

YDEL for CUDA Performance Comparisons

BENCHMARK	YDEL 6.2	Improvement Over					
		RHEL/Centos 5.4	Fedora 10	Ubuntu 9.04			
bandwidthTest host-to-device (MB/s)	3835.350	3799.267	3824.400	3864.000	0.95%	0.29%	-0.74%
bandwidthTest device-to-host (MB/s)	3401.700	3417.167	3338.600	3316.850	-0.45%	1.89%	2.56%
bandwidthTest device to device (MB/s)	115398.800	115370.633	115267.800	115266.150	0.02%	0.11%	0.12%
convolutionTexture (ms)	1.718	1.721	1.723	1.718	0.19%	0.29%	0.00%
matrixMul (ms)	0.089	0.092	0.098	0.093	2.91%	9.18%	4.30%
scalarProducts (ms)	0.173	0.178	0.174	0.176	2.63%	0.29%	1.42%
sortingNetworks (ms)	18.195	18.212	18.231	18.212	0.09%	0.20%	0.10%
transposeNaive (ms)	2.898	2.950	2.908	3.028	1.75%	0.34%	4.29%
transposeOptimized (ms)	0.299	0.307	0.309	0.308	2.61%	3.24%	2.92%

Testing Notes:

- The test system had the following specifications:
 - CPU Type: Intel(R) Xeon(R) W3520 @2.67GHz
 - CPU Speed: 2660 MHz
 - Memory: 4096 MB
 - Memory Bus Speed: 1066 MHz - DDR3
 - Video Card: NVIDIA GeForce GTX280
 - Number of cores: 240
 - Core clock: 602 MHz
 - Memory: 1GB GDDR3 SDRAM
 - Memory clock: 2214 MHz
- The YDEL benchmarks were performed using kernel 2.6.18-164.ydl.1.
- The RHEL/Centos benchmarks were performed using kernel 2.6.18-164.6.1.el5
- The Fedora benchmarks were performed using kernel 2.6.27.41-170.2.117.fc10
- The Ubuntu benchmarks were performed using kernel 2.6.28-17-generic
- Nvidia CUDA Driver 190.42 and CUDA SDK v2.3 samples were used to complete the benchmarks.
- All Tests were ran from init 3 (no X11 running) after a reboot.
- All benchmarks were ran 3 times, and the resulting average used for comparisons.