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NVIDIA Resizable BAR GeForce RTX 30 Series Benchmarks

NVIDIA Resizable BAR Linux benchmarks for a future article on Phoronix by Michael Larabel.

Automated Executive Summary

RTX 3090: ReBAR had the most wins, coming in first place for 68% of the tests.

Based on the geometric mean of all complete results, the fastest (RTX 3090: ReBAR) was 1.619x the speed of the slowest (RTX 3060 Ti: Original). RTX 3070: Original was 1.115x the speed of RTX 3060 Ti: Original, RTX 3090: Original was 1.407x the speed of RTX 3070: Original, RTX 3060 Ti: ReBAR was 0.651x the speed of RTX 3090: Original, RTX 3070: ReBAR was 1.117x the speed of RTX 3060 Ti: ReBAR, RTX 3090: ReBAR was 1.419x the speed of RTX 3070: ReBAR.

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

Total War: Three Kingdoms (Resolution: 2560 x 1440 - Graphics Preset: Ultra - Scenario: Battle Benchmark) at 2.306x
Total War: Three Kingdoms (Resolution: 3840 x 2160 - Graphics Preset: Ultra - Scenario: Battle Benchmark) at 2.086x
Total War: Three Kingdoms (Resolution: 3840 x 2160 - Graphics Preset: Medium - Scenario: Battle Benchmark) at 1.869x
DiRT Rally 2.0 (Resolution: 3840 x 1600 - Graphics Preset: Ultra) at 1.84x
DiRT Rally 2.0 (Resolution: 3840 x 1600 - Graphics Preset: High) at 1.839x
DiRT Rally 2.0 (Resolution: 2880 x 1620 - Graphics Preset: Ultra) at 1.832x

DiRT Rally 2.0 (Resolution: 2880 x 1620 - Graphics Preset: High) at 1.83x
Total War: Three Kingdoms (Resolution: 2560 x 1440 - Graphics Preset: Medium - Scenario: Battle Benchmark) at 1.828x
GravityMark (Resolution: 3840 x 2160 - Renderer: Vulkan) at 1.793x
Shadow of the Tomb Raider (Resolution: 3840 x 2160 - Graphics Preset: Highest - Anti Aliasing: Off) at 1.75x.

Test Systems:

RTX 3060 Ti: Original

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3801 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Western Digital WDS100T1X0E-00AFY0 + 1000GB Western Digital WD_BLACK SN850 1TB + 2000GB, Graphics: NVIDIA GeForce RTX 3060 Ti 8GB, Audio: NVIDIA GA104 HD Audio, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

OS: Ubuntu 21.10, Kernel: 5.13.0-14-generic (x86_64), Desktop: GNOME Shell 40.2, Display Server: X Server 1.20.11, Display Driver: NVIDIA 470.63.01, OpenGL: 4.6.0, Vulkan: 1.2.175, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa201016
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 3070: Original

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3801 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Western Digital WDS100T1X0E-00AFY0 + 1000GB Western Digital WD_BLACK SN850 1TB + 2000GB, Graphics: NVIDIA GeForce RTX 3070 8GB, Audio: NVIDIA GA104 HD Audio, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

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RTX 3090: Original

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3801 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Western Digital WDS100T1X0E-00AFY0 + 1000GB Western Digital WD_BLACK SN850 1TB + 2000GB, Graphics: NVIDIA GeForce

RTX 3090 24GB, Audio: NVIDIA GA102 HD Audio, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

OS: Ubuntu 21.10, Kernel: 5.13.0-14-generic (x86_64), Desktop: GNOME Shell 40.2, Display Server: X Server 1.20.11, Display Driver: NVIDIA 470.63.01, OpenGL: 4.6.0, Vulkan: 1.2.175, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa201016
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 3060 Ti: ReBAR

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3801 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Western Digital WDS100T1X0E-00AFY0 + 1000GB Western Digital WD_BLACK SN850 1TB + 2000GB, Graphics: NVIDIA GeForce RTX 3060 Ti 8GB, Audio: NVIDIA GA104 HD Audio, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

OS: Ubuntu 21.10, Kernel: 5.13.0-14-generic (x86_64), Desktop: GNOME Shell 40.2, Display Server: X Server 1.20.11, Display Driver: NVIDIA 470.63.01, OpenGL: 4.6.0, OpenCL: OpenCL 3.0 CUDA 11.4.112, Vulkan: 1.2.175, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa201016
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 3070: ReBAR

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3801 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Western Digital WDS100T1X0E-00AFY0 + 1000GB Western Digital WD_BLACK SN850 1TB + 2000GB, Graphics: NVIDIA GeForce RTX 3070 8GB, Audio: NVIDIA GA104 HD Audio, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

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Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa201016
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RTX 3090: ReBAR

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3801 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Western Digital WDS100T1X0E-00AFY0 + 1000GB Western Digital WD_BLACK SN850 1TB + 2000GB, Graphics: NVIDIA GeForce RTX 3090 24GB, Audio: NVIDIA GA102 HD Audio, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

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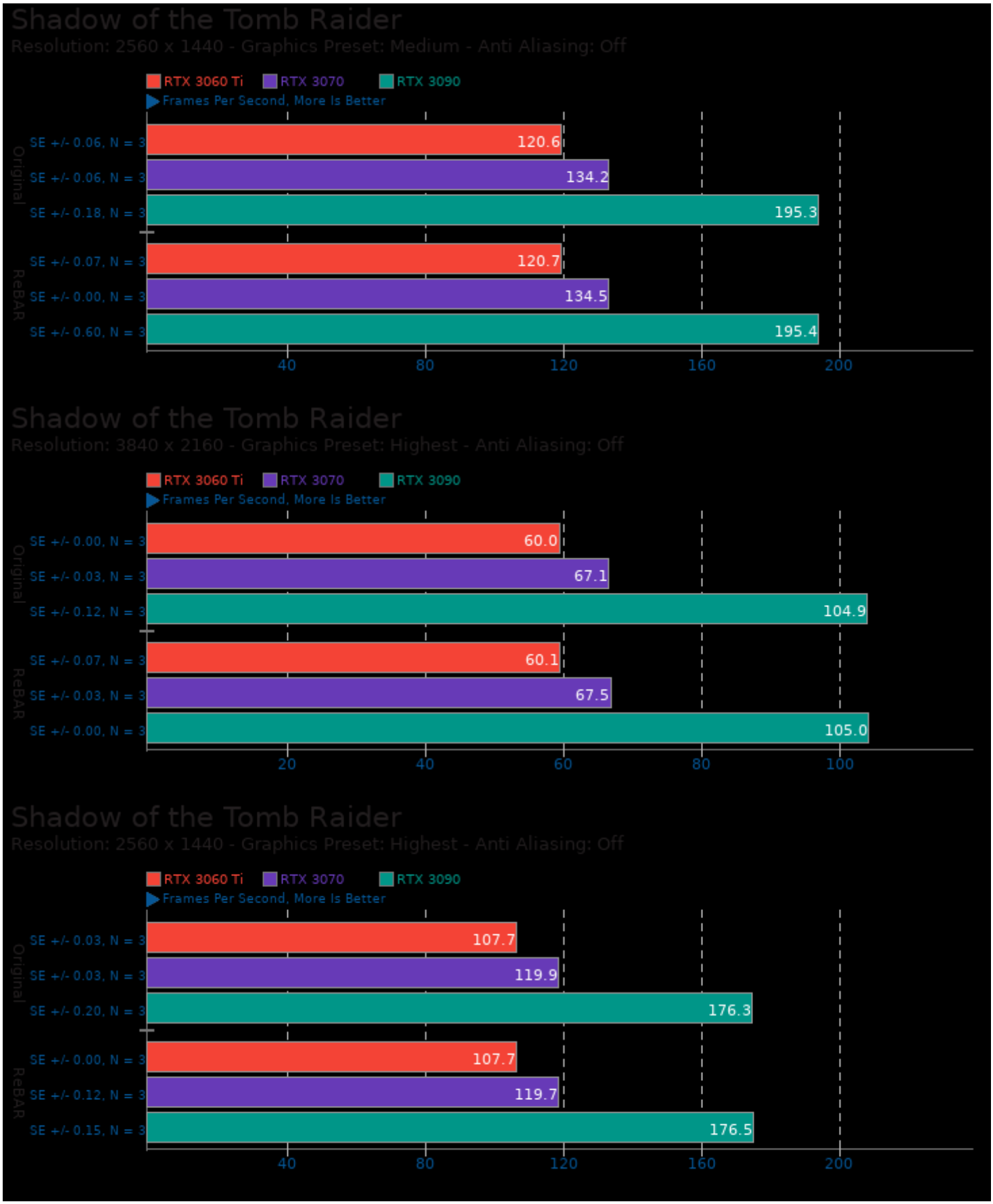
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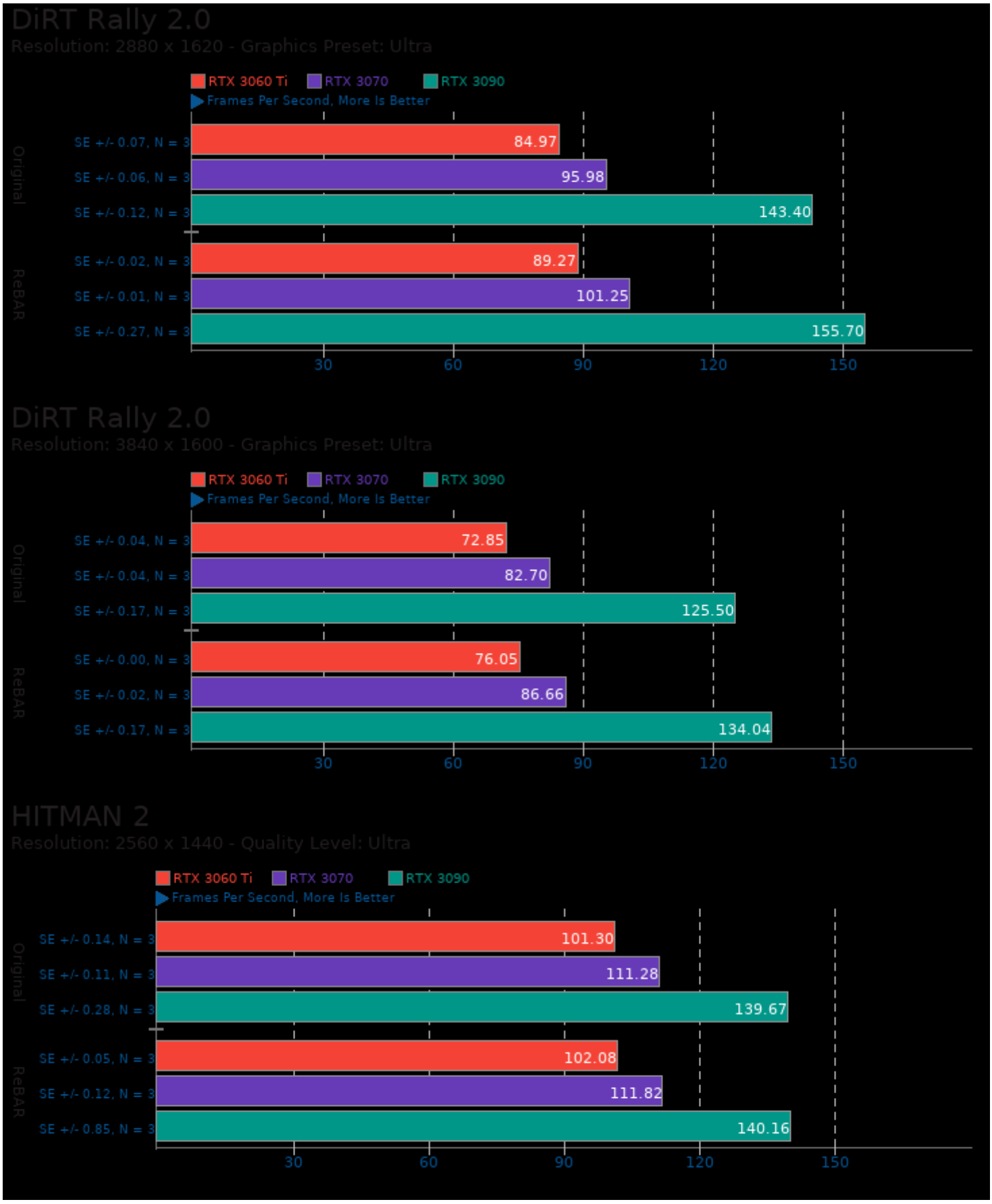
	RTX 3060 Ti: Original	RTX 3070: Original	RTX 3090: Original	RTX 3060 Ti: ReBAR	RTX 3070: ReBAR	RTX 3090: ReBAR
Shadow of the Tomb Raider - 2560 x 1440 - Medium - Off (FPS)	**120.6**	134.2	195.3	120.7	134.5	**195.4**
Normalized	61.72%	68.68%	99.95%	61.77%	68.83%	100%
Standard Deviation	0.1%	0.1%	0.2%	0.1%	0%	0.5%
Shadow of the Tomb Raider - 3840 x 2160 - Highest - Off (FPS)	**60**	67.1	104.9	60.1	67.5	**105**
Normalized	57.14%	63.9%	99.9%	57.24%	64.29%	100%
Standard Deviation	0%	0.1%	0.2%	0.2%	0.1%	0%
Shadow of the Tomb Raider - 2560 x 1440 - Highest - Off (FPS)	**107.7**	119.9	176.3	**107.7**	119.7	**176.5**
Normalized	61.02%	67.93%	99.89%	61.02%	67.82%	100%
Standard Deviation	0.1%	0%	0.2%	0%	0.2%	0.1%
Shadow of the Tomb Raider - 3840 x 2160 - Medium - Off (FPS)	**68.8**	77.2	118.7	**68.8**	77.1	**118.8**
Normalized	57.91%	64.98%	99.92%	57.91%	64.9%	100%
Standard Deviation	0.1%	0.1%	0.2%	0.1%	0.1%	0%
DiRT Rally 2.0 - 2880 x 1620 - High (FPS)	**138.887975**	156.240061	227.390086	149.649007	169.386688	**254.179148**
Normalized	54.64%	61.47%	89.46%	58.88%	66.64%	100%
Standard Deviation	0.2%	0.2%	0.1%	0.1%	0%	0.1%
DiRT Rally 2.0 - 3840 x 1600 - High (FPS)	**119.322306**	135.022542	200.387746	127.109922	144.540583	**219.427434**
Normalized	54.38%	61.53%	91.32%	57.93%	65.87%	100%
Standard Deviation	0.1%	0%	0.2%	0%	0%	0.2%
DiRT Rally 2.0 - 2880 x 1620 - Ultra (FPS)	**84.968228**	95.981562	143.404622	89.265518	101.250816	**155.698964**
Normalized	54.57%	61.65%	92.1%	57.33%	65.03%	100%
Standard Deviation	0.1%	0.1%	0.2%	0%	0%	0.3%
DiRT Rally 2.0 - 3840 x 1600 - Ultra (FPS)	**72.852905**	82.697937	125.499481	76.053050	86.661959	**134.040039**
Normalized	54.35%	61.7%	93.63%	56.74%	64.65%	100%
Standard Deviation	0.1%	0.1%	0.2%	0%	0%	0.2%

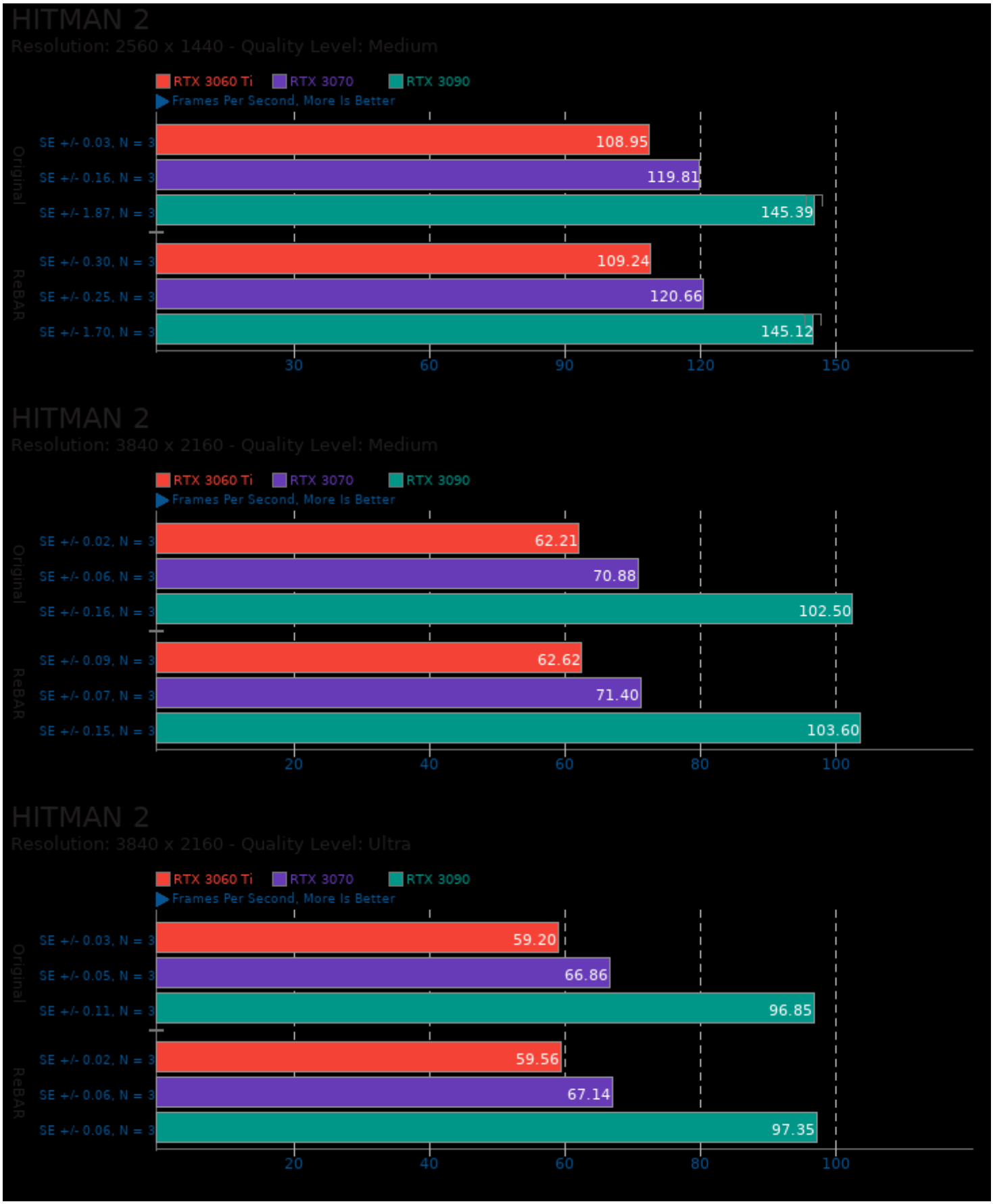
HITMAN 2 - 2560 x 1440 - Ultra (FPS)	101.30	111.28	139.67	102.08	111.82	140.16
Normalized	72.27%	79.39%	99.65%	72.83%	79.78%	100%
Standard Deviation	0.2%	0.2%	0.4%	0.1%	0.2%	1%
HITMAN 2 - 2560 x 1440 - Medium (FPS)	108.95	119.81	145.39	109.24	120.66	145.12
Normalized	74.94%	82.41%	100%	75.14%	82.99%	99.81%
Standard Deviation	0%	0.2%	2.2%	0.5%	0.4%	2%
HITMAN 2 - 3840 x 2160 - Medium (FPS)	62.21	70.88	102.50	62.62	71.40	103.60
Normalized	60.05%	68.42%	98.94%	60.44%	68.92%	100%
Standard Deviation	0.1%	0.2%	0.3%	0.2%	0.2%	0.3%
HITMAN 2 - 3840 x 2160 - Ultra (FPS)	59.20	66.86	96.85	59.56	67.14	97.35
Normalized	60.81%	68.68%	99.49%	61.18%	68.97%	100%
Standard Deviation	0.1%	0.1%	0.2%	0.1%	0.2%	0.1%
Total War: Three Kingdoms - 2560 x 1440 - Medium - Battle Benchmark (FPS)	115.7	132.6	202.9	121.0	137.3	211.5
Normalized	54.7%	62.7%	95.93%	57.21%	64.92%	100%
Standard Deviation	0%	2.4%	2.1%	0.5%	0.7%	0.4%
GravityMark - 2560 x 1440 - Vulkan (FPS)	151.5	166.0	230.9	138.1	148.6	213.0
Normalized	65.61%	71.89%	100%	59.81%	64.36%	92.25%
Standard Deviation	0.3%	0%	0.2%	0.2%	0.1%	0.5%
GravityMark - 3840 x 2160 - Vulkan (FPS)	107.3	116.6	176.3	98.3	105.4	162.8
Normalized	60.86%	66.14%	100%	55.76%	59.78%	92.34%
Standard Deviation	0.3%	0.6%	0.5%	0.1%	0.1%	0%
F1 2020 - 2560 x 1440 - High (FPS)	223	237	247	216	225	224
Normalized	90.28%	95.95%	100%	87.45%	91.09%	90.69%
Standard Deviation	0.3%	0.5%	1.3%	0.5%	0.5%	0.3%
F1 2020 - 2560 x 1440 - Ultra (FPS)	167	181	200	165	177	181
Normalized	83.5%	90.5%	100%	82.5%	88.5%	90.5%
Standard Deviation	0%	1%	1.3%	0.3%	0.3%	1.7%
F1 2020 - 3840 x 2160 - Ultra (FPS)	111	125	176	112	127	171
Normalized	63.07%	71.02%	100%	63.64%	72.16%	97.16%
Standard Deviation	0%	0.5%	0.3%	0%	0%	0.3%
F1 2020 - 3840 x 2160 - High (FPS)	146	165	227	148	166	217
Normalized	64.32%	72.69%	100%	65.2%	73.13%	95.59%
Standard Deviation	0.4%	0.4%	0.3%	0%	0%	1%
Total War: Three Kingdoms - 2560 x 1440 - Ultra - Battle Benchmark (FPS)	48.1	53.0	72.1	60.7	70.5	110.9
Normalized	43.37%	47.79%	65.01%	54.73%	63.57%	100%
Standard Deviation	1.1%	0.9%	0.4%	1%	0.1%	0.3%

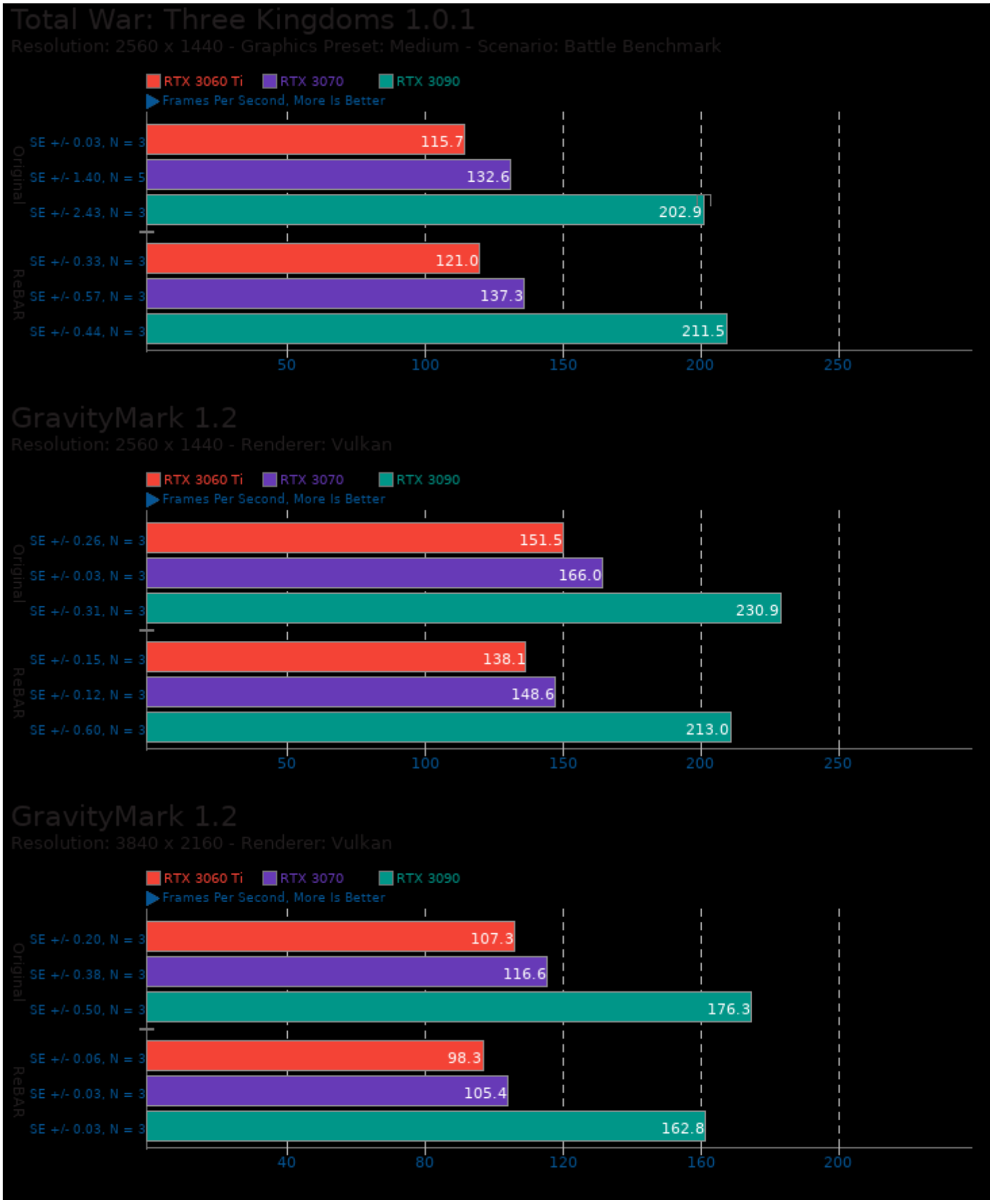
Total War: Three Kingdoms - 3840 x 2160 - Ultra - Battle Benchmark (FPS)	**26.8**	30.0	44.9	30.0	34.5	**55.9**
Normalized	47.94%	53.67%	80.32%	53.67%	61.72%	100%
Standard Deviation	1%	0.8%	0.6%	1.3%	0.9%	0.8%
Total War: Three Kingdoms - 3840 x 2160 - Medium - Battle Benchmark (FPS)	**57.8**	65.4	102.4	58.9	67.4	**108.0**
Normalized	53.52%	60.56%	94.81%	54.54%	62.41%	100%
Standard Deviation	0.9%	0.6%	0.7%	0.3%	1.1%	0.5%

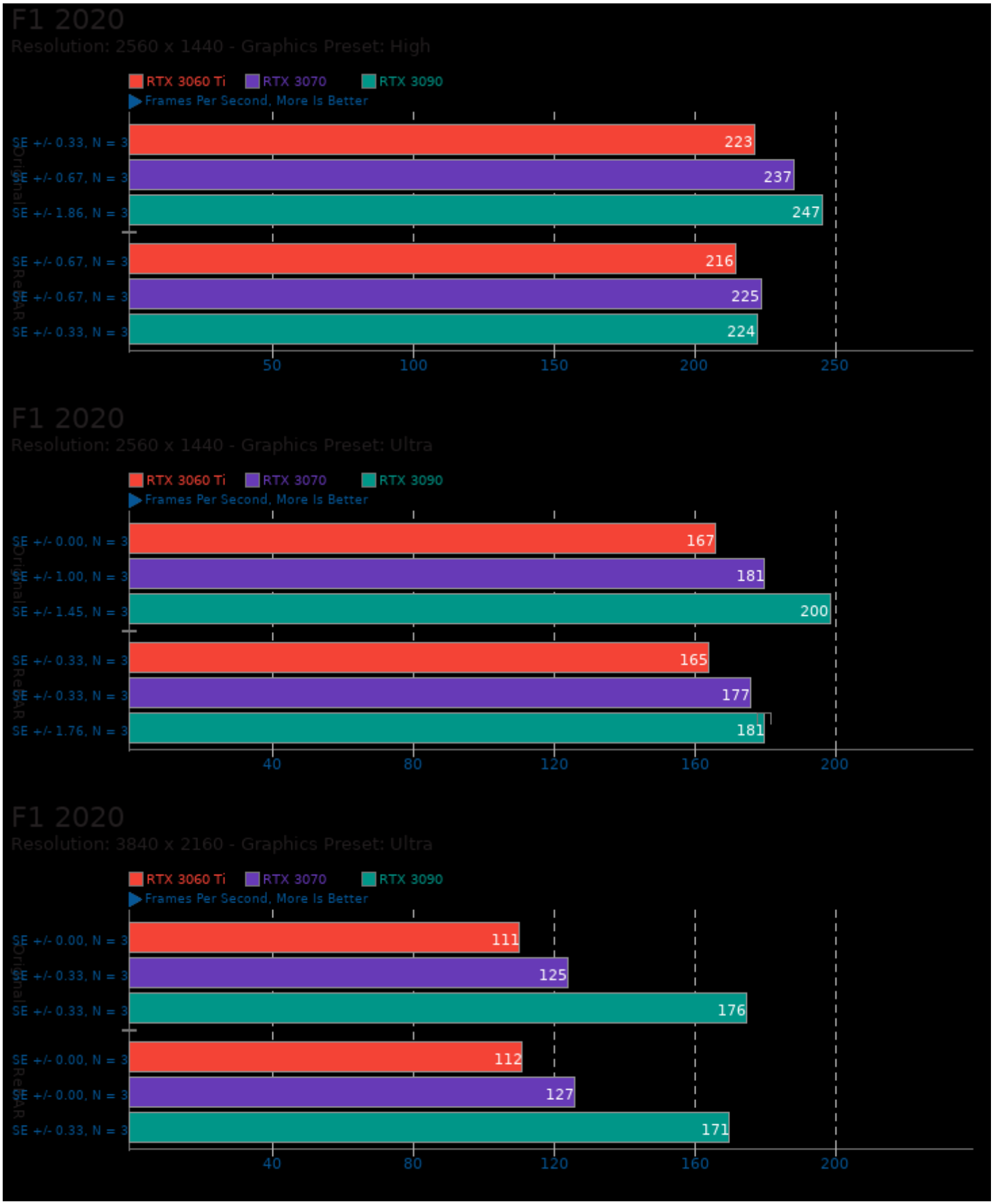

Shadow of the Tomb Raider
Resolution: 2560 x 1440 - Graphics Preset: Medium - Anti Aliasing: Off
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.06, N = 3
120.6
SE +/- 0.06, N = 3
134.2
SE +/- 0.18, N = 3
195.3
ReBAR
SE +/- 0.07, N = 3
120.7
SE +/- 0.00, N = 3
134.5
SE +/- 0.60, N = 3
195.4
40
80
120
160
200
Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: Highest - Anti Aliasing: Off
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.00, N = 3
60.0
SE +/- 0.03, N = 3
67.1
SE +/- 0.12, N = 3
104.9
ReBAR
SE +/- 0.07, N = 3
60.1
SE +/- 0.03, N = 3
67.5
SE +/- 0.00, N = 3
105.0
20
40
60
80
100
Shadow of the Tomb Raider
Resolution: 2560 x 1440 - Graphics Preset: Highest - Anti Aliasing: Off
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.03, N = 3
107.7
SE +/- 0.03, N = 3
119.9
SE +/- 0.20, N = 3
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ReBAR
SE +/- 0.00, N = 3
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176.5
40
80
120
160
200

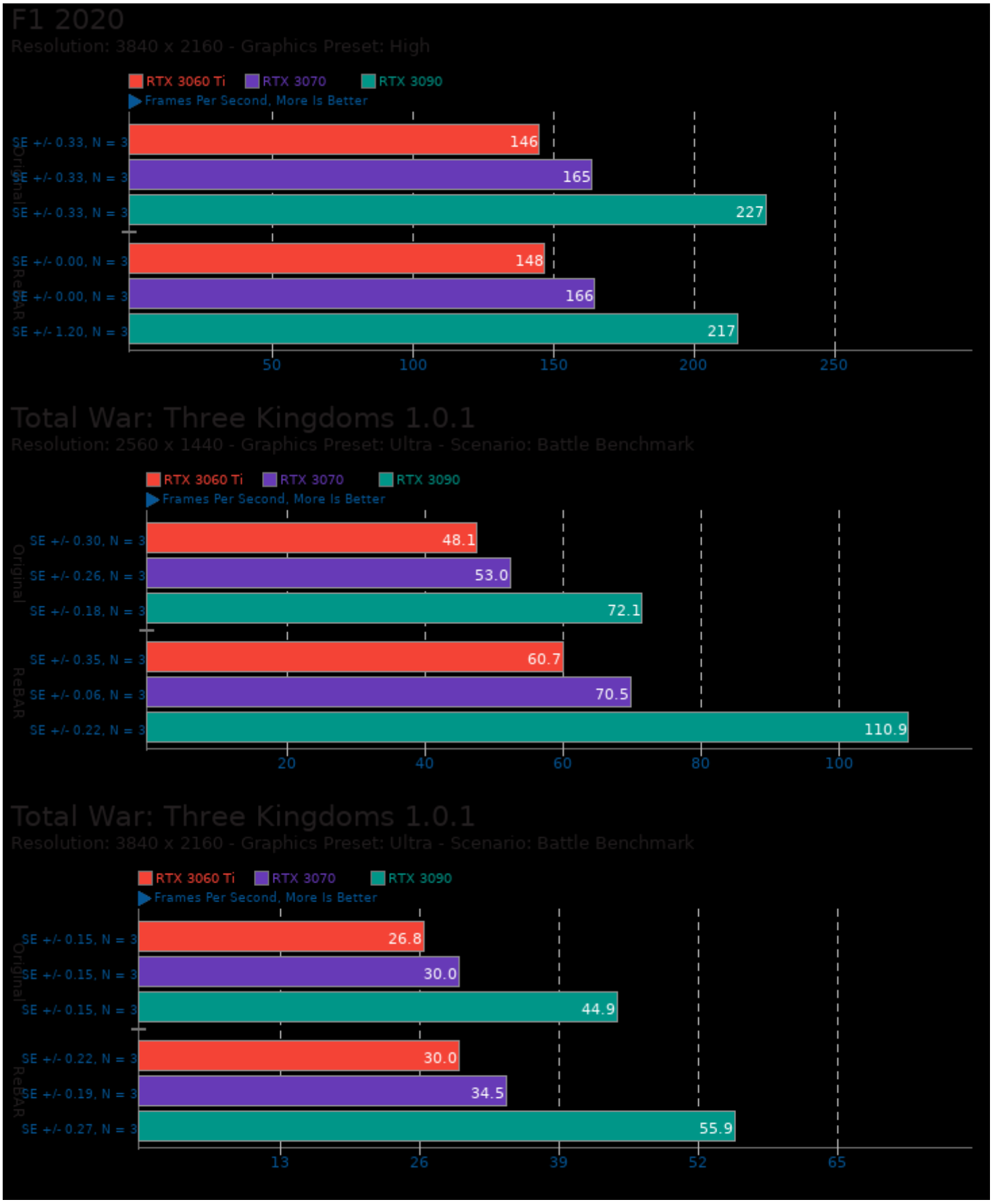

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: Medium - Anti Aliasing: Off
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.03, N = 3
68.8
SE +/- 0.03, N = 3
77.2
SE +/- 0.13, N = 3
118.7
ReBAR
SE +/- 0.03, N = 3
68.8
SE +/- 0.07, N = 3
77.1
SE +/- 0.03, N = 3
118.8
30
60
90
120
150
DiRT Rally 2.0
Resolution: 2880 x 1620 - Graphics Preset: High
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.15, N = 3
138.89
SE +/- 0.16, N = 3
156.24
SE +/- 0.08, N = 3
227.39
ReBAR
SE +/- 0.06, N = 3
149.65
SE +/- 0.02, N = 3
169.39
SE +/- 0.11, N = 3
254.18
60
120
180
240
300
DiRT Rally 2.0
Resolution: 3840 x 1600 - Graphics Preset: High
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.05, N = 3
119.32
SE +/- 0.04, N = 3
135.02
SE +/- 0.29, N = 3
200.39
ReBAR
SE +/- 0.03, N = 3
127.11
SE +/- 0.02, N = 3
144.54
SE +/- 0.27, N = 3
219.43
50
100
150
200
250

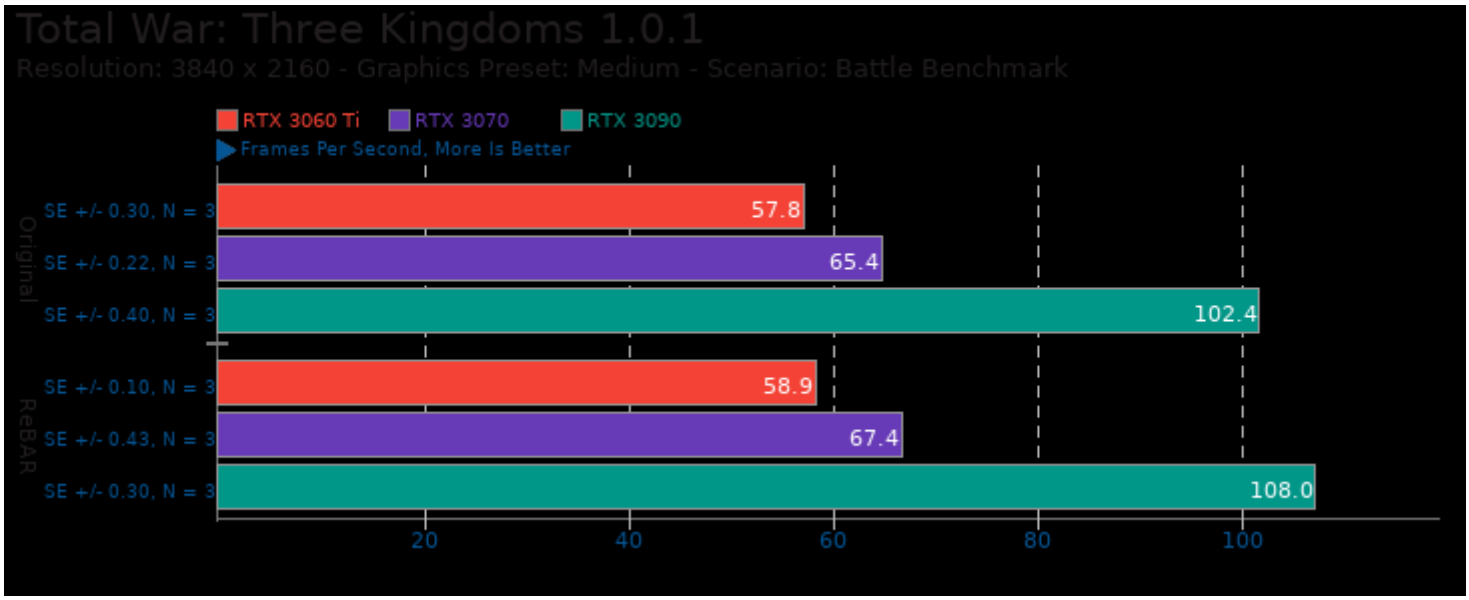

DiRT Rally 2.0
Resolution: 2880 x 1620 - Graphics Preset: Ultra
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
ReBAR
SE +/- 0.07, N = 3
84.97
SE +/- 0.06, N = 3
95.98
SE +/- 0.12, N = 3
143.40
SE +/- 0.02, N = 3
89.27
SE +/- 0.01, N = 3
101.25
SE +/- 0.27, N = 3
155.70
30
60
90
120
150
DiRT Rally 2.0
Resolution: 3840 x 1600 - Graphics Preset: Ultra
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
ReBAR
SE +/- 0.04, N = 3
72.85
SE +/- 0.04, N = 3
82.70
SE +/- 0.17, N = 3
125.50
SE +/- 0.00, N = 3
76.05
SE +/- 0.02, N = 3
86.66
SE +/- 0.17, N = 3
134.04
30
60
90
120
150
HITMAN 2
Resolution: 2560 x 1440 - Quality Level: Ultra
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
ReBAR
SE +/- 0.14, N = 3
101.30
SE +/- 0.11, N = 3
111.28
SE +/- 0.28, N = 3
139.67
SE +/- 0.05, N = 3
102.08
SE +/- 0.12, N = 3
111.82
SE +/- 0.85, N = 3
140.16
30
60
90
120
150


HITMAN 2
Resolution: 2560 x 1440 - Quality Level: Medium
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.03, N = 3
108.95
SE +/- 0.16, N = 3
119.81
SE +/- 1.87, N = 3
145.39
ReBAR
SE +/- 0.30, N = 3
109.24
SE +/- 0.25, N = 3
120.66
SE +/- 1.70, N = 3
145.12
30
60
90
120
150
HITMAN 2
Resolution: 3840 x 2160 - Quality Level: Medium
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.02, N = 3
62.21
SE +/- 0.06, N = 3
70.88
SE +/- 0.16, N = 3
102.50
ReBAR
SE +/- 0.09, N = 3
62.62
SE +/- 0.07, N = 3
71.40
SE +/- 0.15, N = 3
103.60
20
40
60
80
100
HITMAN 2
Resolution: 3840 x 2160 - Quality Level: Ultra
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.03, N = 3
59.20
SE +/- 0.05, N = 3
66.86
SE +/- 0.11, N = 3
96.85
ReBAR
SE +/- 0.02, N = 3
59.56
SE +/- 0.06, N = 3
67.14
SE +/- 0.06, N = 3
97.35
20
40
60
80
100

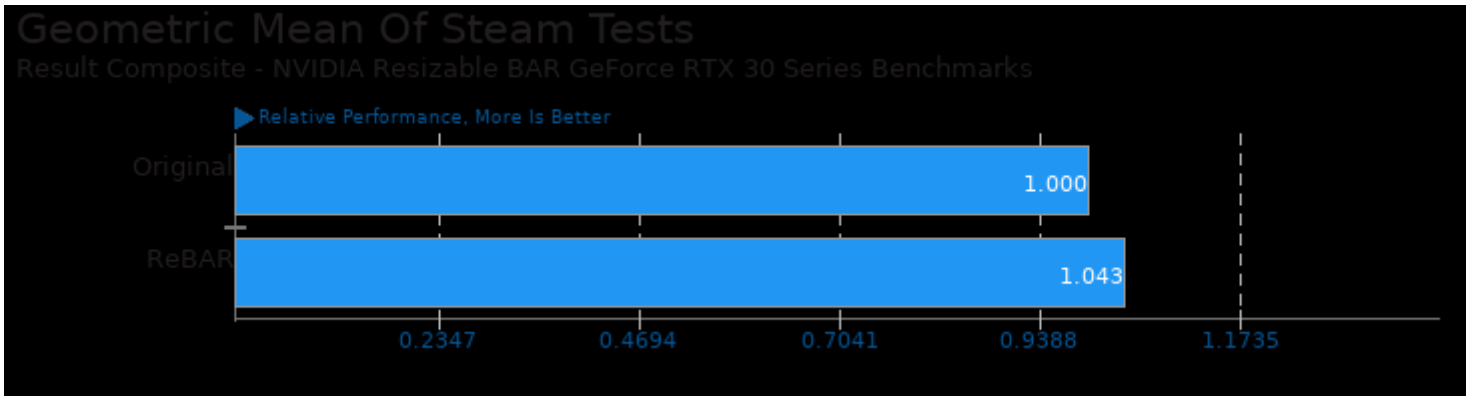

Total War: Three Kingdoms 1.0.1
Resolution: 2560 x 1440 - Graphics Preset: Medium - Scenario: Battle Benchmark
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.03, N = 3
115.7
SE +/- 1.40, N = 5
132.6
SE +/- 2.43, N = 3
202.9
ReBAR
SE +/- 0.33, N = 3
121.0
SE +/- 0.57, N = 3
137.3
SE +/- 0.44, N = 3
211.5
50
100
150
200
250
GravityMark 1.2
Resolution: 2560 x 1440 - Renderer: Vulkan
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.26, N = 3
151.5
SE +/- 0.03, N = 3
166.0
SE +/- 0.31, N = 3
230.9
ReBAR
SE +/- 0.15, N = 3
138.1
SE +/- 0.12, N = 3
148.6
SE +/- 0.60, N = 3
213.0
50
100
150
200
250
GravityMark 1.2
Resolution: 3840 x 2160 - Renderer: Vulkan
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
SE +/- 0.20, N = 3
107.3
SE +/- 0.38, N = 3
116.6
SE +/- 0.50, N = 3
176.3
ReBAR
SE +/- 0.06, N = 3
98.3
SE +/- 0.03, N = 3
105.4
SE +/- 0.03, N = 3
162.8
40
80
120
160
200


F1 2020
Resolution: 2560 x 1440 - Graphics Preset: High
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
ReBAR
SE +/- 0.33, N = 3
SE +/- 0.67, N = 3
SE +/- 1.86, N = 3
SE +/- 0.67, N = 3
SE +/- 0.67, N = 3
SE +/- 0.33, N = 3
223
237
247
216
225
224
50
100
150
200
250
F1 2020
Resolution: 2560 x 1440 - Graphics Preset: Ultra
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
ReBAR
SE +/- 0.00, N = 3
SE +/- 1.00, N = 3
SE +/- 1.45, N = 3
SE +/- 0.33, N = 3
SE +/- 0.33, N = 3
SE +/- 1.76, N = 3
167
181
200
165
177
181
40
80
120
160
200
F1 2020
Resolution: 3840 x 2160 - Graphics Preset: Ultra
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
ReBAR
SE +/- 0.00, N = 3
SE +/- 0.33, N = 3
SE +/- 0.33, N = 3
SE +/- 0.00, N = 3
SE +/- 0.00, N = 3
SE +/- 0.33, N = 3
111
125
176
112
127
171
40
80
120
160
200


F1 2020
Resolution: 3840 x 2160 - Graphics Preset: High
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
ReBAR
SE +/- 0.33, N = 3
SE +/- 0.33, N = 3
SE +/- 0.33, N = 3
SE +/- 0.00, N = 3
SE +/- 0.00, N = 3
SE +/- 1.20, N = 3
146
165
227
148
166
217
50
100
150
200
250
Total War: Three Kingdoms 1.0.1
Resolution: 2560 x 1440 - Graphics Preset: Ultra - Scenario: Battle Benchmark
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
ReBAR
SE +/- 0.30, N = 3
SE +/- 0.26, N = 3
SE +/- 0.18, N = 3
SE +/- 0.35, N = 3
SE +/- 0.06, N = 3
SE +/- 0.22, N = 3
48.1
53.0
72.1
60.7
70.5
110.9
20
40
60
80
100
Total War: Three Kingdoms 1.0.1
Resolution: 3840 x 2160 - Graphics Preset: Ultra - Scenario: Battle Benchmark
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
ReBAR
SE +/- 0.15, N = 3
SE +/- 0.15, N = 3
SE +/- 0.15, N = 3
SE +/- 0.22, N = 3
SE +/- 0.19, N = 3
SE +/- 0.27, N = 3
26.8
30.0
44.9
30.0
34.5
55.9
13
26
39
52
65


Total War: Three Kingdoms 1.0.1
Resolution: 3840 x 2160 - Graphics Preset: Medium - Scenario: Battle Benchmark
RTX 3060 Ti
RTX 3070
RTX 3090
Frames Per Second, More Is Better
Original
ReBAR
SE +/- 0.30, N = 3
SE +/- 0.22, N = 3
SE +/- 0.40, N = 3
SE +/- 0.10, N = 3
SE +/- 0.43, N = 3
SE +/- 0.30, N = 3
57.8
65.4
102.4
58.9
67.4
108.0
20
40
60
80
100

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



Geometric mean based upon tests: pts/dirt-rally2, pts/f12020, pts/hitman2, pts/shadowofthetombraider and pts/twtk

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 08:57.