

1 Overview

1.1 **Location** `$(AMDAPPSDKSAMPLESROOT)\samples\opencl\cl\app`

1.2 **How to Run** See the *Getting Started* guide for how to build samples. You first must compile the sample.

Use the command line to change to the directory where the executable is located. The default executables are placed in `$(AMDAPPSDKSAMPLESROOT)\samples\opencl\bin\x86` for 32-bit builds and `$(AMDAPPSDKSAMPLESROOT)\samples\opencl\bin\x86_64` for 64-bit builds.

Type the following command(s).

1. `ImageBandwidth`
Measures the peak bandwidth from images.
2. `ImageBandwidth -h`
This prints the help message.

1.3 **Command Line Options** Table 1 lists, and briefly describes, the command line options.

Table 1 Command Line Options

Short Form	Long Form	Description
-h	--help	Shows all command options and their respective meaning.
	--device	Devices on which the program is to be run. Acceptable values are <code>cpu</code> or <code>gpu</code> .
-q	--quiet	Quiet mode. Suppresses all text output.
-e	--verify	Verify results against reference implementation.
-t	--timing	Print timing.
	--dump	Dump binary image for all devices.
	--load	Load binary image and execute on device.
	--flags	Specify compiler flags to build the kernel.
-p	--platformId	Select <code>platformId</code> to be used (0 to N-1, where N is the number of available platforms).
-d	--deviceId	Select <code>deviceId</code> to be used (0 to N-1, where N is the number of available devices).
-i	--iterations	Number of iterations for kernel execution.

2 Implementation Details

Measures the peak bandwidth from images using the following subtests.

1. Read Single — All threads are read multiple times from a single memory location that is known at compile time.

Results on the ATI Radeon™ HD 5870 GPU: 1080.51 GB/s

2. Read Linear — Threads are read from a 2D image sequentially.

Results on the ATI Radeon™ HD 5870 GPU: 1080.67 GB/s

3. Write Linear — Threads write to the a 2D Image sequentially.

Results on the ATI Radeon™ HD 5870 GPU: 102.45 GB/s

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