localstatedir=/var --mandir=/usr/share/man --oldincludedir=/usr/include --program-prefix=aarch64-poky-linux- --sbindir=/usr/sbin --sharedstatedir=/com --sysconfdir=/etc --target=aarch64-poky-linux --with-build-sysroot=/ --with-glibc-version=2.28 --with-gnu-ld --with-libtool-sysroot=/ --with-linker-hash-style=gnu --with-ppl=no --without-isl --without-local-prefix
Processor Notes: Scaling Governor: cpufreq-dt schedutil
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Mitigation of Branch predictor hardening + srbds: Not affected + tsx_async_abort: Not affected

	ARMv8 Cortex-A72 - imx-drmdrmfb - Waters IGX8QM Orion	mekstressng
Stress-NG - MMAP (Bogo Ops/s)	**6.49**	**6.57**
Normalized	98.78%	100%
Standard Deviation	0.7%	0.3%
Stress-NG - NUMA (Bogo Ops/s)	**82.03**	**83.17**
Normalized	98.63%	100%
Standard Deviation	0%	0.3%

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Stress-NG - MEMFD (Bogo Ops/s)	**35.58**	**36.25**
Normalized	98.15%	100%
Standard Deviation	0.2%	0.3%
Stress-NG - Atomic (Bogo Ops/s)	**44346**	**44980**
Normalized	98.59%	100%
Standard Deviation	1%	0.8%
Stress-NG - Crypto (Bogo Ops/s)	344	344
Standard Deviation	0.3%	0.5%
Stress-NG - Malloc (Bogo Ops/s)	**5304088**	**5345196**
Normalized	99.23%	100%
Standard Deviation	0.4%	0%
Stress-NG - Forking (Bogo Ops/s)	**2888**	**2532**
Normalized	100%	87.67%
Standard Deviation	1.5%	1.8%
Stress-NG - SENDFILE (Bogo Ops/s)	**13291**	**13524**
Normalized	98.28%	100%
Standard Deviation	0.1%	0.1%
Stress-NG - CPU Cache (Bogo Ops/s)	**61.41**	**57.47**
Normalized	100%	93.58%
Standard Deviation	7.5%	8.1%
Stress-NG - CPU Stress (Bogo Ops/s)	**453**	**455**
Normalized	99.56%	100%
Standard Deviation	0.8%	0.5%
Stress-NG - Semaphores (Bogo Ops/s)	**387082**	**324700**
Normalized	100%	83.88%
Standard Deviation	0.8%	3.5%
Stress-NG - Matrix Math (Bogo Ops/s)	**1691**	**1666**
Normalized	100%	98.52%
Standard Deviation	1.6%	1.3%
Stress-NG - Vector Math (Bogo Ops/s)	**5043**	**5061**
Normalized	99.64%	100%
Standard Deviation	0.1%	0%
Stress-NG - Memory Copying (Bogo Ops/s)	**286**	**285**
Normalized	100%	99.65%
Standard Deviation	0.9%	0.7%
Stress-NG - Socket Activity (Bogo Ops/s)	**923**	**994**
Normalized	92.86%	100%
Standard Deviation	2.9%	0.6%
Stress-NG - Context Switching (Bogo Ops/s)	**445859**	**428520**
Normalized	100%	96.11%
Standard Deviation	2%	0.3%
Stress-NG - G.C.S.F (Bogo Ops/s)	**79372**	**79730**
Normalized	99.55%	100%
Standard Deviation	0.2%	0.2%
Stress-NG - G.Q.D.S (Bogo Ops/s)	**11.64**	**11.92**
Normalized	97.65%	100%
Standard Deviation	1.9%	0.9%
Stress-NG - S.V.M.P (Bogo Ops/s)	**973361**	**914791**
Normalized	100%	93.98%
Standard Deviation	0.8%	0.4%

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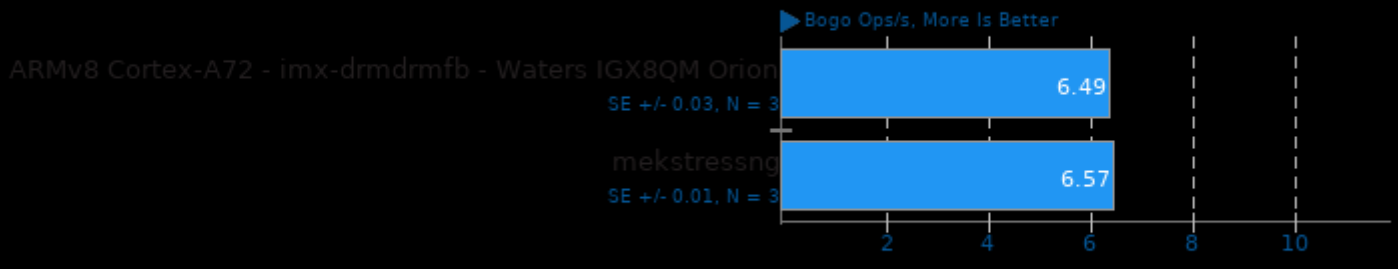
Stress-NG 0.13.02

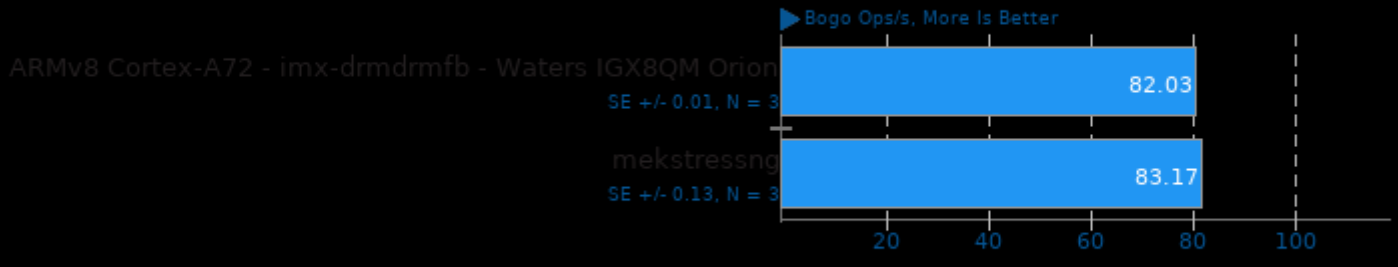
Test: MMAP



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

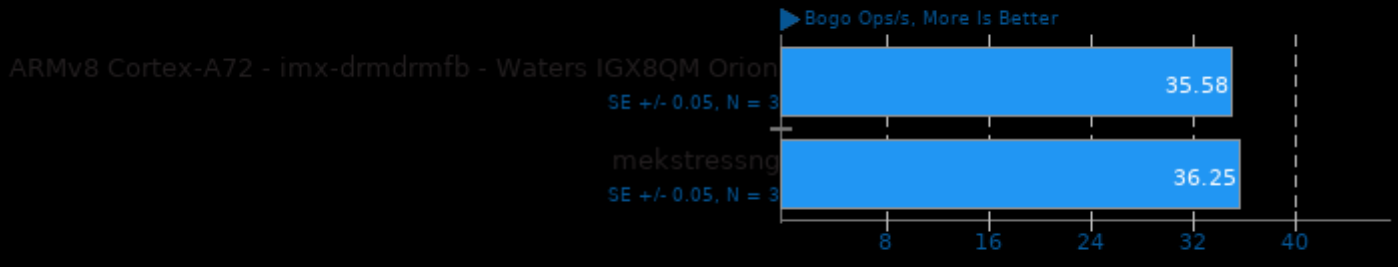
Test: NUMA



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

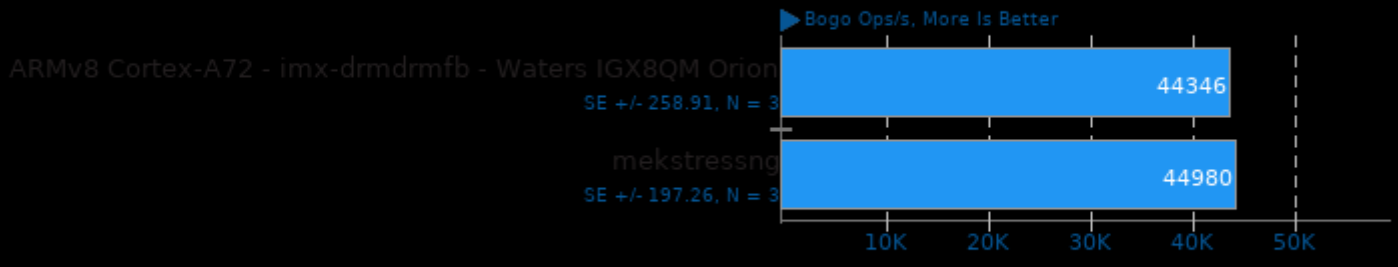
Test: MEMFD



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

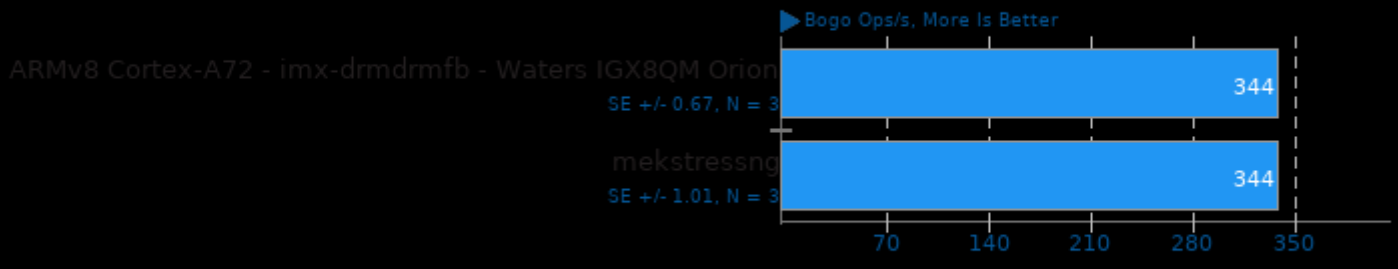
Test: Atomic



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

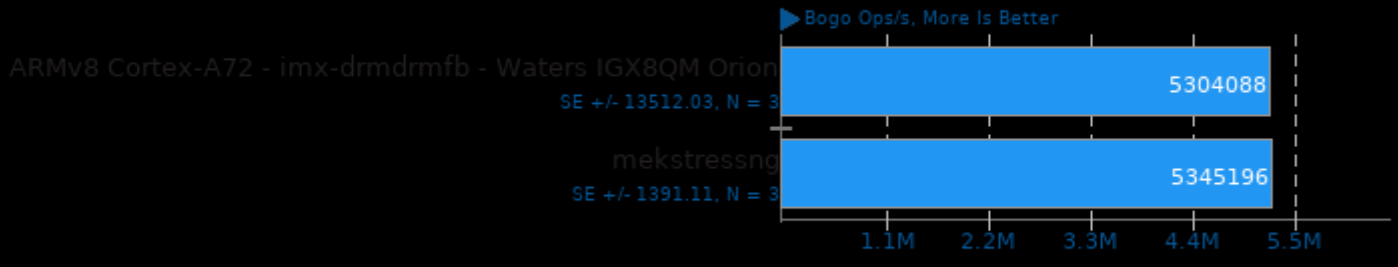
Test: Crypto



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

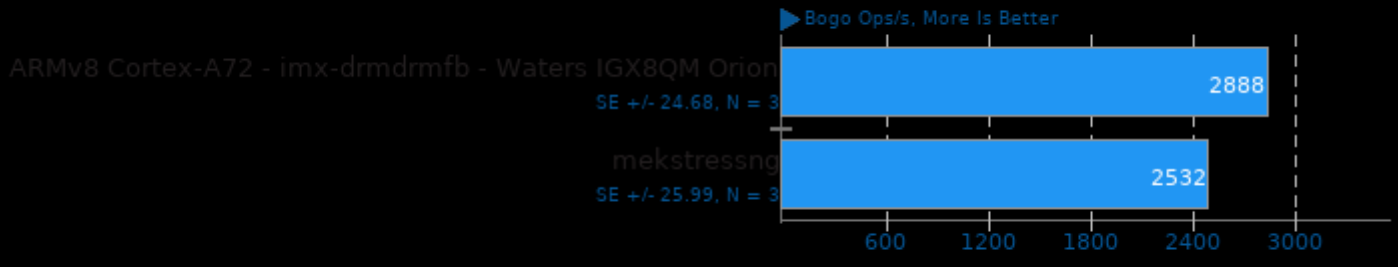
Test: Malloc



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

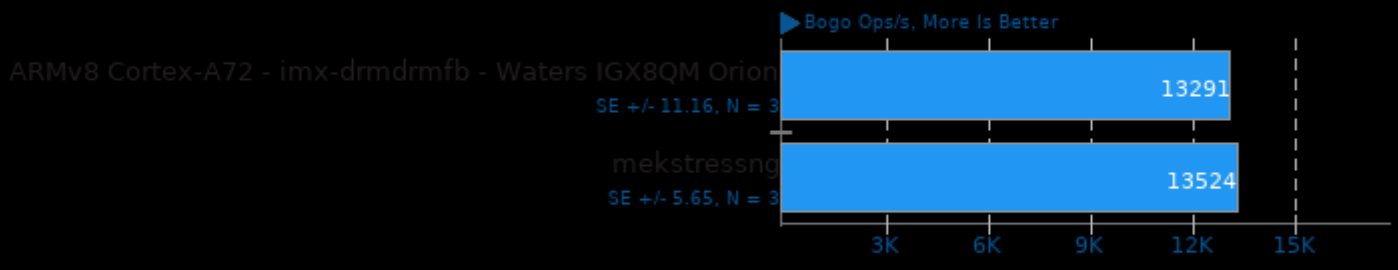
Test: Forking



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

Test: SENDFILE



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

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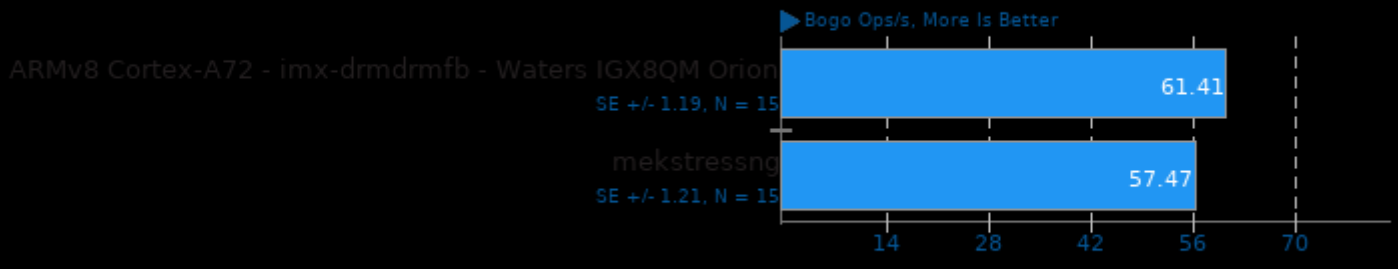
Stress-NG 0.13.02

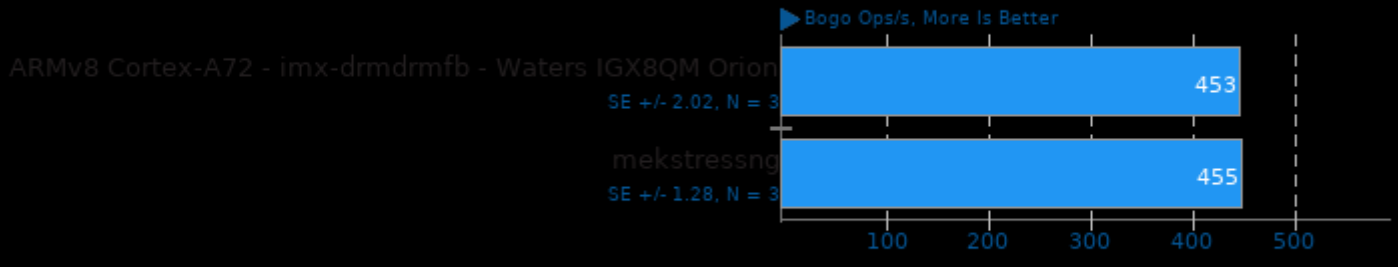
Test: CPU Cache



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

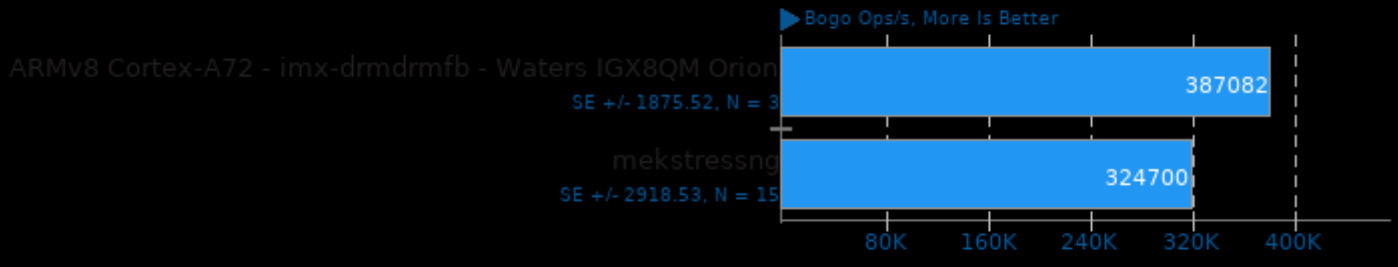
Test: CPU Stress



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

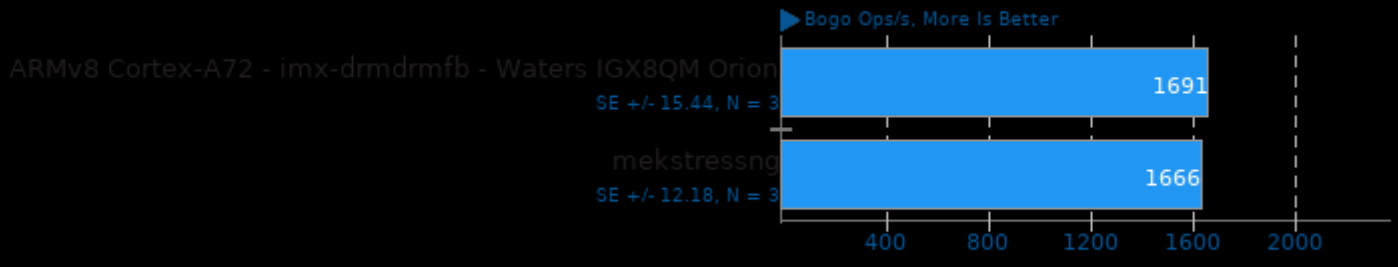
Test: Semaphores



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

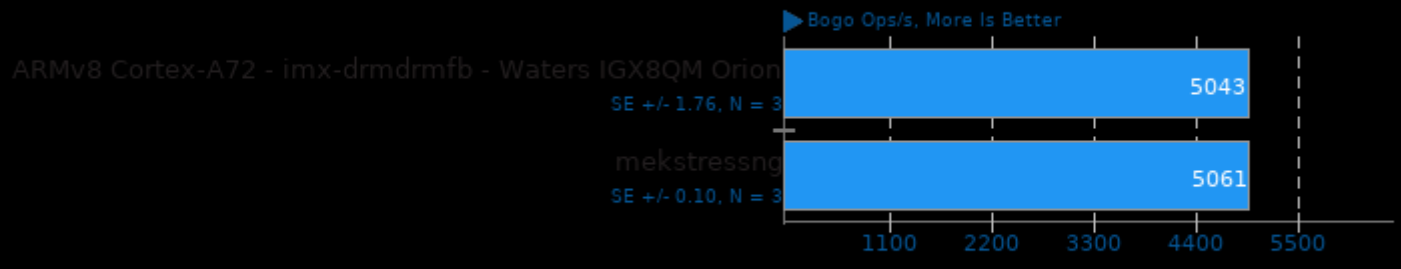
Test: Matrix Math



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

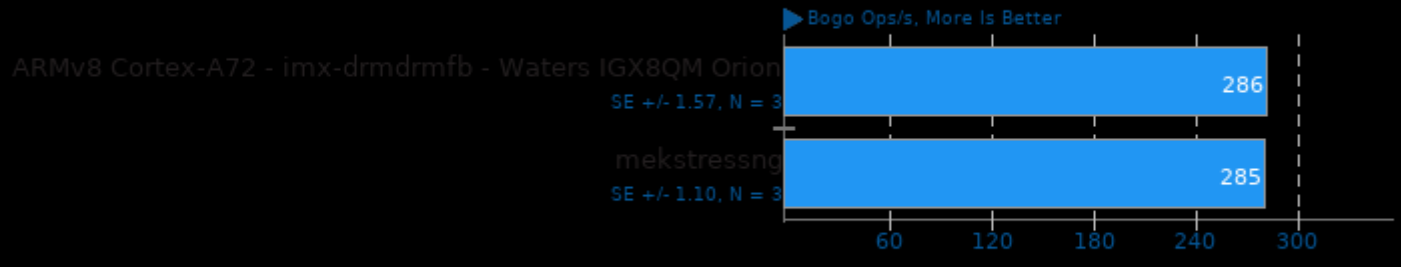
Test: Vector Math



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

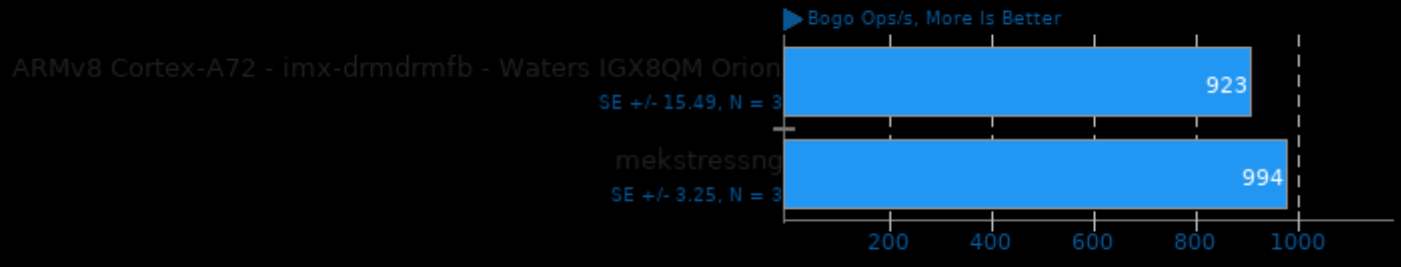
Test: Memory Copying



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

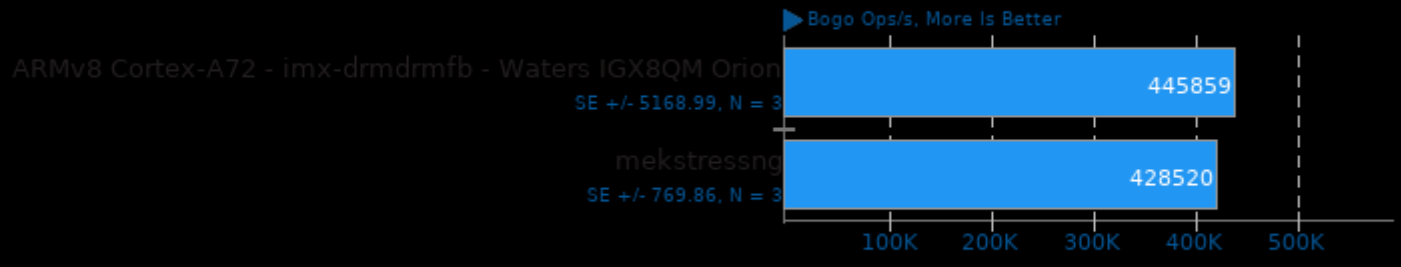
Test: Socket Activity



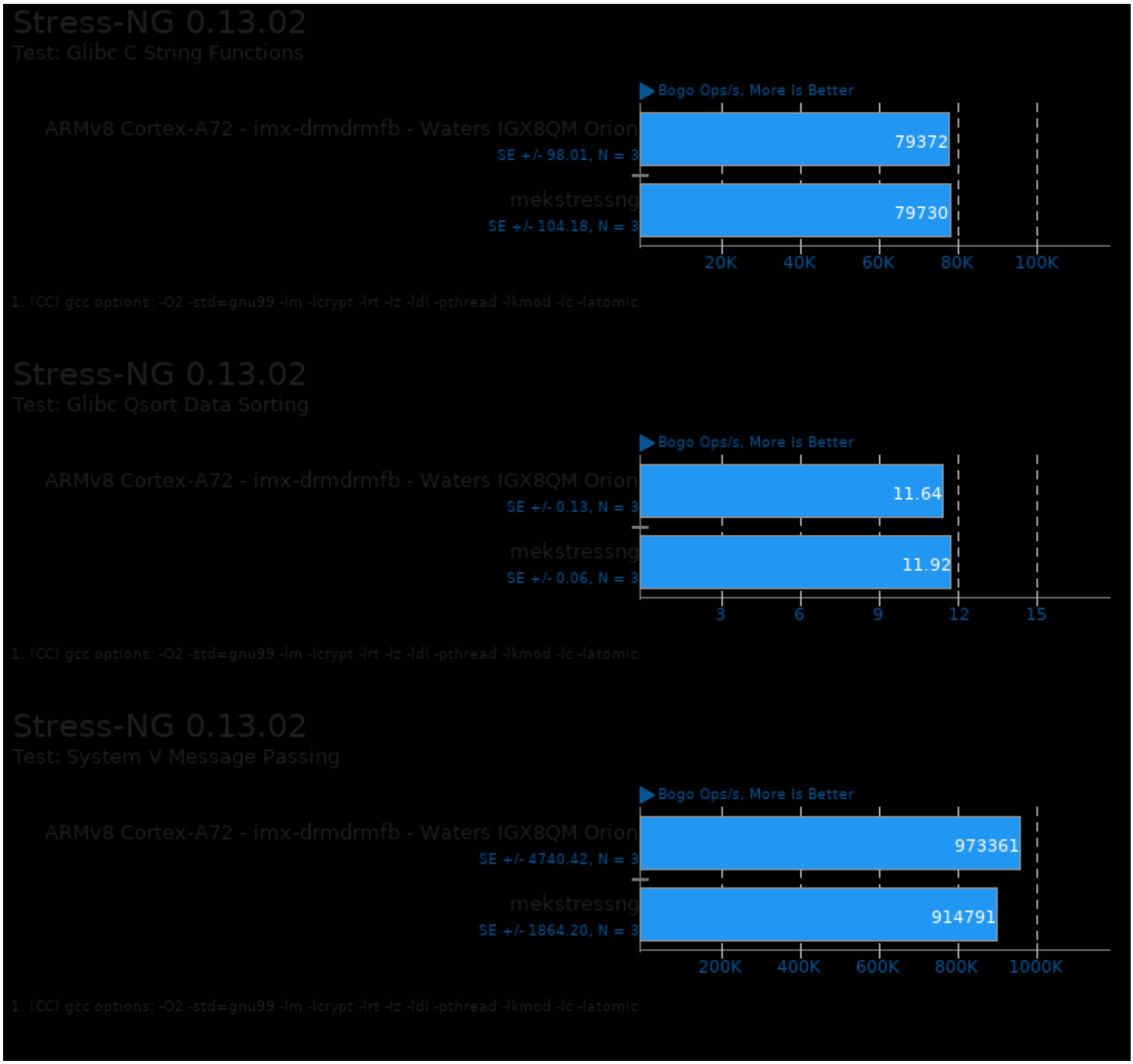
1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic

Stress-NG 0.13.02

Test: Context Switching



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lkmod -lc -latomic



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