	Result	Size	Time	Cycles	GPU	SM Frequency	Process	Attributes
Current	573 - image_RGB2BW_kernel	(120, 68, 1)x(16, 16, 1)	234.88 us	345,031	0 - NVIDIA GeForce GTX 1660 Ti	1.46 Ghz	[11724] image	

Summary | Details | Source | Context | Comments | Raw | Session

Compare | Tools | View | Export

This table shows all results in the report. Use the column headers to sort the results in this report. Double-click a result to see detailed metrics. Double-click on demangled names to rename it.

ID	Estimated Speedup [%]	Function Name	Demangled Name	Duration [ms] (6.45 ms)	Runtime Improvement [ms] (4.27 ms)	Compute Throughput [%]	Memory Throughput [%]	# Reg
0	93.70	init_cos_sin_table_...	init_cos_sin_table_...	0.00	0.00	0.32	2.36	
1	85.54	image_RGB2BW_ke...	image_RGB2BW_ke...	0.23	0.20	87.88	12.78	
2	81.61	noiseReduction_ker...	noiseReduction_ker...	2.03	1.66	82.03	5.03	

The following performance optimization opportunities were discovered for this result. Follow the rule links to see more context on the Details page.
Note: *Speedup estimates provide upper bounds for the optimization potential of a kernel assuming its overall algorithmic structure is kept unchanged.*

FP64/32 Utilization
Est. Speedup: 85.54%

The ratio of peak float (fp32) to double (fp64) performance on this device is 32:1. The workload achieved 0% of this device's fp32 peak performance and 31% of its fp64 peak performance. If Compute Workload Analysis determines that this workload is fp64 bound, consider using 32-bit precision floating point operations to improve its performance. See the Kernel Profiling Guide for more details on roofline analysis.

Uncoalesced Global Accesses
Est. Speedup: 62.21%

This kernel has uncoalesced global accesses resulting in a total of 648000 excessive sectors (71% of the total 907200 sectors). Check the L2 Theoretical Sectors Global Excessive table for the primary source locations. The CUDA Programming Guide has additional information on reducing uncoalesced device memory accesses.

FP64 Non-Fused Instructions
Est. Speedup: 14.72%

This kernel executes 129600 fused and 64800 non-fused FP64 instructions. By converting pairs of non-fused instructions to their fused, higher-throughput equivalent, the achieved FP64 performance could be increased by up to 17% (relative to its current performance). Check the Source page to identify where this kernel executes FP64 instructions.