CSC612M G01
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Comparative Execution Time Summary for 1D and 2D Element-wise Matrix Multiplication (Hadamard Product) in C++ and CUDA

C++ (in microseconds)

1D vector	
2^20	3605
2^22	14534
2^24	57877

2D matrix	
1024x1024	4660
2048x2048	18783
4096x4096	153575

CUDA (in microseconds)*

1D vector without dim3	256	512	1024
2^20	57.055	62.239	75.677
2^22	219.07	240.15	289.37
2^24	870.54	949.74	1144.5

1D vector with dim3	8x8	16x16	32x32
1024x1024	57.247	57.567	76.894
2048x2048	218.68	219.42	295.99
4096x4096	868.46	873.1	1162.3

2D matrix with dim3	8x8	16x16	32x32
1024x1024	59.519	61.47	70.781
2048x2048	221.44	220.03	265.98
4096x4096	892.68	882.25	1039.7

*colors are only used for matching block sizes across different set of runs and are not indicative of any sort of ranking;