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memory-2990-ecc

AMD Ryzen Threadripper 2990X 32-Core testing with a ASRock X399 Professional Gaming (P3.30 BIOS) and AMD Radeon 8192MB on Fedora 28 via the Phoronix Test Suite.

Automated Executive Summary

2990WX + GSkill 2933 128gb DFL 3.33A Agesa 1.1.0.2 had the most wins, coming in first place for 53% of the tests.

Based on the geometric mean of all complete results, the fastest (2990WX + GSkill 2933 128gb DFL 3.33A Agesa 1.1.0.2) was 1.436x the speed of the slowest (2990WX + GSkill 2933 128gb 2k interleave). 2990WX + GGSSkill 2933 128gb 3.30 REVERT Agesa was 0.953x the speed of 2990WX + GSkill 2933 128gb DFL 3.33A Agesa 1.1.0.2, AMD Ryzen Threadripper 2990WX 32-Core - AMD Radeon was 0.965x the speed of 2990WX + GGSSkill 2933 128gb 3.30 REVERT Agesa, 2990WX + Crucial 2666 ECC 128gb was 0.943x the speed of AMD Ryzen Threadripper 2990WX 32-Core - AMD Radeon, 2950X + GSkill 3200 32gb NUMA Mode was 0.96x the speed of 2990WX + Crucial 2666 ECC 128gb, 2990WX + GSKill 2933 128gb was 0.94x the speed of 2950X + GSkill 3200 32gb NUMA Mode, 2950X + GSkill 3200 32gb was 0.982x the speed of 2990WX + GSKill 2933 128gb, 2990WX + GSkill 2933 128gb 256b interleave was 0.963x the speed of 2950X + GSkill 3200 32gb, 2990WX + GSkill 2933 128gb BIOS 3.33 was 0.993x the speed of 2990WX + GSkill 2933 128gb 256b interleave, 2990WX + GSkill 2933 128gb 2k interleave was 0.948x the speed of 2990WX + GSkill 2933 128gb BIOS 3.33.

Test Systems:

AMD Ryzen Threadripper 2990WX 32-Core - AMD Radeon

Processor: AMD Ryzen Threadripper 2990WX 32-Core @ 3.00GHz (32 Cores / 64 Threads), Motherboard: Gigabyte X399 AORUS XTREME-CF (Tx4 BIOS), Chipset: AMD Family 17h, Memory: 129024MB, Disk: Samsung SSD 960 PRO 512GB + 1200GB INTEL SSDPEDMW012T4, Graphics: AMD Radeon 8192MB, Audio: Realtek ALC1220, Monitor: DELL U2410, Network: Intel I210 Gigabit Connection + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.19.0-041900rc2-generic (x86_64) 20180902, Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.19.6, Display Driver: amdgpu 18.0.1, OpenGL: 4.5 Mesa 18.0.5 (), Compiler: GCC 8.2.0, 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++ --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: acpi-cpufreq performance
Security Notes: __user pointer sanitization + Full AMD retpoline IBPB + SSB disabled via prctl and seccomp Protection

2990WX + GSKill 2933 128gb

Processor: AMD Ryzen Threadripper 2990X 32-Core @ 3.00GHz (32 Cores / 64 Threads), Motherboard: ASRock X399 Professional Gaming (L3.33 BIOS), Chipset: AMD Family 17h, Memory: 129024MB, Disk: 250GB Samsung SSD 850 + 8GB DataTraveler 2.0 + 480GB INTEL SSDPED1D480GA, Graphics: NV132 11264MB, Audio: NVIDIA GP104 HD Audio, Monitor: DP-3412UM + DP_FREESYNC, Network: Aquantia AQC107 NBase-T/IEEE + Intel Dual Band Wireless-AC 3168NGW

OS: Fedora 28, Kernel: 4.17.19-200.trlocal.fc28.x86_64 (x86_64), Desktop: GNOME Shell 3.28.3, Display Driver: modesetting 1.19.6, OpenGL: 4.3 Mesa 18.0.5, Compiler: GCC 8.1.1 20180712 + Clang 6.0.1, File-System: ext4, 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,lto --enable-libmpx --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: acpi-cpufreq performance
Security Notes: SELinux + __user pointer sanitization + Full AMD retpoline IBPB Protection

2950X + GSkill 3200 32gb

2950X + GSkill 3200 32gb NUMA Mode

Processor: AMD Ryzen Threadripper 2950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: Gigabyte X399 DESIGNARE EX-CF (F10 BIOS), Chipset: AMD Family 17h, Memory: 32768MB, Disk: 480GB INTEL SSDPED1D480GA, Graphics: Sapphire AMD Radeon RX Vega 8192MB, Audio: Realtek ALC1220, Monitor: DP-3412UM + DP_FREESYNC, Network: Intel I211 Gigabit Connection + Intel Wireless 8265 / 8275

OS: Fedora 28, Kernel: 4.17.19-200.trlocal.fc28.x86_64 (x86_64), Desktop: GNOME Shell 3.28.3, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 18.0.5 (LLVM 6.0.0), Compiler: GCC 8.1.1 20180712 + Clang 6.0.1, File-System: ext4, Screen Resolution: 5760x2160

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,lto --enable-libmpx --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: acpi-cpufreq performance
Security Notes: SELinux + __user pointer sanitization + Full AMD retpoline IBPB Protection

2990WX + Crucial 2666 ECC 128gb

Processor: AMD Ryzen Threadripper 2990WX 32-Core @ 3.00GHz (32 Cores / 64 Threads), Motherboard: Gigabyte X399 AORUS XTREME-CF (Tx4 BIOS), Chipset: AMD Family 17h, Memory: 129024MB, Disk: 480GB INTEL SSDPED1D480GA + Samsung SSD 960 PRO 512GB, Graphics: AMD Radeon 8192MB, Audio: Realtek ALC1220, Monitor: DP-3412UM + DP_FREESYNC, Network: Intel I210 Gigabit Connection + Intel Wireless 8265 / 8275

OS: Fedora 28, Kernel: 4.17.19-200.trlocal.fc28.x86_64 (x86_64), Desktop: GNOME Shell 3.28.3, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 18.0.5, Compiler: GCC 8.1.1 20180712 + Clang 6.0.1, File-System: ext4, Screen Resolution: 5760x2160

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,lto --enable-libmpx --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: acpi-cpufreq performance
Security Notes: SELinux + __user pointer sanitization + Full AMD retpoline IBPB Protection

2990WX + GSkill 2933 128gb BIOS 3.33

2990WX + GSkill 2933 128gb 256b interleave

Processor: AMD Ryzen Threadripper 2990X 32-Core @ 3.00GHz (32 Cores / 64 Threads), Motherboard: ASRock X399 Professional Gaming (L3.33 BIOS), Chipset: AMD Family 17h, Memory: 129024MB, Disk: 8002GB Western Digital WD80EFZX-68U + 480GB INTEL SSDPED1D480GA, Graphics: AMD Radeon 8192MB, Audio: Realtek ALC1220, Monitor: DP-3412UM + DP_FREESYNC, Network: Aquantia AQC107 NBase-T/IEEE + Intel Dual Band Wireless-AC 3168NGW

OS: Fedora 28, Kernel: 4.18.11-200.fc28.x86_64 (x86_64), Desktop: GNOME Shell 3.28.3, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 18.0.5 (LLVM 6.0.1), Compiler: GCC 8.1.1 20180712 + Clang 6.0.1, File-System: ext4, Screen Resolution: 1920x1200

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,lto --enable-libmpx --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: acpi-cpufreq performance
Security Notes: SELinux + __user pointer sanitization + Full AMD retpoline IBPB Protection

2990WX + GSkill 2933 128gb 2k interleave

Processor: AMD Ryzen Threadripper 2990X 32-Core @ 3.00GHz (32 Cores / 64 Threads), Motherboard: ASRock X399 Professional Gaming (L3.33 BIOS), Chipset: AMD Family 17h, Memory: 129024MB, Disk: 8002GB Western Digital WD80EFZX-68U + 480GB INTEL SSDPED1D480GA, Graphics: AMD Radeon 8192MB, Audio: Realtek ALC1220, Monitor: DP-3412UM + DP_FREESYNC, Network: Aquantia AQC107 NBase-T/IEEE + Intel Dual Band Wireless-AC 3168NGW

OS: Fedora 28, Kernel: 4.18.11-200.fc28.x86_64 (x86_64), Desktop: GNOME Shell 3.28.3, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 18.0.5 (LLVM 6.0.1), Compiler: GCC 8.1.1 20180712 + Clang 6.0.1, File-System: ext4, Screen Resolution: 1024x768

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,lto --enable-libmpx --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: acpi-cpufreq performance
Security Notes: SELinux + __user pointer sanitization + Full AMD retpoline IBPB Protection

2990WX + GSkill 2933 128gb DFL 3.33A Agesa 1.1.0.2

Processor: AMD Ryzen Threadripper 2990X 32-Core @ 3.00GHz (32 Cores / 64 Threads), Motherboard: ASRock X399 Professional Gaming (L3.33A BIOS), Chipset: AMD Family 17h, Memory: 129024MB, Disk: 8002GB Western Digital WD80EFZX-68U + 32GB USB Flash Disk + 480GB INTEL SSDPED1D480GA, Graphics: AMD Radeon 8192MB, Audio: Realtek ALC1220, Monitor: DP-3412UM + DP_FREESYNC, Network: Aquantia AQC107 NBase-T/IEEE + Intel Dual Band Wireless-AC 3168NGW

OS: Fedora 28, Kernel: 4.17.18-200.fc28.x86_64 (x86_64), Desktop: GNOME Shell 3.28.3, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 18.0.5 (LLVM 6.0.1), Compiler: GCC 8.1.1 20180712 + Clang 6.0.1, File-System: ext4, Screen Resolution: 1280x720

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,lto --enable-libmpx --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: acpi-cpufreq performance
Security Notes: SELinux + __user pointer sanitization + Full AMD retpoline IBPB Protection

2990WX + GGSSkill 2933 128gb 3.30 REVERT Agesa

Processor: AMD Ryzen Threadripper 2990X 32-Core @ 3.00GHz (32 Cores / 64 Threads), Motherboard: ASRock X399 Professional Gaming (P3.30 BIOS), Chipset: AMD Family 17h, Memory: 129024MB, Disk: 250GB Samsung SSD 850 + 32GB USB Flash Disk + 480GB INTEL SSDPED1D480GA + Samsung SSD 960 PRO 512GB, Graphics: AMD Radeon 8192MB, Audio: Realtek ALC1220, Monitor: DP-3412UM + DP_FREESYNC, Network: Aquantia AQC107 NBase-T/IEEE + Intel Dual Band Wireless-AC 3168NGW

OS: Fedora 28, Kernel: 4.18.11-200.fc28.x86_64 (x86_64), Desktop: GNOME Shell 3.28.3, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 18.0.5 (LLVM 6.0.1), Compiler: GCC 8.1.1 20180712 + Clang 6.0.1, File-System: ext4, Screen Resolution: 1024x768

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,lto --enable-libmpx --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: acpi-cpufreq performance
Security Notes: SELinux + __user pointer sanitization + Full AMD retpoline IBPB Protection

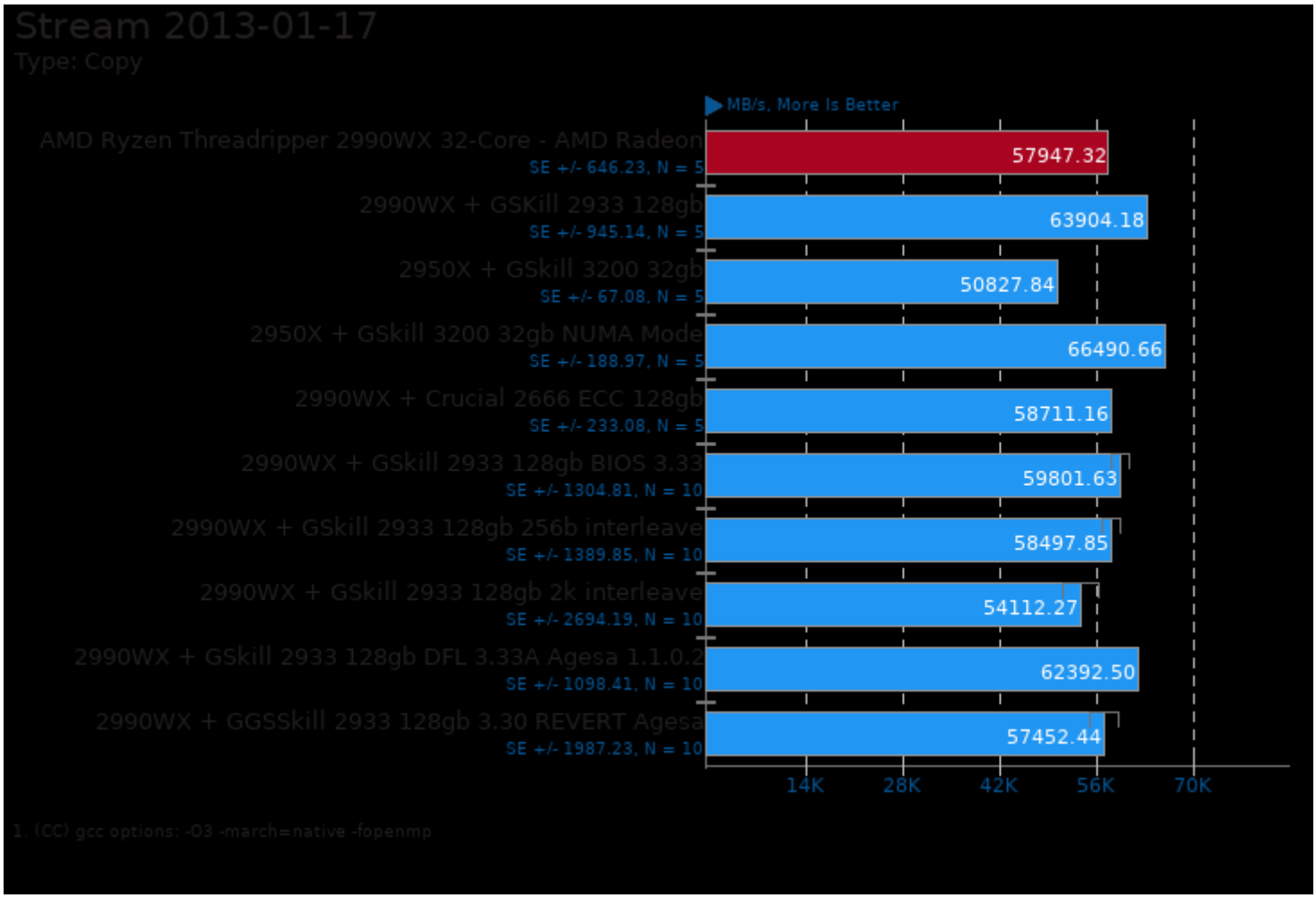
Phoronix Test Suite

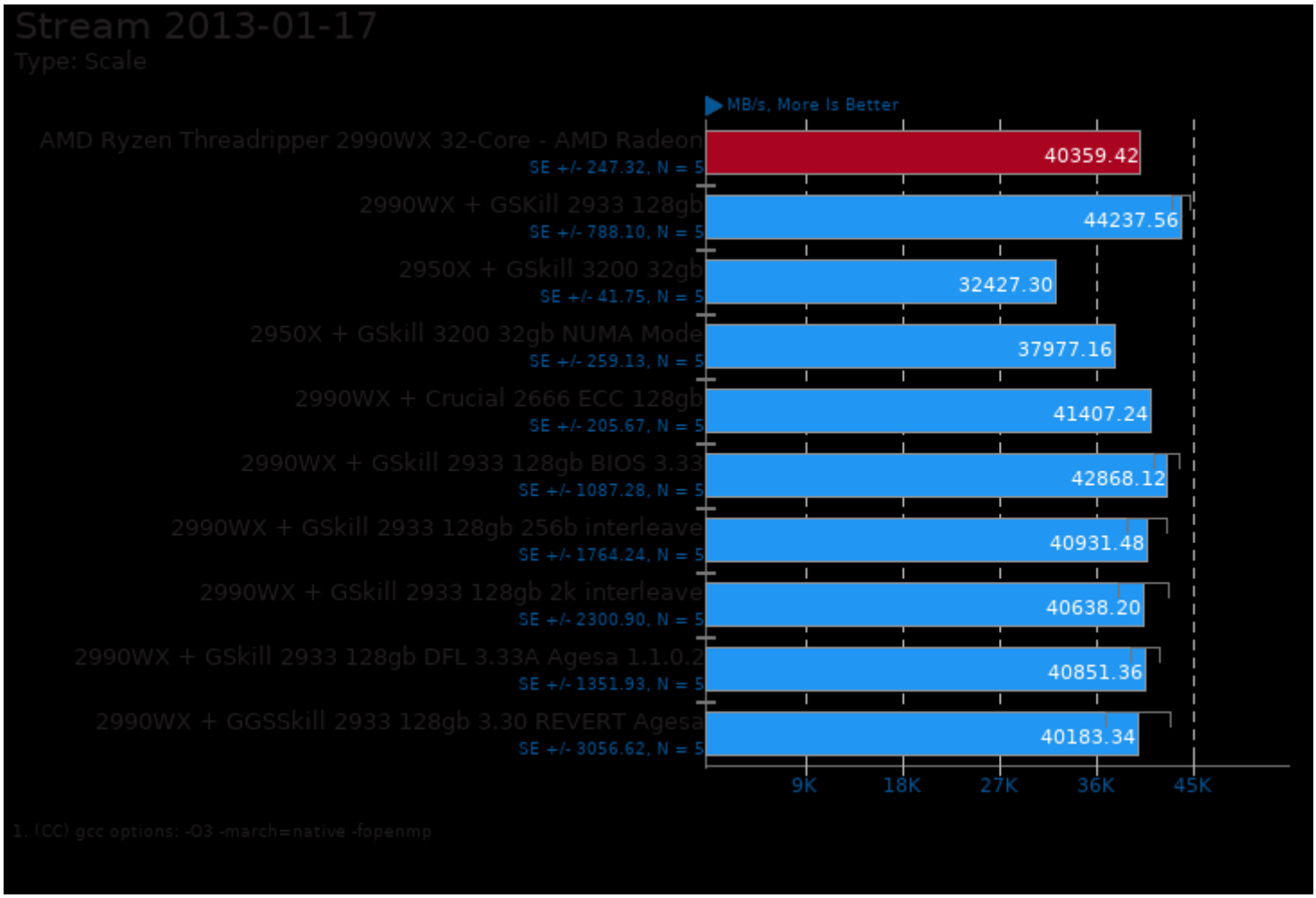
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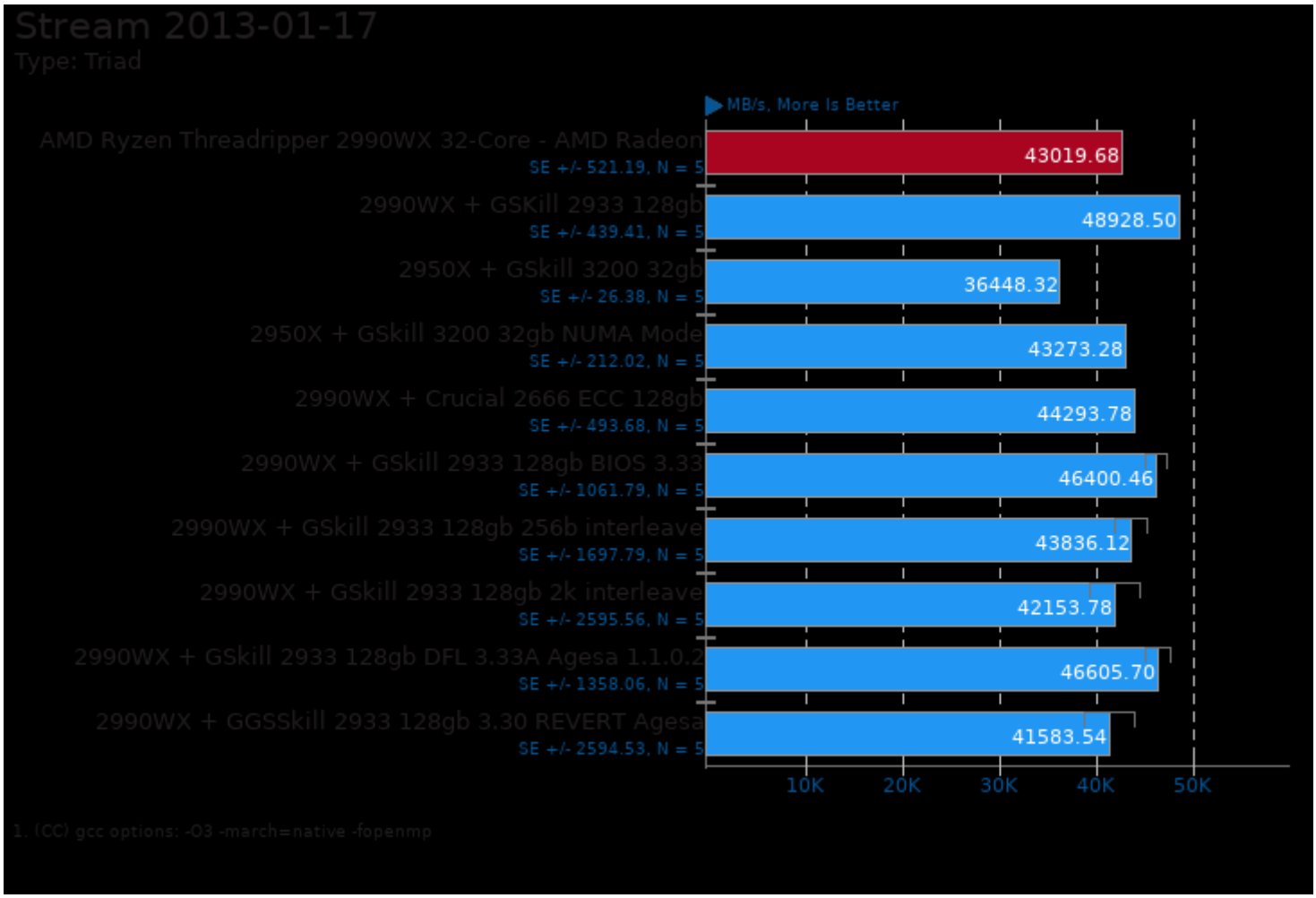
	AMD Ryzen Threadripper 2990WX 32-Core - AMD Radeon	2990WX + GSKill 2933 128gb	2950X + GSkill 3200 32gb	2950X + GSkill 3200 32gb NUMA Mode	2990WX + Crucial 2666 ECC 128gb	2990WX + GSkill 2933 128gb BIOS 3.33	2990WX + GSkill 2933 128gb 256b interleave	2990WX + GSkill 2933 128gb 2k interleave	2990WX + GSkill 2933 128gb DFL 3.33A Agesa 1.1.0.2	2990WX + GGSSkill 2933 128gb 3.30 REVERT Agesa
Stream - Copy (MB/s)	57947	63904	**50828**	**66491**	58711	59802	58498	54112	62393	57452
Normalized	87.15%	96.11%	76.44%	100%	88.3%	89.94%	87.98%	81.38%	93.84%	86.41%
Standard Deviation	2.5%	3.3%	0.3%	0.6%	0.9%	6.9%	7.5%	15.7%	5.6%	10.9%
Stream - Scale (MB/s)	40359	**44238**	**32427**	37977	41407	42868	40931	40638	40851	40183
Normalized	91.23%	100%	73.3%	85.85%	93.6%	96.9%	92.53%	91.86%	92.35%	90.84%
Standard Deviation	1.4%	4%	0.3%	1.5%	1.1%	5.7%	9.6%	12.7%	7.4%	17%
Stream - Triad (MB/s)	43020	**48929**	**36448**	43273	44294	46400	43836	42154	46606	41584
Normalized	87.92%	100%	74.49%	88.44%	90.53%	94.83%	89.59%	86.15%	95.25%	84.99%
Standard Deviation	2.7%	2%	0.2%	1.1%	2.5%	5.1%	8.7%	13.8%	6.5%	14%
Stream - Add	43330	**48706**	**36284**	43109	44712	46378	43861	42466	45651	42752
Normalized	88.96%	100%	74.5%	88.51%	91.8%	95.22%	90.05%	87.19%	93.73%	87.78%
Standard Deviation	3.1%	2.7%	0.3%	1.4%	1.1%	5.2%	8.7%	12.5%	6.6%	15.2%
Tinymembench - Standard Memcpy (MB/s)	15931	11362	11974	14249	15879	11340	11429	**9158**	**17396**	17343
Normalized	91.58%	65.31%	68.83%	81.91%	91.28%	65.19%	65.7%	52.64%	100%	99.7%
Standard Deviation	0.1%	0.2%	0.4%	0.4%	0.3%	0.3%	0.2%	0%	0.5%	1.2%
Tinymembench - Standard Memset (MB/s)	13021	9855	10677	9773	12803	10143	9835	**8300**	14239	**14271**
Normalized	91.24%	69.05%	74.81%	68.48%	89.71%	71.07%	68.91%	58.16%	99.77%	100%
Standard Deviation	0.3%	0.6%	0.5%	0.6%	0.2%	5.3%	0.6%	0.1%	0.4%	0.5%
MBW - Memory Copy - 128 MiB (MiB/s)	14928	11070	11159	14086	14772	**6376**	6421	10364	**16538**	11363
Normalized	90.26%	66.94%	67.47%	85.17%	89.32%	38.55%	38.83%	62.67%	100%	68.71%
Standard Deviation	0.3%	0.6%	0.2%	1.1%	0.2%	0.4%	0.4%	0.6%	0.5%	0.1%
MBW - Memory Copy - 512 MiB (MiB/s)	14854	11035	11241	14069	12003	**8892**	11001	10427	16592	**16611**
Normalized	89.42%	66.43%	67.67%	84.7%	72.26%	53.53%	66.23%	62.78%	99.89%	100%
Standard Deviation	0.5%	0.4%	0.1%	1%	0.2%	0.3%	0.3%	0.2%	0.1%	0.2%
MBW - Memory Copy - 1024 MiB (MiB/s)	14812	10893	11244	13804	13140	10750	10800	**9331**	**16420**	16418
Normalized	90.21%	66.34%	68.48%	84.07%	80.02%	65.47%	65.78%	56.83%	100%	99.99%
Standard Deviation	0.1%	0.2%	0.1%	0.8%	0.5%	0.4%	1%	0.6%	0.1%	0.4%

memory-2990-ecc

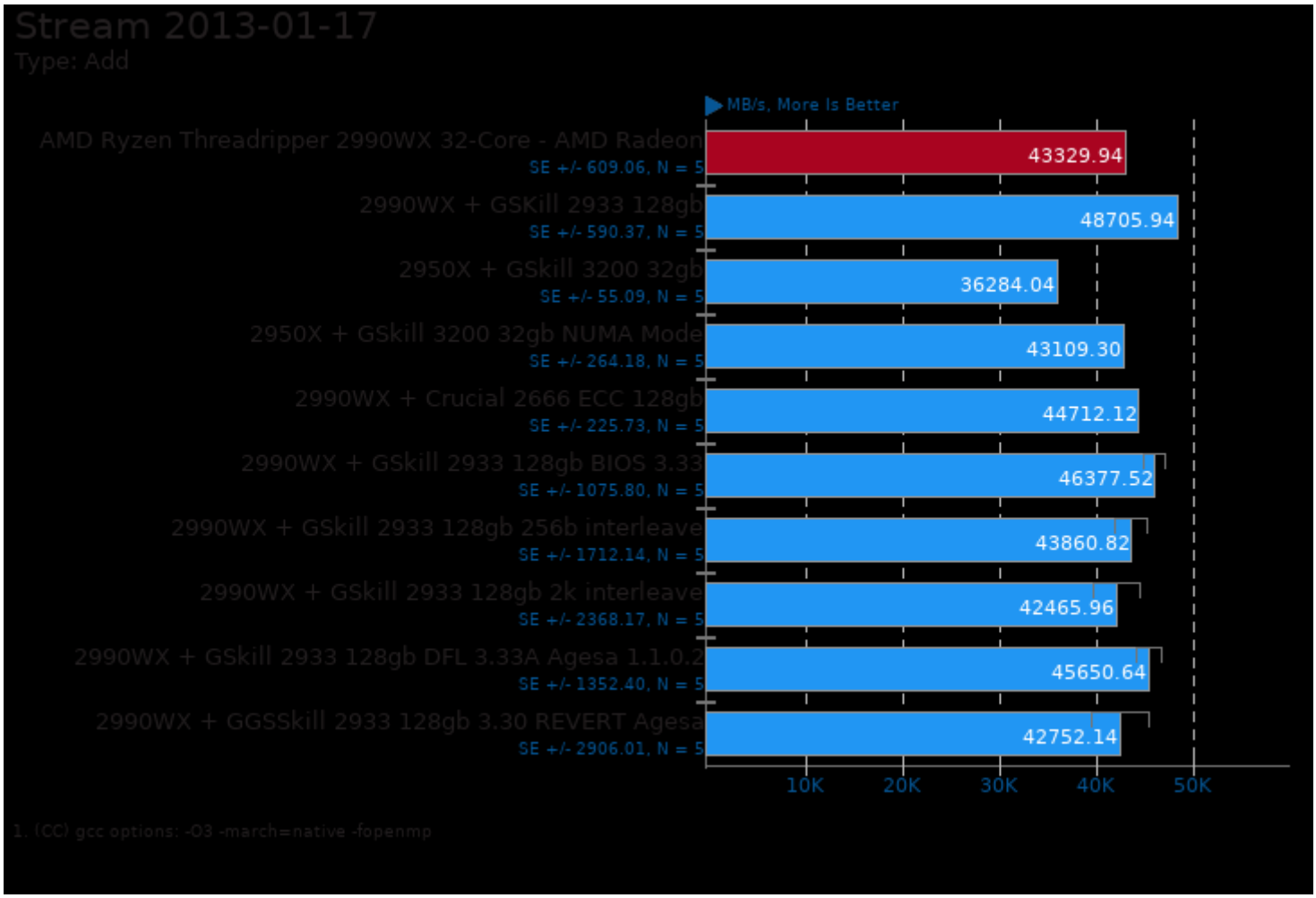
MBW - Memory Copy - 4096 MiB (MiB/s)	15028	10898	11449	14161	14032	10775	10916	**9808**	**16498**	16082
Normalized	91.09%	66.06%	69.4%	85.84%	85.06%	65.31%	66.17%	59.45%	100%	97.48%
Standard Deviation	0.2%	0.9%	0.9%	1.9%	0.3%	0.5%	0.2%	0.3%	0.3%	3.2%
MBW - Memory Copy - 8192 MiB (MiB/s)	14757	10595	11208	11817	14069	10702	10782	**10329**	**16406**	15822
Normalized	89.95%	64.58%	68.32%	72.03%	85.76%	65.23%	65.72%	62.96%	100%	96.44%
Standard Deviation	0.2%	0.1%	0.1%	1.9%	0.3%	1.1%	0.3%	0.1%	0.1%	0.1%
MBW - M.C.F.B.S - 128 MiB (MiB/s)	8271	6880	7926	7142	**5899**	7098	6923	6204	**8866**	8651
Normalized	93.29%	77.6%	89.4%	80.56%	66.54%	80.06%	78.09%	69.97%	100%	97.58%
Standard Deviation	0.4%	0.6%	0.9%	1.4%	0.3%	0.8%	1.5%	3.4%	2.4%	2.6%
MBW - M.C.F.B.S - 512 MiB (MiB/s)	8300	6877	7767	6902	7452	6837	7053	**6065**	9075	**9155**
Normalized	90.66%	75.12%	84.84%	75.4%	81.4%	74.68%	77.05%	66.26%	99.13%	100%
Standard Deviation	0.9%	1.7%	3.8%	1.1%	0.9%	2.1%	0.3%	0.9%	0.6%	0.7%
MBW - M.C.F.B.S - 1024 MiB (MiB/s)	8329	6841	7555	6978	7767	6845	6799	**5996**	8917	**9046**
Normalized	92.08%	75.63%	83.52%	77.15%	85.86%	75.68%	75.16%	66.29%	98.58%	100%
Standard Deviation	0.5%	1%	0.5%	1.8%	0.6%	0.4%	0.4%	0.4%	2%	0.4%
MBW - M.C.F.B.S - 4096 MiB (MiB/s)	8277	6724	7603	6675	8180	6642	6831	**5961**	**9081**	9050
Normalized	91.14%	74.05%	83.72%	73.5%	90.07%	73.14%	75.22%	65.64%	100%	99.66%
Standard Deviation	1.8%	0.1%	2.4%	2.9%	1.2%	2.8%	0.6%	1.9%	1.4%	0.1%
MBW - M.C.F.B.S - 8192 MiB (MiB/s)	8012	6640	7752	6110	8124	6841	6841	**5967**	**8994**	8991
Normalized	89.08%	73.82%	86.19%	67.93%	90.33%	76.06%	76.06%	66.35%	100%	99.97%
Standard Deviation	0.4%	2.7%	11.1%	3.1%	0%	0.9%	0.6%	0.4%	1.1%	0.7%


Stream 2013-01-17
Type: Copy
MB/s, More Is Better
AMD Ryzen Threadripper 2990WX 32-Core - AMD Radeon
SE +/- 646.23, N = 5
57947.32
2990WX + GSKill 2933 128gb
SE +/- 945.14, N = 5
63904.18
2950X + GSkill 3200 32gb
SE +/- 67.08, N = 5
50827.84
2950X + GSkill 3200 32gb NUMA Mode
SE +/- 188.97, N = 5
66490.66
2990WX + Crucial 2666 ECC 128gb
SE +/- 233.08, N = 5
58711.16
2990WX + GSkill 2933 128gb BIOS 3.33
SE +/- 1304.81, N = 10
59801.63
2990WX + GSkill 2933 128gb 256b interleave
SE +/- 1389.85, N = 10
58497.85
2990WX + GSkill 2933 128gb 2k interleave
SE +/- 2694.19, N = 10
54112.27
2990WX + GSkill 2933 128gb DFL 3.33A Agesa 1.1.0.2
SE +/- 1098.41, N = 10
62392.50
2990WX + GGSSkill 2933 128gb 3.30 REVERT Agesa
SE +/- 1987.23, N = 10
57452.44
14K
28K
42K
56K
70K
1. (CC) gcc options: -O3 -march=native -fopenmp

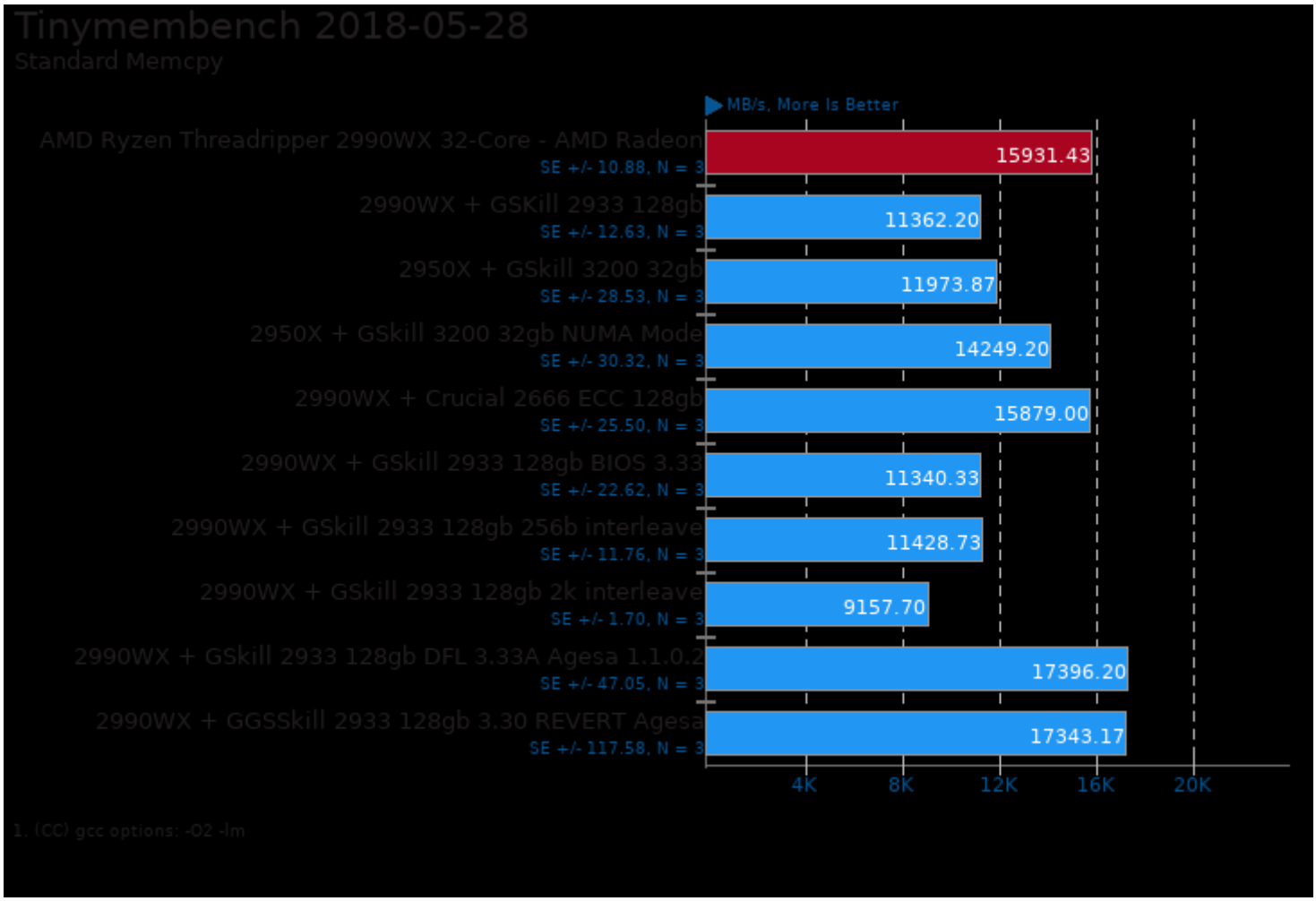

Stream 2013-01-17
Type: Scale
MB/s, More Is Better
AMD Ryzen Threadripper 2990WX 32-Core - AMD Radeon
SE +/- 247.32, N = 5
40359.42
2990WX + GSKill 2933 128gb
SE +/- 788.10, N = 5
44237.56
2950X + GSkill 3200 32gb
SE +/- 41.75, N = 5
32427.30
2950X + GSkill 3200 32gb NUMA Mode
SE +/- 259.13, N = 5
37977.16
2990WX + Crucial 2666 ECC 128gb
SE +/- 205.67, N = 5
41407.24
2990WX + GSkill 2933 128gb BIOS 3.33
SE +/- 1087.28, N = 5
42868.12
2990WX + GSkill 2933 128gb 256b interleave
SE +/- 1764.24, N = 5
40931.48
2990WX + GSkill 2933 128gb 2k interleave
SE +/- 2300.90, N = 5
40638.20
2990WX + GSkill 2933 128gb DFL 3.33A Agesa 1.1.0.2
SE +/- 1351.93, N = 5
40851.36
2990WX + GGSSkill 2933 128gb 3.30 REVERT Agesa
SE +/- 3056.62, N = 5
40183.34
9K
18K
27K
36K
45K
1. (CC) gcc options: -O3 -march=native -fopenmp

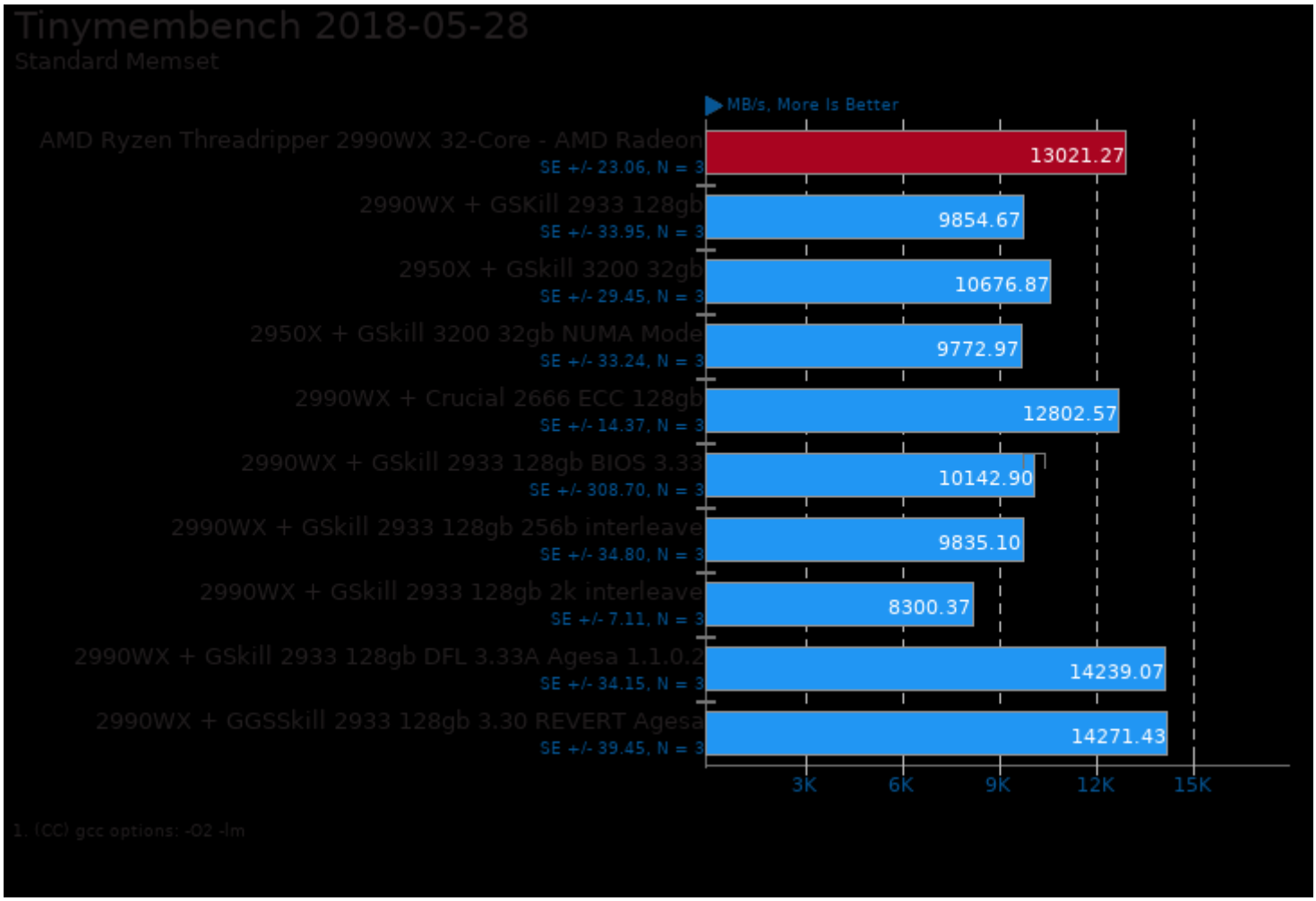

Stream 2013-01-17
Type: Triad
MB/s, More Is Better
AMD Ryzen Threadripper 2990WX 32-Core - AMD Radeon
SE +/- 521.19, N = 5
43019.68
2990WX + GSKill 2933 128gb
SE +/- 439.41, N = 5
48928.50
2950X + GSkill 3200 32gb
SE +/- 26.38, N = 5
36448.32
2950X + GSkill 3200 32gb NUMA Mode
SE +/- 212.02, N = 5
43273.28
2990WX + Crucial 2666 ECC 128gb
SE +/- 493.68, N = 5
44293.78
2990WX + GSkill 2933 128gb BIOS 3.33
SE +/- 1061.79, N = 5
46400.46
2990WX + GSkill 2933 128gb 256b interleave
SE +/- 1697.79, N = 5
43836.12
2990WX + GSkill 2933 128gb 2k interleave
SE +/- 2595.56, N = 5
42153.78
2990WX + GSkill 2933 128gb DFL 3.33A Agesa 1.1.0.2
SE +/- 1358.06, N = 5
46605.70
2990WX + GGSSkill 2933 128gb 3.30 REVERT Agesa
SE +/- 2594.53, N = 5
41583.54
10K
20K
30K
40K
50K
1. (CC) gcc options: -O3 -march=native -fopenmp

memory-2990-ecc

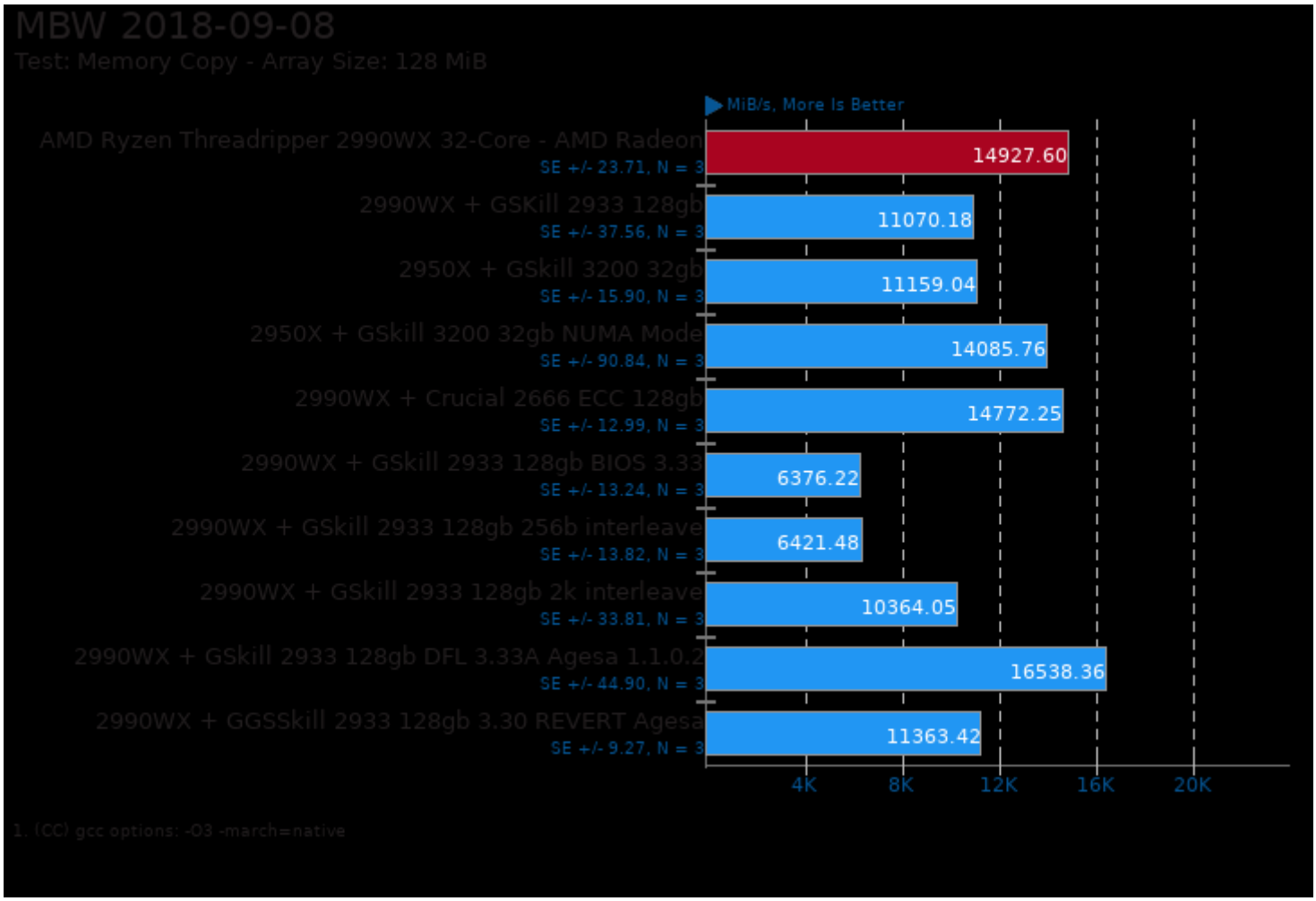


memory-2990-ecc

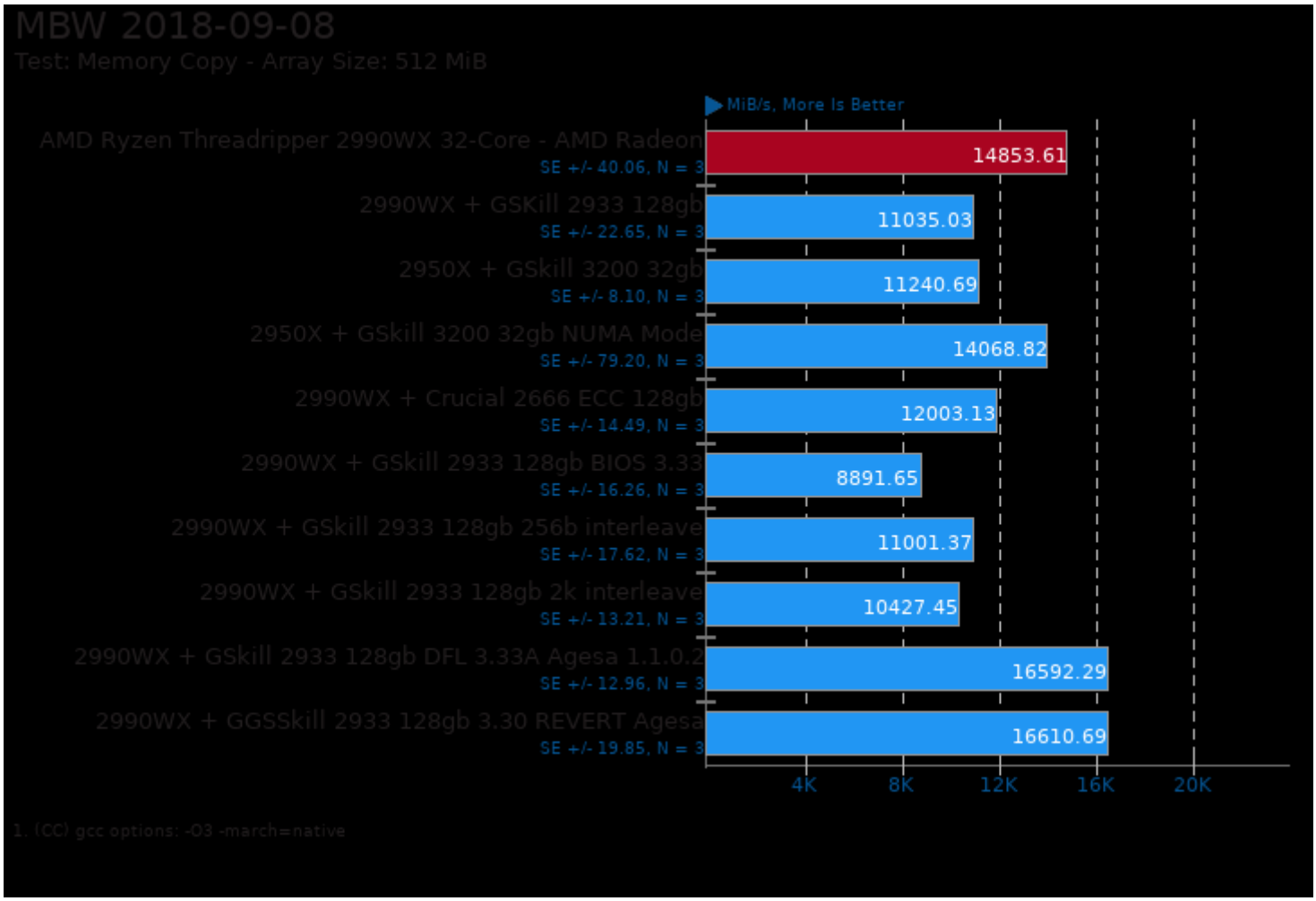



Tinymembench 2018-05-28
Standard Memset
MB/s, More Is Better
AMD Ryzen Threadripper 2990WX 32-Core - AMD Radeon
SE +/- 23.06, N = 3
13021.27
2990WX + GSKill 2933 128gb
SE +/- 33.95, N = 3
9854.67
2950X + GSkill 3200 32gb
SE +/- 29.45, N = 3
10676.87
2950X + GSkill 3200 32gb NUMA Mode
SE +/- 33.24, N = 3
9772.97
2990WX + Crucial 2666 ECC 128gb
SE +/- 14.37, N = 3
12802.57
2990WX + GSkill 2933 128gb BIOS 3.33
SE +/- 308.70, N = 3
10142.90
2990WX + GSkill 2933 128gb 256b interleave
SE +/- 34.80, N = 3
9835.10
2990WX + GSkill 2933 128gb 2k interleave
SE +/- 7.11, N = 3
8300.37
2990WX + GSkill 2933 128gb DFL 3.33A Agesa 1.1.0.2
SE +/- 34.15, N = 3
14239.07
2990WX + GGSSkill 2933 128gb 3.30 REVERT Agesa
SE +/- 39.45, N = 3
14271.43
3K
6K
9K
12K
15K
1. (CC) gcc options: -O2 -lm

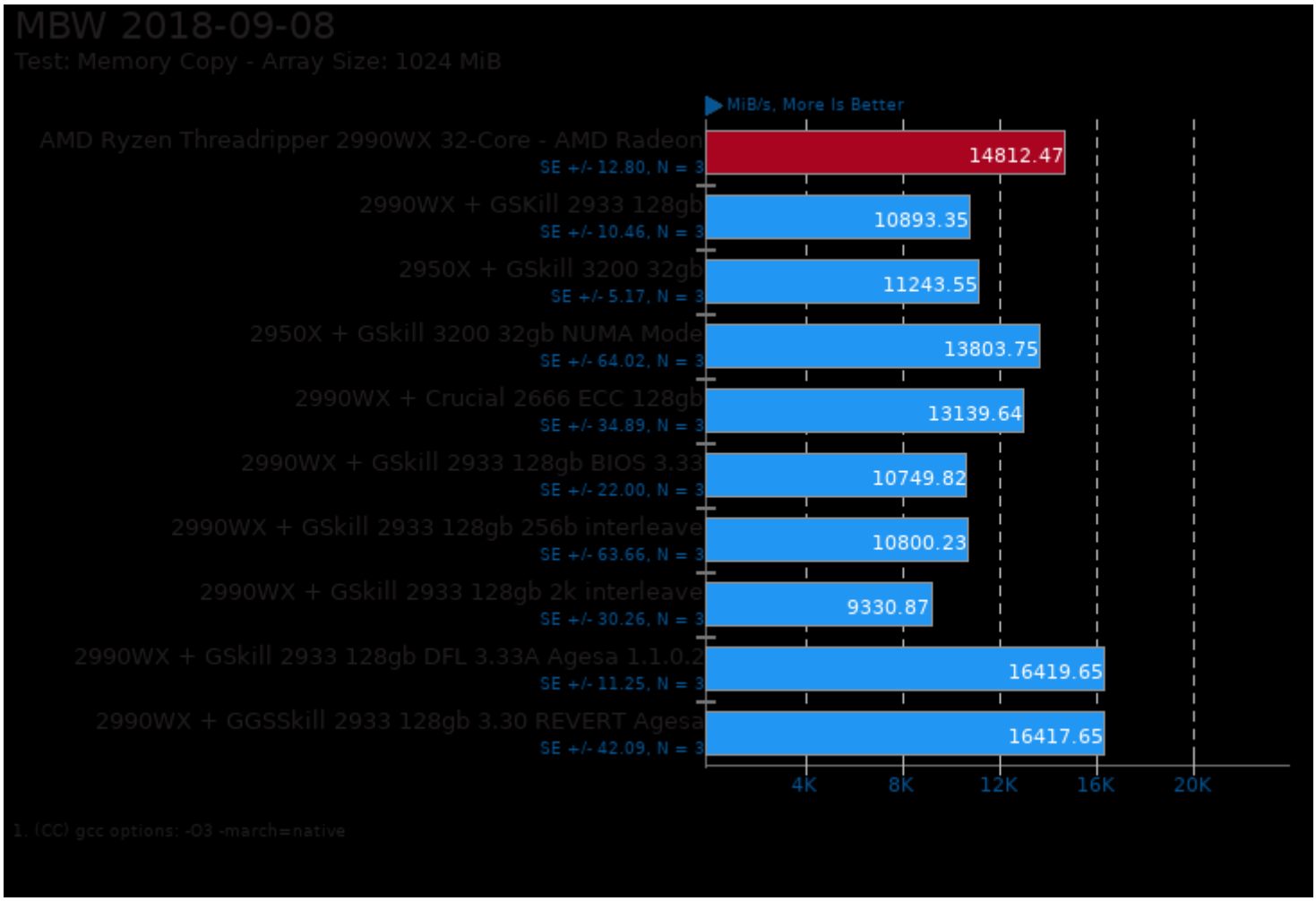
memory-2990-ecc



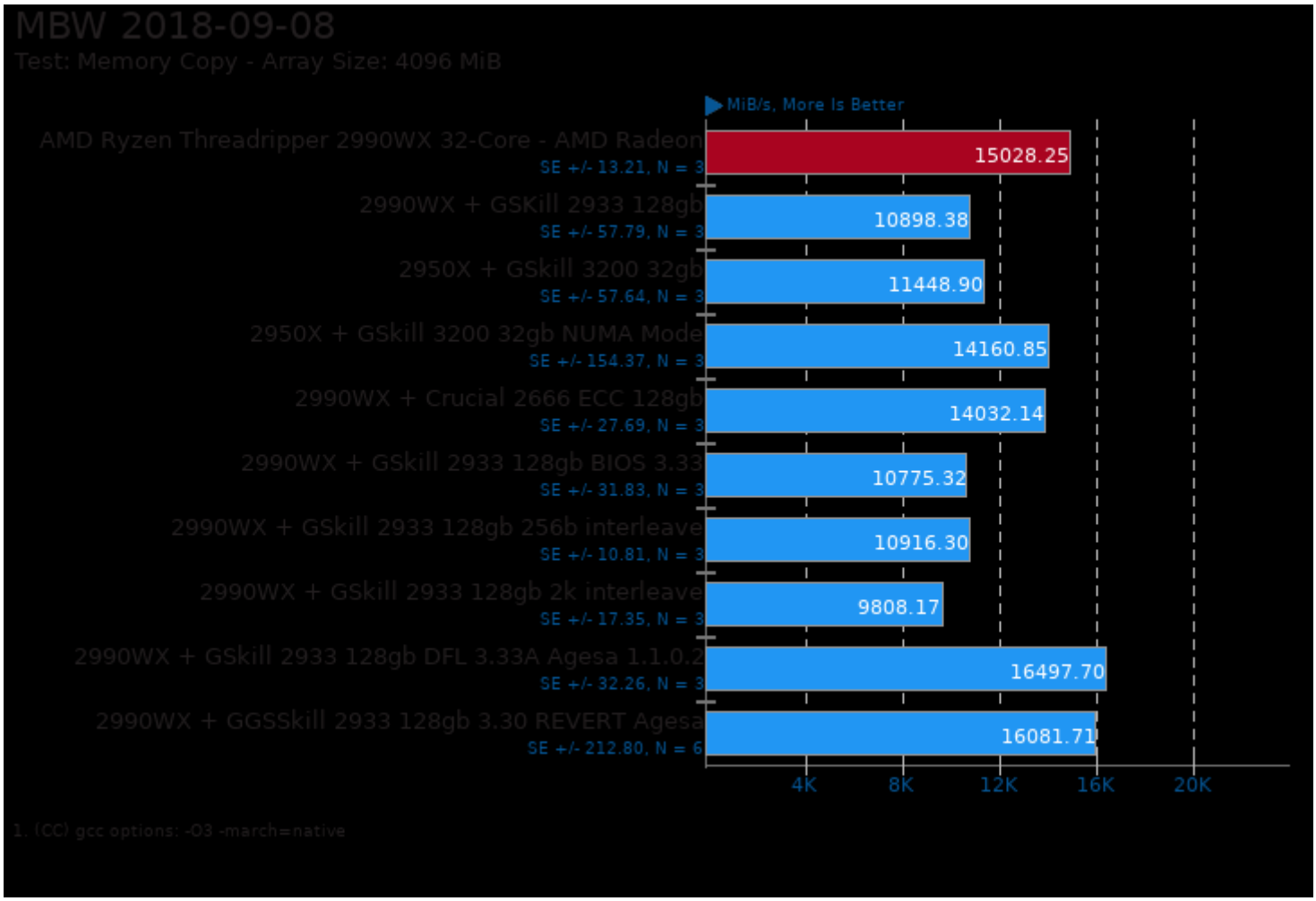
memory-2990-ecc

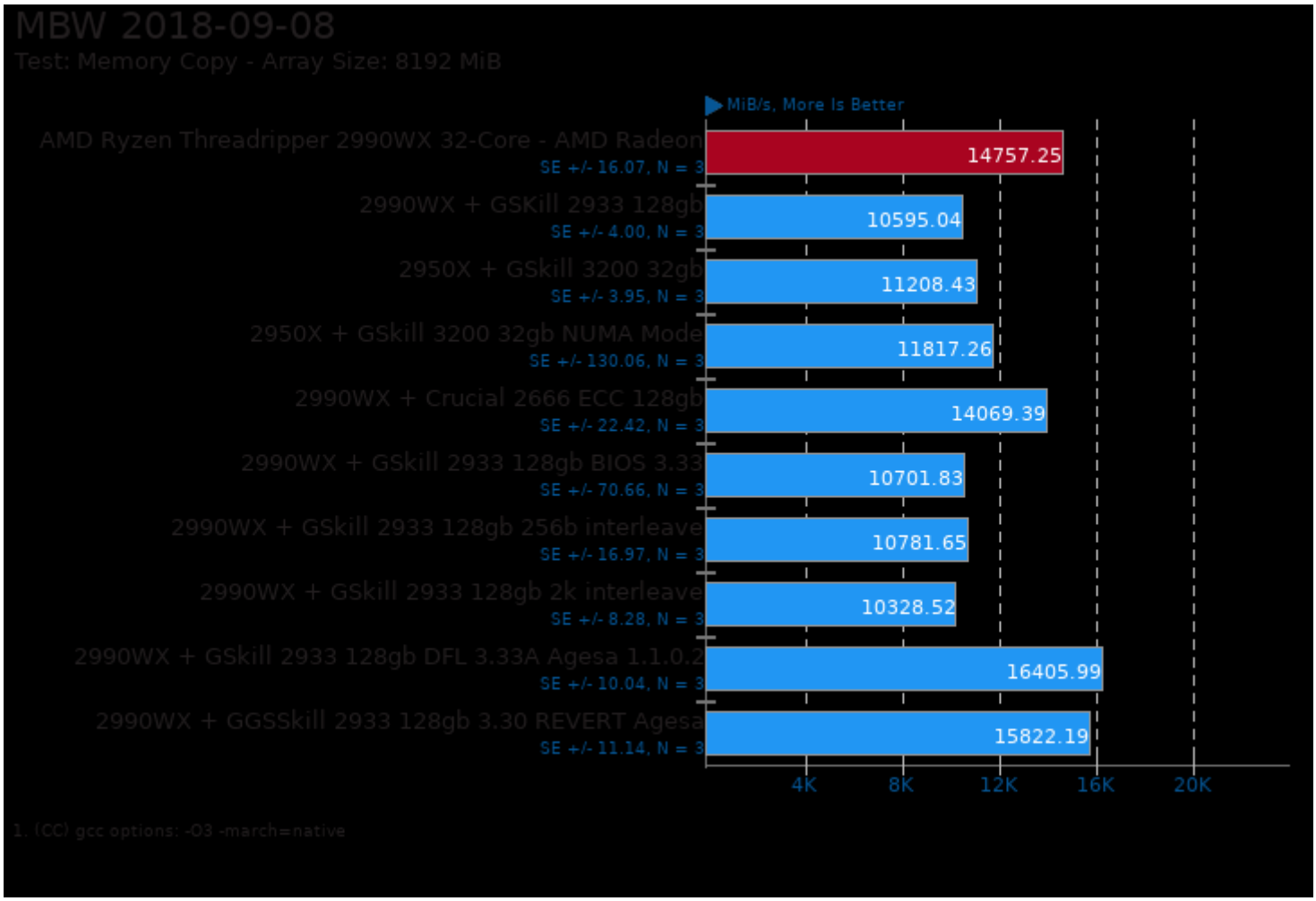


memory-2990-ecc

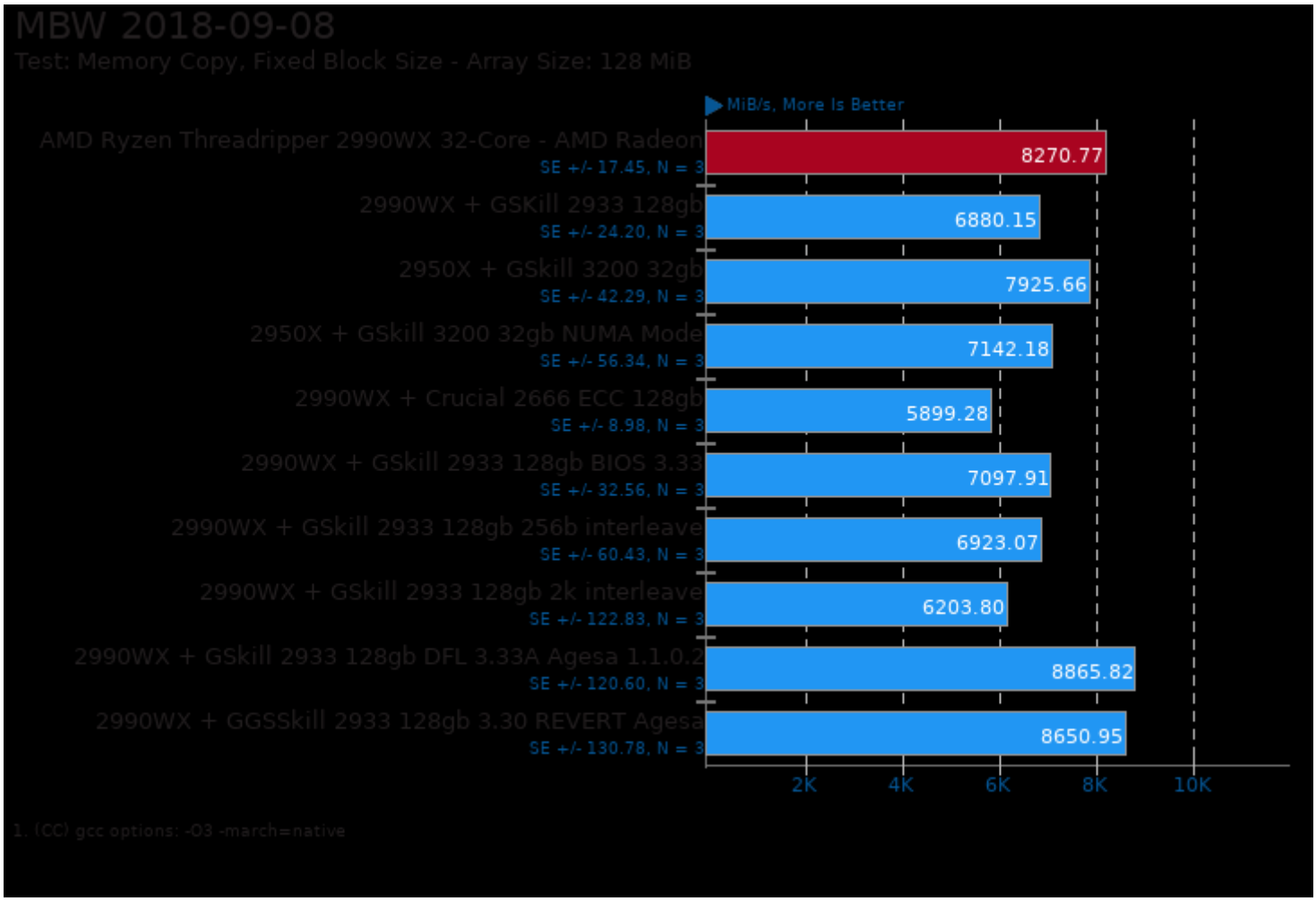


memory-2990-ecc

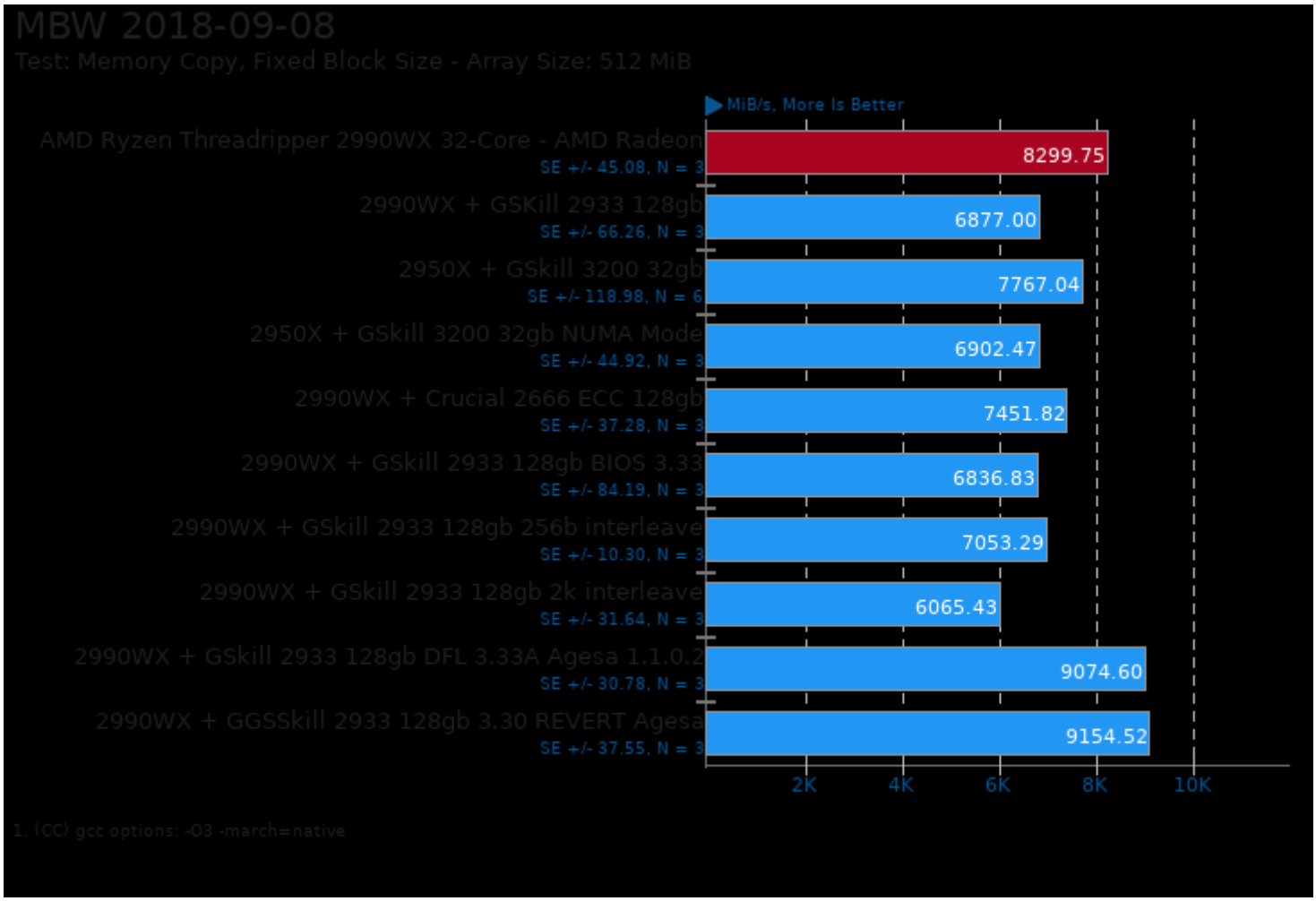



MBW 2018-09-08
Test: Memory Copy - Array Size: 8192 MiB
MiB/s, More Is Better
AMD Ryzen Threadripper 2990WX 32-Core - AMD Radeon
SE +/- 16.07, N = 3
14757.25
2990WX + GSKill 2933 128gb
SE +/- 4.00, N = 3
10595.04
2950X + GSkill 3200 32gb
SE +/- 3.95, N = 3
11208.43
2950X + GSkill 3200 32gb NUMA Mode
SE +/- 130.06, N = 3
11817.26
2990WX + Crucial 2666 ECC 128gb
SE +/- 22.42, N = 3
14069.39
2990WX + GSkill 2933 128gb BIOS 3.33
SE +/- 70.66, N = 3
10701.83
2990WX + GSkill 2933 128gb 256b interleave
SE +/- 16.97, N = 3
10781.65
2990WX + GSkill 2933 128gb 2k interleave
SE +/- 8.28, N = 3
10328.52
2990WX + GSkill 2933 128gb DFL 3.33A Agesa 1.1.0.2
SE +/- 10.04, N = 3
16405.99
2990WX + GGSSkill 2933 128gb 3.30 REVERT Agesa
SE +/- 11.14, N = 3
15822.19
4K
8K
12K
16K
20K
1. (CC) gcc options: -O3 -march=native

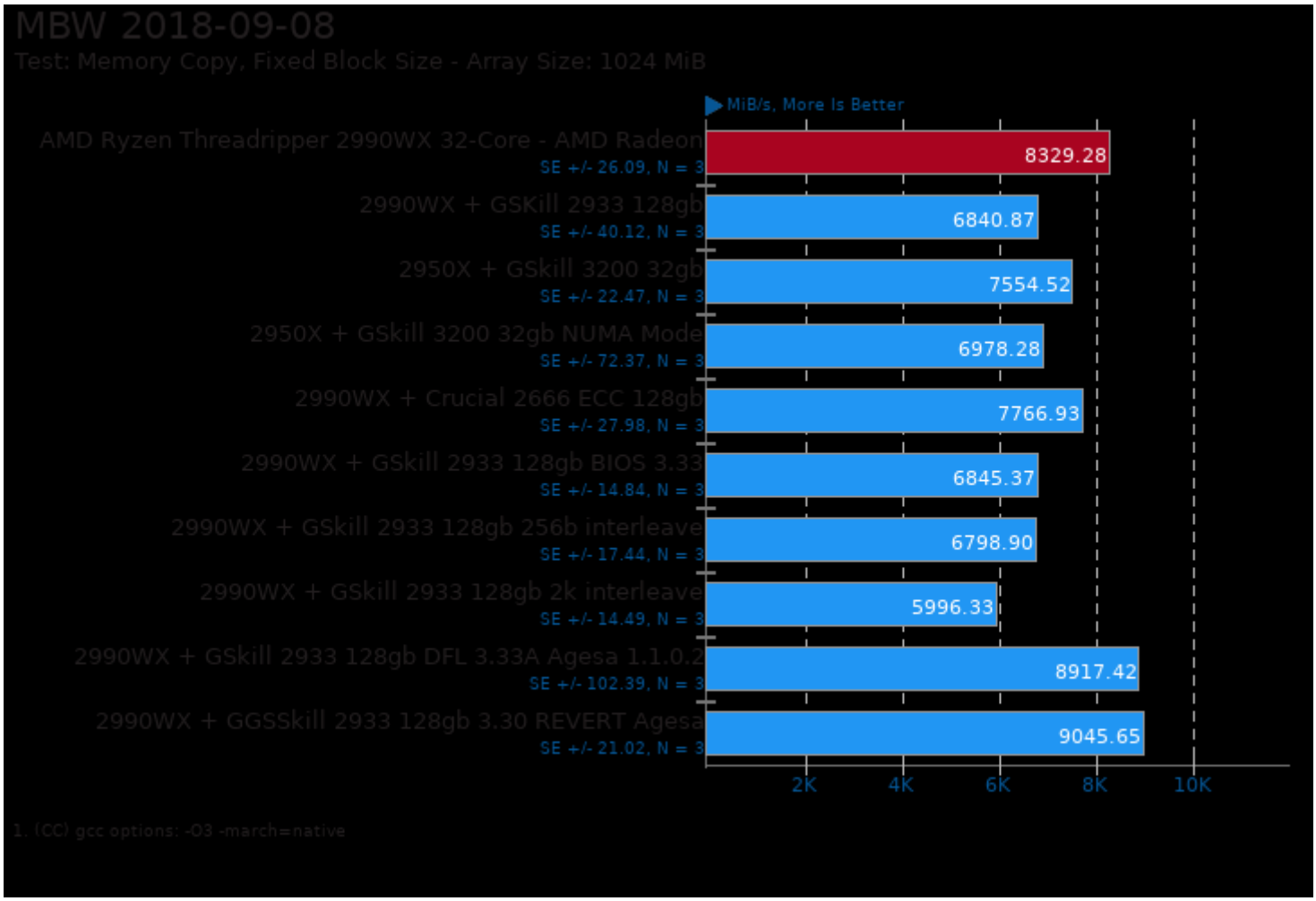
memory-2990-ecc



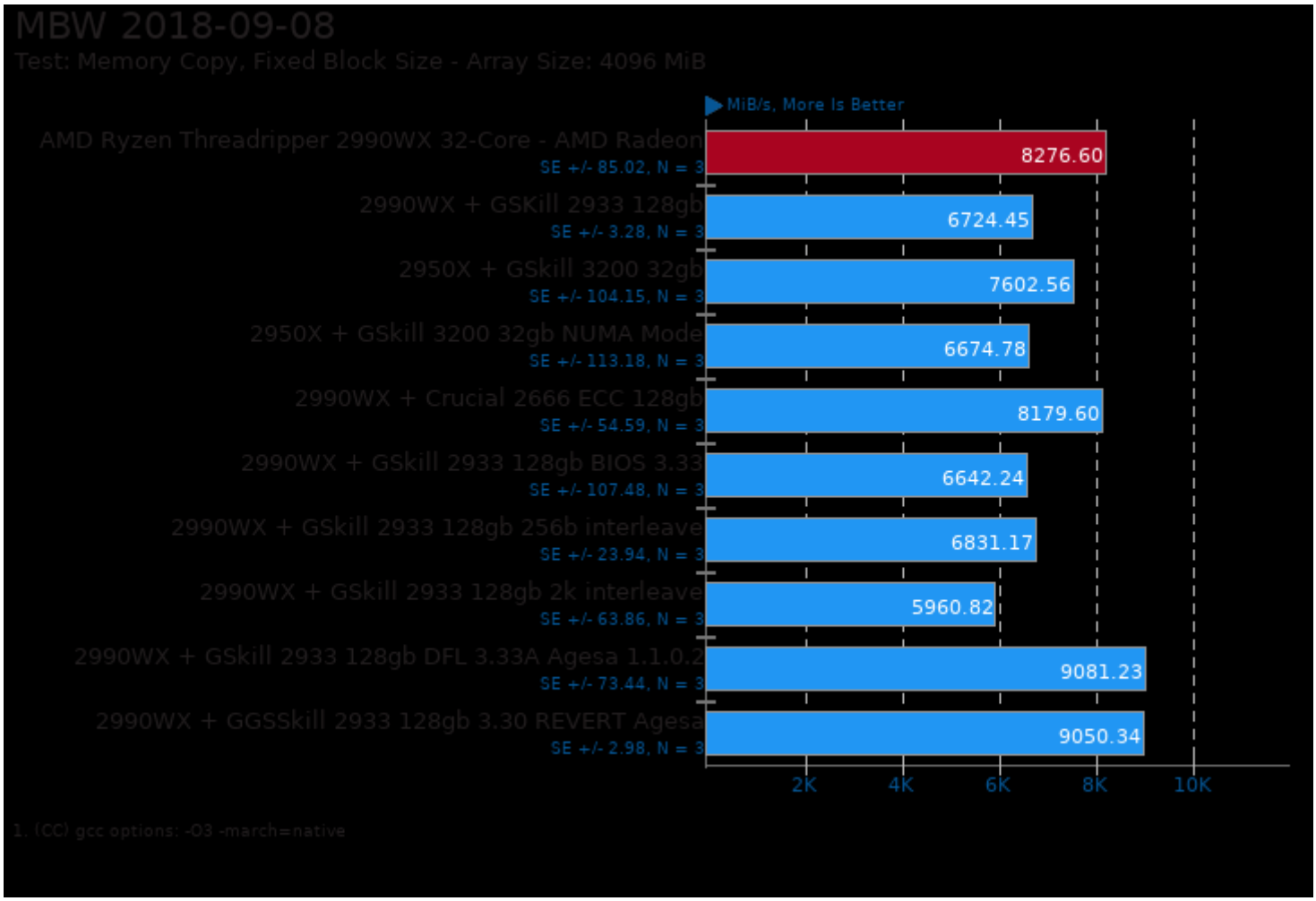
memory-2990-ecc



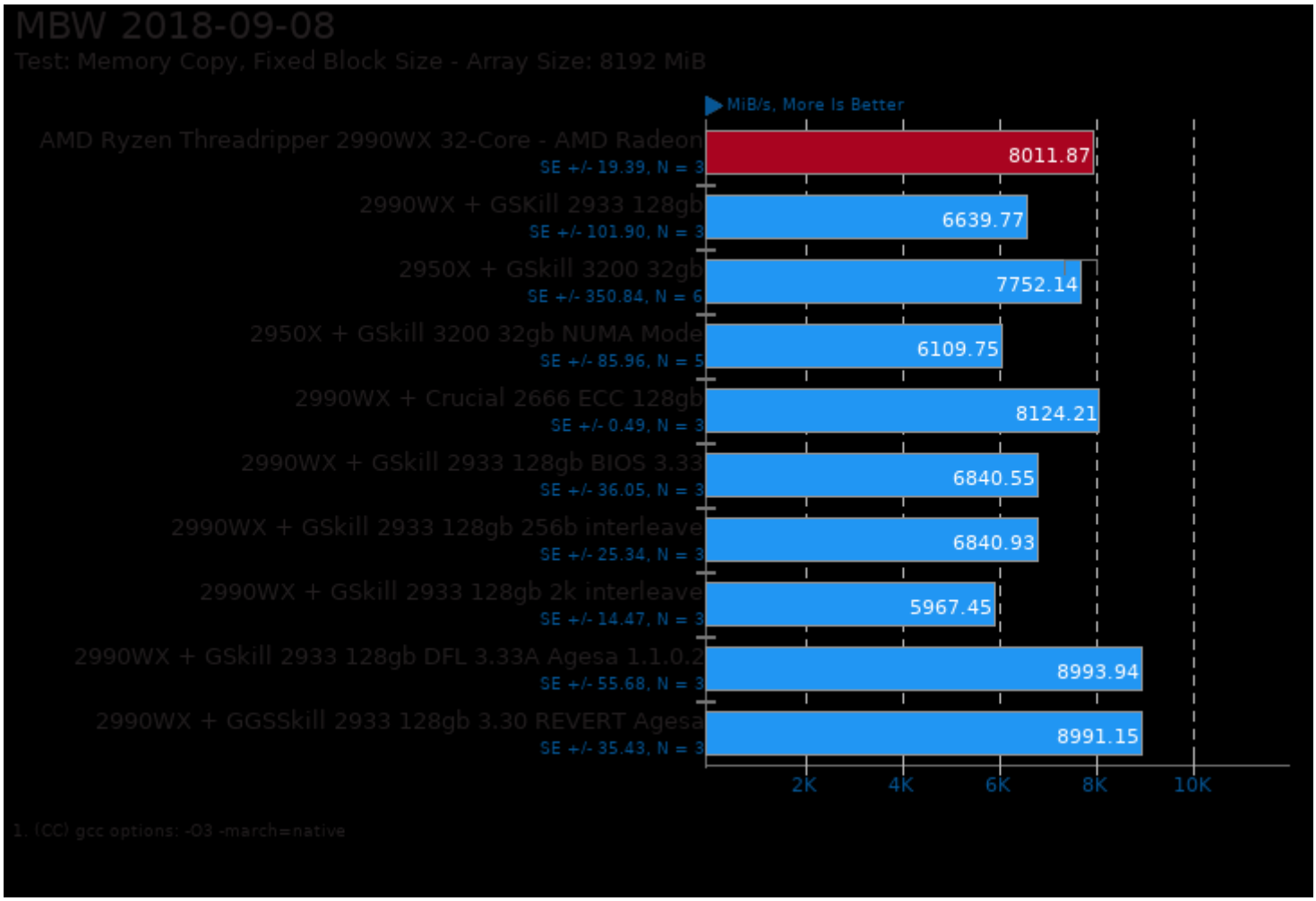
memory-2990-ecc



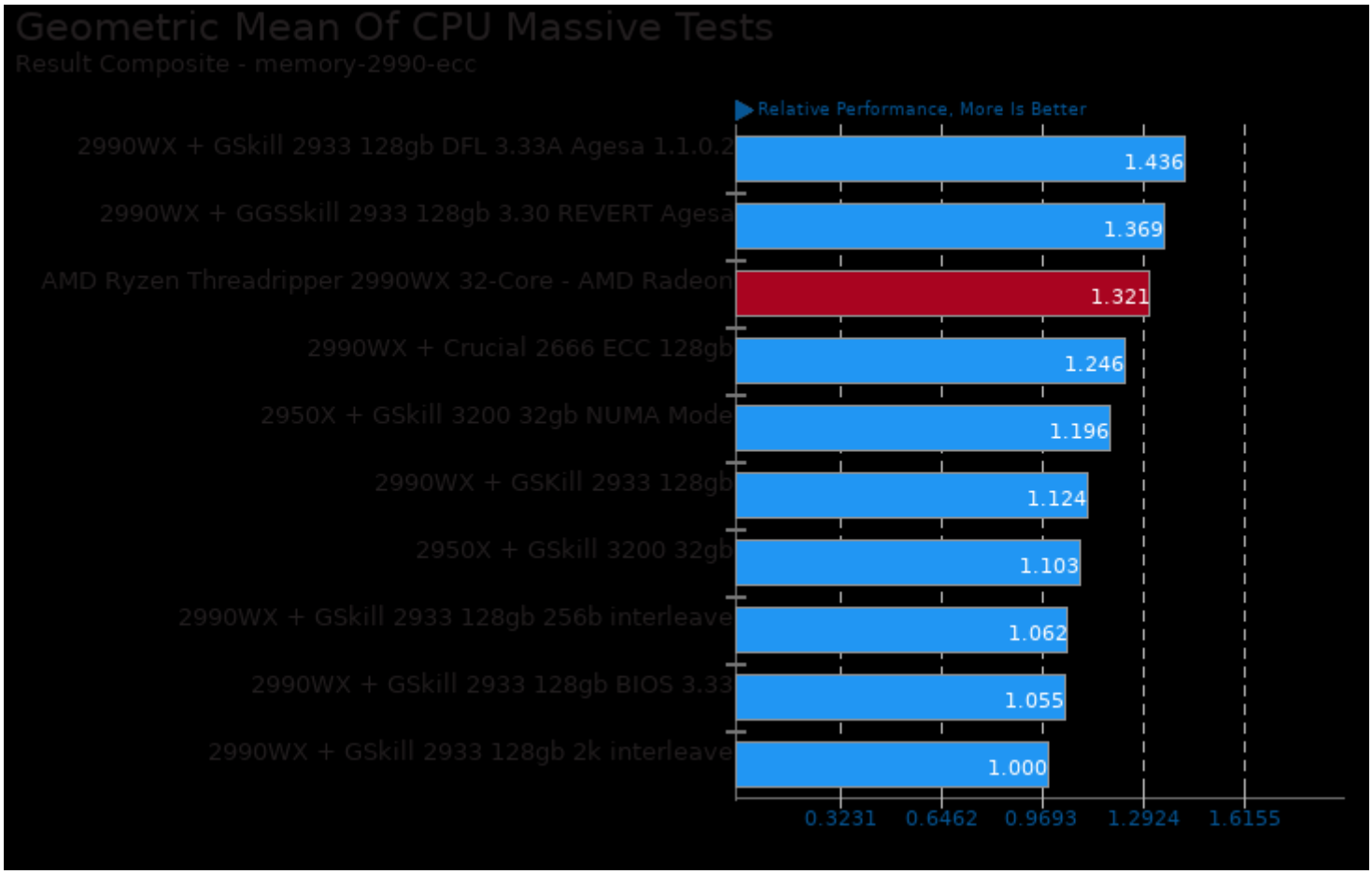
memory-2990-ecc



memory-2990-ecc

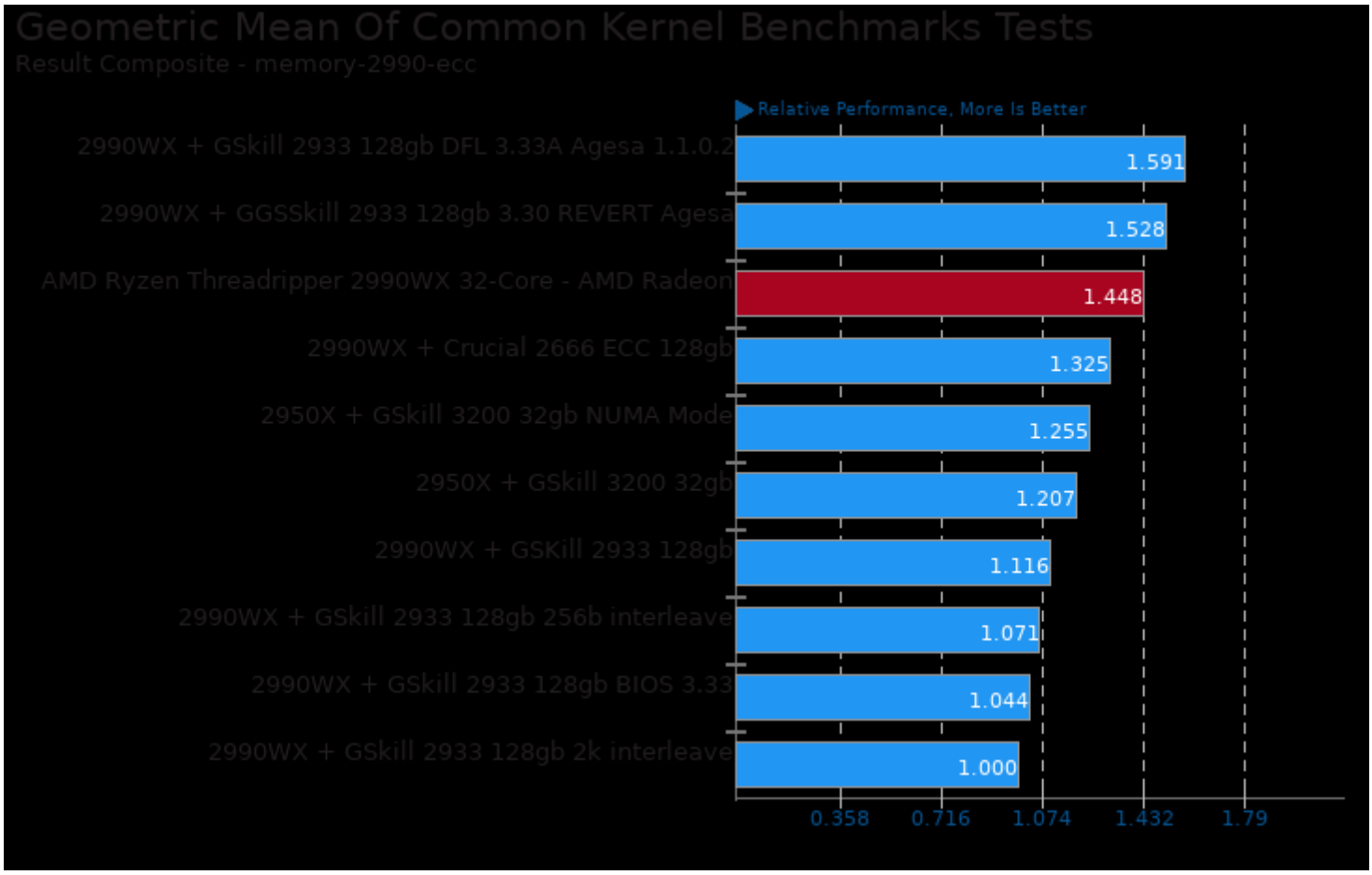


These geometric means are based upon test groupings / test suites for this result file.

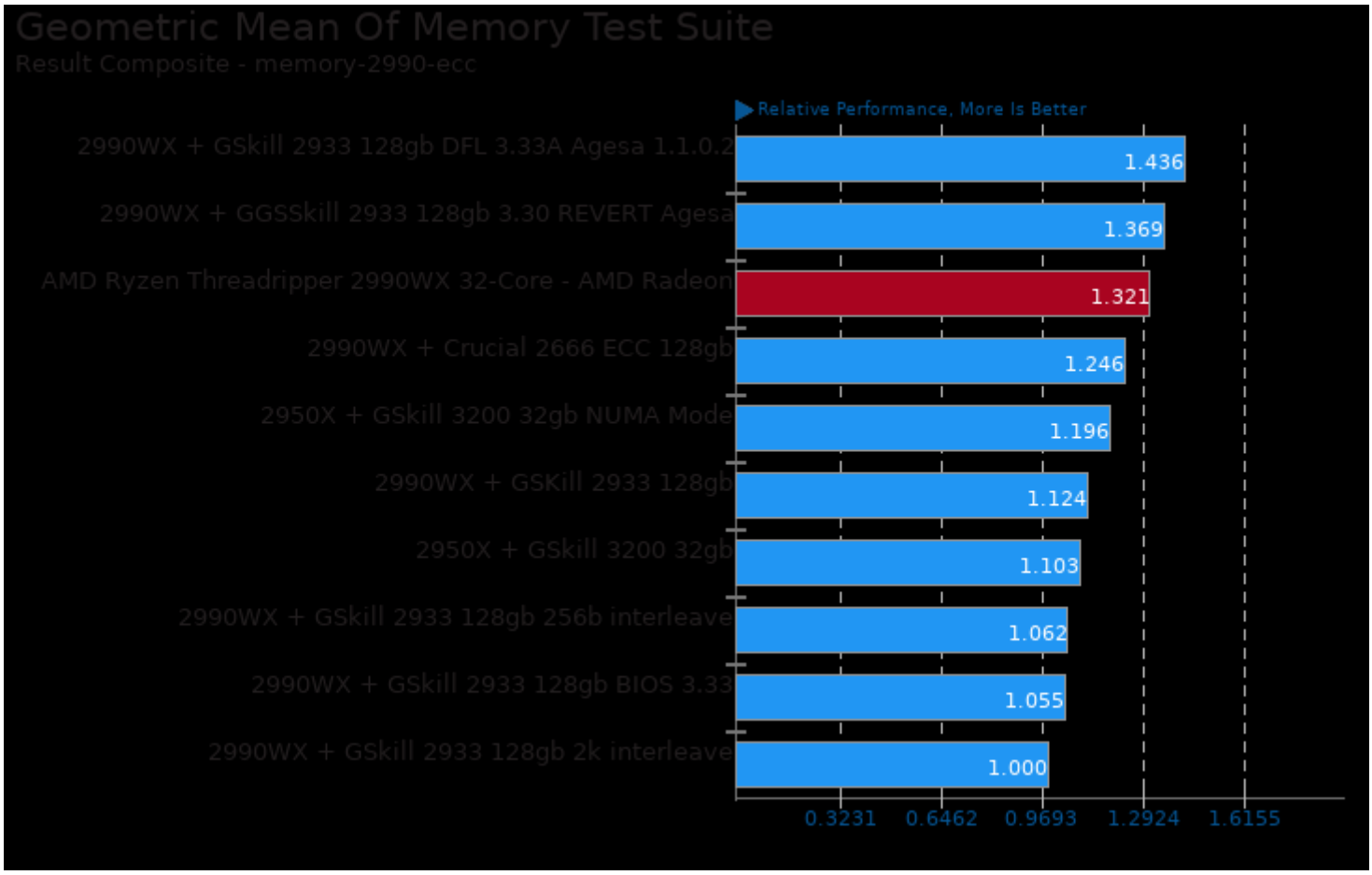


Geometric mean based upon tests: pts/mbw, pts/stream and pts/tinymembench

memory-2990-ecc



Geometric mean based upon tests: pts/tinymembench and pts/mbw



Geometric mean based upon tests: pts/stream, pts/tinymembench and pts/mbw

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 09:27.