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

Compare | Tools | View | Export

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

ID	13	14	15	16	17	18	19
Estimated Speedup [%]	90	50.00	50.00	50.00	50.00	50.00	50.00
Function Name	...nel	convolveVerticalKernel	convolveHorizontalKernel	convolveVerticalKernel	convolveHorizontalKernel	convolveVerticalKernel	convolveHorizontalKernel
Demangled Name	...n...	convolveVerticalKernel..	convolveHorizontalKern...	convolveVerticalKernel..	convolveHorizontalKern...	convolveVerticalKernel..	convolveHorizontalKern...
Duration [us] (166.91 us)	74	8.86	5.02	5.73	4.93	5.70	6.94
Runtime Improvement [us] (83.46 us)	37	4.43	2.51	2.86	2.46	2.85	3.47
Compute Throughput [%]	27	33.53	3.87	3.08	3.78	3.13	34.29
Memory Throughput [%]	27	33.53	3.87	3.08	3.78	3.13	34.29
# Registers [register/thread]	39	34	39	34	39	34	39
Grid Size	...	20, 15, ...	5, 4, ...	5, 4, ...	5, 4, ...	5, 4, ...	20, 15, ...
Block Size [block]	...	16, 16, ...	16, 16, ...	16, 16, ...	16, 16, ...	16, 16, ...	16, 16, ...

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.*

Tail Effect
Est. Speedup: 50.00%
A wave of thread blocks is defined as the maximum number of blocks that can be executed in parallel on the target GPU. The number of blocks in a wave depends on the number of multiprocessors and the theoretical occupancy of the kernel. This kernel launch results in 1 full waves and a partial wave of 60 thread blocks. Under the assumption of a uniform execution duration of all thread blocks, this partial wave may account for up to 50.0% of the total runtime of this kernel. Try launching a grid with no partial wave. The overall impact of this tail effect also lessens with the number of full waves executed for a grid. See the @ Hardware Model description for more details on launch configurations.

▶ Key Performance Indicators

SMSPs Workload Imbalance   One or more SMSPs have a much higher number of active cycles than the average number of active cycles. Maximum instance value is 13.04% above the average, while the